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Augmenting Competence: an investigation of criteria which may enhance Podiatry Education

Christopher Stuart Davies

March 2004

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Education at the University of Huddersfield

Abstract

In 2001, the Quality Assurance Agency (QAA), in consultation with the professional body for Podiatry in the U.K., the Society of Chiropodists and Podiatrists (SoCAP), issued a list of benchmark statements that could be expected of new graduate podiatrists. This provided a list of threshold competences expected of students prior to achieving independent practitioner status. These statements are essentially outcomes based judgements based on the students' performance. Evidence within the literature searches suggests that the achievement of competences alone is not enough on which to base such quality judgements and it would follow that the measurement of the quality of podiatry education is therefore incomplete.

This study sought to identify a complementary set of statements to supplement the QAA benchmark statement in the education of podiatrists. The pathway leaders of the schools of podiatry from the U.K., Australia, South Africa and New Zealand were asked to cooperate in the formation of a set of criteria that they felt could be considered as being appropriate. This included the subject areas taken from the literature originating in medical education, namely the staff, the resources, the students themselves and the pathway as a whole, each considered as key considerations. The outcome of these discussions served to form a more inclusive set of criteria that may be included to complete the quality circle of standards of podiatry education and hopefully these will be debated further at a later stage for consideration in tandem with the existing competence statements.

The study employed an action research methodology and the data was collected in cycles from the participants. Initially a request was made to the professional body for details of any existing guidelines regarding such statements. This was followed using questionnaires, then semi-structured interviews involving the pathway leaders. A list of 32 criteria was distilled from the two rounds of data collection. These were subjected to Likert scale attitude measures, to create the final list of 28 criteria that were agreed by all participants to influence the education of podiatrists.

These criteria were sent to the professional body for further debate, to make them aware of a potential weakness in the measurement of the quality of education for podiatrists. It is hoped that further discussions will include all or some of these findings to supplement the existing benchmark initiatives. It may or may not be considered to be appropriate at a later stage to widen the debate to include other groups such as the NHS managers (as employers) and the students (as consumers).

The initial feedback from the Director Of Education of SoCAP, the professional body in the UK was positive, in that the potential value of such data was recognised. The response interpreted that the data satisfied the need for the collection of qualitative information, which could be used to balance and support the quantitative data, on which the QAA and professional body had determined the outcome- based benchmark statements.

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I am thankful to the anonymous 'community of researchers', the pathway leaders of the schools of podiatry surveyed in this thesis who have contributed to this study.

In conclusion, I dedicate this thesis to my wife and family, who are so very important to me. They are the main motivation for starting the programme in the first place. Part-time study, whilst maintaining a full time position, places extra strain on anybody's family and I am grateful for their constant love and support through the highs and lows of this study.

"Clinical theory and decision making are a mix of science, experience, contemporary culture, authoritarianism, personal bias and even emotion.

Each time a factor changes, the stage is set for one pendulum or another to begin its journey to the other side"

Dr Sherwin Nuland.
Clinical Professor of Surgery
Yale School of Medicine. 1995.

Chapter 1

1. The Research

1.1 Introduction.

The Society of Chiropodists and Podiatrists (SoCAP) is the professional body representing Podiatrists in the U.K. It has worked in consultation with what was formerly the Council for Professions Supplementary to Medicine (CPSM), now the Health Professions Council (HPC), to produce the standards of practice for graduate or qualified practitioners (SoCAP 1999). At the commencement of planning and writing this thesis, Ashcroft (1999) reported that no such standards existed to guide the pre-registration clinical education and training of podiatry students. However, new guidelines were published in 2001 as a benchmark statement to describe the nature and standards expected of graduating students who have undertaken recognised programmes of study in podiatry in the U.K. This benchmark statement had been formulated using a Quality Assurance Agency (QAA) template. The stated areas for consideration and judgement are based in the broad expectations of the student when they become a qualified practitioner, the knowledge, skills and understanding which underpin the education and training of new practitioners and the application of that knowledge in the provision of a service to improve health. The consultation document, given in appendix 1, highlights the expected outcomes of the students' educational experiences but it does not provide guidelines regarding other contributory factors that influence the whole educational experience of the student. It could be argued that this new benchmark statement does not provide a complete indication of the quality of podiatry education and this study seeks to investigate the possible rationale for this and to seek ways of improving the educational processes. Bowden and Marton (1998) noted that there had been increased pressure on

universities to respond to demands from external agencies. They found that universities were expected to produce graduates who were able to function in the workplace. They continued saying,

> *Outcomes are being defined in relation to the needs of working life within different professions, independently of the specific educational arrangements that might produce these outcomes.*
>
> Bowden and Marton (1998) p11.

This statement implies there are areas of educational practice that have been omitted from the overall process of professional education and that outcomes by themselves do not provide a complete educational experience for students. Therefore, it is intended to investigate 4 keys areas of influence in podiatry education. The staff, the students, the resources that support the programme of learning and the pathway of learning itself. From this it will be possible to compile an agreed schedule of criteria and highlight them to provide a more complete set of statements on which judgements about the quality of the education of podiatry students can be based.

In the U.K., at least three separate bodies, the host institutions, the Society of Chiropodists and Podiatrists (SoCAP) and the Health Professions Council (HPC), validate each BSc degree that is awarded in Podiatry. The emphasis in this study will centre on clinical teaching and learning, as this is the aspect of a podiatrist's education and training, in which threshold competence is required to be assured by the HPC to protect the public and is examined by a final practical examination.

Each individual school of podiatry delivers a subtly different degree and clinical experience for their students. The quality of education delivered in each school of podiatry is evaluated and licensed by the professional body SoCAP, in conjunction

with the HPC as part of Joint Quality Audit Committee (JQAC) at quinquennial reviews. The assessors have to adopt a flexible interpretation of the overall educational processes of each individual school, as each degree is the primary responsibility of the host institution. Therefore each School operates within its own resource allocation utilising the expertise of its teaching staff. Each degree is therefore separate having different strengths, each depending on the range of resources and staff abilities.

Employers are very interested and concerned about the quality of clinical education for podiatrists, with respect to new graduate competence. A survey by Borthwick (1990) demonstrated that NHS employers were critical of newly qualified practitioners in many areas of clinical practice at initial graduation. From an educator's point of view, this may be seen as an unfair criticism of the schools, given the protected environment in which students have existed for three years. It has always been axiomatic that students continue their education when in practice and during employment, utilising their skills in lifelong learning and professional development, where they develop to the best of their potential within the working environment of the NHS or private practice, alongside other health care professionals. From an employers perspective it is recognised that they need to employ competent practitioners who can be reasonably expected to manage a caseload.

Another prominent issue are the international discussions between the professional bodies representing the podiatrists from overseas and those of the U.K. concerning the recognition of qualifications between countries Despite similarities in

educational traditions and philosophies, problems have arisen for applicants who wish to register to practice their profession in another country. It has until recently been the case that graduates from their countries of origin, wishing to practice in another country, have to sit a two-part entrance examination, a practical and written assessment, to prove their competence before they are allowed to practice in the new country. This may be considered to be an unnecessary restriction of practice considering that all applicants are holders of the professional degree of their 'home' country. The call for international recognition of qualifications can only be answered when it can be assured that all of the criteria, which influence clinical teaching, are recognised and monitored by the respective registration authorities of participating countries.

1.2 Previous Research in Standards for Medical Education

According to Loudon (1995), medical education in England and Wales became organised with the formation of the General Medical Council (GMC) in 1858. This was formed by Act of Parliament to provide a register of qualified doctors and to ensure an adequate standard of medical education. This was not able to be as regulatory in function as was originally anticipated because of the vested interests of the three main bodies, which were formerly separate before being amalgamated, within the GMC. However, as knowledge in anatomy and physiology developed, so too did the scope of practice of the new medical practitioners, thereby demonstrating the need for a change in delivery of medical education.

Abraham Flexner was an American education reformer, who wrote the book "Medical Education in the United States and Canada" in 1910, in which he exposed the inadequacies of most recognised Schools of Medicine in the U.S.A. at that time.

As a direct consequence of this book, the American Medical Association and the Association of American Medical Colleges met to agree and adopt professional standards for course content, qualifications of the teaching staff, laboratory facilities, affiliations with teaching hospitals and the licensing of their practitioners.

Flexner was invited to address the Royal Commission in London, which had been set up to investigate the working of the organisation of medical education at the University of London in 1910. Van Heteren (1995) reported that Flexner's original testimony had been presented in three phases. The first phase concerned the clinical experiences of the students, which he found to be largely empirical and incident-based. The second phase addressed the supporting scientific theory, which was used to inform therapeutic interventions and the third phase demonstrated the emergence of the clinical teacher as a tutor and researcher, rather than as a manager of clinical incidents. He drew comparisons with the teaching methods of the centres of excellence in medical education in Germany to illustrate his points.

The standards he promoted have survived the test of time and are retained within medical schools, and similar standards can be traced in the education of the modern podiatrist. It is perhaps necessary that these standards need to be more specific, more exacting and expressed more firmly, to act as unequivocal benchmarks or as minimum threshold standards of competence, to enable truly equitable standards to be applied across all participating schools of podiatry.

Like the developments in medical education previously discussed, the profession of podiatry continues to develop from a traditional skills-based approach to a scientific

evidence-based approach and the subsequent change in the educational requirements to facilitate these developments needs to be recognised and measured in relation to the education of the modern practitioner.

With the emphasis on the term education, it is of primary interest to produce an operational definition to be able to interpret exactly what is actually meant by the word 'education'. Jarvis (1984 p.1) suggests that the English word 'education' is accepted as taking its origin from the Latin word *'educare'*, which literally means ' to train or bring up a child. There is however another closely spelt and pronounced Latin word *' educere'*, which means 'to draw out'. The author of this study intends to relate the discussions herein to both of these derivations, preferring to introduce each definition at different stages of the students' learning experiences.

The developing importance of the quality of the students learning experience and the qualifications of the teaching team are two factors that may be deemed to have major influences in the quality of the curriculum offered and ultimately delivered. These factors need to be evaluated and assured as part of any quality audit initiative by the validating bodies of each degree.

1.3 Proposed Aims

Before the aims of the study can be written, it is important to give working definitions to some of the terms, which will be used. In this study, the term 'benchmark' will be used to indicate a threshold standard expected of new graduates. They will be expected to achieve these before being awarded their degree, to measure their fitness to practice and to enable them to apply for Registration as a Podiatrist. These benchmarks will need to be expressed in terms of criterion-based terminology

used to describe competences. These competences are seen as 'outcomes' in the sense that they are skills and abilities demonstrated by students as they exit the educational processes at the school. According to Brundrett (2000) p 64,

> *the competence model contains within it an inappropriate and reductivist model of learning, which is educationally and philosophically inadequate.*

This, and similar findings by other authors presented in chapter 1.7, underpins the criticism of the competence-based education. Competence alone is not considered to be sufficient for a modern healthcare practitioner to be able to manage professional practice. These individuals need to demonstrate higher order knowledge in order to be reasonably expected to manage their current and future practice.

It is anticipated that this study will broaden the discussions to enable the QAA competences to be strengthened by recognising and including the other significant influencing factors that affect the education of a podiatrist, namely the staff, the resources, the students and pathway specific issues. These factors are seen to enable the QAA benchmark to be achieved.

It must be recognised that these statements will only represent the minimum level of competence that can be measured, but additional criteria may be added incrementally should the professional body, through further discussion and debate, accept these. However, each school will have the ability to operate at higher levels than the minimum level discussed here, depending on their resources budget and staff profile. The proposed standards will be judged against agreed criteria in all areas of influence and each school may be scored at times of periodic review.

The aims of this study are therefore to,

a) identify the criteria that support and underpin and facilitate good teaching and learning practice (where none are reported to exist at the present moment), to complement the current QAA benchmarks.

b) use these same agreed criteria to encourage further debate and facilitate closer cooperation regarding national and international recognition of professional qualifications.

1.4 Research Framework

This study was conducted within an action research framework. One researcher, an experienced clinician and tutor of podiatry who had taught at two centres in the United Kingdom over a period of 24 years and who had visited other schools in the UK completed it. The 'community of researchers' in this research was the Director of Education of the Professional Body for Podiatry (SoCAP) in the UK and the pathway leaders of the schools of podiatry included in this study from the UK and overseas. This group formed a purposive sample for the study and they were considered to be the essential respondents who had specific knowledge of the educative processes involved in podiatry and who had the expertise to make a significant contribution to the study. These were the key people who engaged with these issues on a daily basis and were closest to the issues raised. The intention was to focus solely on the reflective responses of these experienced educators who had never before been asked to participate in a study of this kind in a collective manner. This was considered to be an appropriate starting point for such a study of this kind. It focused on the specific areas of influence that may augment the benchmarks required for podiatry education,

Information was gathered in five phases. Phase I was a request to the Professional Body, The Society of Chiropodists and Podiatrists (SoCAP), which provides the professional guidance to the HPC and QAA regarding the quality of education at all schools of podiatry in the U.K. This request is provided in appendix 2. The initial response is given in appendix 3.

Phase II gathered data using self-completion questionnaires sent to all pathway leaders at all 14 Schools of Podiatry within the U.K. and to 7 Schools of Podiatry in the English speaking world, which share a common background and philosophy in podiatric education. This will establish the variety of teaching methods currently used and the variability of students' teaching and learning experiences in the different centres.

Phase III was undertaken using audiotaped semi-structured interviews, which were held to follow-up the questionnaires. Each participant was provided with a script containing set areas for discussion, built upon emerging issues from the questionnaires. The data gathered from phases II and III was collated and analysed. The commonly recurring themes were presented to the participants in each of the four domains for their summative comments. This formed Phase IV of the data collection. Their comments were then used as the basis of a report to the professional body (SoCAP) for its evaluation and comment, which formed phase V.

It was anticipated that when the outcomes of the questionnaires and interviews were analysed, it might be possible to identify and offer a set of criteria, which could inform clinical teaching for podiatry students. These criteria may be agreed with the professional body and after further discussions with the HPC, used to support and enhance the existing benchmark statements. This could be subjected to further

evaluation regarding the effect of the introduction of these recommendations. In this way, the study may be revisited, refined and adapted in the continuing application of this research area. This study could also be used to facilitate further discussion, particularly concerning the issue of equivalence of the qualifications awarded from centres of podiatric education throughout the world.

It is anticipated that as a result of this study, it may be possible to be able to identify and formulate a set of criteria that influence clinical teaching that can be accepted by all schools, nationally and internationally. A further outcome could be that Schools of Podiatry may be able to re-evaluate their staff development needs to further develop their staff experiences and expertise, thereby enhancing their students' learning experiences.

It was not the intention of this study to recommend the production of the same podiatry degree from each institution. It was rather the intention that each school could use the criteria generated within this study to strengthen their individual curricula and possibly increase the individuality of each programme offered, reflecting the strength of the separate schools. Increased opportunities for the transferability of students between the degree programmes of participating countries may also become more available as a result of the implementation of the outcomes of this study.

1.5 Quality Assurance

Quality assurance is discussed variously in terms of Total Quality Management (TQM) and Quality Assurance (QA). Hatten, et al, (1997) provided a working definition of these terms, describing TQM as a form of quality evaluation undertaken with a management philosophy, based in a continuous search for improvement. They

cite Thornber's study (1991) showing that this type of quality assurance is defined in terms of customer perceptions of both the delivery and content of a service. Donabedian (2003) suggested that TQM had become synonymous with measuring all elements of an organisation, including secretarial and administrative support . This more encompassing model of quality measurement included areas that are outside the remit of this study so TQM has been discarded.

Demming (1993) proposed a definition for QA, which included a format containing processes of Planning, Doing, Checking and Acting. Hatten, et al, (1997) described QA in terms of being a planned and sequential monitoring of the service provided and the assessment of opportunities for improvement. The main point of their paper was that the QA model could be used to identify an opportunity for improvement to the systems that are already in place and functioning satisfactorily. This followed the earlier work proposed by Donabedian in his original studies.

Donabedian (2003) is attributed to having unravelled the concept of quality, describing the measurement of quality and the improvement of quality in a model based in three areas, structure, process and outcomes. He described QA in terms of actions taken to establish, protect, promote and importantly to improve quality. He recognised that guarantees could not be attached to the pursuit of QA but he did propose that it was possible to increase the possibility that quality would improve. When related to clinical practice, Donabedian's interpretation could be adapted to measure QA in the performance of practitioners and in the care provided to their clients or patients.

This study seeks to pursue Donabedian's approach to QA, as it more closely provides a means of creating improvement to the existing set of requirements, or at the very least provide the opportunity for improvement to occur.

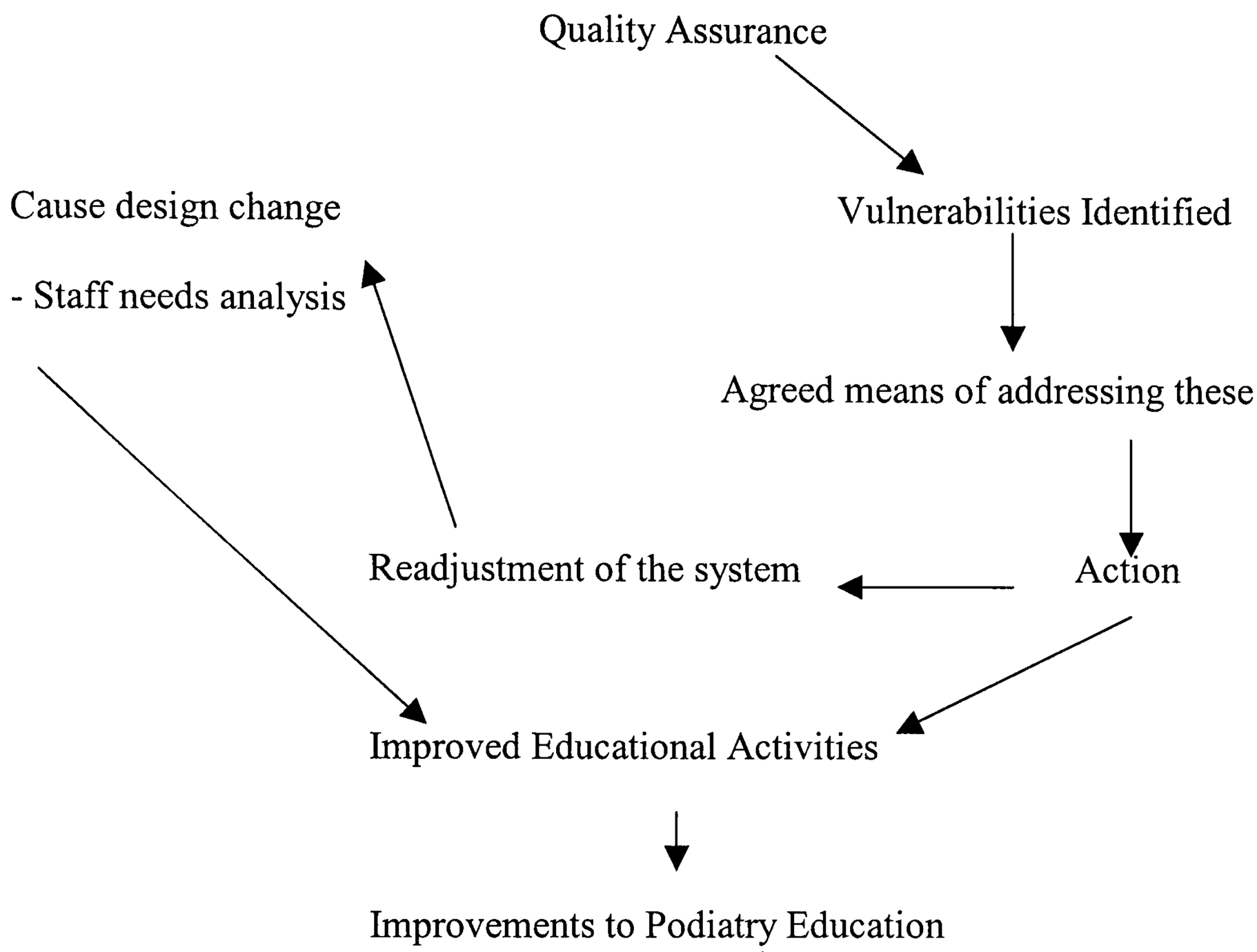


Fig. 1 Quality Assurance model (After Donabedian 2003 p xxv1)

1.6 The Development of Podiatry in the U.K.

The profession of podiatry has evolved from its origins in chiropody, but it has progressed beyond the original scope of practice of its originating discipline. Where chiropody is the term used to refer to the medical speciality dealing with the treatment of conditions of the feet, podiatry has an expanded scope of practice that utilises the scientific assessment, evaluation and diagnosis of disorders of the lower limb and foot whilst retaining the management of foot related disorders.

From being a simple skills-based craft dealing with the management of superficial minor ailments of the feet, the profession of podiatry has evolved into a profession that has an evidence-based application of scientific principles. Over time, this has necessitated a shift of emphasis in clinical education, designed to reinforce the students' professional empowerment, enabling them to become proactive practitioners, researching and creating professional innovations through practice.

Podiatry education will be discussed in this study, based on degree courses that are validated and recognised by the HPC and the Society of Chiropodists and Podiatrists (SoCAP) in the U.K. Overseas pathways will be included where they share a common philosophy and background of podiatry education.

To achieve Registration in Chiropody / Podiatry in the United Kingdom, students must complete and pass a degree pathway at a recognised centre. There are a total of 14 centres of podiatry education in the U.K. with a further 7 centres in the English speaking world which share a common background and philosophy.

The seven overseas schools of podiatry included in this study are in Australia (5), South Africa (1) and New Zealand (1). Each must satisfy the regulations of their respective Health Board Committees before a licence to practice is issued.

The schools of podiatry in North America and Canada are not included in this survey, as they operate a different scope of practice. Schools in continental Europe have no direct equivalence between their courses and the UK degrees, so they too are excluded from this survey.

At the present time in the U.K. there is a public and private sector providing podiatry education. The private sector is not at this time recognised as being a provider of appropriate courses for the purpose of Registration and hence students of these correspondence courses cannot practise within the NHS. They can only practice in the private sector. Only graduates of the recognised schools of podiatry can become Registered Chiropodists (Podiatrists) and can practise within the NHS. This causes some considerable confusion to the medical professions and other health care personnel, as they are not fully aware of the differences in education and training between these two providers.

Dobby (1993) suggested that this meant patients too were unable to differentiate between Registered and unregisterable practitioners. This has inevitably produced an erosion of confidence in the status and practice of Chiropodists and Podiatrists in general practice and an erosion of confidence by the professionals of themselves at all stages of their educational development, starting at the student level. Dobby's report infers that General Practitioners (medical) and other significant health care personnel were also confused, leading to further misunderstanding and misinterpretation between health care professionals. Dobby (1993) further noted that not all health care professionals are comparable because of the traditions and nature of their work. There were significant differences in their respective educational processes too, with student podiatrists accessing their foundation level clinical education at their host site, rather than within a hospital setting, as is the case of other health care professionals. This is changing and subject to further development in-line with current NHS planning initiatives, with the introduction of placement

experiences for students within NHS settings, although the majority of preparatory and developmental clinical study and skill acquisition is largely retained in the university base.

Dobby's study surveyed the perceptions of the podiatry profession and concluded that they differed from other allied health professionals (AHPs) in three main areas. Firstly, he found that they were autonomous professionals making diagnoses without direction from other medical or paramedical sources. Secondly, podiatrists worked independently in practice and thirdly, their professional scope of practice was neither fully understood nor appreciated by either the general public or other health care personnel. In preparing students for practice therefore, podiatry tutors would argue that their main aim is to produce students who are competent and safe independent clinical practitioners, who have developed skills to analyse and critically evaluate their practice, thus contributing to the delivery of effective health care of their patients. Podiatry students would ask for, and expect, well-informed, motivated and professional tutors to facilitate these essential elements of their learning and the resources to be successful.

The health care needs and expectations in society continue to change over time and the role of the professional therapist must also change and develop to respond to these needs. Professional education and training in any of the health care disciplines cannot therefore remain static and the institutions responsible must remain sensitive to the changing reality of the modern health services. The developmental planning for health care has undergone radical change and this has been matched in the education of health professionals, who have to a large degree been the vectors of

promoting such change.

The providers of education and training of health care professionals must reflect the requirements, not only of their existing practice but they must also be pro-active in recognising and developing the potential for professional growth. To do this, it may be reasonable to expect a podiatry tutor to understand and have experienced the role of a podiatrist in practice. A parallel may be drawn with the work of Grugulis (2000) who found that in the context of manager training, the educator needed to understand the expectations of the new manager in the workplace and how to respond or adapt to circumstances that may occur. She recognised that different employers had different needs and priorities and each may choose to conduct their business in different ways, but she considered the experience of the educator to be an essential element in the students' learning.

Another aim of such education and training should be related to the personal and professional development needs of the learner. In the first instance, this may not be essential to the needs and requirements of the profession or society in general, but it will become absolutely vital in the long term analysis for purposes of future professional and service development. It is this element that is actively addressed as part of the degree research component and may be seen to generate a research ethos in, and particularly applied to, students' practice.

Podiatrists are trained to recognise and diagnose systemic and local conditions that may affect the lower limb and foot. Renwick (1992) proposed that this expansion in scope of practice requires an increased educational emphasis that is underpinned by an active research ethos. This is catered for in the new degree curricula that are now

available and continuously developing. Dobby (1993), reported that British podiatrists are now making increasingly strong claims to being the medical and surgical experts in the care of the foot. This has promoted the need for radical change, enabling the development of a wider and more advanced scope of practice, through the development of Bachelor of Science with honours degree, reflecting a broader knowledge and skills base required to underpin successful modern practice. The development of degree education was also essential as it promotes the research ethos in students, encouraging life-long learning skills which are required to provide the evidence base on which patient management strategies are founded. In this way, graduate podiatrists are encouraged not only to be consumers of research but also to contribute to the developing body of evidence on which present and future interventions are justified.

This is reflected in the current education and training of health care professionals where the requirements and demands made, not only prepare students for current practices but also for future professional growth.

Entry qualifications may be considered to be relevant structural aspects of quality evaluation. On initial entry to any pathway of study, students must have achieved advanced level awards in secondary education, or their equivalent. However, many of these awards, in the same subject areas and with similar titles, are quite different from each other because they contain different syllabi with different awarding bodies to validate them. These qualifications therefore serve as an entry point to access higher education indicating the level of achievement at that stage of the student's career. It does not necessarily indicate and guarantee the successful completion of the

degree pathway. Where introductory material is given at foundation level of the degree pathways, all students need to be taught the principles of the components in the pathway, to establish the required level of understanding before moving into advanced level areas of study. However where students are established and comfortable with the expectations of the pathway, they would be encouraged to build and 'draw out' other aspects of new or applied knowledge. The transition is entirely consistent with the notion of the 'educational continuum' offered by Benner (1984).

1.7 The Development of Professional Competences in Podiatry

The notion of competence-based education is not new. It had been developed in areas of management education since the 1920's. Brundrett (2000) found that the debate surrounding competence-based education was still relatively new and filled with contention. He cited the study by Johnston and Sampson (1993) which showed that other disciplines were moving towards the development of the competence-based courses; those that sought to accredit learning in the workplace, and were developing these alongside the education based courses; those that met the needs of the students in broad based educational terms and also addressed the circumstances of practice. The debates continue, both models having their place in education and both can be evidenced in modern curricula. Perhaps it is the specific areas of their application that needs careful consideration.

There is no generally agreed definition of 'competence' because of the terms' all-encompassing nature. Jarvis (1984) suggested that a working definition of competence should be more clearly stated as 'good practice based on sound theory'. An alternative interpretation would be the application of sound theory to the

workplace, wherever that may be. Ashford (1991) further wrote that as established, experienced professionals, clinical teachers were able to recognise a competent practitioner, their judgements being based in the clinical domain of safety to practise. Donabedian (2003) wrote that this intuitive nature of measuring competence, by an experienced practitioner was flawed. He believed that this recognition of competence would not be the same by another practitioner and so the concept was ill defined. He strongly believed that definitions of competence had to be agreed to become measurable. In this way they could be monitored to show improvement to satisfy the goal of quality assurance. According to Stengelhofen (1993), there was a considerable step between agreeing what competences are required and then deciding a form of implementation, assessment and achievement of them. Because there are differences in the interpretations of the term by different authors on this subject, reference to earlier work may enable progress to be made in the understanding of a generally accepted definition for competence,

The National Council for Vocational Qualifications (NCVQ) (1989) suggested that competence was seen in the actions of a senior occupation or profession, where the application of a significant range of principles and techniques to diagnosis, led to appropriate and effective planning and problem solving. To achieve this, extensive knowledge and understanding was required, together with the capability in practical management, which relies on informed, positive supervision in education.

The practice of podiatry is more than simply skills-based. There is a definite distinction between the 'cognitive' and 'skills' domains in being able to perform a specific procedure. Scheffler (1965) originally recognised three levels of skill,

namely competency, proficiency and mastery. Benner (1984) took this and devised a five-stage level of skills for nursing students, creating a continuum from novice to expert. Benner's work served to initiate an understanding of levels of competence in nurse education and this model has guided other health professional education.

It had been suggested that the initial education and training of podiatry students should be based on the development of competences.

Ashford (1990) recognised this and researched podiatric competences at a time prior to the introduction of degrees. He used a 'DACUM' exercise to identify the competences required by State Registered practitioners. This is the acronym for Developing A Curriculum. To do this he assembled 11 acknowledged experts from the profession who met 'around the table' to identify the competences which they felt were absolutely necessary for competent practice to be acknowledged. Some of these experts were managers - thus health service employers of the new graduates. From this exercise he identified two general categories of practice; clinical practice and practice management. Within each category, competences were then agreed and constructed, in all 57 were identified. Ashford (1991) continued his work to validate these competences using the 'DELPHI' technique. This has as a primary function the systematic collection and aggregation of informed judgement from a group in the specific area. In essence this is the same technique as the 'DACUM' exercise, however the experts do not meet around the table. A series of questionnaires were sent in 'rounds'. The number of 'rounds' depends on the depth that is required for refinement purposes.

The results of their impersonal considerations showed agreement on 26 competences, which were considered essential to education in podiatry. These were divided into

four categories, namely; clinical practice; communication; knowledge base and professional issues.

Mulcahy (2000) studied a range of industries and found that there were many perceptions attached to the understanding of competence. She proposed categories of competence describing abilities, which became measurable at different stages of professional development. These were largely dependent on the requirements of the industry. The first category, competence as outcome, was seen where performance of the individual was measured on their ability to perform a task. This is seen in the early stages of the education of a podiatrist in foundation studies through introduction to clinical practice. More sophisticated skills such as the administration of local analgesia, nail surgery are further examples at a later stage in the students' learning experience. The second category, competence as a process, enabled the worker to become pro-active in their work practices. This is seen in the development of assessment skills and the decision-making processes that accompany the application of the students' knowledge to practice. The third category, competence as relations, is linked to the abilities of the individual with the needs of their work environment. In podiatry education it this stage of development, which provides an indicator of threshold competence to practise.

The development of the clinical competences is judged throughout the pathway at each appropriate stage, where students demonstrate their abilities to perform graded clinical tasks. Students become proficient in clinical practice towards the latter part of their studies in some clinical areas, when they can fully integrate the supporting studies with their professional practice and this stage continues into their initial

practice experience as post-graduates. They will eventually achieve complete mastery of an aspect of their practice, only when they have become clinically experienced, possibly several years after graduating. This is the key factor that prompted the question regarding the requirement for a new member of teaching staff to have a number of years clinical experience prior to appointment as a teacher.

There is also the debate that society places greater worth on the cognitive domain, which is seen to be more academically based, than on the acquisition of practical skills, often dismissed as simple craft based aspects. This is clearly a major concern for any of the health care professions as it is argued that it is the synthesis of the theory with practice that forms the critical mass of a student's knowledge base. This integration is purposefully managed with the skilled introduction, through clinical teaching in the student's education and training. Bertrand Russell, cited in Rudestam et al (1992) is credited with writing that knowledge could be appreciated in two ways, the Knowledge of Description, the evidence base which is gained from books and articles of learned reading, and the Knowledge of Acquaintance, the practice, which is gained from actually learning whilst performing a task. Both of these are demonstrable in the education and training of podiatry students, particularly using clinical teaching to link theory and practice. This is further reflected in the work of Biggs (1999) who referred to the students' development of functioning knowledge based in practice.

A group representing AHPs has met under the guidance of the Quality Assurance Agency (QAA) to discuss and formulate a set of competences for some groups of health professionals. This may be seen to promote a competence-based approach for

the health professions and could be very much outcome driven, based on what the student achieves. Taken to a conclusion this could downgrade clinical practice to a minimum standard and therefore be detrimental to professional growth and development. It may serve to define and restrict the scope of practice. Macfarlane and Lomas (1994) proffered that the competence model was seen to promote a restrictive definition of the educational process. It showed a return to the systematic model of training favoured in industry in the 1960's.

Grugulis (2000 p. 91) cited an interview with a company manager, who was concerned about the emphasis being placed on the introduction of competence, quoting him as saying,

> *The fact that people can 'do it' doesn't mean to say that they are competent...the theoretical knowledge to support competence is largely absent.*

It is, therefore, strongly argued that the education and training of all health professionals must be evaluated in a greater depth than by simply assessing competences or outcome-led measures, because at a basic level this could produce practitioners who are simply able to perform repetitive skills.

Jessup (1991) suggested that outcome statements were generated on a narrow basis at the level of skills and tasks, operating the so-called 'list logic'. He noted that this gave cause for concern following his experiences with NVQ training. It could be argued that there is merit in considering the qualifications, skills and experiences of the teacher or clinician; the students; the levels of resources invested to support

learning, including inputs from the external agencies and affiliations and the programme of learning itself as part of an overall strategy.

In a similar vein, the Unit for the Development of Adult Continuing Education (UDACE) (1989) concluded that by itself, a competence only described what an individual can do, but it does not explain the learning processes they have experienced to be able to perform the competence. In the light of changing political agendas and cultural requirements, Franklin (1997) was of the opinion that as the work requirements will be varied and subject to change over time, so too therefore will standards need to be altered to have a best fit to new working practices. It follows that the workforce needs to be able to transfer skills as required and to be well educated so that it can be as flexible and adaptable as possible.

Davis (1990) saw one role of clinical teachers as being able to develop students' abilities and incorporate their skills into their respective levels of competence and expertise. This would enhance their practice skills and therefore improve the standards of care provided by them. He continued his assertion saying that this was only capable of adjustment in the light of continuing practical experience. This could be interpreted as meaning clinical teachers have a responsibility to remain pro-active in providing the needs of their students, through continuous update in professional development. It would follow that graduates too need to update their skills to be in the best position to respond to their service needs.

Therefore, the issue of clinical education needs to be explored further, going beyond simply agreeing a set of expected clinical competences. Bowden and Marton (1998)

suggested that the learning environment, the students' attitudes towards their learning and the teachers approach to their teaching, all directly impacted on how students learn. These findings have informed and prompted this study and demonstrate confirmation of the choice of these domains for further investigation and debate in the context of podiatry education. In discussing these points, it should be considered that although there are boundaries between these as individual points, there is a working inter-relationship where each individual issue influences the others. Each of these perspectives will provide the substance for the questionnaire and subsequently for the semi-structured interviews to debate further the emerging issues.

1.8 Clinical Education

Clinical education in this study is the term used to indicate a much broader concept than that which is traditionally acknowledged. It includes the integration of all aspects of professional practice, not just those associated with the acquisition of practical clinical skills. Podiatry education is essentially practice-based and it has undergone radical changes in its progression through developmental stages from a pre-registration diploma course, to ordinary bachelor degree level, to bachelor degree with honours. Biggs and Price (1992) showed that high standards of clinical education are absolutely vital in medical education where it is considered central to the learning process. It is considered to be the essential integrative instrument, which brings together theory and practice and is referred to as the concept of 'praxis', which is considered to be, purposeful action based on information. Early studies by de Castell and Freeman (1978) suggested that theory itself cannot be adopted *per se,* but it must be filtered through contextual constraints. In podiatry education this is

facilitated through the clinical expertise of the students at their stage of their clinical experience. Practice therefore is not considered to be simply the application of theory; rather theory provides the reasons or motives for purposeful action and is thus considered to guide practice.

Literature related to podiatric clinical education *per se* is not widely documented and references are drawn from other medical and health professional education areas. These will be used to inform current practices in clinical education in podiatry.

Clinical teaching is seen as being imperative in the education and training of all medical and paramedical professionals and greater emphasis needs to be given to its importance in relation to staff involved in teaching podiatry students, particularly because of the variety of education styles utilised in the delivery of this discipline. Quinn (1998) referred to a study by Fish and Purr (1991). They concluded that the training for clinical supervisors was lacking in current theory and educational practices. This was seen to create a barrier between the students and the tutors thereby reducing the effectiveness of the learning opportunity. The current change of emphasis from teaching to learning supports the primary role of the students as learners throughout their professional lives, promoting their personal and professional growth. However, it is understood that teachers need to be prepared for their roles as facilitators of students' learning.

The development of degree curricula in podiatry has demanded the wholesale change from a rather dated, traditional style of education and assessment, to one emphasising the application of evidenced theoretical principles in podiatric practice. Differences in the respective pathways offered at all Schools of Podiatry are evident, being dependent on the strengths and weaknesses of the pathway team and the resources

invested by the parent institution. A recent publication by the JQAC, in the JQAC 2000 handbook (p 22), makes an attempt to create unity in all podiatry pathways by making it a requirement for them to accommodate a baseline of clinical hours. It argues that,

> *..in order to provide sufficient time to achieve the competences outlined... it is believed...it is necessary that the clinical practice element of the course should involve a minimum of 1000 hours...*

As this statement is written, it is ambiguous and may be interpreted differently because it includes the words 'believed' and 'should', which leaves room for different interpretations of the statement. Interpretations have varied from an absolute minimum 1000 hours of 'interactive' clinical practice, with patient management, to 1000 hours of 'clinically related' practice, which would include some theory-based education to support clinical practice. This is clearly easier for the host institution to manage within the teaching timetable frameworks available but is equally clearly not the same experience for all graduates at these different schools. Both of these interpretations comply with the written requirements but as the guidance is vague, it is not possible to be certain of the original intentions.

All schools of podiatry agree that their aim is to produce competent, reflective practitioners who are able to analyse and critically evaluate their professional practice in managing their patients' symptoms. This fosters and supports the notion that learning is an ongoing process throughout their professional life, from which professional growth continues to develop. This is therefore entirely consistent with the notion of lifelong learning, which is encouraged in modern podiatry graduates.

The acceptance of health care degree education by HEIs has enabled clinical education to be considered a valid aspect of the three-year full time undergraduate honours degree in podiatry. The academic rigour of clinical practice has been neither completely understood nor appreciated by the wider academic community because previous beliefs considered this to be simply a craft ability. Darbyshire, et al, (1990) found that clinical practice and its assessment had been given little priority but this was changing with the introduction of health professional degrees. Stengelhofen (1996) argued that the whole student learning experience is the important criterion and that the practice element of these pathways demonstrates the highest pinnacle of academic achievement, as it requires higher order skills of synthesis, application and evaluation. She continues the debate to draw together the practical element, that which is seen or actioned, with the intellectual ability of the clinician. These are the central issues in positive clinical teaching and are not considered to be separate entities. They are considered to be an essential feature of the students' educational experience.

The seminal studies by Flexner (1924) showed that there was indeed no difference in the intellectual attitude of a practitioner who was required to be successful in either the laboratory or the clinic, suggesting that the clinic had become recognised as a scientific milieu. He concluded that the work undertaken within this environment represented a determined and thorough effort to observe, explore, interpret and unravel information, before any therapeutic intervention is attempted. This work became a very important landmark for the practice-based, non-traditional 'physical' science disciplines, as for the first time it was acknowledged that the synthesis of the cognitive and skills domains of clinical teaching was a meaningful development,

which was elevated from the 'arts and crafts' arena to being accepted as a 'science'. The clinical environment represents a scientific setting, which is appropriate for medical practice and education. Clinical education requires a basis in the traditional physical sciences of biology, chemistry and physics. Although these subjects are taught separately away from the clinic, they are incorporated into the practice of clinicians, and with the addition of quantitative and qualitative research methods, they have formed an essential central basis for clinical education.

Stengelhofen (1996) remarked that all aspects of the curriculum would have an effect on the learning experience of a student within the clinical setting, ensuring that good clinical education effectively and efficiently links theoretical education with the application of skills in practice. It motivates and justifies clinical practice, which is an incremental process throughout the three years of the pre-registration pathways.

Biggs and Moore (1993) identified four key elements of teaching. They suggested that it should be intrinsically motivated; active rather than passive; interactive with others and well structured with an integrated knowledge base. To enable this to be effective it requires the staff and the environment to be able to facilitate, support and lead the students' learning.

Miller, et al, (1999) provided a stratified description of a student's educational experience. They acknowledge that students need to develop a professional identity and develop a security in their knowledge and abilities. They describe 4 stages of development. The pre-clinical student, who has a theoretical knowledge base but who has not yet experienced clinical practice. The clinical novice, describes a stage

of development where the student experiences clinical learning in a clinical setting. The probationer, who is a senior student, familiar with the roles and expectations but who is not qualified to practice independently. The fourth stage is the practitioner stage, where the student becomes a graduate and is qualified to practice independently.

More recently, the Peach Report, Fitness for Practice (1999) was commissioned by the United Kingdom Central Council (UKCC) to investigate Nurse and Midwifery education. Peach concluded that at the point of registration, nurses lacked practical skills, largely as a result of a reduction in their ward practice. He did however conclude that they were better able to implement, recognise and solve problems in relationship to skills gained in the applications of evidence-based practice. His report recommended an agreement on a set of learning outcomes to cover the domains of skills, knowledge and understanding values, which would be expected of a newly qualified nurse or midwife. He reported that in modern nurse education there should be a re-emphasis of the values of practice-based education, so that there is a more substantial and active involvement of students in the maintenance of patient care, as practitioners rather than as simply being observers. This echoed the findings of Marson's key study of nurse education (1981), which concluded that in the clinical area, there are more opportunities to learn and develop practical experiences by having a 'hands on' approach, than by didactic instruction in a ward setting or a classroom.

One interpretation of Peach's report recognises the central role of clinical tutors and mentors in the clinical education of nurses and the importance of their part in the

shaping of student nurses professional practices. He recognises that the qualities of the teaching staff and the teaching environment are significant factors in the clinical education of nurses and this is true of any health care professional, making these investments in education essential components of the learning process. Another view of the Peach report is that the committee saw the modern nurse as having good intellectual skills being less-able practitioners than was formerly recognised, infact a reversal of the previously-held view, before the introduction of degree courses for nursing.

Changes in the education of all health care professionals have often followed the lead provided by the nursing profession. This has now moved towards a need to concentrate on the practical abilities or levels of achieving competences, rather than on an overall evaluation of the combination of their range of knowledge and skills. This further highlights the tension that exists between the introduction of competences and the perceived erosion of education. Jarvis and Prais (1988) contended that the concentration of education based in competences alone, rather than in general educational subjects, was in their opinion destined to produce 'a certificated semi-literate underclass'. This opinion may appear to be harsh and dismissive of the approach. For any health related area it certainly highlights that when inappropriately applied to some disciplines there is a danger of producing a person with an incomplete set of abilities and an inability to cope with the unexpected. Mulcahy (2000) crystallised the debate by showing that the introduction of competences are only a part of a training model. She argued that training was associated with bringing someone (in this case a student) to a desired standard or state and linked this to the industry's requirements (in this case the NHS). This has become very task orientated. Whereas education was considered to be more than

simply training for a purpose, enabling a person (a student) to investigate beyond current knowledge, enabling them to think independently around an issue and to create and contribute new knowledge to their personal and professional profile.

Chapter 2

The Development of Podiatry education

This chapter will provide an overview of the historical events that have led to the development of present day podiatry education, providing an insight into the professionalisation of what was once considered to be a craft-based occupation. It will also provide an indication of the national and international perspectives on developments elsewhere. Reference will be made to the methodologies and philosophies associated with podiatry education in the centres of excellence, which share a common philosophy and scope of practice with the centres established within the U.K and some overseas schools of podiatry.

2.1 An overview

There is little information written about the history and development of chiropody or podiatry education. This being the case, the principles of education for health professionals will be referenced herein and applied to podiatry education where appropriate. Moseley (1970) reported that immigrant practitioners first introduced chiropody to Great Britain from France and Germany, where it had developed largely as a result of the neglect of the doctors of the time. It is believed that medical practitioners preferred to concentrate on advances made in medical and surgical specialisms that had developed as the understanding of human anatomy and physiology had advanced. This provided the opportunity for the medical specialisation in disorders of the foot to develop. Early references were reported in the work of a French surgeon in 1755. La Forest (1781), a French practitioner wrote a book, which was in part translated into English by Low (1785), a London corn cutter. It was in this publication that the term 'Chiropodist' was first introduced to medical terminology.

In eighteenth century Europe, an apprenticeship system of training had been established and this had also been introduced into Britain. This scheme had served the needs of the communities of the eighteenth and nineteenth centuries but had needed modernising as the demands for the services, and indeed the profession itself, had grown. In 1818, the Surgeon's Hall (London) was asked to grant a diploma to those designated as competent chiropodists, because the general public had difficulty in differentiating between ethical and unethical practitioners. Lewis Durlacher (1845) made similar proposals for licensing and examining those wishing to practise chiropody. This required the establishment of a professional body to organise and control both the profession and the training of students.

Dagnall (1988) records that in 1895, a group of American practitioners had formed the Pedic Society of New York. This was the world's first "Society of Chiropodists". It allowed chiropodists in the state of Greater New York the right to determine the fitness of persons to practise chiropody and permitted the formation of the New York School of Chiropody in 1911 granted by the State Legislature of New York

The first organised body of Chiropodists in Britain was founded by E G V Runting and Dr. A W Oxford in 1913. It was called the National Society of Chiropodists, and was situated within the Silver Street Pedic Clinic in London. One of this new body's main aims was the establishment of a school for the training of chiropodists and to provide for their further learning in maintaining an update of their practice. This became the Incorporated Society in 1915, which provided the framework for the first School of Chiropody in Britain. The First World War intervened but in 1919, the London School was formally opened, becoming the London Foot Hospital in 1924. Other schools were sanctioned in London and other regions of the U.K. as demand for practitioners grew, namely in Manchester (1923) and Edinburgh (1924). The schools were formed in

voluntary foot hospitals until after the Second World War in 1945 with the introduction of the National Health Services Act. This brought about changes and Chiropody schools developed within the further or higher education sector. The National Health Service (NHS) funded some schools and others became funded by Local Education Authorities (LEAs). This created the dichotomy in chiropody education that had existed until 1997, when the National Health Service (NHS) funded podiatry education.

The Incorporated Society did not represent all practitioners. There were some practitioners who were not formerly trained; who had learned by observation of another practitioner. This group formed a union with a Local Educational Authority Institution to provide for their educational needs by offering theoretical distance learning materials to those already practising, without any clinically based education as part of this provision. Representatives of the chiropody profession in the 1920's were not satisfied with the state of the profession. Various Bills were put to both the House of Lords and the House of the Commons, with little being achieved because the petitioners did not represent all practising chiropodists. There was some unity amongst the five main bodies at that time representing practitioners with agreement that state registration, (and its association with statutory control), would be advantageous to the profession. In 1938, the British Medical Association (BMA) recognised the bodies representing chiropodists, one of the terms of recognition being that the education of chiropodists was provided by a two-year training course, and a syllabus common to all schools. As a result the five bodies merged in 1945, forming what was to become the present day Society of Chiropodists and Podiatrists, which is to date the professional body of most State Registered practitioners. Lorimer (1996) discovered that at this time the standards were those required by the Board of Registration of Medical Auxiliaries. The Cope Report (1951) considered the issues of Chiropody education, stating that the courses at schools approved by the Society of

Chiropodists were satisfactory and that the examinations provided an adequate test for employment within the NHS. The recommendations of the Cope Report were effected within the Professions Supplementary To Medicine Act (1960), which provided Privy Council supervision of professional Chiropody education and training and also standards of conduct. This was an

> *Act to provide for the establishment of a council, boards and disciplinary committees for certain professions supplementary to medicine. It had the responsibility to provide for the registration of their members for regulating professional education and professional conduct and for cancelling registration in cases of misconduct; and for purposes connected with matters aforesaid.*

The Chiropodists Board of the CPSM has been superseded by the HPC, which retains the regulatory powers to accept or refuse the courses offered by the HEIs in chiropody (podiatry). The Chiropodists Board had been actively involved in monitoring and validating the changes in curriculum content and design, with particular reference to the award of honours degrees in Podiatry. It did not recognise the privately sponsored correspondence courses as registerable under the Act.

In 1939 the recognised schools offered a 2-year professional training course which was superseded in 1953 with an extended curriculum to create a 3-year course, awarding diplomas in chiropody. Other schools opened in the U.K., eventually forming the fourteen formally recognised schools which are in existence today, at Queen Margaret's University in Edinburgh; Glasgow Caledonian University; Belfast (University of Ulster); Universities of Salford; Huddersfield; Durham; Northampton; Matthew Boulton College, Birmingham; University of Wales Institute, Cardiff; Plymouth; Southampton; Brighton and The London Foot Hospital and Department of Podiatric Medicine of the University College London (UCL). Each school offers a 3 or 4-year full time course leading to State

Registration. Differences exist, as some courses are 3-year honours degree programmes, with others offering the 4th year to achieve honours status (in Scotland and Australasia) either by tradition of the host institution or by regional policy. At the time of writing, a school in University of Central England in Birmingham is closing following a review of the profile of pathways offered by that institution.

Overseas schools developed within five states of Australia, on the North Island of New Zealand and in South Africa. These schools were largely based within the philosophy of podiatry education in the U.K. but in Australia conformed to local educational requirements, where an honours degree is completed after 4 years of study, as is the case in Scotland.

2.2 Scope of Practice

The advancement and development of podiatry as a profession has made rapid forward movement since the introduction of local analgesia into the curriculum in 1970. This enabled new areas of surgical practice to develop and facilitated the eventual introduction of podiatric surgical practice. Further developments in the applications of biomechanics and gait analysis have necessitated the establishment of educational schemes that reflect the increased scope of practice of the career. It has also required the level of the curriculum to reflect this new status afforded by the advancements in the scope of practice, moving from diploma to degree level of award.

Many lay people believe that the term podiatry is a new name for chiropody and that practitioners perform the same areas of work. This is not the case. Although podiatrists retain and practice the traditional clinical work of the chiropodist as part of their professional activity, they have progressed and developed many other skills. This is

acknowledged in the analysis, evaluation of the needs and diagnosis of patients in the diagnostic related groups (DRG's) in Diabetes, Rheumatology, Gait analysis, Sports injuries, Podopaediatrics, Elderly Care, Therapeutics, Podiatric surgery and in the prescription and manufacture of Orthoses. Opportunities for specialist posts within the NHS have developed, as has the partnership of podiatrists within multi-disciplinary teams, for example in diabetes, rheumatology and the management of sports injuries. All of these interventions rely on research skills, creating the base for evidence-based practice (EBP) and this leads to a greater accountability for the care offered to the patients.

The terms Chiropody, Podiatry, Podiatric Medicine and Podology have to some extent become synonymous. The use of the descriptive word Chiropody has changed to Podiatry in the U.K., but due to generations of familiarity with the term, members of the general public still use the term Chiropody. Podiatry or Podiatric Medicine is the term commonly used in the U.S.A. with local variations of Podiatriste being used in continental Europe. International recognition of Podiatry and Podiatric Medicine is slowly being achieved. In recognition of this major shift in scope of practice the professional body in the U.K. has from July 1993 changed its name to become the Society of Chiropodists and Podiatrists. At the time of writing, there is a Bill passing through the early stages of readings to revise the provisions of the Professional Supplementary to Medicines Act (1960). This will provide the proceedings for the formation of a new regulatory body, the HPC, to continue the work of the CPSM. As part of this new legislation the titles of 'Chiropodist' and 'Podiatrist' will be protected, so that only practitioners registered with the HPC can use them.

In continental Europe, with the exception of Spain, the profession is not organised in a structured manner and practitioners have a reduced scope of practice determined by their

region or country of origin. These courses vary in length from one to three years. There are projections for the future that all pathways of podiatry education in Europe will follow a similar progression and enjoy a similar scope of practice to that of the U.K, which is acknowledged as the 'Gold Standard" to be achieved (Shenton 1993). However this has not yet become a reality and due to the fragmented nature of provision, schools of podiatry in Europe are not included in this study.

In the U.S.A., there have been different historical developments that have produced a different practitioner with an increased scope of practice. Here the programme of study leads to the qualification of Doctor of Podiatric Medicine (D.P.M.). This carries a medical and surgical implication with prescribing of medicines (drugs) and medico-legal studies as an essential part of practice. This pathway is of five years duration and encompasses a higher level in terms of achievement in medical, surgical, legislation, diagnostic and pharmaceutical practices. The emphasis here is not on the acquision of the more traditional clinical chiropody or palliative treatment skills. Surgical practice, biomechanics and orthosis prescription are more prevalent in the USA. Students self-fund their study and when they graduate work in the private sector of practice, which is fully recognised by medical insurance companies. Therefore pathways of podiatry education in the USA are not included in this study.

Until 2000, the schools of podiatry in Canada, which were formerly based in the U.K. tradition, have been curtailed as the Government have decided that it would be more advantageous to employ American trained and educated podiatrists. This has many advantages, not least that these countries share a national border where the exchange of practitioners between the countries is made simpler. The schools of podiatry have entered into co-operative agreements with the American schools to gradually raise the

professional profile of podiatrists in Canada increasing their scope of practice. Therefore the Canadian schools were not included in this study.

2.3 Professional Competence

One of the most important aspects of professional education in Podiatry is that which guarantees competence to practise and provide protection of the general public. In the U.K. current degrees in podiatry ensure that the students have the ability to perform a range of clinical or patient management tasks at each stage of their experience. This has to be ensured to satisfy the requirements for the award of a licence to practise within the NHS, given formerly under the seal of the Chiropodists Board of the Council for Professions Supplementary to Medicine. (CPSM). The regulations pertaining to this award are administered on behalf of the HPC, by the Society of Chiropodists and Podiatrists (SoCAP), who take responsibility for accrediting the threshold competence of students through professional examinations at each school.

If it is to be accepted that the educational processes provides the means to unlock the potential professional abilities in students, then the challenge of developing improved teaching and learning opportunities must be accepted and acted upon.

Ashford's study (1991) had developed an agreed set of clinically supportive competences, which could reasonably be expected of graduates. Jarvis (1984) had argued that competency to practice should not be a sole aim of professional education. He believed that professional educators should produce in students the appreciation of their commitment to learning so that their practice would not fall below a minimum standard. He continued that professional education should be more about education than training, with the emphasis on the development of higher-order skills such as decision-making, reflection and problem solving, all of which should be emphasised as part of this

education. Jarvis acknowledged that the work requirements are incomplete with knowledge alone and that professional education should not be limited to professional development, because knowledge added to practical skills and attitudes are the essentials of any professional practice. It is the combination of these three influences, the curriculum design, content and assessment strategies employed in professional education which sets the standards for education and training of students and this has informed the inclusion of these influences in this study.

Sanazaro's research (1983) showed that the professional qualifications of medical personnel did not bear a strong relationship to the standards of care given by them. He found that any negative attitudes held by practitioners towards their patients were more difficult to rectify, than any lack of knowledge or inadequate clinical skills. This is fully acknowledged within podiatry education, where inappropriate attitudes by staff or students will be reflected by the patients' attitudes towards their own care. Students have 'role models' in the staff members and their own peer group to demonstrate patient interactions, contributing towards attitude formation. The danger invoked by this method of role modelling is the effect of 'shadowing' or 'selective filtering' of information, which may be seen as a reversion to the earlier apprenticeship model which was heavily criticised. This model is still practised by some agencies today. It had been thought that students' learning could be improved using this method, but educational psychology research showed that on average only a 5% improvement could be demonstrated. The failure to retain information given in this manner is termed the 'Stroop effect', named after the psychologist who investigated the learning process throughout the 1930's.

The formalised introduction of research methods and practice into the curriculum has been a major initiative to enable the promotion of evidence-based practice for health care professionals. However new learning emerges from practical experiences, showing

clearly that research skills are in use and that podiatrists are consumers of research. When formally recognised and organised it can be seen that research skills enhance and enrich practice, generating in the learner the personal skill of critical reflection and analysis of their abilities. This is an essential ability and shows the transition from teaching to learning. Usher and Bryant (1989) debate the inter-relationship of research with practice, suggesting that the former is always applied to the latter. The triangular relationship between education, practice and research will always be present and each of the component parts will always inter-relate. It is important not to create a hierarchical case for any individual component, as each is equally important and ongoing in a cycle of learning. Research can therefore be seen as a methodical attempt to gain knowledge of reality but it also has further reflective and predictive qualities. It is central to the provision of evidence of knowledge and therefore supports competence. Clinicians are expected to be 'problem solvers' within their own domain of expertise and they are expected to apply their research and knowledge to their practice.

Without a clear understanding of cultural and societal expectations, students are disadvantaged when asked to manage patients. This created the need for all patient interactions to assume a 'problem' or 'lesion-based' approach. The modular format of studies has created a more formal, closer integration of theory to practice in an inter-related matrix of study that promotes a more 'holistic' approach to patient care. Thus students are able to apply their knowledge as a result of the synthesis of theory with practice as they progress through the pathway. Alternatively, it could be argued that the introduction of the modular programmes has fragmented the curriculum rather than integrate it. Much depends on how modularity was introduced.

2.4. Educational Models

In 1980, Finniston presented his work on the changing roles of education in Engineering. He discussed a theoretical framework, which provided a model of introducing appropriate competences to this trade, which could be applied to many disciplines. In the context of podiatry education, his work provided a possible template for the application of clinical competences. The education of a modern podiatrist can be sub-divided into six domains which largely reflect the competences referred to earlier; The Psychomotor; Cognitive; Inter-personal; Management, Decision making and Evaluative domains.

The psychomotor domain is considered as a set of skills for effecting practical procedures. In podiatric education these are the clinical psychomotor abilities, which are developed throughout the student's clinical experiences over the 3 years of their training and education. These skills are introduced at appropriate stages of the students' experiences. In Year 1 they practice scalpel techniques in a skills laboratory setting. In Year 2 the skills and equipment to perform a range of clinical assessment techniques are introduced. Students move onto working with patients when they are deemed to be safe to practice at this level and their clinical skills develop with their practical experiences.

The cognitive domain revolves around the knowledge and understanding required following immediate access to facts and findings following investigation. This is the research-based ethos generated from the very beginning of their degree education and is an ongoing feature of the pathway. Students are encouraged to triangulate data, using their skills to investigate, analyse, question and critically evaluate all information. They are required to develop information-gathering skills to generate differential (alternative) diagnoses and use diagnostic tests to confirm or eliminate each one to decide on a

preferred diagnosis with the ability to comment on their own progress at each level of their study. This is introduced in Year 1, develops in Year 2 where students learn the processes of diagnosis, developing a selective response to their patient's needs and culminates in competence to practice on graduation after further advanced experiences of Year 3.

The inter-personal aspects of the pathway deal with an appreciation of knowing to whom to turn for advice, help or referral. These are the networks, both formal and informal, which are developed in the inter- and multidisciplinary placement experiences that are integral to the student's clinical experience. Here students appreciate the influences that direct the delivery of health care to their patients. They learn their professional role in this setting and gain some understanding of what, how and why things may not always proceed as they may have desired.

In the management domain, the judgement of capacities and costs in terms of efficiency and effectiveness is a central feature. This enables students to analyse and audit their own professional practice, which is supported by tutors, but in the main is generated in their placement experiences. Students are made more aware of these issues, which even if they themselves cannot influence decisions they may understand the constraints on those who have to make them.

Decision-making skills are of paramount importance to a podiatrist. The development of these skills is central to the development of a working diagnosis, followed by the management of a patients' podiatric care. The ability to think laterally is actively encouraged in students to enable them to seek out all the available evidence and to use this information to link their personal experiences with any similar research evidence they may have discovered. Students may then seek alternative methods of managing their

patients' podiatric care that may provide an improvement in the patient's status. This concept is introduced in Year 2 but is reinforced in clinical teaching during Year 3. Decision-making is also closely linked with determining the potential consequences of a procedure, be it performed by the students or another medical practitioner, and also in the advice given to patients. The final domain, evaluation, concerns the student's ability to re-visit the information gathered about a patient; the ability to review the status of the patient and to know when to embark on alternative therapeutic measures for the patient's longer-term management planning.

Podiatry education neither fits nor follows the traditional model of an academic pathway. It has the added dimension of professional clinical education with added responsibilities for a third party, the patient. Bines (1992) argued that in formalised professional education, it is essential for teaching staff to consider learning and cognitive styles. The ultimate aim being to generate a situation where the responsibility for generating a knowledge base that is less the responsibility of the teacher and more the responsibility of the student. More responsibility for learning is expected of the students who are actively encouraged to research the principles in theoretical terms and bring them to their clinical practice, the outcomes of these processes being greater than their constituent parts. This has become reflected in the students' attitudes to their learning, demonstrated by their taking more of an active part in their education and assuming more responsibility for their own learning, rather than being passive and simply just receiving it. Similarly, tutors have a significant role as Mallik (1998) contends that they should be open-minded, responsible and flexible enough to allows students to share their learning with their tutors and peers and facilitates the empowerment of students. Different models of education can be seen as progressive developments.

A Transactional Learning Model

Kolb (1984) developed Piaget's work in developmental learning in children by suggesting that there were four stages linked together, each having an influence on the way adults learn.

Stage 1 was concrete experience, to include shared experiences with others.

Stage 2 was reflection, with an opportunity to use their own attitudes and beliefs to reflect upon issues.

Stage 3 was conceptualisation, to formulate concepts and generalisations.

Stage 4 was action, to practice and try out new ways of learning and application of their knowledge.

All of these stages of learning experiences can be recognised in podiatry education, each supported by a logical integration of theory to practice. Kolb described this as a transactional model of learning, citing that experience alone did not build knowledge and learning. He showed that an interaction between these elements facilitates learning and promoted the experiential learning model of education, demonstrating that the learning process itself promoted new knowledge or understanding.

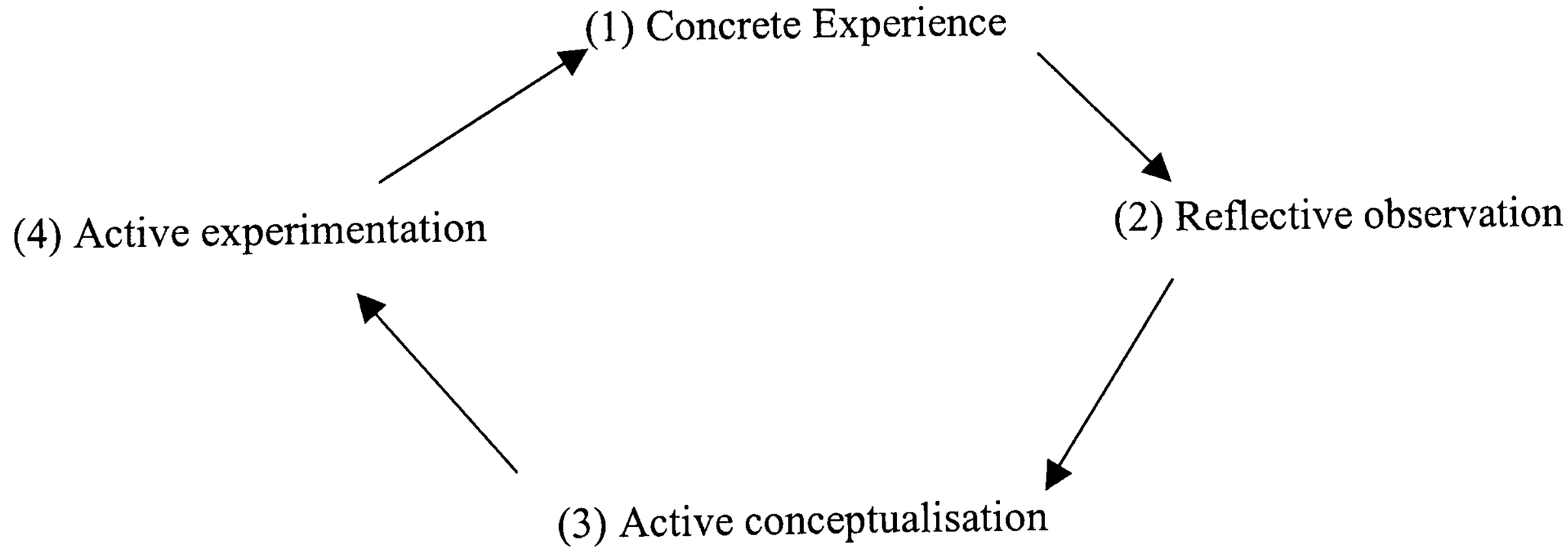


Figure 2. Source. Kolb (1984 p42).

An Experiential Learning Model

Smith (2000) used Kolb's original work and introduced the type of learning styles and characteristics of students as they progress through the model. (Figure 3). Smith saw the lines that linked the 1st and 3rd stage of Kolb's model to show the level of involvement in learning and the line linking 2nd and 4th stages to show the preferred learning style of the students. Smith (2000) described this as a cyclical process linking education, personal and professional education as being the key roles in the learner.

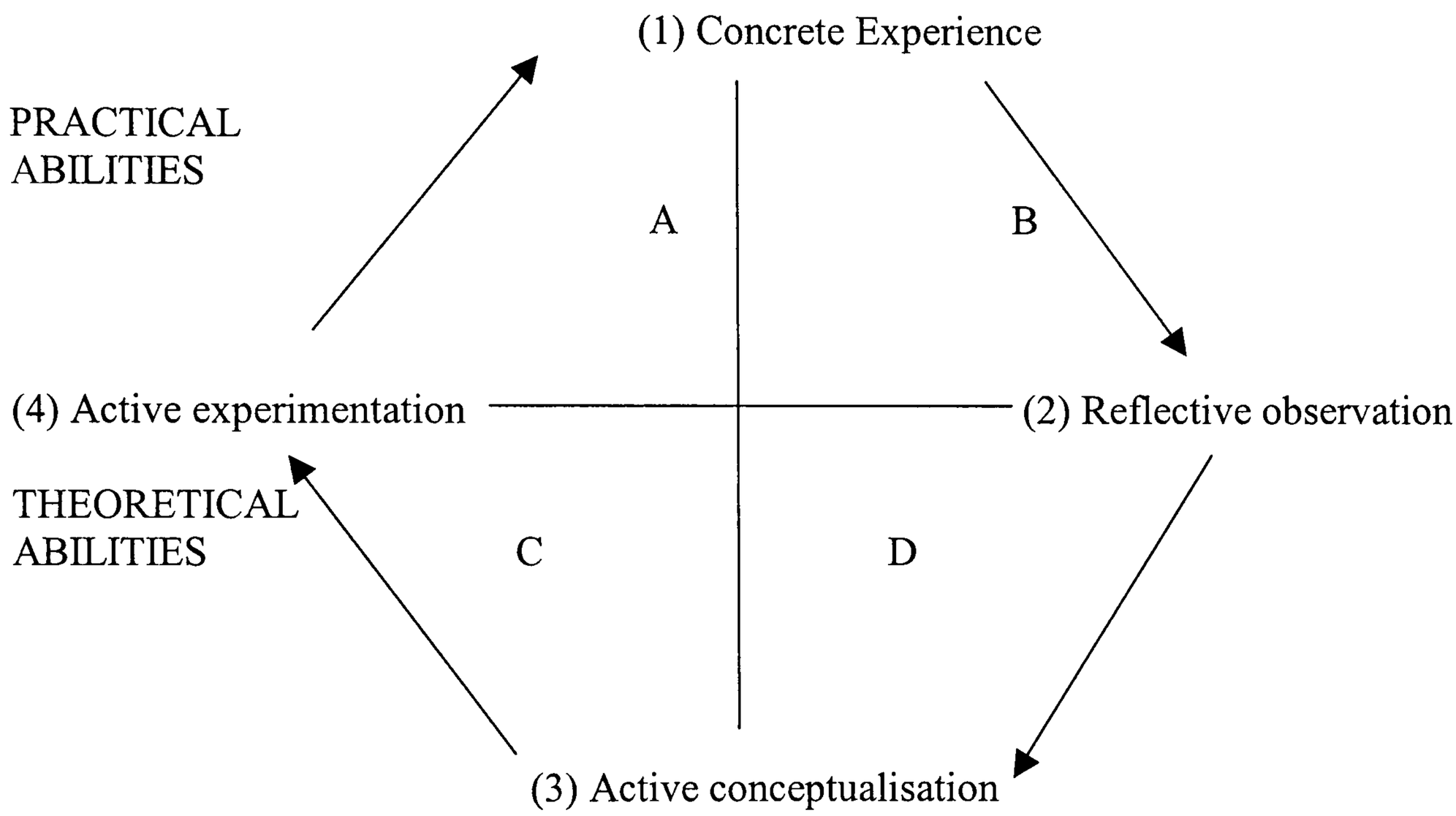


Figure 3. Source. after Smith (2000 p 284).

Students in the upper half of the figure given above were seen to be the practically able students and those in the lower half of the figure were deemed to be theorists. Other characteristics became apparent relating to the learning styles.

Those who occupied the area A were practical by nature and able to use creative skills.

In area B, students were able to set-up alternative perspectives of learning.

Area C produced students who were able to create theoretical models of learning and in area D students were problem-solvers.

In this model, Smith concluded that a range of different learning styles could be accommodated and recognised.

Increasingly, the need to recognise and appreciate the different learning styles is introduced to podiatry students. The Honey and Mumford (1980) questionnaire, although dated, is still used as an introduction to different learning styles, to enable students to realise that there are a range of learning styles; which style they use and that reliance on one style restricts the opportunities to learn and that a mixture of the styles is advantageous to their successful application of theory to practice.

A Reflection Learning Model

Ferenchick, et al (1997) showed that one of the challenges facing tutors was the incorporation of the reflective cycle in teaching, namely: -

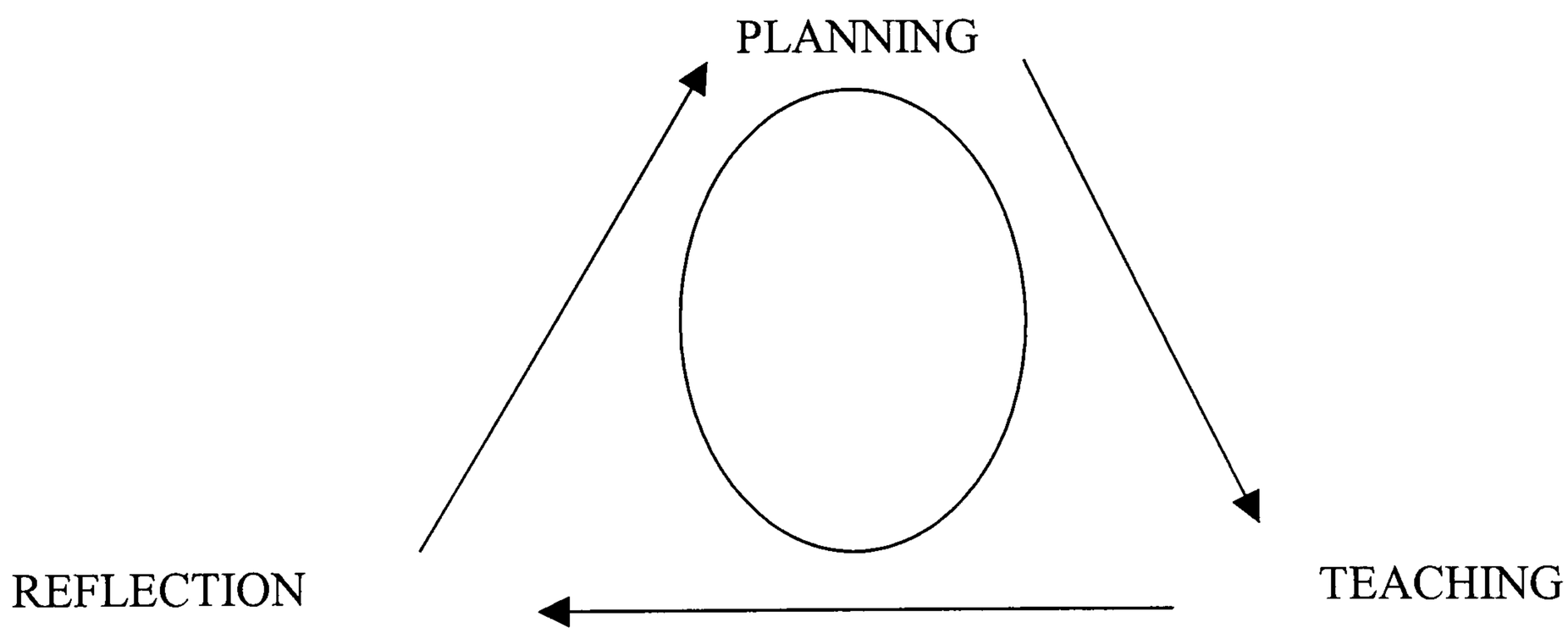


Figure 4. Source. Ferenchick, et al, (1997 pp 277 –280)

Where this process is transparent, it should also encourage students to engage with some analysis of their studies and to recognise their own levels of learning.

The move to this higher-level work has fostered within the new practitioners a critical and analytical approach to an increased scope of podiatric practice, which will promote and

encourage further innovations in treatment strategies and thus improve the health care of patients. There is an increasing trend for podiatrists to specialise in areas of practice, requiring practitioners to possess very high levels of supporting knowledge and clinical abilities in these areas. These abilities have as their foundation a detailed understanding of the theories, which underpin such practices. Podiatrists must also have the ability to systematically analyse, evaluate and audit their practice to monitor and improve the quality of care offered to their patients, so that, as Lorimer (1996) contends, this will generate an increase in confidence to deliver high quality health care.

Burnard's Knowledge model

Burnard (1987) described the acquisition of knowledge in 3 headings. Propositional knowledge, which was based in learning gained from reading books or journals. Practical knowledge that was achieved through learning practical skills, and experiential knowledge, gained through direct personal contact. The criticism of this model is that it did not take the next necessary step to include the application of knowledge.

Biggs' knowledge model

Biggs (1999 p 40) took this a stage further. He introduced another level of knowledge in the context of acquisition and application. Biggs described knowledge in terms of it being declarative knowledge, procedural knowledge, conditional knowledge and functioning knowledge. He developed an incremental hierarchy of these types of knowledge and showed that at the peak of the pyramid is functioning knowledge. Declarative knowledge is that which is declared in books, journals or in lectures; procedural knowledge is knowledge which is skills-based; conditional knowledge incorporates both declarative and procedural knowledge and develops these to a higher level, creating the ability to

problem-solve. This is referred to as functioning knowledge in practice and confirms competence to practice.

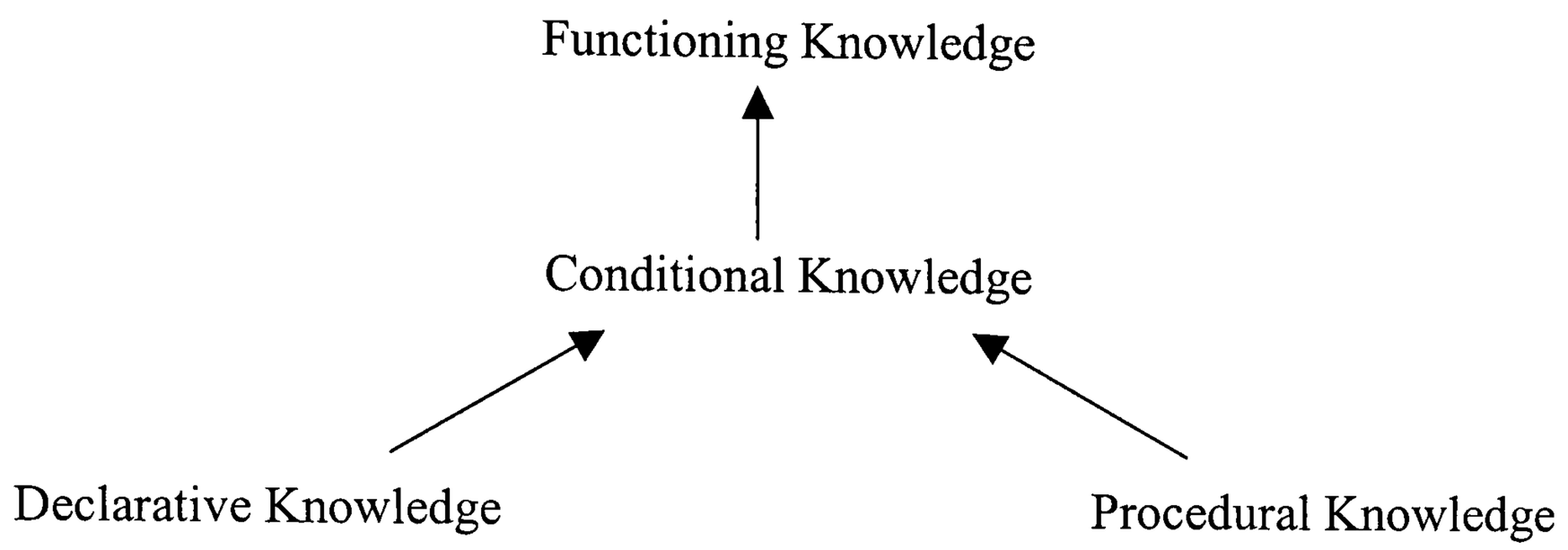


Figure 5. Source. Biggs (1999 p 41)

This model can be recognised in the current processes of podiatry education and Ashford (2001) advocates its further development. He contends that this model would better prepare students for graduate employment and that it answers a lot of the criticisms made by employers of new graduates and enhances their prospects for future employment.

2.5 Educational Developments

The development of problem-based learning (PBL) has been introduced to the curricula of the high school pupil, in the form of a problem-solving approach (PSA). Students experienced in this, on entering higher education, bring this skill with them and are willing to apply their abilities, particularly since all students learn at different rates, in different ways and with different expectations. This is a developing method and is evidenced in some podiatry curricula, but to date it is confined to tutor-led small group work in clinical 'sets'. It is possible that PBL could be developed and used to enhance students' learning by utilising peer support and peer learning. These changes in secondary and post aged 16 education (aged 11-16 years and 16-18 years) show that more modern

teaching methods are replacing the traditional didactic methods, using interactive video equipment, workbooks and compatible computer programmes which allows students to introduce this new learning into their existing practice experience. There is evidence to show that methods of teaching and learning have also changed in higher education to reflect these well-founded skills of the students. The advantage of this is that students are able to study at their own pace, with tutor support if necessary by telephone, fax or computer based on-line facility.

In higher education, traditional didactic teaching methods are no longer deemed the only or most appropriate forms of teaching approach. The Improving Student Learning Project (CNAA 1992) described how this tutor-led form of teaching only produced a superficial learning of issues and encouraged the regurgitation of facts with little understanding. To promote a deeper learning and understanding in the students, the introduction of new approaches to teaching and learning with new assessment methods was encouraged. The CNAA report of the project refers to this as the ' Student Centred Learning ' and was fostered via a number of approaches, each different but effective in producing the required outcomes. The CNAA (1992) recognised that students come to H.E. with fairly fixed ideas of how teaching and learning should be, and it is this influence which affects the individuals' learning experiences. This has a negative effect on any potential change towards facilitating more progressive ways of learning at an early stage of a student's career. There is a case for a didactic approach to teaching in the introductory or foundation stage of the students' experience as long as it is supported with some interactive learning opportunities. A change to more self-directed methods being employed is encouraged for the intermediate and advanced stages of their education. Earlier modes of podiatry education had developed as a mixture of the pure and applied

sciences, with professional theory and practice. They had provided an excellent model for the production of 'technical' practitioners, but did little to produce analytical, reflective practitioners. With an extended curriculum, to include the introduction of the social and behavioural sciences, and with new methods of promoting learning, the development of degrees have enabled schools of podiatry to address this short-coming with the aim to produce students who are good theorists to support safe practice. Ashford (2001) recognises that podiatry education has undergone major change and development since the 1990's. He cites the influences of government initiatives such as the Enterprise in Higher Education (E.H.E.) and more recently the QAA guidelines for Higher Education as being instrumental in the change towards the promotion of skills and theories. These requirements, coupled with the need to recruit a broader range of applicant with diverse entry qualifications, have established the need for a change in educational processes. Students no longer make satisfactory progress relying on the lecture and tutorial presentations. The diversity of students currently enrolling onto professional degree pathways may produce a number of students with different levels of abilities. Some may be good at the theoretical aspects of a pathway but are weak in the practical elements. This creates a tension for the tutors who are required to provide an adaptable learning environment to match these varied requirements. Developmental work by Marland (1997), Cowan (1998) and Toohey (1999) recognises this issue and demonstrates ways for innovative changes to facilitate the learning of a diverse group of students in a variety of new learning environments.

The students' ability to learn and the retention of that learning is a critical factor, particularly in relation to the clinical core, which in all its forms, accounts for over 50% of the pathway. It is designed to build incrementally through the three years, and

eventually in the final year of the course the students will spend up to 80% of their time in clinically related-practice, in preparation for their first employment.

Ferenchick et al, (1997), studied learning in ambulatory care settings (in placement). They found that students should be given a significant role in patient care and that they must be observed whilst providing that care so that feedback on their progress may be given immediately. They suggest that this stage should be followed by a period of reflection where the student can 'cement' their learning from that experience. This follows a principle introduced by Brookfield (1990) who described a 'Critical Incident Method' of learning for teachers. Applied to podiatry education, the students can reflect on their practice and analyse critical events that were either positive or negative experiences and record their learning as a result in their portfolios or logbooks. There is need for caution in pursuing this method. The early stages of clinical education in podiatry take place in a skills-laboratory environment, which modifies the experience of working in practice. This is a very necessary stage of the students' development in achieving the theoretical and psychomotor skills to support their practice (the declarative and procedural knowledge). In placement, some tension exists between the students' learning needs and the provision of a service for patients and this requires careful consideration. Brooker and Butler (1997 p503) discuss this issue in their study based in industry. They found that the workplace was essentially a place of production, and educational learning was a secondary consideration when taking place in this setting. Conclusions drawn from this indicate that the needs of all contributors to the learning process, the university, the placement provider, the student and the community of patients must be carefully balanced to satisfy the requirements of the learning exercise.

Bines and Watson (1992) outline different models of education that can be traced into stages of podiatry education. They describe a pre-technocratic model where routines are rehearsed. A technocratic model, where a knowledge base is applied to practice, with a period of supervised experience and a post technocratic model which focuses on reflection and analysis. Podiatry education has evolved with pre-technocratic, technocratic and post-technocratic elements incorporated into its curriculum design. These domains allow the integration of theory with practice at all levels of the pathway enhancing student experience. The principle is to empower students to develop at their own rates through the different stages of their practice. This ensures a closer 'fit' to the work requirements and addresses the issue of preparation of practitioners for practice.

The pre-technocratic model involves the elements of practice, which are learned in a work-related establishment by theoretical instruction. It entails the demonstration of facts and routines under the direct supervision of experienced practitioners. The technocratic model encourages the interpretation and application of knowledge to practice. It also allows for the development of theory, which is the expected outcome where new learning emerges from practice. It is very much concerned with the processes and interpretations of information gathering and the application of this knowledge to practice, including problem solving, assessment and evaluation of patients' needs and early diagnosis skills.

Hatten et al, (1997) found that the use of this model had developed from the belief that problem-solving, in a professional context, could be mastered through regular and rigorous application of theories and practice.

The Post-Technocratic Model shows the growing emphasis on the development, integration and application of professional competences, the commencement of reflective

practice and the applied use of research skills. This is developed with the increase in clinical experiences, both at the institution and in community placement, where students actively take more responsibility for their practice in the final year of the pathway and experienced staff members assume the 'coaching' role. This practical element assumes the key integrative function, where the cognitive disciplines become contextualised and utilised in the development of professional practice.

2.6 **Models of Assessment**

The main purposes of assessment are initially to be summative, that is, to measure and recognise the standards and achievements of levels of performance by students, leading to the award of academic credits. Assessment may also be formative, that is, to provide feedback to the students at each level of their practice to guide them forward, and also to allow them to gauge their progress. Assessment is considered to be part of the quality control mechanisms to measure the students' progress, the pathway content and the teaching of the pathway of learning. Rowntree (1987) gives another function of assessment, in that it can allow students to be assured that the standards of teaching are the same, or better, than in previous years. Students also need to know, that the classifications of award given by their institution equate with similar awards at other institutions, giving a 'value' to their award and influencing how they feel about their award in terms of its currency. In turn this will be measured in relationship to gaining employment and any future applications for higher qualifications at any institution.

In Podiatry, methods of assessment and the amounts of assessment have undergone major change. They are seen to directly impact on the course content, the style of its delivery and the timings of the assessments themselves. A decision was taken to move away from

the reliance on traditional written examinations for non-clinical core subject areas of work, towards coursework-based assessments. Students were encouraged to keep a portfolio of their work in clinically related coursework and from their practical experiences. This was supplemented with a reflective narrative, which served to demonstrate what the student had learned.

Criterion Referenced Assessment is a form of assessment where students' performance is measured against a known set of criteria. In clinical practice, students are assessed individually with their performance being measured against a set of criteria, which indicate their competence in a given area. This information is accessed via the Objective Structured Clinical Examination (O.S.C.E) and the Objective Structured Practical Examination (O.S.P.E.) where these methods are applied. Here the students are set tasks at each of a number of workstations, each task being oriented to a patient-management task, an assessment or diagnosis technique or its interpretation. The students have a given time to read the instructions and then a further time to undertake their task. The answer sheet is then kept in a folder and the student moves onto the next station. This type of examination can be used formatively to inform students of their progress at a stage of their learning, or it can be summatively to assess their knowledge base and application abilities.

Normative Referenced Assessment is the type of assessment where students' performances in examinations are graded in the order of their results. In this scheme, students are assessed in the performance of an activity in comparison with their peers, creating a hierarchy of results. The practical clinical examinations allow this form of assessment to be facilitated, where all students are required to satisfy examiners who are

looking for the same minimum level of clinical competence in each student, in a carefully managed examination, where the patients are chosen from diagnostically related groups.

Person Referenced Assessment is a scheme of assessment where students may be assessed in terms of recognising their own progress, commencing from a known starting point after an initial assessment. Subsequent assessments provide a personal profile for the students to judge their progress and to judge for themselves their work rates and quality of work. Where clinical portfolio assignments are supported by a narrative, students are required to reflect on their own strengths and weaknesses when presenting a piece of work for assessment. This allows them to analyse their own progress from their own known starting point, and is a clear demonstration of the students' abilities over a period of time. Where this is implemented students are reported to respond well to this type of assessment, as it is not considered to be threatening and empowers them to control their own learning and potential for success. They also see from an early stage where their weaknesses may be and have the opportunity to seek remedial teaching as appropriate.

2.7 The Assessment of Clinical Ability

The assessment of clinical practice is considered to be highly situation specific. The rating of a student's performance of a particular competence is located within the traditions of the people who had developed the practice in certain preferred ways. Therefore it is important to ensure that teaching staffs are prepared for their roles as assessors, thereby demonstrating a consistency between themselves and fairness to the students.

The main areas of priority, which are required in the summative assessment of clinical skills and abilities, include examination in clinical safety, an understanding and

application of clinical and safety protocols and the demonstration of clinical competence appropriate to the stage of the student's experience. It will also include an assessment of the knowledge base achieved by the student to demonstrate an understanding of the theories which inform their comprehension of clinical cases. The students' technical skills and abilities, which are required to demonstrate safe and competent clinical practice, will also need to be ensured as will be the appropriate use of interpersonal skills (communication, behavioural styles and attitudes) in the giving and receiving of information. Through appropriate assessment of these areas positive benefits are derived for both teachers and students. Staff have the information on which to base student assessment and students have the opportunity to become actively involved in, and reflect on, their own performances through peer and self-evaluation. This information can be fed back to the students and their respective strengths and weaknesses can be identified at an early opportunity for remedial action where necessary. Therefore the specific information needs of both staff and students are achieved through the use of this scheme and the longer-term effects on patient management abilities can then be predicted.

Measuring clinical ability is not an easy activity to undertake. One aspect of clinical effectiveness is linked to the results of an assessment scheme, which may look at the assessment itself, whilst another aspect involves an evaluation of the abilities of the practitioner in the work place, which judges the level of attainment by the student. Effective clinical teaching was the central point of the study carried out by Tiberius and Sackin (1988), who inferred that several factors combined to enhance effectiveness, namely, the identification with the teacher by the student; an affective interaction between the student, teacher and fellow students and a sense of shared participation with the patients, students and teachers. Clinical tutors would agree that they have developed a set

of criteria, which are necessary for effective clinical teaching. These would include criteria which were patient-centred not disease-centred; encouraged student participation in problem solving; allowed students to recognise their own knowledge, their strengths and weaknesses and encouraged students to share readings and research through presentations.

There is the potential for all students to have differences in their levels of clinical competence at each stage of the learning process. This is addressed in the feedback of information discussed earlier and through assessment of the clinical portfolio, clinical examinations and their use of the interpersonal skills demonstrated as part of their practice. To ensure equivalency of education, staff must use a number of techniques to determine the student's background knowledge, clinical competences and behavioural attitudes that have been developed through their varied and different learning opportunities. In this way the staff are key personnel in making these judgements and it is imperative that they are appropriately prepared for this role.

2.8 Conclusion

To comply with current government directives on student recruitment into H.E., access routes have been widened, in terms of the range of acceptable entry qualification, to enable a greater range of students to be considered for entry, both for school leavers entering higher education for the first time and for mature students returning to higher education. People wishing to change career often have highly transferable life and previous career experiences, which they bring to their studies, and it is with this in mind that these applicants are usually only required to achieve an 'A' level or its equivalent, to become eligible to join the course. The podiatry courses sampled in this study are similar

to each other, in that they award degrees in podiatry and share similar scopes of practice, yet they are sufficiently different from each other, each being a separate submission displaying different, but equally important strengths. Johnson (1984) showed that the heterogeneity of a profession is further enhanced by differences in national culture and the level of specialisation within each particular profession. This is seen in the added value of a well-motivated and supported staff who are considered to be the main force behind the curriculum development of each individual school.

Schon (1987) identified potential problems in the content of curricula, in that although employers and national bodies selected and accredited institutions to run courses, it is the course providers themselves who dictate content and delivery models, and who act as the final arbiters in determining a practitioner's competence. Therefore common standards are a vital requirement in terms of equivalency and quality of pathway provision.

Gray (2000) observed that professions started originally within the Guilds, working under the logic that a period of apprenticeship, with regular testing, led to competence. Proficiency and mastery of a craft developed through independent practice. Gokulsing et al (1996) noted that Guilds controlled the type of work undertaken, and the numbers of people who entered training for a skill and consequently controlled the numbers who entered that area of employment. In this way they ensured their own survival in the industrial world. This was the case until the early 1900's when the original triangular relationship between the Guild, the State and Funding became augmented with the additional influences of the consumer. The individual professions may be seen to have declined in terms of their influence in the debate about education and change, where societal expectations and consumer consultations have increased. New funding initiatives

for the N.H.S have a major influence in the funding of education and training of modern health care practitioners, with the issue of skill mix once again becoming a central point for debate amongst all AHPs, of which podiatry is just one profession. These funding requirements may also directly influence the content and direction of the health care degrees, showing a preference for training to the requirements of the employers, rather than to education for the future development of the professions. The needs of patients are of paramount importance in all health care environments. The best care for patients is provided by well-educated health care professionals.

All contributors to the process of education should be aware that the attitudes and cultures of any organisation are inevitably instilled into all those who work within it. Positive attitudes and behaviours in education produces positive, enquiring and proactive health care professionals and it is precisely this set of cultural perspectives which need to be retained as they distinguish one degree pathway from any other and they also reflect the attributes of the staff team. Marland (1997) found that where the teacher had limited knowledge of teaching theory, they might rely on their personal experiences of being taught. This is a limiting factor in their ability to become adaptable and cognisant of the changing sets of factors that influence the new curricula.

Chapter 3

The Methodology

This chapter will introduce the chosen methodology of action research and the processes that support it. It will discuss the epistemology of action research, debate the processes and techniques of questionnaires and interviews and apply each of these to this study. The issue of research ethics will also be discussed in the context of this study.

Winter (1989) considered the inter-relationship between Action and Research to be central to study. He suggested that writing theory (research), when separated from practice (action) became abstract speculation. Practice (action), when separated from research, became a self-perpetuating routine or self-justifying reaction. Therefore to be effective and to create a progressing situation, Winter concluded that the concepts of Research and Action are interdependent.

The choice of methodology for this thesis was made after due consideration of the intention of the study, which is to promote change, or at least to increase the likelihood of change, through discussion between the schools of podiatry, about four sets of criteria which may enhance podiatry education. These are considered to be major influences in the student's total learning experiences and which could be considered to supplement and strengthen the use of the QAA benchmark statement when evaluating a podiatry degree pathway. The domains concerning staff, resources, students and pathway issues are the focus of the research. The opportunity will therefore be presented to promote discussion of issues related to these key areas of

influence and hopefully to promote change and improve podiatry education through their adoption.

Action research in this context therefore will be used to facilitate change, as it will invite all the relevant actors who can deliver change, to contribute to, reflect upon and agree on issues at each stage of the research process, following exposure of the issues. Hayes (1991) suggested that one potential role of action research was that it could be used to understand an issue, by challenging the basis on which it is founded and to put it into a context of ideas, so that by introducing these issues to the participating group, change may be recognised and enacted. Robson (1999) recognised that one of the most significant influences of adopting any change into the workplace, or curriculum, is the involvement of the people responsible for the planning of that workplace, or curriculum, in the study. Waterman et al, (1995) wrote that changes in understanding became evident with the realisation that current interpretations of an issue are partial and one-sided and that modifications of interpretations are a necessary development. However, Fullan's work (1982) acknowledged that change could not be assumed to be an automatic outcome of any study, due to the influence of other circumstances, financial or political. He did however believe that the issues would have been brought into the public domain and at the very least they would have been debated.

3.1 Action Research

Stringer (1996) stated that action research was a community-based method of research carried out by the researcher in the field. It has developed into a methodology used to diagnose an issue in a particular context and to solve it within that context. It is considered that in this way it can promote action or change (from within an organisation or culture) more smoothly than by alternative means (external to that

organisation or culture). It is a collaborative method of research that includes the contribution of a team of co-researchers. It is participative but as it works within a specific field the results are not necessarily generalisable to a broader population. The College of Education at the Florida Atlantic University in the U.S.A. provides definitions of action research by authors in this field. It quotes Lewin (1947) saying,

> *Action research is a 3-step process involving 1) planning and reconnaissance, 2) taking actions and 3) fact finding about the results.* (p1)

It also quotes Corey (1953) who wrote that:

> *Action research is the process by which practitioners attempt to study their problems scientifically in order to guide, correct and evaluate their decisions and actions.* (p1)

The North Central Regional Education Library (NCREL) describes action research as being an inquiry or research in the context of a focused effort to improve the quality of an organisation and its performance. This perspective of action research now brings it into a more useful direction in educational terms as it starts to address quality issues. Riding, et al (2000), proposed that an action research approach could contribute within the tertiary sector of education, where concerned with teaching quality issues.

Carr and Kemmis (1986) wrote that a variety of forms of action research had evolved for different environments and circumstances, all adopting a methodical, iterative approach with the insights gained from the first round of actions serving to modify planning for a second cycle of actions. This in turn facilitated a revised second round of actions. Zuber-Skerritt (1992 p 14) formed the view that action research was a

participatory process, which she considered to have a strong characteristic whereby participants contributed equally, describing it with the acronym CRASP:

Critical collaborative enquiry by Reflective practitioners who are Accountable in making their results public: Self-evaluative in their practice and engaged in Participative problem solving and continuing professional development

Sheffield (1997) wrote from a personal perspective of action research, arguing that it is a method of improving practice by exposing inadequacies followed by informed discussion, questioning and reformulating ideas and changing practice. Interestingly she proposed that the process potentially has no end as the effects of change in one area cascaded into other, associated areas of practice. Therefore researchers have to be very carefully in control of the process. Kemmis (1990) argued that action research was an iterative process with major components of planning, action, observation and reflection, the outcomes of which are reviewed, revised and repeated in cycles, as shown below:

Plan (1) > action (1) > observation (1) > reflection (1) > revision (1) > plan (2) > revised action (2) > observation (2) > reflection (2) > revision (2) > ...

The cycle of action research starts with a question, the subject of which has been identified as requiring change and seeks to recognise and resolve issues by collaboration with colleagues. Hatten et al, (1997 p 6) described it as a recursive process of interwoven cycles or stages of research that seeks validity in multiple perspectives. Action research is a method used to facilitate professional development, practice development and organisational change. It has as central tenets to its methodology, interaction and mutual learning, which combine to promote forward thinking and engagement with other significant peers in the same professional field.

McNiff et al, (1996, p 20) cite one of the main strengths of action research as allowing researchers to:

change, improve, discard, make mistakes and enhance learning.

Action research is also a natural application in the field of health care, where all clinical interactions are justified in evidence-based practice with reflection, being descriptive and interpretative of previous experiences. It is however the next phase of practice, the reflexive nature to the process, which is descriptive, interpretative and analytical and this is the basis of the realisation of new understandings. This can be argued to lead to a better understanding and positive change in the field of professional values. Bloodworth et al (2000) argue that it is the very nature of the process of action research that finds validity in the human story, at a level of detail that is comfortable for the participants to provide and in as many perspectives that develop from the studies.

Adelman (1993) records that Kurt Lewin is credited as being the originator of action research techniques. Lewin's studies in the 1930's investigated the effects of democratic participation in decisions on industrial productivity, comparing it with what he termed 'autocratic coercion'. Kimmel (1996) wrote that Lewin believed theoretical progress and the understanding of social problems were interdependent and he provided the background to the development of social relationships within groups and between groups to promote and maintain co-operation. He used this methodology to effectively involve all workers in the increased productivity of their factory through a consultative process. From this, according to Marrow (1969) Lewin coined the maxim, *No action without research: no research without action.*

McNiff (1992) records that Lewin was a social psychologist, keen to investigate industrial practices and to see how these affected the social development of the participants. His original intention was that action research could inform social planning. The principles of his action can be applied directly to this study, in that the future of the quality of education in podiatry must be assured to enable its further development.

The conflict between traditional scientific research and action research is problematical. It can be summarised by recognising that in traditional research, workers generate hypotheses, gather all data, analyse the data and produce findings, which may be generalisable and worthy of action after completion of the study. On the other hand action research requires iterative action at various stages throughout the process of research, to contextualise and inform the study. Robson (1999) concluded that the role of traditional scientific research was to investigate, describe, explain and understand a problem, and action research served to promote change. This study is heavily influenced by both traditions and this is identified in the model outlined in section 3.1.1. Hatten (1997) described 3 main types of action research, technical, emancipatory and practical. She considered technical action research to be used where a theoretical framework is used to test an intervention. Emancipatory action research was considered to reduce the distance between the issues identified and the theories used to achieve their resolution. Practical action research involved the researcher and the practitioner uniting to identify potential issues and their possible means of solution.

3.1.1 Action Research applied to this study

The model proposed for this study demonstrates the practical action research type of study previously introduced, and is given in the scheme outlined below. It follows the philosophy forwarded by Sheffield (1997) and seeks to promote change from within the profession.

1. Establish the need for change
2. Formulate the question
3. Seek initial response from the Professional Body (UK) (i)
4. Refine the question
5. Ask for expert participant involvement with questionnaire. (i)
6. Develop questions and emerging issues
7. Engage expert participants in semi-structured interviews.(ii)
8. Analyse results (i)
9. Develop new supporting criteria
10. Review outcomes of research with expert participants (iii)
11. Analyse results (ii)
12. Request feedback response from Professional Body (UK) (ii) and seek discussions regarding the possible implementation of the agreed standards statements.
13. Encourage the evaluation of these measures through further research.

(the roman numerals given in brackets after each section, indicate the number of consultations with that group)

To undertake this study, data was collected in five phases. Initial contact was made with the professional body to establish existing guidelines and criteria. Secondly, a

panel of expert participants comprising the pathway leaders of the chosen schools of podiatry was approached using a questionnaire to seek their views regarding the four domains to be discussed. Thirdly, the questionnaire was followed up with a taped interview. A review of a doctoral study by Hayes (1991), which utilised the action research approach, shows similarity to the methodology employed in this study. However the only difference was that Hayes utilised interviews in a face-to-face situation. This was not possible to arrange for this study and a taped, distance interview technique used. Fourthly all of the participants were sent a summary of the collected data for further comment. This phase may seem to be a departure from previous action research processes, but the choice was deliberately taken to provide feedback on the whole study, rather than to ask participants to comment on each domain as separate sections. All participants had seen and answered the whole questionnaire and all participants had read the whole script for the interview in preparation for their responses. One point concerning the four domains is that they are inter-related and the consequences of one domain impacts directly on the others, so the participants needed to see the whole of the results to enable them to respond more holistically. The final phase of data collection was in consultation with the professional body to ascertain their comments on the results of this study

3.1.2 The Principles of Action Research

The principles of action research have been followed in the conduct of this thesis. Participants have been engaged in each stage of this study and they have been instrumental in formulating and refining questions in the phases described, as part of the on-going process

Action research is considered to be the most appropriate methodology to employ in this particular study as it allows the researcher to develop the necessary scope to promote professional self-awareness, concerning the need to debate other criteria that influence undergraduate education for podiatrists. The contribution of action research in this context would include the professional body and the key educators in the study, for them to consider a wider based perspective of standards in education, rather than relying on the more limiting aspect of practitioner competences alone. Using action research, it is anticipated that the potential for change and improvement can be realised. Having been exposed to the feedback at each stage of data collection, participants may or may not demonstrate that change has occurred. At the very least the potential for change and improvement would have been achieved. It is intended to offer the resultant findings of the study to the professional body for consideration, alongside the benchmark statements, to strengthen the quality assurance of podiatry education.

To be successful, action research relies on the input and support of informed participants who have consented to take part. Of the twenty-one questionnaires distributed, twenty were returned (phase 2) and of these sixteen respondents consented to take part in the interview phase (phase 3) of data collection.

The results of this study may provide additional appropriate standards in clinical teaching for the undergraduate education for podiatrists, which could possibly be promulgated widely in an attempt to continually improve and ensure the quality of teaching practices in podiatry. Common themes emerging from this study will be re-circulated to the eighteen contributors for their comments (phase 4) before completion

of the thesis is undertaken. These comments may become a foundation for further discussion with the respective professional bodies, leading to the implementation of change requiring these standards to be made a part of the quality debate, allowing the outcome benchmarks to be met more wholly.

Currently the measure of the effectiveness of podiatry education tends to rely on the student's achievement of the competences that form the benchmark statements. It is anticipated that the recognition and inclusion of these new criteria will enhance the effectiveness of podiatry education and ensure a more complete understanding of the influences to register the quality of the investments in podiatry education. There may also be an additional advantage for an international recognition of these enhanced quality statements and enable reciprocity of qualifications between participating countries.

3.2 Questionnaires

The Questionnaire is a research tool used to collect data for a study, which can be quantitative or qualitative in nature and be expressed statistically in descriptive or inferential terms. Sometimes supplementary questions are posed which require the respondent to express an opinion or preference about an issue. This provides qualitative data and may be used to inform or possibly contextualise the study. The questionnaire is thought to be more complex at the beginning of its preparation, with the design and construction of questions (and their coding). In operation, it is less time consuming for the researcher, as it is mainly respondent led in that they fill it in and return it to the researcher. A good questionnaire is unambiguous, easy to follow and interesting to complete.

The starting point of any data collection questionnaire design is to determine the aims of the research, and to design an instrument that enables the researcher to gather appropriate data about a topic by ensuring that the same questions are asked equally of all respondents.

There are commonly two types of questionnaire used, the Interview Questionnaire and the Self-completion questionnaire. Oliver (1997) describes the Interview questionnaire as being the simpler to administer as it is conducted with the researcher present to control the responses and to manage the response with an appropriate code or category. It also, usually, ensures a very high response rate through the personal interaction with the researcher. The disadvantage of this technique is that it is very time-consuming and can be corrupted by the researcher giving too much clarification or details about an issue to prompt a response.

The self-completion questionnaire is less time-consuming for the researcher to conduct. This is usually posted or given by hand to a sample group of the population without any interference of any kind from the researcher, although this may be problematic in that a poor response rate may ensue.

Cohen and Manion (1998) show that the kind of question used affects the outcome of the questionnaire and assert that the ideal questionnaire should be unambiguous and easily understood by both the researcher and the respondent to aid the completion and data gathering procedures which it is meant to facilitate.

Strauss and Corbin (1990 p 41) introduce the notion of enhancing the theoretical sensitivity of a question. They show that the use of questions can be an effective means to open up a subject and enable subsequent questions to uncover more specific and related questions, which can be used to create the characteristics, categories, properties and dimensions of an issue. The form of a questionnaire also affects response rates. A compressed typeface is uninviting and de-motivates respondents whereas an open style encourages respondents to participate and retains their interest.

Galloway (1997) had designed a workbook that provided a guide for the design and analysis of questionnaires. Key factors in this were related to the placing of questions, and their style, in the body of the questionnaire. This has to be carefully planned as lack of attention to these factors may mislead the respondent. It is important to avoid the use of follow-on questions, which may mislead the respondent or influence their response along a path possibly pre-determined by the researcher.

Cohen and Manion (1998 p 96) indicated that it was better to intersperse attitude questions with behavioural questions to relieve any sense of frustration or boredom on the part of the respondent. They also suggested that the questionnaire be divided into 3 elements. The initial element should be composed of simpler questions to engage the respondent, the middle element contains the harder, issue-based questions with the third element being of high interest to motivate the respondent to complete and return the questionnaire.

Having gathered the information it then needs to be sorted and coded to make the volume of collected data usable. This can be a restricting factor for the study as the

number of options may be limited, disallowing other possible responses which may restrict the respondents and the quality of their continued participation. Post-coded questions do in some way address this issue but can be too flexible and allow for too many variations in responses. This type of coding is more under the control of the respondent.

This information gathered in this study is considered to be of importance at the present time due to ongoing professional change and uncertainty, which is being brought about by proposed amendments to the original Act of Parliament of 1960, concerning Professions Allied to Medicine. The issues relating to standards of education have been discussed and evaluated and any new Government legislation and subsequent changes of employer demands will shape the future provision of clinical education in all health-related degrees.

3.2.1 The development of the questions asked in this study.

The formation of the questions used in this study was based in four main domains. The choice of these domains was founded in literature and reflected the original literature by Flexner (1924) in his work in medical education. As this was the first time a study of this nature had been attempted in this professional context and this community of researchers had not been asked these kinds of questions previously, there was not an existing bank of questions to use in pursuit of the aims of is study. The questions themselves were developed from literature-based sources in other academic disciplines and from experiences gained through the QAA evaluation process. Reference was made to the findings of Bowden and Marton (1998), dealing with student attitudes to their learning; teachers abilities to facilitate learning and the

environmental factors that influenced learning. The study by Fish and Purr (1991) highlighted the need to investigate the appropriate preparation of teaching staff for their role and finally the reference to Dearing report (1997) regarding the need for a teacher to hold a teaching qualification. Informal conversations with colleagues at the SoCAP National Teachers (Podiatry) Conference in1999 also yielded some informed opinion regarding the areas for development and discussion.

The questionnaire was piloted to a sample group of experienced tutors, who were not to be part of the study group, to establish the validity of the questions and to establish that they would be valuable in pursuit of this study.

3.2.2 The Questionnaire for this study

An example of the questionnaire used in this study is provided in Appendix 4. The target group for this exercise are all pathway leaders at the recognised schools of podiatry in the U.K, Australia, New Zealand and South Africa with each one considered to be an expert contributor. The questionnaire was designed and compiled with the aim of investigating the influencing factors in four key areas of interest in the setting of standards in podiatry education, namely the staff, the resources, the students and the pathway of education itself.

Each questionnaire was anonymised but coded for tracing purposes. Once responses were returned all coding was destroyed to protect the participants' identity. All participants were asked to fill in the questionnaire or return it blank: a blank return would prevent needless embarrassment for all parties if a second questionnaire was posted to somebody who did not wish to partake in the study.

The questionnaire was composed of 12 questions with sub-questions used to sensitise the data collected. Each question was carefully screened before adding to the list to eliminate researcher bias or ambiguity in the question.

The introductory questions were posed to establish current practices in the preparation of new students for clinical practice, either in clinically supportive areas or in actual clinical interactions with patients.

Informal discussions revealed that opinions differed between staff teams about when it is most appropriate to introduce students to clinical practice (treating patients) so it is important to gauge the responses. The issue of 'clinical hours' is always open to interpretation as previously discussed in chapter 2, so it became important to establish how different staff teams apply these requirements to their pathway. This is important in terms of clinical equivalence between schools of podiatry and in terms of their graduates' clinical experiences.

Questions 5 and 6 sought to identify the methods of clinical education used by the schools. Since variance would be expected between the respondents, depending on their local needs and priorities. This could have a major influence on the students' education.

Question 7 sought to establish where students receive their clinical education, again as opinions differ around the country and around the world. This is commonly considered to be directed by financial costs rather than being based in a judgement of quality of the students' experience. However, this may also be a means used to achieve the prescribed number of clinical hours using a block placement setting.

Questions 8 and 9 sought information about the variety of assessments and how they are implemented to evaluate students' progress, and by whom. Assessment is recognised as being an essential aspect of determining a student's progress. It is also considered to be a thorny issue in terms of the diet of assessment, the distribution of assessment for the students to manage and the marking load borne by the staff.

Question 10 asked how patients are graded into clinical groups to match the expectations of the clinical abilities of the students in each year of the pathway. This may seem to be a logical requirement but each school may not have an available population of potential patients on which to base a graded system of experience.

Questions 11 and 12 looked at the staff abilities, their influences and the preparation of staff to meet the demands of an expanding curriculum. This was considered to be an essential set of questions, particularly as it is the experience of the tutor that contributes to the 'added value' element of their role in the preparation of students for practice.

The final part of the questionnaire sought written confirmation that the participants are prepared to take further part in the follow-up interviews. Apart from one respondent who found the questions hard to answer, all participants who responded provided information for the themes for the interviews.

3.2.3 The Pilot study

To enhance the prospect of maximising the responses from the questionnaire, it was written and appraised by the researcher for accuracy and intended meaning. The original questionnaire was then subjected to a small pilot study to test its validity,

with five experienced teachers of podiatry who would not be asked to participate in the final data collection exercise. This was an important stage of the research development as it was used to eliminate bias and to highlight any potentially leading questions or areas of omission. The pilot group were asked for feedback on the clarity and complexity of the questions, the style and presentations of the questions and the time taken to complete the whole questionnaire. This was an important factor when considering the compliance of the intended expert participants.

Apart from minor typographical details the feedback was positive. No questions were changed but more options were added to the part questions to increase the sensitivity of the responses.

3.3 Interviews

The data gathering techniques using questionnaires and interviews share some characteristics. They are both used for data collection from a target group or population sample, and they are both useful research tools for gathering qualitative information.

An interview requires a lot of work once the series is completed, with transcription of the taped conversation, firstly to paper and then to computer disk. The subsequent coding and analysis require an allocation of time, care of translation and reliable recording. This process of data collection is researcher-led, as they are required to explain and direct the interview. A good interviewer should have excellent summarising skills to curtail any excessive or tangential responses.

Kvale (1996) introduced the interview as a structured and purposeful conversation. It contained a careful questioning and listening approach to collect thoroughly tested

knowledge. He continued, that the qualitative interview is literally an interchange of views between two people about a topic of mutual interest. He shows that this is an unequal arrangement (p 126) with the interviewer defining the situation to introduce the topic and therefore steering the conversation using pre-determined questions.

He reports on seven (7) stages of interview preparation and activation (p 87).

1) Thematising and formulating research questions about an issue.
2) Designing the study to address the issue.
3) The interview itself.
4) Transcription of the interview.
5) Analysis of the interview.
6) Verification of the contents.
7) Reporting the outcomes.

There are 3 major types of interview processes reported in the literature.

Oliver (1997) describes unstructured interviews as being unplanned, without a pre-rehearsed sequence or pattern of questions. This informal kind of interview occurs where the interviewee is invited to lead the conversation in different directions.

Semi-structured interviews are described by Kvale (1996) as interviews with themes to be addressed sequentially, as well as a series of central questions. The ethos of such an exchange is flexible in respect to the sequencing and forms of questions to allow for the follow-up of issues raised by the interviewee through their responses.

The structured interview is an interview where the interviewer controls the interaction by having a pre-rehearsed series of questions about a common interest. The negative aspect of this type of interview is that the interviewer has the opportunity to be too prescriptive and impose or direct his/her views on the issue.

Agar (1986) introduced the notion of the interviewer as being an 'expert' or a 'critic'. The effects on the interviewee are, that where they perceive the interviewer as an

'expert, their response is modified accordingly, assuming that the interviewer already holds knowledge on the subject. Where they perceived the interviewer as a 'critic', the response is modified to protect the interviewee from criticism by the interviewer. He suggested that a neutral third party individual is better at conducting interviews. Another kind of interview is the elite interview. Here an individual with specialist subject knowledge is identified to provide key information, which is otherwise unavailable, thereby changing the balance of the direction of the interview.

Spradley (1979 pp 58-60) describes three main elements in the interview process as being the purpose of the interview, the explanation to participants and the questions to be asked.

As part of the purpose, he recognised that both the informant and the interviewee knew that their discussions will lead somewhere and that within that intention, the interviewee only has a limited appreciation of exactly what the interview is about. He preferred to conduct his interviews as friendly conversations, as otherwise the rapport with, and compliance of, the interviewee is lost. He suggested a cycle of friendly conversations followed by questions about the issue, followed by more friendly conversation. Spradley acknowledged the need for the interviewer to lead the conversation and proceedings to be able to gather information.

In the explanation aspect, he recommends that the interviewer should offer explanations of the questions to facilitate the interview process, easing the interviewee into the situation. This may act to reduce the stress of the situation especially in relation to the point made earlier about the interviewee being disadvantaged in not

knowing where the discussions may lead. This would promote clearer understanding for the interviewee and provide more appropriate responses.

Under the heading of the questions, Spradley suggested that questions take the form of being descriptive in nature to create a relationship with the issue under discussion. Another format he suggests as structural questions, which look at the organisation of the subject and finally contrast questions, which seek comparisons with other factors known by the interviewee.

A problem often encountered in interviews is that of researcher bias. The validity of the interview depends on three factors, the characteristics of the interviewer, the characteristics of the interviewee and the content of the questions. It is suggested that the attitude and opinions of the interviewer may produce a tendency to seek answers to support the study. Misunderstandings of the responses by the interviewer are another problem highlighted, as is the potential for misunderstanding of the question by the interviewee, of the question being asked of them. To rectify these potential problems, the interviewer should have the ability to manage the interview and match the style of the interview to the characteristics of both the interviewer and interviewee, where possible, to eliminate some of these problems. Other difficulties cited include the differences between groups, which are produced by nature of their cultural expectations and perceptions of social class by both participants in the process.

3.3.1 The Interview for this study

The philosophy that underpins these interviews follows the work of Kvale (1996). The interview questions used in the interview schedule are given in Appendix 5.

The semi-structured style of interview, with an elite participant group, was chosen as the most appropriate type to use. It allows some degree of flexibility for the interviewer to follow up some points of particular interest and relevance as they arise and also to make some allowance for a variety of responses from this group of interviewees. It was also considered to be a more enjoyable participatory experience for the interviewees, as they would have some shared control within the proceedings and therefore feel part of the interview process.

Originally it was intended to conduct interviews in a variety of forms, using face-to face interviews with UK based participants and 'on-line' or tape recording for overseas participants. This proved to be impossible to arrange and was also considered to be an inappropriate format because of the potential for researcher bias, when phrasing questions at the interview and the inevitable inequality of the differing interview circumstances. It could also be seen to influence the reliability of the study. To eliminate these factors it was decided to conduct all of the interviews by tape recordings, which were controlled entirely by the respondents. The taped interviews were not piloted. However the script for the interviews was designed based in the responses to the previously circulated questionnaire, which had been inspected by colleagues for matters of accuracy, meaning and explanation. The style was deliberately open and user-friendly in that it allowed full control of the content of the responses to rest with the participant. The participants had been informed of the nature of the following interview and had already agreed to a further survey by semi-structured interview.

For the interview stage of the study, eighteen schools opted to be included, seven from overseas schools and eleven schools from within the U.K. To ensure parity and

to reduce interviewer bias, all respondents were treated equally and were sent a blank audiotape, with a script listing a series of issues for their comment. They were asked to reflect and debate the issues presented to them in the form of a personal conversation with the interviewer. This would enable transcription of the tapes to be more manageable, as points were arranged in themes for the purposes of analysis at a later date. The interview schedule allowed for the inclusion of further developments of the four domains and to enable the participants to expand on any areas introduced in the preceding questionnaire. All participants were asked to pre-read the script and annotate it before recording their responses. They were also asked to listen to what they had said on tape after the recording. They were all allowed to exert full editorial rights over the tape and were able to alter their responses without the interviewer being present to shape or influence the interview in any way without confusion or misunderstanding. There was therefore no personal contact between the interviewer and interviewees to offer explanations or interpretations, so there was no researcher bias to corrupt or coerce respondents and it provided an opportunity to eliminate any possible sense of the interviewees perceiving the interviewer as either an expert or a critic. The disadvantage of this technique was that the interviewer had no opportunity to seek clarification of points raised until the tape had been returned.

The interview schedule for this study was designed to be flexible enough for the interviewer to explore responses with the interviewees, as the themes were based on emerging issues from the questionnaire. All interviewees were asked the same questions in the same format, but because there was some disparity in the experience of some of the respondents, it was anticipated that some responses would be more complete than others. Issues for further debate in this interview were to centre about

the investment of resources to support and nurture students' education in podiatry. This was to include host resources as well as any affiliations the centres had in existence at the time. Points for further discussion included in the schedule concerned a number of aspects. The teaching staff became a central focus of this thesis because they are considered to 'drive the curriculum'. It follows that their qualifications and experiences needed to be recognised and assured. The physical resources needed to be considered in terms of equity between participating schools, particularly if recognition of qualifications is to be an end point for further discussions after this study.

Information relating to students, and their entry point qualifications needed to be discussed in recognition of the wider access opportunities for students with different further education qualifications. In the UK, apart from the traditional A levels and vocational A levels, other qualifications included BTEC's, NVQ's, GNVQ's, Access courses, as well as new developments in Accreditation for Prior Learning (APL) for applications with appropriate other first degrees in health related areas. The introduction of a NHS bursary in the UK has been attractive to many students who under this scheme have their education fees paid and where allowable they may also receive a student income. Pathway issues centred on learning and lifelong learning are also discussed, with some references to clinical competences from the aspect of ensuring their inclusion in the curriculum.

3.4 Data handling and preparation for analysis

The initial part of data preparation commenced as the questionnaires were returned. Each was checked against the coded table to show the schools that had participated and those that had returned the data. The questionnaires were read, and each response recorded. The responses for each question were collated and scored to look for levels

of agreement amongst the participants. The qualitative responses were collated and grouped by themed domain. The outcome of this process shaped the script used for the taped interview.

When the interview tapes were returned, each tape was listened to 3 times in total. The first time was to ensure its sound quality, volume and completeness of the task. The speed of the tape proved to be a problem as some overseas machines played at a faster speed than the UK machines. Once this problem was overcome, the tape was listened to for a second time and transcribed to paper. The third time of re-playing the tape, responses were checked for precision of the response and the transcription was checked for accuracy of data recording. This took place on different days to reduce the risk of familiarity with the tape. It was made easier due to the variation in time intervals between tapes being returned.

The script was purposefully arranged into themes and each point of each theme was carefully recorded and a count of response was maintained. The responses were grouped together in areas where there was common agreement and any variance in response or polemical views were noted. The tone and inflection of the voice was also noted as were the number of times a tape was stopped and re-started, indicating either an equipment fault, a pause in the recording or potentially some element of editing the response. Singular comments were recognised and presented separately. Comparisons between responses could in this way be made between the questionnaire responses and those of the tape-recorded responses. This will be presented and discussed further in the results chapters. The final stage of data handling was to determine a means of scoring the responses to produce a final list.

Evaluation of their final responses was undertaken using a Likert scale, which was chosen to measure the attitude responses to each of the statements. Robson (2002) suggested that the use of Likert scales served two purposes. Firstly they allowed the researcher to establish the response, whether positive or negative and secondly, they allowed some interpretation of the depth of feeling towards an issue. This may be a telling feature of the response. It is usual for Likert scales to offer five options offering two positive statements, two negative statements and a mid point option. However the scale used for this study was deliberately limited to four options, omitting the 'Don't know' or mid-point option. The reason for this was based in the study by Saunders, et al, (2000) who suggested that without the mid-point option participants could only respond to each point in a scale of positive or negative options for each question. This has in effect focused the mean scores for each statement to enable a clear interpretation of the results. The final analysis of the responses was undertaken with each response being coded with a scale of 4 to 1, with the highest score of 4 being allocated to the Strongly Agree option and the lowest score of 1 allocated to the opposite end of the scale at the Strongly Disagree option. For each question, the highest total score with the Strongly Agree option is therefore 48 (12 x 4), with the lowest total score for Strongly Disagree being 12 (12 x 1). The total score for each point was collated and the mean score for each point was calculated. Please refer to appendix 7 for the table. The mean score for each statement was used to determine whether or not the statement was acceptable. Only those scores that fell in the range between 3 and 4, therefore between Agree and Strongly Agree, were selected for inclusion in the final list as this represented the total agreement of all participants. Mean scores less than 3 were eliminated. From an initial set of 32 statements that was put to the group, 28 were accepted and these formed the final set

of recommendations to be forwarded to the professional body for further consideration and debate.

The final act, as agreed with participants was to destroy any means of tracing a response to protect the anonymity of the respondents and to prevent their institution and their students from being identified.

3.5 Research Ethics

Cardwell (1996) introduced the notion of ethics as being a consideration of what is acceptable behaviour, that which is enacted when an individual follows a personal or scientific goal. This introduces the researcher to the terms 'morals' and 'ethics'. These terms are largely used interchangeably but there are differences that need to be acknowledged to understand the intentions of ethical research. Kimmel (1996) suggests that many moral philosophers make subtle differences and use the terms differently. He cited the work of Reynolds (1979), describing morals in relationship to accepted understandings in terms of being 'right or wrong', with ethics being related to conformity to a set of principles or rules of behaviour. He continued his debate to show that in some cases of psychological research studies, it may be ethically acceptable to deceive the participants in the course of the research process. For example, Milgram's (1963) work in behavioural studies of compliance could be considered to be morally unacceptable, although the researchers' work was performed, at that time, within an agreed set of research principles, so it was considered to be ethically acceptable, yet outside a set of acceptable principles within a wider society.

Another differentiator is discussed in relationship to the personal and social values of the researcher. It is the researchers' dilemma to decide whether or not, to inform the participants of an observation, fearing that should participants know they are being observed, this would cause them to act in a different manner and in so doing, change the normality of their actions and influence the validity of the observation, having been corrupted by prior warning.

It is expected that researchers act in a professional manner, being fair and sensitive to the needs of others when working with them. This however should never be assumed and regulations have been written for various professional fields including Anthropology, Psychology, Sociology and Behavioural Sciences. Kimmel's study (1996 p 345) gives examples of these codes.

3.5.1 The ethical considerations of this study

This study was accepted by the Research Committee of the School of Education and Professional Development, at the University of Huddersfield. The participants were informed of the style of the research, of the remit of the study and of the nature and possible benefits of the study. All participants were asked for, and they have given, their informed, written consent to be approached, and each has been assured that they will be treated equally as elite respondents. All participants have been allowed to edit and control their own tape recording before returning it for transcription and each person has been guaranteed confidentiality. The researcher has given an undertaking to destroy any materials that may in any way compromise the identity of any participant, institution or pathway. All participants have been advised of their rights to withdraw from this study at any time without prejudice, without having to give a reason.

Some participants have indicated that they would have preferred a more traditional 'face-to-face' interview or 'voice-to-voice' telephone interview, but have responded to the taped interview request when they realised the need for parity across all respondents. Others have indicated support for this type of approach, as they felt empowered to retain more control of proceedings. Some participants had misplaced their original tape and script but had been motivated and interested enough to have asked for a replacement set to be re-sent to them so they could be included.

Only those who had indicated a willingness to take a further part in the study were contacted on a subsequent time where their responses had not been received.

Introduction to the results chapters

The results are provided in four separate chapters, each reflecting the results taken from the quantitative and qualitative data collected for the four domains of this enquiry, namely data relating to the staff, the resources, the students and the pathway. An analytical narrative is provided to support these.

Analysis of the responses was conducted using content analysis. A paper produced by the Colorado State University (2003) indicated that content analysis is a research tool that could be used to determine the presence of certain words or concepts within a text. This could then be used to quantify and analyse the presence and meanings of such words and concepts. The outcome of this enables inferences to be made about the messages within the texts.

In this study, the texts took the original form of questionnaires and interviews. To conduct a content analysis the data, it was first coded or broken down into themes and then examined using conceptual analysis. This involved quantifying and tallying number of times information was presented with the focus on looking at the occurrence of the details requested in the questionnaire and interview script. A criticism of this could be that it may be complicated by the need to base judgments on the subjective interpretations of the researcher.

According to Robson (1999), content analysis had 6 keys aspects. The research question, the sampling strategy, the recording unit, the categories for analysis and the test of reliability and the analysis itself. Each of these key aspects have

been evidenced and addressed in this study. Robson considered content analysis to be an appropriate analytical tool to use with qualitative data gathered in the form of questionnaires and interviews. He noted that difficulties could arise with this type of analysis, particularly with the interpretation of what he termed manifest content (that which was actually presented) and the latent content (that which was inferred or required interpretation by the researcher). The former he referred to as having low interference (by the researcher) because the data was factually reported from the data collection instrument. The latter he referred to as having high interference as there was some opportunity for the researcher to manipulate the data by applying their own interpretations to the responses.

This study concentrated on the manifest content of data returned, minimising interference by the researcher, although reference may be drawn in cases where a particularly notable response was made or indicated by the tone of voice or language used.

Cohen and Manion (1998) indicated that this method of analysis reflected the nature of the study and served to shed some light on the political and social agendas that may influence the responses. These factors too are noted and reflected upon in the following chapters.

The data was gathered in five phases using an action research approach. Each phase of data collection was used to sensitise and modify the next phase until the process was completed.

Phase 1 of the data collection was a written communication to the Professional Body of the profession in the U.K., the Society of Chiropodists and Podiatrists, requesting details of any baseline standards used to assess Schools of Podiatry. The letter of request is provided in appendix 2.

The response was an e-mail communication, the essential contents of which are provided in the section below (appendix 3).

Phase II was a data collection exercise using a self-completion questionnaire requested of the twenty pathway leaders of degrees in podiatry at schools of podiatry which matched the inclusion criteria for this study (appendix 4). The content of these responses was collated and this formed the themes for the development of the interview schedule.

Phase III was the collection of data using a set of common themes, provided in the form of a script. Responses were collected from participants using a self-recording of a taped semi-structured interview. The transcription of the interview tapes taken from these expert participants forms the narrative and some are given as quotations of their responses (appendix 5).

The results from both the questionnaires and taped interviews were then re-assembled into the four main categories, matched by domain and discussed in the four separate chapters. For analytical purposes, responses were grouped to reflect the levels of agreement within the group and placed within a social context. This was further analysed and commented upon using the concepts of

reciprocity, reflexivity and reflection-on-reality as advocated by Robertson (2000) in Chapter 10.

A summary of the common factors from these interviews is given at the end of each chapter as a review of the outcomes. The main points were sent to the participants for their further comment and final refinement.

Phase IV of the data was collated from the feedback of all participants. The emergent outcomes of this study are tabulated in appendix 7, which shows the mean scores for each point. This mean score was used to decide whether the group agreed on an issue and this is discussed further in Chapter 8.

The final set of statements were sent to the Professional Body, appendix 8, to demonstrate the final outcomes of the study and the level of support for each statement. The professional body's response formed phase V and is provided in appendix 9.

Phase 1 – The original request for information from the Professional Body in the UK

An extract from the original written request for information by the researcher.

> *...The starting point is to ask you if there are any guidelines used by the Society which inform the decisions of the reviewing panel when they undertake quinquennial reviews of the Schools. Clearly decisions and judgements are made about each School, their strengths and weaknesses in the context of their resource investments by their host institution. There must therefore be some variability allowed between Schools and their provision of clinical teaching....*

The Professional Body's response: -

This was the e-mail response to a written communication to the Director of Education of the Society of Chiropodists and Podiatrists.

> *There are no standards of the sort you are requesting for evaluating schools. However the new QAA/NHSE/PSB methodology for QAA Reviews post 2001 will utilise 'benchmarks', yet to be developed, for the assessment of courses. Benchmarks have been piloted for Law, History etc... but their utilisation for vocational courses is yet to be determined & evaluated.*

The Director of Education acknowledged the need for such guidelines, indicating that changes in the quality assurance arena would require benchmark standards to ensure the quality of education of podiatrists, saying

> *The Society (of Chiropodists and Podiatrists) will shortly have to set up a benchmarking group together with representatives from employers, HE and the statutory body to progress this method of evaluating courses. It will be a common methodology across all courses in all subjects in the UK*

Benchmark statements, in the form of measurable outcomes based on students' performance, had been formulated, agreed and published for practising podiatrists. However no such requirement had been made for the other major influences, which both affect and effect the respective pathways undertaken by undergraduate students. The Health Professions Council (HPC) will assume the functions and responsibilities of the CPSM regarding visiting HEIs, when the new Health Bill is introduced. It would be advantageous for the professional body to be proactive in the formulation of such addition criteria, to be in a position to act following discussion with the educators. Ultimately the HPC will become the arbiters of professional standards for all Allied Health Professional (AHP) education in this new arrangement in consultation with the professional body. Clearly there has to be a move of this nature to

respond to both the QAA initiatives and the changes in professional education. This has been prompted by a requirement to ensure quality in the education of podiatrists.

The UK schools of podiatry are now all located in the new universities, formerly Polytechnics. Before the new Universities were empowered to validate and award their own degrees, the recognised qualification for Podiatrists was the Diploma in Podiatric Medicine. This award contained learning materials appropriate for the preparation of students to become practitioners. It served as the standard for Membership of the Professional Body, the Society of Chiropodists and Podiatrists and for State Registration with the CPSM. These diploma courses were the direct responsibility of the Professional Body and were similar in content, style and delivery at all institutions.

There followed a major shift in responsibility for the new degrees when the universities were enabled to validate their own awards. The new degrees in Podiatry were still recognised for the purposes of Membership of the Professional Body, the Society of Chiropodists and Podiatrists and for State Registration with the CPSM, but the parent institutions retained ownership of the pathways. There followed a change in the content, philosophy and delivery of the degrees to reflect the requirements and culture of the host institution. Social and behavioural sciences became integrated into the new curricula and new content areas were included which were not strictly required for practice, but were considered to be essential skills for the new developing profession.

These changes produced a variety of degrees, which satisfied the validation mechanisms of the universities but it was a widely held view that this created a noticeable difference between the graduates of the different schools, regarding their academic and clinical strengths and abilities.

Chapter 4

The Staff

4.1 Introduction

It is the intention of this chapter to investigate the perceptions of these expert participants regarding the role that they feel the teaching staff has in the processes involved in the curriculum for educating podiatrists. Informally, it is widely assumed that it is the staff of the individual schools that shape and drive their respective curricula, particularly in reflecting the culture of the parent institution. The respective staff teams are the significant people who are primarily involved with the generation of the separate degrees, their underlying philosophy, content, delivery and assessment.

The quality of the staff teams can be considered, quite possibly, to be the major influence in the development of the different pathways, as indeed they are the major actors in the educative process. Research undertaken by D'Andrea and Gosling (2001) contended that the accreditation of professional competence (teaching abilities) in lecturers in H.E. is no longer considered to be an option. In the UK, this philosophy is central to the work undertaken by the Higher Education Staff Development Association (HESDA) and this work is continued through the Institute for Learning and Teaching in Higher Education (ILTHE). An alternative view to this proposition was a point raised in the interview tapes, which was contrary to this notion and was expressed as:

> *Do you really think that the staff drive the curriculum? I wish this were so...with us money drives the curriculum linked to a (local) professional need.*

This response may be interpreted in different ways either as a cynical riposte or as a direct reflection that financial considerations drive the curriculum. It would be naïve to discount the influence fiscal policies have on education, but this comment does typify the growing fears and concerns of staff at different institutions have concerning funding. It must be recognised that although unlimited budgets do not guarantee the quality of education, a restriction of funding would affect the quality and breadth of the provision. Similarly any reduction in the curriculum could reduce the quality of the students' abilities in practice. Informal discussions with colleagues show that it is understood that money, its accumulation, expenditure and justification is becoming the central factor in the competitive market for funding within and between competing institutions. Survival of some pathways within their host institution's profile of pathways is constantly under review and most decisions about those pathways are based on considerations of student recruitment, retention and success rates. In short, pathways survive depending on their financial viability. In the U.K. local NHS Workforce Development Confederations (WDC) agree education contracts with universities and much relies on the local understandings, priorities and agendas of such organisations. Another underlying trend is seen where staff are re-directed from their teaching duties to undertake funded research or other income generation activities, to fund the provision of part-time teachers to deliver the curriculum. This may be seen to weaken the teaching influence for students and therefore affect their learning. These factors, coupled with the requirements of the locality, such as generating new income by providing a range of courses for continuing professional

continuing professional development (CPD), are significant considerations in the delivery of the degree pathways.

Another point raised from the interviews surrounded the ownership and currency of the curriculum. This was reflected in the response,

> *Well in the past we have looked to the staff to drive the curriculum...but we reviewed our curriculum and we looked at the staff to write the documents.*

The same respondent continued,

> *We thought we should involve the service managers, to have some input to these decisions. However this served to widen the debate rather than necessarily clarify the issues. There has been a significant shift to include the influences of all people who are involved in student education, for example placements providers, which is only right. The professional body has also played a role.*

This broadening of the consultation constituency, to include all stakeholders, is to be welcomed at some stage in the discussion especially where the emphasis is about employment. However, a major consideration to be taken into account is what an educational programme needs to provide, namely an academic philosophy that embraces more than what is simply needed to achieve basic competence in skills to practice. This may contrast with the requirements of what a manager needs for the provision of a service. Managers manage their service within the context of a 3 or 5-year plan, operating within budgets and the immediate needs of service in their region. They require people able to fulfil a particular function. The role of educators on the other hand, is to promote and develop the skills necessary for lifelong learning and the application of these skills, within an environment of an evidence base, to validate that clinical practice. There exists an understanding between these two philosophies and the case is accepted for a broad-based curriculum, which

is preparatory for all stages of undergraduate practice, ranging from competence through the proficiency stage to the mastery of practice, which is achieved after graduation.

4.1.1 The requirement for Staff to hold degree qualifications

The profession of Podiatry has undergone a major cultural change and this is reflected in the education and training of students. Before the introduction of degrees, the educational emphasis was on the development of clinical skills and the production of good clinical practitioners. At that time the amount of practical experience was the main criterion for appointment to a teaching post, as this reflected the needs of the curriculum of the time. After the introduction of degrees, the pathways of learning have further developed to include the need for students to have a research base, to enable them to interpret the evidence to support their professional practice. Therefore the students have developed good intellectual abilities. The change of expectations reflects the cultural shift to show theoretical excellence, which underpins practice and this has necessitated the appointment of a different type of educator. The findings show a preference for a member of staff who is more research-based rather than with a range of clinically based experiences.

The credibility of the teaching staff to deliver a degree pathway lies either in their clinical and teaching experiences or in their qualifications. A consideration is that for staff to teach on a degree course they should have a first degree or higher award so that they can understand the process to guide and support students accordingly. The responses to the question asking if it

was felt that staff should be required to hold an appropriate first degree produced a range of responses. All 20 (100%) respondents indicated that their full-time members of staff are required to hold an appropriate first degree. This may not necessarily be a degree in podiatry. Other disciplines, for example physiology or medicine, may be included in this response from schools to support these key aspects of the curriculum.

> *The first degree could be in Podiatry or related subject area such as Health Studies. I do not think that the degree must be specifically in Podiatry provided the individual has recognised professional qualifications and is State Registered.*

Interestingly not all part-time staff (65%) and fewer placement staff (30%) are required to hold a first degree. This may be explained by understanding that many part-time teaching staff are employed to teach the clinical components of the curriculum so are employed for their experience in practice. These part-time staff bring an external perspective to a student's university-based education. This is the added value of having such experienced staff, which is demonstrated in the environment of clinical practice at another hospital or community clinical site. Students in placement settings, away from their university-based clinical facility, are required to experience the environment and the variety of caseloads offered by that placement in order that they achieve different aspects of their education. However, where part-time and placement-based staff did not hold a degree, this may have implications about the equivalency of the students' experience and the ways in which practice is explained and mentored to them in the different settings.

Quinn (1998) found that the key factor influencing the learning environment was the qualified staff. Where they lacked current theory and practice knowledge, a barrier was created between themselves and the student.

A variety of responses from the taped interviews showed that there was a range of academic qualifications now required of teaching staff depending on the levels of appointment. Some respondents were definite in their opinions and requirements, responding,

All full time staff are expected to hold a first degree at honours level.

The level at which members of staff were appointed provided a relatively common range of responses. There was some variance with respect to expectations of staff depending whether they were appointed on a full-time basis, at a junior or senior level of appointment, on a part-time basis or where they were based in a placement setting.

For newly appointed full-time staff, a baseline requirement of a first degree with honours was indicated. Some disparity existed in the level of achievement of that degree, with some comments showing a strong justification for their opinions.

> *We require all of our full-time staff to hold a BSc (Hons) degree or an M.Sc. If they do not hold a higher degree we look for their commitment to achieving this higher degree award.*

The preference for a M.Sc. level award is a common feature, as many diploma holders did not undertake a first degree as their post-graduate development. Many practitioners have moved straight to Masters level awards, their awards reflecting their clinical experience, for example in the clinical areas of Diabetes or Rheumatology, following a number of years experience in practice

in that field. These staff have supported the inter disciplinary liaisons with other health care providers in these clinical areas to further develop the professional standing of podiatry in a wider health care context. The information and experiences shared in these new partnerships have developed new opportunities for research, publication of joint papers and the involvement of podiatrists in the multi disciplinary team (MDT).

This next view clearly reflected the feeling that teachers need to hold an academic qualification beyond the first-degree level, although not necessarily for professional reasons, but as an indicator of academic credibility within the institution.

> *The current baseline academic level is definitely the BSc (honours) degree, but as we* (the pathway) *mature, this will move to a Masters degree I'm sure.*

This increasing trend towards the achievement of higher academic awards reflects the advancement and range of opportunities for teachers of podiatry and in turn to the support afforded to the undergraduate students.

Many colleagues indicated that it was their desire to see the stage arrive when teaching staff held a first degree but had also made a commitment to gaining a higher degree. Some reported that they were in the situation where these awards were not currently available and that postgraduate awards were being developed and should be available within the next two to three years.

At a senior tutor level of appointment, the expectations of staff were justifiably different, requiring a Masters level award or a commitment to achieving this

within a given time frame. This would reflect a commitment to higher order study in the pursuit of a research activity to support personal and professional development.

> *All staff must hold a first degree and I would expect that new appointees at the Senior Lecturer level hold or are completing a Master award.*

Some replied that they expected their staff to be appointed holding higher levels of qualifications pertinent to the requirements of the pathway or which enhanced the staff team, saying,

> *I think it is essential that staff hold a first degree at 2:1 or 1st level of award and be committed to gaining a higher award. This may be a Postgraduate Certificate, Postgraduate Diploma or other Masters modules or a complete Masters award. This would depend on the relevance of the award to the needs of the pathway and the contribution of this qualification to the overall profile of the teaching team.*

Within the senior level of appointment, there was also a developing requirement for staff to have gained a PhD level award or be working towards such an award to reflect the level of contribution to new perspectives and knowledge in a professional context.

> *It is important that staff not only hold a first degree but also a post-graduate degree. That is what I am currently looking for... at a doctorate level.*

> *All new appointments to full time staff posts must hold a Masters degree and be committed to achieving a PhD whilst in post.*

This is a common response and it was noted that there was a lack of podiatrists with PhD level awards, but many of those with this level of award were not remaining within the clinical side of the profession. Some have moved into other career areas such as management, administration or in full-time research posts to fulfil other career ambitions. New appointees with a higher level of

academic achievement, coupled with a credible research and publication record are advantageous to schools that are included in research assessment exercises (RAE), which has come to dominate much of university life, as this could affect the schools ability to attract research funding

One respondent recognised the problem and reflected the reality of the situation in Podiatry. There are not many podiatrists with Ph.D. level awards. Those who do hold doctorate level awards are mainly from within the teaching profession and these have studied a range of subject areas, some of which are not in the field of podiatry itself but are in related areas that attract funding from external sponsors

> *We are looking at making full time appointments at PhD level, although people with this level of qualification are not easy to find. Certainly we look to people who are committed to completing this within the first 2-3 years of joining the staff.*

The situation is improving with increasing numbers of post-graduate students registered for Masters level courses. This is another reflection of the cultural change that is slowly occurring, with tutors being supported to pursue doctorate level study whilst in post, as a condition of their employment and more clinicians too are being supported by their employers to follow a doctorate level award. The future bodes well for the profession with more post-graduate students being registered to follow higher and doctorate level awards but a problem often cited is one of studying on a part-time basis whilst managing a full-time career. In common with other disciplines, informal discussions with colleagues about this issue show that many post-graduate students find the traditional Ph.D. route to be long, difficult and lonely. They report that some of their post-graduate students leave the pathway without

completing the final stages, accepting a post-graduate diploma or Masters level award.

One respondent was concerned that 'good' people might be deterred from entering the teaching side of the profession if the entry requirements were set too high. This seems to be a point for further discussion and relates to the lack of interest in graduates to enter the teaching side of the profession.

> *The minimum requirement should be a first degree (honours) at 2(ii) or above. I do not believe that we should be looking at less than a 2(ii) classification if we are to ensure that the individual has sufficient academic credibility. Some would have the view that we should be looking at Masters level for entry into the teaching profession of Podiatry but I believe that this would exclude some very able individuals who for many reasons have not had the opportunity to pursue a higher degree. Having entered the teaching profession then individuals should be encouraged and supported to undertake a Masters programme. We need to have realistic baseline requirements that will attract individuals into teaching and not deter them. There is a real need to attract potential teachers to the profession particularly in view of the current shortfall.*

On further reflection of this response, although it is acknowledged that teachers require more skills than just academic credibility, the reality of the situation, which was recognised by Harland and Staniforth (2000), is that on appointment teachers are expected to manage a set of tasks with minimal development time and with little opportunity of pursuing higher academic awards. In this case schools often insist on a higher-level award for entry to teaching and make the assumption that teachers can cope.

However not all respondents were in agreement with the need for a first degree. Each of these cited the need to recognise the clinical experience and potential teaching skills a non-graduate has and felt that these people could do a good job.

No, I don't think it (having a degree) is a necessity as it may remove from the available list of staff people with diploma level qualifications who would make good tutors. I do think a degree would be desirable.

Another respondent preferred to look at an applicant's experience before making a decision, retaining an element of flexibility to allow for the matching of an applicant's experience to the needs of the pathway.

I think we have now got to the stage where I would require staff to hold a first degree. However I would still be prepared to make an exception in the case where somebody does not have a degree but who has valuable experience.

It is this equivocation that confounds the issue. The value of clinical experience is an essential element for teaching clinical skills, but the appointment of a graduate also brings some research skills and academic credibility to support student learning. It also highlights the link between the evidence base and practice, which is another essential part of the education of new podiatrists.

The latter response may be seen to be short-lived as a degree in Podiatry has only been available since 1990 and many people with diplomas are currently in practice. As new generations of podiatrists graduate, all potential teaching staff will hold a first degree. The debate for the future will be the level of award and amount of clinical experience held by the applicant.

With respect to part-time staff, there was a view expressed that reflected 65% (13 schools) of the respondents indicating,

Our part-time staff must have a minimum of a first degree and suitable clinical experience and all staff are required to have evidence of CPD.

The placement-based staff were not required to hold a first degree in all cases, indeed only 30% (6 schools) of this sample required them to do so. The primary focus of placement staff may be considered to provide an applied professional lead for students, based in a clinical experience and setting which reflects professional practice. This may be within a hospital setting, in a community health provider's premises or in an individual private practice. This experience is an essential element for the students to assimilate knowledge and learning. The placement staff may not be expected to provide a traditional educational lead for students as their home university normally facilitates this aspect of their learning. They would be expected to build on the students' theoretical knowledge to enable them to develop in the context of a practice setting. It must be recognised that it was they who controlled the situation and it is they who are the significant role models. Their leadership style and personality are considered to be key characteristics of an effective learning environment and these staff must be carefully selected. The abilities of the placement staff too must be considered. The JQAC Handbook (2000) (p 30 2.3) cites that,

> *students should not be disadvantaged by poor facilities or poor supervision on clinical placement*

The handbook continues

> *Placements should encompass a diversity of locations and student experiences and that all parties are satisfied with the competences of the staff concerned with clinical supervision.*
>
> JQAC Handbook (2000) Pp 31 & 32

.

The Universities must therefore be seen to ensure the competence and currency of update of the placement staff to be able to perform their expected roles.

4.1.2 The requirement for teaching staff to hold teaching qualifications

The following responses from both the questionnaires and interview tapes are of interest considering recommendation no. 48 of the National Committee of Inquiry into Higher Education for the 21st Century, referred to as the Dearing Report (1997). This report recommends that all full-time academic staff with teaching responsibilities should achieve membership of the Institute for Learning and Teaching in Higher Education (ILTHE), and that all new teaching staff should achieve associate membership after the successful completion of a probationary period. This view is reinforced by D'Andrea and Gosling (2001 p.68) who found that it is possible for new teaching appointees to have little or no formal professional preparation for their role as a lecturer and that all such staff, who have any level of responsibility for student learning, should receive support to develop such knowledge and skills. To do this they will have to apply using a portfolio of evidence of their teaching expertise. The U.K. Government considered that this was primarily a matter for the institutions providing higher education. However the Government supported this recommendation and would also like to see the ILTHE offer a range of membership or associate membership possibilities, which is made available to all those who teach students. The present Government has stated that all teachers in higher education should hold a professional teaching qualification, which has been achieved by satisfying the demanding standards

of teaching and supervisory competence through an approved scheme of training or experience.

The responses to the question asking if it should be a requirement for teaching staff to hold a recognised teaching qualification, showed that only 30% of all schools of podiatry required their staff to hold a recognised teaching qualification. This may be because, as one respondent commented, that it might be believed that if somebody holds a first degree, then they can teach the subject. There is also a perception that clinical experience is an appropriate substitute for professional ability as a tutor. Given that 7 (35%) of the respondents were from overseas, and therefore outside the influence of the Dearing Report, only 6 (30%) U.K. schools acknowledged the need for such a requirement with one respondent reporting,

> *In my view these (teaching qualifications) are not necessary, a degree is sufficient.*

This was a surprising response considering the recommendation by Dearing, as it was anticipated that all schools would require some form of teaching qualification or experience, depending on the level of appointment, prior to starting teaching. Harland and Staniforth (2000) showed that the expected roles of new tutors on initial appointment are many and varied, some relying on their professional ability and others on their experiences of life and in education. Their research shows that many new tutors are recruited mainly for their research record and research potential, once again reinforcing the professional advancement of podiatry. They acknowledge that all graduates will have some experience of this in their undergraduate experience in the final

stages of their degree or in post-graduate studies and indeed, this may be the only expertise these new tutors hold. Where this is the case, new academic staff members are expected to learn their teaching skills in practice. To some this may be considered to be a major weakness and affect the quality of the students' learning experience whilst for others this may not be so significant a problem. However, the lack of induction into the teaching and learning processes afforded by such a qualification may have a negative effect on tutors' abilities. The inexperienced staff member will only be able to rely on their own personal experiences as a student, namely their personal experiences with their own tutors, on which to base their styles and attitudes. They may therefore be disadvantaged in terms of their professional approaches and attitudes towards their students. Responses to a supplementary question asking which qualifications were acceptable listed a range of programmes including the Bachelor of Education (B.Ed), Certificate of Education (Cert. Ed.) Certificate of F.E., (Cert F.E), Certificate of H.E. (Cert. H.E), City and Guilds (C&G) 730 / 7303, Post-Graduate Certificate of Education (PGCE) and the Post-Graduate Certificate of Professional Development (PCPD) as being appropriate. For such a negative response to the previous question regarding the need for a teaching qualification awards, this is an exhaustive list of recognised teaching awards and shows the awareness of such programmes. However most responses inferred that staff would be encouraged to pursue one of these qualifications when new staff were in post. Realistically most new tutors are busy with the business of their expected roles to which they have been appointed. The longer-term pathways available, the B.Ed., therefore need to be seen in the light of balancing the need for the qualification with the

requirements of the teaching post. Most new teachers may be released one day per week for one year, to complete a certificate level course as part of their staff development. Most are also expected to be research active and actively engaged in conducting personal and professional CPD, so a one-year option is the more likely to be appropriate.

Many institutions in the U.K. are encouraging their staff to become members of the ILTHE indeed some are refunding the first years subscriptions to promote the initiative. To be accredited with full membership, staff must maintain a portfolio of their teaching experiences, supported by a reflective narrative and accompanied by two work-based references. It is usual for new staff to be supported by a senior colleague who acts as their mentor throughout this period. ILTHE membership is considered to be a mechanism of providing staff with a recognised level of professional support to achieve a teaching standard and this will be reviewed annually. All new staff will become eligible for associate membership of the ILT depending on their level of teaching experience and will gain full membership after successfully completing a prescribed teaching programme or have completed a portfolio of their teaching and research experiences supported by a reflexive narrative. This is a development that is seen to improve and maintain the quality of the university's staff base and it encourages all tutors to become active in professional development.

The interview responses were more expansive than the questionnaires and showed a range of responses with critical comments regarding a possible

baseline requirement for all teachers to hold teaching qualifications. Others acknowledged the role of the ILT, writing:

> *I think it is essential that all teachers have some kind of teaching qualification. This has become more important as we make progress through the ILT and they become more involved in the process of HE.*
>
> *All my staff have a teaching qualification and are encouraged to become members of the ILT to update their portfolio.*
>
> *These will be required under the terms of the Dearing Report, staff are encouraged to register as associate or full members of ILT as a recognised level of competence.*

These comments reflect the real desire to create the best possible learning environment for students, by having an appropriately qualified and experienced workforce. This also reflects the potential for research and postgraduate development to support further curriculum developments. It is consistent with the education of health care professionals and provides a forum for inter-disciplinary perspectives to be explored, shared and developed in partnership.

Another debatable point raised was that where previously this had been a requirement, the need for teaching qualifications had been diluted, possibly as a means to fill teaching posts.

> *It used to be a requirement for staff to hold a teaching diploma, although whilst this is not now a requirement, it is still recommended.*

One respondent suggested that the podiatry profession, especially those in the H.E. sector, should be required to follow the lead set by the Further Education Colleges. They expressed a particularly firm view noting that with effect from September 2001 all staff being employed by an FE College must hold a

teaching qualification. This would become a contractual requirement and is consistent with the Further Education National Training Organisation (FENTO) standards. Supporting this view were other responses that suggested this would seem to be a sensible course of action particularly with reference to the quality initiatives now being implemented.

This is a proactive stance taken by the colleges of F.E and could be followed by all education providers in the fullness of time with ILTHE membership becoming a compulsory requirement for teaching posts. Discussions are currently taking place between the various teaching representative bodies to form an Academy of Higher Education requiring a harmonisation of their work.

Another respondent replied affirmatively citing an academic and a professional body award as the required minimum standard:

> *I ask all my staff to gain the Cert.Ed. or the C & G - FETC (City and Guilds Further Education Teaching Certificate) and the Society's Teaching Certificate.*

The Society of Chiropodists and Podiatrists has an award of its own to recognise that a tutor has undertaken and passed a recognised teaching qualification. The other courses referred to in the response, are achievable in the short-term and provide the necessary induction into the role of tutoring students as adult learners. In terms of reciprocity, all participants gain from this. The teacher gains qualifications and new ways of managing learning situations for students; the pathway has the expertise of the informed staff and

the institution has another valued member of staff who is equipped to develop new educational initiatives through their subject specialism.

Not all responses were so positive regarding this requirement, one commenting,

> *Teaching qualifications are preferable but not essential.*

This sentiment, which was presented by more than one respondent (n=3), indicated that staff should be appointed for their academic credibility rather than for a particular qualification. A research profile or experiences as an advanced practice clinician should be accommodated within an applicant's profile. This was seen to be a more important indicator of their ability. They continued that an absolute requirement would restrict the abilities of pathways to provide a comprehensive programme of study by limiting the staff available. Some responses, whilst not requiring any formal teaching qualifications of their staff on appointment, did acknowledge a need for them to achieve one within a prescribed time after appointment.

> *New staff do not have to hold a teaching qualification but are expected to complete one within two years of joining the staff. I recommend the Cert.Ed. as the standard for all staff...I also encourage part time staff to complete the same course to help continuity in student learning.*

This was the only response that acknowledged the need for part-time staff to hold a teaching qualification in relationship to the continuity of the students' learning experiences. Again the reciprocity from such an initiative generates benefits for all parties involved.

Colleagues reported that while they did not consider it to be absolutely necessary for new staff to hold a formal teaching qualification, an in-house

induction course as preparation for new staff was available, although it was implied that this was at the tutor's choice. Those reported herein lasted for a period of 3 days at a weekend or may be one day a week for a term (semester) depending on the level of induction required. Each felt that this prepared their staff for the immediate purposes of their own pathway requirement. Another respondent reported that their institution had previously required a teaching qualification but had not found it to be a satisfactory transition for new staff members. They had decided to revert to an in-house certificate course tailored to their needs from within their university. This is a recurring feature and may be a criticism of the programmes available. It may also be a compromise position to engage particular staff whilst fulfilling the need for some induction into teaching.

4.2 The assessment of students.

Part of any induction into education processes should include a component on the assessment of students' work. The role of assessment, how to set assessments, how to mark and grade a student's work and how to make decisions about students' progress should all be part of this induction. Without this expertise there are many potential pitfalls for inexperienced staff and students can become confused with any advice or feedback they are given. This detracts from the consistency of their learning experience and demotivates students. A key role for teaching staff is the assessment of students. This not only serves to grade and quantify students' abilities but also serves to determine the quality of their progress and status on the pathway.

This is a very important consideration in the retention of students at any stage of a pathway.

A question was asked of the participants concerning the grades of staff who are actually involved in the assessment of students at the different schools. It is always important to know who is involved in assessing students. Responses from this sample of participants showed that in all schools, student assessments were part of the role of their full-time staff. Some schools allow staff other than full-time staff, to assess the students' progress. This may create problems where it is possible to show differences in standards and expectations in assessments, depending on the experiences of the staff, especially where assessment occurs in different sites. Any disparity in the preparation of these staff would create a disparity in the assessment of students. The full-time teachers know what has been taught, the principles of the subject and the links to other academic modules, whereas the part-time staff are mainly involved with the application of knowledge and may not be as exhaustive in their assessment of a students' ability. Without appropriate support, part-time members of staff have to rely on their own practices against which to make any judgements about a student's progression and this becomes subjective in nature. Clearly this may confuse students as it exposes them to different opinions, which they cannot judge because they have little or no clinical experience of their own to evaluate against.

All schools acknowledged this function for their full-time staff, but did include in their responses that part-time staff (85%), hospital-based staff (40%) and community-based staff (45%) were involved in the assessment of students.

Interestingly 15% of respondents show that in their curriculum they use student peers to assess students' colleagues' work. This was seen as a positive move as it was seen to inform and involve students in the assessment process and serves to introduce students to the expectations of analysis required in presentations and also of the decision-making processes in the active evaluation of assignments. This would help them to appraise their own work before submission. Davies (2001) reported that some institutions, in other disciplines, are researching the extended use of peer assessment for summative work and to grade dissertations. Their findings were interesting but sounded a warning on the reliance on this style of assessment in summative contexts. He found that students with higher academic abilities were better informed and more confident of their knowledge and were strict in their marking. He also found that the converse was true, in that their less intellectual colleagues, who were not confident of their knowledge became more lenient markers of their colleagues'.

To conclude this section, the discussion of these factors has raised some issues that need to be addressed. It would appear from these responses that all teachers have a significant role to play in creating the learning environment and in student assessment. It would also seem appropriate for all staff to be prepared for this role, to enhance the likelihood of student success and to facilitate their understanding and application of their knowledge base. This is a major undertaking and requires a concerted amount of staff development for all teachers at all levels included in podiatry education. Problems, such as the availability of part-time staff and the rotation of placement staff, will need to

be acknowledged and addressed. The positive outcome of such a scheme would be the creation of a stable, informed teaching establishment with benefits for all involved in the scheme.

4.3 The requirement for a period of clinical experience before entering teaching.

The traditional route for clinicians to demonstrate clinical excellence and advancement in clinical practice follows the model introduced by Scheffler (1965). They graduate as a new practitioner with competence, progress through proficiency as their practice developed and to achieve mastery of clinical skills after a period of extended practice. It would therefore seem a logical standpoint to require teaching staff to have mastery of clinical skills in a specialised area derived from a period of clinical experience in their own right. This would serve to inform and equip them with the knowledge base, attitudes and commitment to the education of students. A key issue raised from the questionnaire responses was the requirement for a period of clinical experience prior to entering the teaching side of the profession and follows the need to investigate this in the light of Grugulis' study (2000). Some feedback showed that members of staff were often recruited to specific areas of expertise, based on their skills rather than for a number of years in practice. Another view expressed was that it is more likely for staff to be appointed for the currency of their knowledge as this was seen to be a better indicator to support the continuously changing dynamism of the profession.

At this point it is worth considering the impact of the increasing reliance on inexperienced staff to deliver large parts of the clinical curriculum. The whole

point of a university-based clinical site is that it enables the principles of practice to be observed and practised in a controlled way under the direct supervision of the clinical team. Where staff are inexperienced, the danger is that the clinical teaching element is reduced to the level of experience of the tutor. Whilst this may be basically competent in terms of practical abilities the theoretical reinforcement is lost and the learning opportunity is reduced. Whilst it may be more cost effective in terms of the cost per hour basis and may enable full-time staff to be released to undertake research or other income generating activities, it is not an ideal situation. Further discussion was encouraged and subsequently the request in the interview phase was for participants to make comments concerning a possible baseline requirement for all teachers to have clinical experience. Responses were again wide ranging including statements supporting the need for a defined period of clinical experience to no requirement at all. A general consensus was formed indicating that 2 years clinical experience would be accepted as the norm for appointments at a senior level. Not surprisingly there was a range of views presented, some with an absolute minimum time requirement with others making a case for flexibility in the application of this requirement.

> *I do think that new graduates would find the adjustment to their new roles hard to manage as their own (recent) experiences of being a student would shape their teaching, rather than teaching from experience of real world scenarios.*

This response was typical of others and reflects the findings made by Grugulis (2000) regarding the preparedness of staff for their roles. Two years was the minimum required in some cases as this was considered to be an appropriate amount of clinical experience for applicants to shape attitudes and to have

some experiential reflections of practice to be brought to the teaching of students. It was also a point raised that this was sufficient time for applicants to mature (within the profession) and to have gained other life experiences. This acknowledges the fact that not all student problems are academically based.

Of course the level of appointment needs to be considered in each case and where expectations of executive (decision-making) leadership are required then clearly an experienced tutor needs to be involved.

Some others preferred to stipulate a longer time based in their prior experiences citing the opinion that there should be at least two years, possibly three years of clinical experience prior to appointment in a teaching capacity. They acknowledged that a number of staff come into teaching with little postgraduate experience and have struggled to adapt quickly to the role. These members of staff have lacked the experience of clinical practice so that the student does not get the value of the staff experience. One respondent introduced an interesting perspective that not all very experienced practitioners are suitably skilled for the posts, indicating that poor practice can be communicated to students. They felt it more necessary to link evidence of CPD with professional experience and a review of the abilities of the individual was more important. Other views revolved around the level of appointment saying that previous clinical experience would be expected of a full time staff appointment as an indicator of clinical credibility but this would not be necessary for all levels of appointment. The appointment of a new graduate was seen to be an advantage with respect to the evaluation of the

degree pathway. Established staff that would have written and directed the curriculum, would continue developing the content and style of delivery of the curriculum following validation. One role for a new staff member could be to contribute to the audit process of the degrees as they could comment on their recent experiences as a student in receipt of that curriculum. As made by the respondent who thoughtfully added,

> *For full time members of staff I ask for a minimum of 2 years clinical experience...but for some part time staff appointments it is sometimes useful to have somebody who is relatively newly qualified, we can learn a lot from people with this level of experience.*

It is often the naivety of staff, new to the system, who feel more able to ask the questions seeking clarification of issues which to other staff are axiomatic. Established tutors have a tendency to concentrate on their own areas and often lose sight of the overall pathway development. It is only when somebody asks questions that staff are forced to think about and justify their actions and decisions.

Overall there was a range of responses that presented alternative views. Some respondents questioned the length of experience; others were looking for other indicators in matching the staff ability to the expectations of their new role.

> *With respect to clinical experience, I'd be unlikely to take anybody into my department with less than 3 years clinical experience, but it's not just the number of years that's important...rather the breadth of their experience in that time which counts.*

The recognition of this was encapsulated by a number of comments received, which said that there is no requirement for clinical experience in new posts at junior level. Some new junior staff are employed with no clinical experience

outside of their undergraduate experiences and the expectations of these new staff depends on their projected roles and duties. It was suggested that new staff be seconded to employment as part of their staff development to gain clinical experience in the first year of their appointment. Another option quoted was the possibility of senior staff acting as mentors to new staff for an introductory period. This would seem to satisfy critics of the appointment of teaching staff with little or no experience and would ease new teachers into their roles with somebody to refer to for advice or counselling.

There was also a response that highlighted the importance of recognising the skills and abilities of staff, especially those abilities taken from outside of their professional remit in podiatry. Pathways are dynamic entities and so change over a period of time and Franklin (1997) suggested that as the curricula offered change, these changes needed to be reflected and supported in the abilities of the staff team, not only to keep pace with change but to enable them to be proactive in anticipating and creating future change.

> *It may be that staff have other skills which they have brought from previous career experience which are equally important and relevant, for example marketing and administrative skills.*

To conclude this part of the chapter, it would appear that the level of clinical experience prior to entering teaching is within the jurisdiction of the employer. It would also appear to be appropriate that full time staff appointed at a senior level have a period of experience to satisfy the needs of academic credibility. New graduates, where employed in a teaching capacity, may find it beneficial to gain clinical experience as part of their staff development either having their

own caseload of patients within the clinical facility of their university or as a secondment to local employment.

Another initiative included in the responses has much merit. Newly appointed teaching staff work with an experienced colleague, who acts as a mentor during their probationary period year. This was advocated by Morton-Cooper, et al, (2000) who considered that what lay at the heart of the process of personal (and professional) development, was the shared, encouraging and supportive elements that are based in common values held by staff teams. This type of scheme had been operated successfully at some schools and was seen as an example of good practice that may be shared by other schools.

The reality of the situation, reflected by respondents, is that the existing curriculum is very busy and the existing demands on staff time in other areas often means that with the best intentions there is little time available to allow new staff appropriate remission time to pursue named teaching qualifications.

4.4 The requirement for Continuing Professional Development (CPD)

The model of CPD for a profession closely related to podiatry was the one instigated for nurses by the regulatory body formerly known as the United Kingdom Central Council (U.K.C.C.). This body was disbanded in July 2001 and was replaced by the Nursing and Midwifery Council (NMC) with effect from April 2002. There are different models for the other health care professionals but this one set the standard offering a range of opportunities to update knowledge using a variety of media and assessment schemes. The

original requirement for nurses was that they provided evidence of a minimum of five study days (30 hours) over a three-year period and this was linked to their ability to register with the U.K.C.C. and to their ability to practice as nurses. The Society of Chiropodists and Podiatrists canvassed and consulted widely outside of the profession (although not within it) and decided their preferred approach to the CPD issue was to be 30 hours each year.

The success of any adult education programme is enmeshed in its voluntary nature. This was the subject of a study by Jarvis (1983) who argued that CPD was considered to be essential to the maintenance of good practice and further thought that basic professional education is no longer sufficient for a lifetime of safe practice. Barker (1985) supports this view, suggesting that the life expectancy of any professional knowledge lasted between 2 or 3 years before it became outdated and required revision. An emerging issue from the questionnaires was the need for staff to be updated regularly in clinical and academic areas to maintain the currency of both elements of the curriculum and the materials taught. Academic credibility was another essential aspect closely linked to this area and as this was achieved through personal research, conference presentations and publishing papers it was felt that research should form some part of the CPD recognition of the staff. This was typified in the response below.

> *As with all professions it (research) is important...as academics passing on information and knowledge... we should be current and up to date. This is important from a professional point of view as well as from an educational aspect.*

Further responses were sought concerning the setting of a baseline requirement of teachers to demonstrate CPD, as a means of providing professional update. This was prompted by comments in the questionnaire pertaining to the currency of the materials taught and the need for this to become maintained as a means of reflecting the dynamism that exists within professional development, and most people were fully committed to it. In Australasia, the Podiatry Council had recently made CPD a compulsory factor in the registration of podiatrists in their participating countries and in the U.K. the HPC was moving in that direction too. Whilst there was a widely held view of acceptance of the need for CPD, the contentious issues were based in the prescriptive nature of the proposed content. Comments such as

> *Any CPD must be related to the requirements of specific areas of work interest. This lead comes from the academic staff and feeds to practitioners*

A further request for a more flexible approach was encapsulated in the following response.

> *If we are to keep abreast of professional practice then I think it is essential that staff be fully committed to CPD. I would see this requirement as being contractual (i.e. a commitment to so many hours of CPD per academic year). Needless to say this will prove costly in terms of paying for clinical cover etc. The requirement might be presented in such a way as to involve secondment to the NHS for a given period of time, attendance at conferences, workshops and seminars, the undertaking of a higher degree or professional qualifications (e.g. ambulatory foot surgery). The requirement for CPD would need to be flexible to suit both the needs of the individual and the institution.*

This was the first response to raise the financial aspects of the issue. Cost is seen to be a significant factor in influencing CPD opportunities and the problem faced by employers is the balancing of the requirements of the pathway, i.e. to produce competent podiatrists, with the personal development

of the teaching team. An interesting conundrum was raised in a response, which said,

> *Do you mean 'doing' it or teaching it? All our staff are very busy teaching it that there is little time for them to do it themselves - apart from their own research that is.*

Currently the teachers who lead CPD initiatives do not receive professional credit despite the fact that they must spend time and demonstrate academic rigour in the preparation and delivery of the CPD course materials. Clearly recognition of the fact that teaching staff have prepared and delivered a high quality CPD programme needs to be acknowledged and credited as part of their own CPD achievement.

Another view expressed was that the whole issue of CPD should be the responsibility of the individual. There was some conflict between the needs of personal CPD and Professional Body requirements for CPD. These aspects needed to be addressed and managed better than is currently the case. The interpretation of what constitutes CPD is open to debate. It seems that the professional body has made an overarching statement requiring all practitioners to fulfil the same requirements and there is resistance to the uptake of such programmes as these are seen to be an imposition rather than a choice, reflecting the findings of Jarvis's study (1983) and the debate concerning the voluntary nature of any adult education.

The majority of practitioners engage in clinical practice to varying amounts. For some, their substantive role may be in management, education and research or in advanced clinical practices for example podiatric surgery.

Update in these areas needs to be acknowledged and accredited by the HPC as being appropriate CPD.

Individual responses from colleagues in the taped interviews demonstrated the opinion that CPD should be regarded as a revision and reaffirmation of current knowledge, to protect the public from poor practice. Others see it as a research opportunity and believe that time should be allocated to develop practice. Some have mistakenly interpreted it as a tool for career enhancement or for salary advantage, linking it to specialist areas of practice, whilst others have viewed it as an imposition, a waste of their time and something that detracts from their need to pursue other goals.

The majority view (n=10) was that staff should be involved in CPD whatever form this takes as long as it can be justified to personal and professional development. The other feedback point (n=9) was that this should be regulated in some form to prevent abuses of the system.

In the UK, there is currently a debate within the HPC regarding whether or not it should be a requirement of registration for evidence of CPD to be provided. Similarly this would affect the third party indemnity insurance arranged through SoCAP. Should this be confirmed, the imposition of CPD would need to be very carefully monitored and controlled to ensure recency of update in areas of clinical practice as a means of safeguarding the public.

One respondent demanded that there should be a search of the available research evidence (or lack of it) to justify the requirements of CPD. The point raised highlighted that the credibility of the process needs to be fully appreciated.

> *I will nail my colours to the mast on this one. I am not in favour of compulsory CPD as I am not convinced that it achieves what it says it achieves. It is often a good excuse for a social gathering and the whole impact and credibility of the event is lost.*

This view is supported by the work of Fullan (2000) who undertook a retrospective analysis of CPD in schoolteachers over a 10-year period. He found that the most frustrating part of providing CPD was that time and money had been wasted in providing short courses and conferences for little or no change in practice when staff went back to their 'normal' working routines. The participant continued,

> *There is little evidence to correlate that compulsory CPD improves the health care outcomes. Of course I am in favour of voluntary CPD, but this is a separate matter altogether.*

It is the impact of the penultimate sentence that will bring the future development and effectiveness of the whole CPD debate into a sharper focus, as if there is no evidence that the health outcomes are being improved, there is little point in undertaking CPD at all. In support of this opinion, Carpenito (1991) refers to a number of studies in the USA that have shown that the direct benefits to patient care have not materialised and Brennan (1992) further concluded that the questions surrounding the links between CPD and increased competence remains unanswered. He proposes that at best it serves to promote competence and knowledge to those who are motivated to undertake it. At its worst it exposes the uninterested to information they would otherwise not have

encountered. It is generally accepted that to protect the public, evidence of update or re-training needs to be available to protect the individual, the employer and the profession from claims of malpractice. In educational terms it is assumed that CPD will improve the quality of teaching and learning but as Fullan (2000) suggested CPD (for any professional group) should be a more accountable and linked to the needs of the individual in the context of their current or projected role.

4.4.1 How would you ensure that staff are achieving CPD?

There is a majority view (n=11) in agreement, in principle, with the introduction of CPD and it follows that there would have to be a means of ensuring this activity, a means of evidencing this activity and a standardisation of requirement for all personnel. This is linked to the credibility of the process. Some form of audit is required to be made regarding the issue of CPD, the currency of staff qualifications and the need for employers to have knowledge of these facts. The responses given here describe a range of mechanisms employed to ensure that staff CPD is undertaken and maintained. Most replies indicated that the audit cycle of staff reviews was started at an annual personal interview. Negotiated goals were enacted over one academic year and these were reviewed as part of the independent performance review (IPR) annually. The academic goals were agreed for the year and this agreement formed the basis for any funding requests to support this activity. This was typified by the responses,

> *Objectives are set and a staff development programme is discussed and agreed being built around the needs of the individual and their contribution to the curriculum. Funding requests follow this procedure and it is then implemented.*

One school operated a system of a series of short-term reviews in keeping with the changing needs of their staff.

> *We have ongoing staff performance appraisal, which looks at personal development and is reviewed every 4 to 6 weeks. We also have twice-yearly evaluations to keep pace with the changing needs of staff. This is constantly changing and will settle when we are more familiar with the processes.*

The criticism of this approach is that it does not allow time for new initiatives to be planned, implemented and evaluated and seems to be too prescriptive a response.

The value of current research presentations and publication records was also seen as being an essential part of the requirement for CPD. The response also highlights the very intense pressure some colleagues are finding in their universities, which relates activity to generating a funding stream.

> *My staff are more interested in their publications output as this affects our funding which is related in part to the staff publications record. This is what I look for in my staff.*

This concern was echoed by other colleagues who reported requirements for CPD which were over and above those currently expected by the professional body,

> *This is done through a PDR annually. However, we will be noting the new requirements of the Society. We also have additional expectations of our staff namely to present papers for at least 3 conferences in a 3 year cycle and one of these should be at an International Conference.*

Another respondent explicitly linked presentations and publications with funding issues.

> *We expect our staff to produce 2 publications a year on a 3-year cycle. We also expect them to apply for 1 or 2 funded awards at the same time.*

It is precisely this issue of the competing demands of the professional body and the employers on teachers, which is a deep concern for staff. In other academic areas the experienced staff and those who are research active are reported unavailable for student teaching as the requirement for other funded activity reduces student contact time. Currently new initiatives in CBL are being introduced for students to follow without staff present. On the one hand this emancipates students and allows them to be more responsible for their own learning. On the other hand it may be a problem for clinical programmes to support students appropriately to ensure the application of theory to practice.

There is also a growing issue about the amount of time spent by staff in being monitored and reviewed for so many other aspects of their work, at different levels ranging from audits for employers to the professional body.

> *Staff feel that they are being monitored very closely by many different parties and would sometimes like to be allowed to get on with the job.*

The feeling of being over-evaluated is a recurring theme although it was widely reported that staff did comply with the best intentions to satisfy these requirements. Another response showed the cynical side of the issue of CPD indicating that it was open to manipulation by staff depending on their attitude to achieving CPD. Not all staff have embraced the need to demonstrate ongoing scholarly activity of the type demanded. This respondent commented

> *We have a system where goals are set for staff, by staff. Some staff are 'cute' and don't say much in case they don't achieve it but we have at least agreed to set some goals. These are discussed each year and may take the form of published papers, presentations to conferences and courses.*

Clearly attempts will be made to manipulate the system and the fact that this is openly admitted calls for a re-think of the system.

4.4.2 Do you encourage your staff to use portfolios as evidence of their CPD?

The most cited means of evidencing CPD activity was the use of portfolios of experiential learning.

> *These are really a must for CPD as without them there is no way to 'police' the whole thing. These are self completed and brought along to the annual PDR, so that isn't too much extra work for staff.*

Another view took this a stage further. It introduced the notion that by providing these portfolios a profile of the staff team would be available to show a progression of staff development as part of the requirements for a university-wide audit. This evidence could also be provided for any review being undertaken in universities. These are forms of audits that show levels of staff activity and where money is spent. They would highlight any changes, positive and negative, which have been brought about as a result of that investment:

> *I would support the use of portfolios of evidence. Certainly our institution encourages staff to bring documentary evidence to appraisal and I think this is a valuable means of collecting evidence. Another means would be through the Course Annual Review and possibly through Board/JQAC visits to the Schools or as part of QAA Subject Review.*

There needs to be a clear understanding of what a portfolio is and the purpose it serves. In reality, these range from a random collection of certificates of attendance with some course notes, to a more structured, cross-referenced file of evidence which is supported by a narrative to demonstrate learning and

application of that learning. These take time to compile and maintain but they do serve to show the impact of this learning on the individual and their practice. They may serve as the most appropriate means of evidencing the currency of an individual's practice, which is becoming increasingly necessary in the light of claims for medical negligence against the medical professions.

There was a general agreement on the use of portfolios as evidence of staff activity. Their use was becoming more commonplace following the introduction of the ILT but again the time taken to complete and maintain portfolios was seen to be a problem.

> *We are currently having a debate regarding this whole issue, as there are requirements for educational CPD and professional CPD. It is hoped that a 'one fits all' portfolio will be acceptable to all parties.*

There was some ambivalence towards the notion of portfolios 'per-se' and this depended on the reason for their use.

> *We are really only interested in the publications records of the staff. These may be presented in a portfolio style as evidence of activity but not necessarily so.*

Another reply indicated that they were waiting for a decision by their State Board regarding the format of evidencing CPD.

> *We don't have anything official yet, although all graduates here have to be registered with our State Board. This will ensure that all CPD activities are evidenced and recorded in some form. This may be in the form of a portfolio.*

4.4.3 The time necessary to satisfy CPD requirements?

The questionnaire and interview responses were canvassed before the Professional Body in the U.K. directed that all qualified practitioners should undertake 30 hours of CPD per year, arranged as 15 hours Core Activity and

15 hours General Update. Core activity is described as accredited learning material with a syllabus and outcomes specified by the professional body. General activity is described as reading articles, attending conferences and attending local branch meetings where guest speakers present topics of general interest.

There was some recognition of the particular difficulties that tutors had to manage. This was provided by the responses,

> *I'd like to see an adjustment (reduction) for staff who were research active.*

Another replied

> *This is a difficult area for tutors, as they are engaged in so much work (personal research, conferences and publications) that it is hard to be prescriptive. Many tutors lead CPD programmes based on their personal research.*

Conversations like this with colleagues show that although they can see the need for, and welcome, the introduction of compulsory CPD, they find its pursuit a problem. They are concerned that the requirements are prescriptive and the various syllabi have been prepared for general practitioners who need to demonstrate an update in clinical skills. These requirements do not include reference to their research, publication or presentation commitments. The voluntary nature of adult education is seen to enable people to learn because they want to learn, not because they are forced to learn. Mechanisms employed to encourage this venture take the form of recognising peoples' individual needs, ranging from the provision of equipment to further their teaching or research capability to further career opportunities or the abilities for practitioners to offer an enhanced service.

It is interesting to read the perceptions of colleagues before the Society's decision was released and perhaps this explains some of the criticisms expressed regarding what was perceived as the imposition of this scheme. For some, other research and training was expected over and above the professionally required CPD. Other colleagues considered it appropriate to consider the value of the intended CPD route in respect of the application to the practice of education and podiatry.

A range of options, regarding the number of study hours considered to be appropriate for CPD expectations for podiatrists, was put to colleagues in the questionnaires. One person raised quality issues saying,

> *I'm not sure how to answer this, as I do not believe in a prescribed number of hours. This is an easy way out of determining the quality of the CPD.*

Once again the issue of quality had been raised suggesting that a prescribed number of hours gives a quality standard to the event, when infact the quality of the content should be the issue.

> *I don't think the number of hours is important. If somebody does 10 hours, it doesn't mean that somebody else who does 20 hours is any better. It's the quality of the CPD that counts and this must be flexible. I don't know what else to say about this really.*

Respondents were also asked for their opinions about whether they thought this CPD should be certificated (evidenced) and assessed. There was an equal division between those who considered certification and assessment to be necessary and those who did not. Some asked for consideration of part assessment for clinical elements of CPD but did not feel it necessary for all theoretically based CPD to be assessed. The majority view was that

theoretical CPD should be certificated with evidence of attendance at the activity and that major clinical areas of practice, such as local analgesia, basic and advanced life support training should be assessed as evidence of professional competence.

A range of responses was returned from the participants. These showed the disparity that existed prior to any announcement regarding CPD. Figures returned from colleagues ranged from 1 hour per week to 10,15, 20 or 30 hours a year. Perhaps it is this disparity that has prompted their responses but it is clear that some organisation and parity had to be attempted by the regulatory bodies concerned and their professional advisors.

This response encapsulated the feelings of many of the respondents,

> *I think it would be difficult to be completely prescriptive. I would like to see at least 30 hours of CPD per year written into contract. I see CPD as being negotiable with individuals as part of their own personal development. With regard to CPD being certificated/non-certificated I am of the opinion that it should be at least accredited by a professional/awarding body but not necessarily leading to a specific qualification. At the very least, CPD needs to have been subject to some quality assurance or validation mechanism.*

The content and its application to practice was an issue emerging from the deliberations, particularly linking it to assessment in specific areas.

Suggestions that some core subject areas should be assessed hinted that in these areas the protection of the public was a central consideration and teaching staff engaged in clinical activities should be updated and their abilities assured. Basic life support, local analgesia techniques, surgical practice and health and safety issues were given as examples.

Perhaps we should be better thinking about elements for CPD like BLS (basic life support) this certainly would need assessment but for other areas this may not be necessary.

In support of this view, one respondent thought,

I feel assessed CPD to be of more value than non-assessed. I don't see the value of a certificate if the assessment isn't part of the system.

It was considered that the issue of certification was a good one as it is believed that some people attend a course for the morning session of a whole day event, get a certificate and leave early, whilst others work quite hard at the study day for the same reward.

The professional body evaluates the course content of all CPD and it is accredited for credit points if it satisfies their criteria. Interestingly, the professional body 'vet' the staff who are delivering the CPD courses and insist on their qualifications and experience being appropriate. They do not have such a mechanism for the undergraduate schemes except for the initial validation process.

A criticism was voiced concerning the nature and speed of introduction of the Professional Body's newly distributed requirements for CPD.

The Society requires 30 hours per year but this hasn't been thought through properly and needs more discussion. It should include some educational topics.

The conclusion that can be drawn from this section is that teaching staff should be able to negotiate a separate package for CPD (from that deemed appropriate for general podiatric practitioners) and that this should allow some recognition of their research and publication activity.

4.5 Induction training or information pack given to new staff?

Responses indicated that a period of induction is considered to be essential to provide a time of adjustment to the new working environment and the expectations of the post. This enables the new member of staff to establish an identity within their new work environment and with their new roles. This is in conjunction with a probationary period for new staff. There is a broad agreement in the responses given that the institutions in this survey have variable schemes depending on the grade or level of appointment of that member of staff. All reported comprehensive induction processes for their full-time staff. This was a package offered by the university to cover aspects of human resources, administration, the learning resources available, health and safety protocols and computer resources. In each case there was a separate induction into the faculty or division in which the school of podiatry was situated. Update for existing staff was carried out as required and the pathway leader inducted other grades of staff. Here they were informed of the elements that directly affected them. In most cases a manual or handbook was given as part of the induction procedure for the individual to make reference to as the need arose. There were some differences between responses depending on the size of the school.

> *We are a small institution and induction is conducted informally as we find this is more effective than an official induction programme.*

The dangers inherent in a small-scale, informal induction are that staff may not be appraised of key university-wide regulations, for example assessment and progression details and human resources issues.

All respondents shared the common areas for inclusion in induction, however one remarked about an additional topic,

> *An induction training pack, stating the requirements for CPD would be useful particularly to new staff. This could be incorporated into induction days for new staff (full and part time).*

It is usual for the CPD needs of staff to be the responsibility of the employer. This response was the only one to acknowledge that part-time staff were required to provide evidence of their CPD and for this to be considered by the university. This is an encouraging development as it attempts to establish some equivalence in support for student learning.

A Summary

1 As a minimum requirement, all teaching staff should hold a first degree, preferably at the 2 (i) level of award and this should be supported by a higher award within 3 years of commencing the post. Applicants with an honours degree at 2 (ii) level of award should be considered for teaching positions depending on their experience or CPD evidence related to the expectations of the post.

2 All new teaching staff should undertake a period of induction into the administration, health and safety as well as to all of the education and assessment processes of the employing institution. This should include part time and placement-based staff.

3 All UK based teaching staff should apply to become full members of the ILTHE within 2 years of commencing the post. At the very least, all teachers should achieve associate membership as soon as possible after appointment.

4 Full time teaching staff, at a senior level of appointment, should have a minimum of 2 years clinical experience.

5. An experienced colleague should mentor new full-time staff during a probationary period of one year.

6. Annual CPD is considered to be essential for all grades of teaching staff. This should be certificated as evidence of attendance and completion of the module. The CPD experience should also include educational as well as professional areas of interest.

In the UK, the current requirements for CPD need to be reconsidered for teaching staffs who are actively involved in the delivery of CPD.

The importance of research activity should also be recognised and emphasised to encourage further development of the profession as well as the development of clinical practice.

A compromise position, which may be acceptable, could be to accept the current requirements for CPD as the initial working model. Any clinically active teacher should be required to evidence 15 hours of core clinical hours of CPD but that their other CPD credit could be evidenced by negotiation in areas pertinent to their personal and professional requirements to their employment.

7 Staff should maintain a portfolio of evidence of their CPD activity for annual appraisal, where agreed goals have been set in advance. Although the portfolio is the personal property of the individual, they may be asked to allow the pathway leader to have access to this material as part of their review analyses if linked to funding requirements.

Chapter 5

The Resources

This chapter will concentrate on the issues related to the resources that are invested to support the learning environments, such as staff-student teaching ratios, teaching equipment, in conjunction with safety issues related to the use of this equipment. A main theme of this chapter will be to investigate the duration of clinical provision and the interpretation and application of the professional body's requirements. A further consideration will be to look at the roles played by full and part time staff themselves, as learning resources for the preparation of students to practice independently

5.1 Introduction

The whole issue of resources requires further debate in a wider arena particularly in the light of changes reported in the national press (Times, 5th September 1995). Staff reductions were reported and the provision of degree courses was being adjusted to balance the financial equation of income and expenditure, depending on issues such as student recruitment. In some universities the number of degrees offered in the academic profile has been reduced as part of a cost efficiency exercise and as a direct result of local employment requirements. Brundrett (2000) suggested that the availability of some degrees might be artificially manipulated to comply with an underlying agenda, where some degrees are phased in and out of provision. For health care professionals, the NHS Plan (2000) promotes the increase in numbers of qualified staff and this should safeguard the future provision of these courses.

However, the funding arrangements and local contractual agreements will have an impact on the resources provided to produce these new practitioners.

The standardisation of total resources within schools of podiatry is impossible to achieve, as calculations which determine this would depend on the host institution, the needs of the local service and the requirements of all stakeholders in the provision of the education. However it may be reasonable to expect a minimum provision to support students learning.

Respondents argued that attempts to standardise resources could be detrimental to the delivery of a pathway, because any attempt to do this may be considered to be a means used to stifle the individuality and flexibility of pathway provision at the different institutions. They argued that this flexibility should be retained and the individual pathways would be allowed to thrive. Any learning initiative generated by the different schools is shaped as a reflection of the staff team and of the culture or experience brought about by the geographical and economic position of that school. Any increase in the diversity of the graduates skills and abilities should be encouraged, as this may be seen to be a positive contributor to the professional development of the services they could provide. Employers, and the patient populations, could benefit more from the appointment of graduates from different schools each having a subtly different set of abilities to share with each other. This produces a so-called 'hybrid' practitioner who brings an increased range of services in that discipline.

However in terms of the equality of the student experience, there may have to be some similarities in investments to show that resources are provided in common to all pathways, to satisfy the learning and practice requirements of the professional degrees that promote effective professional practice.

Traditionally in podiatric clinical education, students learn by applying their theoretical knowledge to their elementary clinical skills under the direct supervision of an experienced clinician. However this is time-consuming and a change to this system is being slowly introduced through the use of commercially available or self-generated computer assisted learning (CAL) packages. These are seen to be a learning aid to supplement the teaching staff's roles in the education of students and their use is becoming widespread to the point where some schools have created their own teaching and learning packages through the internet for learning at a distance. This is entirely consistent with the recommendations of the Dearing Report (1997), which clearly put C&IT at the heart of his vision towards a learning society.

5.2 The introduction of computer-based technology to clinical education

There has been a significant change in education with the introduction of computer-supported learning packages being made available.

> *I really do believe that podiatry has developed now to the point where every technological aid needs to be available. As we are changing to a more e-society we should be looking to using e-technology within the clinic.*

This very proactive statement reflects the reality of the situation faced in most Higher Education Institutions today. The ability to respond quickly and to learn quickly is paramount to the continuing success of the new degrees and

students need to be in a modern environment to access learning materials through a variety of media. Davies and Pearson (2001) support the case for the introduction of computer based learning materials to the clinical environment. Their presentation at the Association of Learning Technologies Conference (ALT-C 2001) clearly showed the potential and positive impact of introducing the computer to clinical education to facilitate and reinforce a student's learning and their confidence in their learning. Support for this view was typified by the following comment,

> *Rapid access to current material is essential for students to become research based in patient care. The availability of anatomical models, a clinical library and immediate access to such initiatives as the Internet, confirms their knowledge and reinforces their confidence in practice.*

The availability and immediacy of access to this technology serves to provide an instant source of reference to enable a student to confirm their knowledge and this is reflected in the majority of the responses in this study. Professional practice can no longer be seen to exist in isolation from these sources of reference materials, as they are requirements to support evidence-based practice. Intra-disciplinary knowledge is now insufficient for competent professional practice and access to information and communications with inter-disciplinary perspectives, are both essential in any professional context and this point is well made as:

> *I believe that each school of podiatry is a centre of excellence and should have access to up to date equipment and technology, even though the employers may not have the same equipment. I truly think that students must have access to this technology to know how to access, use, interpret and liaise with professional colleagues from other disciplines who do have these facilities.*

To determine the extent of the adoption of this in a national and international context in schools of podiatry, participants were asked to comment on what they saw as the minimum requirements necessary for students to learn in the clinical environment. It was intended to investigate the range and use of other learning resources, other than the standard clinical equipment required to teach clinical skills, (listed on the questionnaire as patients operating chairs, operator stools, autoclaves, clinical units and diagnostic equipment and instrumentation).

On-line teaching and CBL (computer based learning) are not traditionally used in clinical aspects of podiatry but this is now a developing initiative, something which is reflected in the responses from the participants in this study. Packages such as the Virtual Hospital have been developed for nursing pathways at one University and there would be potential for the development of a 'virtual clinic' in podiatry education. This would allow students to engage with technology and interact in problem solving exercises as a teaching aid. This system could be accessed either on campus or offsite, through the parent University's homepage or using the Blackboard (Bb) TM, or the equivalent that is locally available, systems now becoming more widely available.

Participants were asked to comment on the introduction of the newer learning resources such as the availability of an on-site clinical reference library, on-line teaching resources within the clinical area and access to in-house or commercially available CD ROM's. Respondents commented on the benefits

of the inclusion of these facilities in establishing a reference and evidence base for clinical practice.

> *In addition to the standard clinical equipment additional resources should ideally include the following: Clinical and Laboratory reference books, On-line facilities in the clinic including network to patient reception, CD-ROM access in clinical areas. Audio-visual aids e.g. Video, OHP, camera, etc.*

The responses ranged from a total acknowledgement of the need for this resource, to a recognition that clinical education needs to reflect workplace situations and that graduates may not have access to this technology whilst on placement or in practice.

> *On-line facilities are becoming increasingly popular and I can see the benefits in well-structured clinics, however if we are trying to make the clinical environment as real as possible, I doubt many NHS clinics would have these facilities.*

This is an age-old problem. This respondent recognised that employers (NHS) are perceived to be operating without access to these media facilities and financing the provision is cited as the problem, however there is some movement in the working practices of other health care providers, mostly in nursing, showing access to PC's at ward and health centres to provide educational materials for staff reference.

Other responses indicated that there was also some resistance to the introduction of this technology, bearing in mind the cost, needs of maintenance and access to these facilities within practice and within the NHS clinical provision. These also seemed to reflect an acceptance that not all aspects of professional practice required access to these materials.

This must be linked to what employers expect of new graduates and related to the priorities each Trust has developed.

This is perhaps a debatable point in terms of the assessment, diagnosis and the evidence available on which practice is based. Protection of the public (patient) from inappropriate interventions is an essential element of all health care professional practice and indeed this is to be expected of all graduates. This detail must be protected and ensured at all times. The immediate availability of access to computer-based information would enable the practitioner to provide a current intervention with the evidence to support the efficacy of its application.

Other positive responses, supporting the introduction and availability of this technology were in a majority. The undergraduate experience was seen to need this kind of enhancement to reinforce the primacy of the students in their own learning and this was made clear by the response, which said,

I'd go so far as to say that on-line facilities and access to CD ROM's are essential to promote students learning.

This very positive response recognised the increased potential for students to learn with access to this technology. It encourages self-directed study to a wide range of literature and adds value to their learning experience.

Some respondents were developing the introduction and use of computers and were at different stages of providing them.

Yes, your prompt regarding Internet access is timely as we have just ordered 4 PCs for the clinic, although we are not yet networked into a system, this will happen in time.

Whilst others were more advanced in their provision and were contemplating new and innovative ways of using such technology, citing the use of WEB-CT and other on-line interactive packages:

> *The opportunity to do some web-based teaching, for example to direct a student to renew examination (of patients) techniques and diagnostic procedures, is essential.*

One respondent noted that the cost factor inhibited the availability of this type of learning support, saying that their provision was limited only to staff.

> *We have the facility for staff to get on-line from the clinic, but not for students. This would be nice. Extra resources are difficult to arrange at placement sites because these are spread far and wide and the costs involved would be prohibitive for the small numbers of students involved each week.*

Another respondent reflected the need for this type of survey, highlighting the difficulties of ensuring some parity of the students' experiences and exposure to different learning mechanisms.

> *This is a difficult point to address as it relates to each institution differently, as their resources differ in each case.*

The ability for access to the Internet would be the starting point for liaison between community-based clinics and the host institution, to enable on-line communication to be effected. This would promote the immediacy of access to a host of information that may be relevant to the student's learning whilst on placement. It would also facilitate on-line, interactive tutorials to include the students, community-based and university-based staffs.

Two responses noted the need for student and staff development and training in the use and maintenance of the equipment to ensure that the introduction of IT in clinical education is successful, commenting,

A major resource issue is the reliability and maintenance of the equipment we do have...and the expectations of staff to manage new equipment is based entirely in their ability to use it.

We think it reasonable to have access to CD ROMs, Internet, videos and a clinical library, however it all depends on how they are used and how well students are taught to use them. This will determine their effectiveness in education.

The latter response highlights a possible weakness in the provision of this technology, as the students' uptake of the facilities can only be matched by their ability to use it.

One respondent observed that the maintenance of equipment to a safe standard for student use. It is recognised that people who are unfamiliar with equipment or who have not used this type of equipment for a period of time need to refresh themselves in its use. It is equally important that the equipment is maintained in a safe condition, requiring the input of technical support to ensure that the equipment works.

Maintenance of equipment to an appropriate standard is more important than the amount of equipment per se.

Another response pointed to health and safety considerations, without actually saying what these were, commenting:

While I agree there is a need to have this type of material available close to the clinic I am wary of the health and safety considerations.

It is assumed that this was a reference to electrical equipment being 'live' for the duration of the clinical session and being unattended for a period of time or that patients may be left unattended in a cubicle while a student went to a PC to access information. It could also refer to the consideration of the need for

safe screens and other Health and safety equipment to combat repetitive strain injuries in the workplace.

A more traditional standpoint, which would strike a chord of agreement with most clinical academics, said simply that,

> *Honestly, one of the most important pieces of kit is simply a white board for impromptu and unplanned clinical tutorials, both during and after a clinical session.*

This is a comment, which highlights the added value that the experienced tutor brings to any teaching situation. Clinical tutors may be considered to provide what is termed the 'third dimension' of learning, namely they provide students with an experienced individual who is able to make the link between of theory to practice, which is considered to be essential to the understanding of complex theories when applied to clinical practice. While this statement acknowledges that students can learn some theoretical aspects of their practice using computer technology, there is (as yet) no suitable replacement for a clinical academic to assist students to apply that theory to practice in a case study scenario. A well-informed tutor is reported by students to be an essential aspect of clinical education as part of their evaluations of CBL and is recorded in the study by Davies and Pearson (2001).

A warning signal was raised concerning attempts at the standardisation of resources, implying that establishing a minimum standard of resources would be detrimental to the existence and future development of schools.

> *Stating a minimum additional resource is dangerous and could shut down institutions that do not meet this minimum. We define minimum resource as being what every Trust has on a placement. Everything else is "icing on the cake.*

This statement introduces the reality of the situation to the discussion as the introduction of minimum standards statements may make providing education difficult in some areas. Only one respondent said that they had no IT facilities at their main clinical site, showing that their emphasis in clinical practice was based entirely on the acquisition of practical skills using clinical equipment.

> *We take the view that that we want to see as much of the full scope of podiatry being practised within the central clinic – so this means we need access to a whole range of clinical facilities. Yes we have a clinical library but we do not have computer or Internet access in the clinic.*

This is perhaps a surprising finding in this modern day, as the reliance on teaching staff for all detail is a dated concept and could be misleading for the students. It only affords that which is within the abilities of the tutor and denies access to current international perspectives on a subject.

5.3 The Use of Clinical Time

In the U.K., the Society of Chiropodists and Podiatrists have made a recommendation that students are to be engaged in 1000 hours of clinical time. This may have been prompted by the apparent reduction in clinical hours experienced by students as a result of an inclusive curriculum that had developed new theoretical needs to support the increased scope of practice. All participants were asked for their comments regarding how they interpreted this recommendation and more importantly in some ways, how they would like to see it interpreted. Their responses were very different in the ways they interpreted this recommendation. One commented:

> *I would not be able to run the degree (within the current 3 year time envelope) if this regulation was to be interpreted rigorously as staff and students could not manage this.*

This comment reflects the changing academic calendar at some universities to satisfy the assessment, marking and audit requirements of the degrees.

> *This will become an issue when podiatry degrees become re-validated because if this is to be interpreted strictly, it will not be possible to run the pathway within the existing time envelope.*

Most tutors would probably argue that time is a scarce commodity when educating students. In England, Wales, Northern Ireland and South Africa, the curricular requirements for the podiatry pathways need to be accommodated within a 3-year academic cycle. In Scotland and Australasia there are 4-year programmes that are more able to accommodate an increase in the number of clinical hours and clinical experience for students. In the U.K., it is usual for students to graduate as podiatrists and therefore be eligible for State Registration, having completed a 3-year pathway of learning and practice. Therefore the requirement for 1000 hours of clinical education is expected to be completed within the 3-year timeframe. Responses from the Scottish schools show that their students may qualify for State Registration after 3 years but need to complete a 4th year of study to gain the honours degree status. This discrepancy may need to be addressed to ensure equivalency of provision for all graduating podiatrists prior to State Registration. The professional body may wish to reconsider its requirements in the light of such comments.

To satisfy the requirement to provide 1000 clinical hours within the 3 years, some interesting interpretations of the requirements have taken place at different schools.

Absolute statements interpreting the recommendations strictly as patient treatment time were voiced.

> *We firmly believe as a staff that the 1000 hours should be interpreted as 1000 hours of patient contact and we wouldn't wish to use any schemes to wriggle out of that.*
>
> *I would like to see this interpreted literally to mean 1000 hours of activity in clinical treatment of patients, where skills and protocols are developed, practised and perfected under teaching conditions prior to graduation.*

These very literal views are based in the traditional views of clinical education and suggest that any other interpretation would adversely affect the quality of the abilities of the students at graduation. This was countered by an equally strongly held view, which summed up the views of other respondents (n= 5). These responses were not based in an amount of time rather they referred to the quality of the initiative as the central focus of their concerns.

> *The requirement for 1000 hours is ridiculous, 1000 hours of what? Yes you can make students proficient at simple repetitive skills but that doesn't make a podiatrist.*

The original development of the degree curricula necessitated the inclusion of other scientific learning materials and promoted the need for streamlining of other elements. The clinical practice was expensive in terms of staff time because of the number of staff required to supervise students in practice. For every 3-hour clinical session with a group of 24 students, at a staff-student ratio of 1:6, it could involve 4 members of staff and cost 12 staff hours. The decision to make some adjustments to the clinical schedules was taken and new, more creative methods of clinical teaching had been developed by many schools to facilitate such a transition of the curriculum. These included a range of methods of facilitating clinical education, namely the synthesis of theory

with practice, using portfolios of learning, which are undertaken away from the traditional, physical setting of a clinic to enable such moves to be effective.

The inclusion of 1000 hours of clinical experience is a difficult problem to address within the current busy 3-year time frame, as without a major re-consideration of the different curricula this requirement could necessitate the removal of another aspect of the programme. Another option could be to extend the teaching year by increasing the current number of teaching weeks to satisfy this clinical requirement.

More recently, the further development of clinical placements has increased the number of clinical experiences for students. These placements are arranged in blocks of clinical learning. Each school had different requirements but students have blocks of placement learning where each week of placement has a defined number of hours allocated for their clinical experiences. This is entirely consistent with the DoH document 'Meeting the Challenge' (2000), which promoted the placement experience as a means of improving inter-disciplinary and multi-disciplinary provision of health care education in the U.K.

Other views were not so prescriptive, enabling some flexibility in the interpretation of the recommendation within the academic calendar. Some responses included all aspects of clinical activities in the total allocation of hours. This included all preparatory practical sessions, observations of staff or senior student demonstrations, and all demonstrations of technique prior to patient interactions. Rather surprisingly, some colleagues also included non-

clinical laboratory-based practical sessions in physiology, anatomy and microbiology, as part of this allocation of time, which was justified as being essential learning to support clinical activities. This is indeed a broader interpretation of what constitutes clinical hours and could be seen as a departure from the original intention.

Time is a scare commodity in the busy curricula followed by the schools. The use of clinical time has to be carefully managed to maintain the 1000 hours requirement. Some colleagues included time for students to reflect on their practice, commenting,

> *We interpret this very loosely as we believe that students need time to assimilate clinical learning equally as much as they do theoretical learning, so we allow time for clinical reference and enquiry to support their learning.*

These opinions have much educational merit and mirror the findings of Schon's work (1987), enabling students to develop the skills of reflective practitioners. It may be seen that if a student does not have an immediate opportunity to reflect and recognise what they have learned in a particular clinical session, then they will not remember the interaction nor will they have gained any advantage from being at that session. A criticism of this would be that it occurs at the expense of clinical treatment time; therefore it should occur outside the 1000 clinical hour allocation.

Another colleague supported this latter criticism.

> *Students do not have set clinical supporting times as such but they do have clinical 'down' time where there are no patients to treat. In these cases they use the clinical learning resources to study.*

Many respondents were quite definite in their opinions regarding the need for a quality statement for the content of hours spent in clinical education, rather than the quantity of time. Again, the cost factor of staff time was raised, as a limiting factor in this provision.

> *We have about 720 hours over the 3 years to include orthotic manufacture (although we call this clinical therapy). I guess my issue here is more to do with the quality of the contact not the quantity of the contact. Yes I would like to see more time given to clinical practice but as you know, clinical time is hideously expensive in staff time. I believe that the quality of contact relies on fewer patient contact hours and better use of the time with educational outcomes for each contact.*

The variety of interpretations and subsequent disparity between schools was evident in the following reply.

> *The only hours, which we record, are in the final year, where we expect students to treat patients over 600 hours. It is my opinion that this is a meaningless statistic because it does not reflect the quality of work required and only addresses a number of hours in clinical attendance. I would like to see this hourage reduced in favour of improved quality standards.*

For this respondent, the quality standards spoken about here are not considered to be valuable if they are only reduced to a minimum requirement of marking forms to confirm that a student has practiced a skill. These must be supported by other quality measures to ensure that a student has gained knowledge and satisfied prescribed learning outcomes to demonstrate that they have achieved a higher level of knowledge of a subject.

One response sought to draw a distinction between the service provision, the treatment given to patients, and what was considered to be their primary focus, namely student education. The comment also stated that staff time could be more effectively spent in other activities.

> *I do not think it is an effective use of teaching staff time as many hours are given to providing a patient service rather than education. Staff could be better employed leading research initiatives to improve the quality of clinical practice and the decisions which inform it.*

This is a reflection of the number of part-time, clinically based staff, who are being employed, either as in-house tutors or as placement-based tutors. The release of full time staffs to become research active and to generate other sources of income is becoming the norm.

More importantly, it also seems to be implying that clinical practice itself is not part of the educational process; rather it is just the practice element that is important. This would be vigorously defended in public debate.

Although an HPC requirement, the notion of a set number of clinical hours was not considered to be a valid indicator of a mature profession. The dependency on a number of hours was reported by more than one respondent to be an old-fashioned concept and one which was detached from what was really happening in the schools.

> *I really thought we (the profession) had come a lot further than this reliance on a number of hours. Here, we do not stipulate a global number of hours...rather we require an appropriate hourage to apply a technique safely.*

It is interesting to note that this response rejects the use of hours but uses hourage to determine the learning of safe practice. It recognises that students learn at different rates. Clearly this is a school that has satisfied the requirements for practice by being more prescriptive in the learning outcomes set for the subject.

One group of respondents (n = 4) considered a statement from the professional body, providing guidance for a minimum number of hours for clinical practice, was necessary, recognising the disparity that exists between the schools. Their comments best represented by the comment which stated,

> *I would like to see a requirement for a given number of hours in specific areas, particularly in the clinical settings whether that is on-site or off-site. It causes me concern that we do not have a minimum requirement for clinical sessions. One School can be delivering considerably less in the way of patient contact from another. To support the clinical component of the programme I would like to see the requirement of clinical log books/ portfolios of evidence which might include specific criteria such as the treatment of a certain number of conditions etc.*

They continued that the debate about clinical time would need to be more clearly discussed and defined by the professional bodies and clearer guidelines need to be promulgated to the schools, although some confusion exists about which of the regulatory bodies should take a lead.

> *How the Board (*Chiropodists Board of the CPSM) *interprets this will be interesting and it will depend on subsequent meetings within the new HPC (Health Professions Council) which will replace the existing regulatory framework.*
>
> *I think we need to have a better understanding of what the Society means by clinical time. The danger is that they may be too prescriptive and this will prevent innovation and flexibility which I think will become more a part of the curriculum in the future.*

The debate cannot move forward unless all schools are involved in the discussions, but clearly this is a point for further deliberation. Equally any directive could be imposed by the HPC.

5.3.1 The allocation of clinical time.

It is usual for the teaching of clinical practice, particularly for students in the first and second years, to be supported with some introductory work or clinical

tutorials. Here students learn their psychomotor and diagnostic skills and practice the application of these skills on their peers, using anatomical replica models or by using a variety of media which replicate conditions. Participants were asked if they made any distinction between clinical treatment time and clinic supporting studies time, indicating that these hours were not part of the 1000-hour requirements.

One colleague responded by initially being negative but then altered their perspective by reflectively adding,

> *My initial response is to say no...but on reflection we do...students have to learn techniques before they can practice these on patients; they have to present seminars and group works all of which support clinical studies...so I suppose we do.*

Whilst this is not strictly counted as patient contact time, it could be considered to be essential learning support time, which is made available prior to undertaking clinical practice with patients. This time is interpreted as clinical experience as it facilitates the application of theory to practice in a practice situation. This is consistent with the study by Biggs and Price (1992) and therefore should count towards the total number of recommended clinical hours, although in some schools it is not recorded as such. Others commented,

> *Yes, we have separate studies and differentiate a timetable between these specialisms.*
>
> *We do try to separate these two activities, but there has to be some 'blurring' of the edges where there is some overlap.*
>
> *We do try to have a separate time for the actual treatment of patients and discussion time. We require students to maintain a diary of relevant case studies which is discussed with a clinician. This is classed as clinical time and is allocated within the 1000 hours required.*

All of these responses show that in this way students can only achieve 1000 hours clinical experience by being flexible in approach.

An important perspective was raised regarding the different interpretations by different schools and the impact this may have on students' education

> *The Board (of the CPSM) has a relaxed attitude to the achievement of 1000- hours, however my concern is that there is a disparity between institutions. The professional body should issue guidelines regarding a weighting given to the whole issue of hours, stating what is acceptable as clinic support time and actual treatment experience.*

Many responses indicated that they offered an integrated clinical experience and had no separation of these two clinical domains, implying that these hours counted as part of the 1000-hour allocation.

> *There is no separation between these two clinical activities in our curriculum.*

Interesting variations had started to occur where the edges between the two areas were 'blurred' as evidenced by these responses.

> *The students have study time and assigned clinical tutorial times. We are currently developing clinical case scenarios where students learn with clinical materials not necessarily through treating patients.*

> *No we don't separate times...each clinical session lasts for 3 hours and we don't finish this early to accommodate a tutorial, rather we would add the tutorial on after the clinical session has finished.*

It is perhaps unwise to suppose that students wish to stay later than is timetabled and be part of a continuing tutorial after a clinical session. As is referred to later in the chapter concerning students, most schools acknowledge that students expect to be released to attend their part-time jobs, on which they rely for an income whilst studying. Others have problems with child-care arrangements and another group have difficulties with long distance

commuting. They will demand that all staff-led teaching and learning activities should be completed within a timed day period and then they are able to engage in their learning in their time, which they have allocated on a personal basis.

5.4 Safety Issues

The successful use of teaching and learning aids in clinical education relies on the safe and competent use of equipment. A concern which emerged from the clinical resource questions was centred about safety issues.

> *All equipment should be demonstrated to students by staff and the students' should be supervised by staff when using equipment.*

Another concern raised in the questionnaire responses related to staff-student ratios for observation of students' practice, as well as the preparation of the staff for their role in education.

Respondents were asked to comment on the ways in which they ensured their students' safety to work within the clinical or laboratory environments.

A first requirement was to establish the staff-student ratios employed by the schools. The responses are given in the table below

Table 1: Staff- student ratios by year

Year of Pathway	Staff – Student Ratio	Mean SSR
Year 1 (N = 19)	**1:** 12,10,6,6,6,6,6,6,5,7,5,6,6,6,6,6,7,7,12	1: **7**
Year 2 (N= 20)	**1:**10,10,6,6,7,6,6,7,6,7,7,5,6,6,6,8,5,6,7,7	1: **6**
Year 3 (N = 20)	**1:**10,6,6,7,6,6,8,6,7,7,5,6,6,6,6,10,8,8,6,7	1: **7**

This table shows the number of responses for each year of the pathway, with the ratio expressed and a mean staff-student ratio employed by cohort year. These figures have been rounded up to the nearest whole figure for descriptive purposes. In the U.K., the Society of Chiropodists and Podiatrists have recommended the staff-student ratio for clinical teaching to be 1 member of staff to 6 students.

There are some wide variations in each year group. This may be as a result of a design fault but it could also be that the level of activity involved has possibly corrupted this response. For example, some respondents have included clinical support (theoretical) elements as well as clinical (with patients interactions) activities.

The taped interviews allowed this point to be discussed in more depth and this elicited a difference between the schools and the ways in which they prepared their students for safe practice. They were asked to comment on how they prepared their students to work safely.

A range of responses were returned where schools preferred to prepare their students for safe practice using an in-house preparation and training; some relied on staff demonstrations while others employed the services of an external agency to provide this input. Some schools provided the education, handbooks and update support but others very clearly determined that the students needed to take responsibility for their actions. Most schools operated

their clinical sessions in accordance with the Society's recommendation of a staff–student ratio of 1:6.

Many responses highlighted the need for good initial education and follow up education where necessary as the basis to ensure safety, citing,

> *We have booklets for everything but there is no substitute for good teaching of techniques in all areas to prevent accidents occurring in the first place. We involved students in demonstrations and close monitoring of their activities.*
>
> *We take health and safety very seriously here. Every module outline addresses health and safety implications in writing.*

A particularly reflective point, one which should make all staff look to their own practice, was made by one respondent, who admitted,

> *This starts on day one with an introduction to health and safety, which is followed up in each session by the introduction and reinforcement of clinical protocols for clinical activities. This is built upon within the students' experiences as they encounter them e.g. surgery. We also expect students to learn by example (from staff) but we may fall down here on this.*

The last sentence of this response indicates a need for staff to be regularly updated in all aspects of clinical practice that they demonstrate to students. Unless there has been considerable reinforcement and practical experience, students often forget and repeated education in matters pertaining to health and safety needs to be considered. Areas such as the use of surgical blades, fire evacuation procedures, risk assessment in the clinical environment and the control of substances hazardous to health (COSHH) regulations are central to clinical safety and need to be reviewed regularly, to prepare students for clinical practice in the single-handed world of work. Another issue raised was that education by itself was never enough and that the style and approach of that education was an important consideration.

Students are taught procedures with a Health and Safety 'spin'. We don't ask the question 'How do you do...?', we ask, 'How do you do...safely.

One school noted that it had a certificated programme in its curriculum which is the only example provided to this study.

During the first year all students as part of their pre-clinical studies programme are required to undertake a certified course in basic Health and Safety. The course is very much student-led in that the delivery of it is through a learning pack which the students must work through themselves. On completion of the learning pack, which requires written responses, it is assessed. We have found this to be a useful mechanism in getting students to take some responsibility for their own health and safety. The course makes them aware of the risks within their environment, as the responses required in the pack have to relate to their workplace.

This is a major step forward and one that might profitably be shared and incorporated in the requirements for all schools to follow. It recognises the need to protect the public, to protect the student and to ensure a safe working environment. Another major factor was the need to impress on students their role in managing their own, and their patients' safety. This highlighted the need for education and the development of responsible attitudes of all clinical users. The fact that protocols existed however was not seen to make the clinic or clinical practice safe. Education and attention to attitudes were considered to be necessary. Most schools have a policy of getting the students involved in clinical activity very quickly and they have a strong induction into potentially dangerous activities such as blade application, removal and disposal, hand washing and protocols for handling infected materials.

Some schools reported that the students needed to be responsible and accountable for their actions throughout the pathway, stressing the need for thorough 'risk assessment' before engaging in clinical practice.

> *Risk assessments are undertaken and students are encouraged to follow these in all environments for safety reasons.*

Innovative ideas using computer-based learning schedules, which students must pass, have been used. One school cited this as being a useful tool in the orthotics laboratory safety training. Students are trained in the use of all equipment and have to pass a computer-based assessment and then sign a self-declaration of competence in the use of equipment when they feel able and confident to do so.

One response, worryingly, acknowledged the need for Health and Safety induction but did not complete its statutory requirements, leaving the responsibility for this to another department.

> *There is a Health and Safety protocol, but it is not strictly adhered to. We have Health & Safety representatives for each department in the University whose job it is to conduct monthly reviews of safety issues.*

This system may be acceptable for traditional academic disciplines to follow but it is not clinically acceptable for schools to abdicate responsibility for health and safety. It is the direct responsibility of the clinicians themselves to ensure safety within their own working environments. It could perhaps be explained that this instance there is no university based clinical facility and all clinical teaching is based elsewhere in a community or hospital setting.

Problems exist for schools who share clinical facilities with NHS Trusts or whose clinics are provided outside of the host institution within the NHS framework.

> *We are grappling with this as we speak. Our clinic is run within the NHS premises, so we must obey their guidelines, not the University's guidelines. This is problematical at times and confusing.*

This response is worrying as it implies that health and safety protocols should be allowed to be different depending on the site of operation, rather then establishing a harmonisation of protocols for all staff.

The need to ensure that students have received initial training and update was a particularly positive outcome from two respondents, each ensuring that students had undertaken appropriate training.

> *Health and safety is becoming a bigger and bigger issue each year. Students have annual updates in all clinical and laboratory based protocols and they must sign a form to indicate that they have attended. This goes into their file.*

> *As the school manager, I am responsible for all health and safety matters. Students have booklets and annual updates in protocols and procedures and sign to show they have received this annual update.*

The need for annual update and evidence of attendance is a developing strategy in schools of podiatry and needs to be shared between schools.

Those schools who employed external agencies commented:

> *The Department of Occupational Health performs training for all students in all safety aspects for all pieces of equipment.*

> *We have occupational therapists who come to talk to the students to teach them skills in equipment handling and safety.*

These respondents seem to devolve the responsibility for health and safety to outside agencies. They did not intimate if the podiatry staff themselves were

included in this role or if they continued this work. If this initiative was left to these external agencies as part of an annual update this needs to be highlighted and assured within the requirements of good practice.

5.5 Affiliations

All schools have indicated that some part of their students' learning is carried out in a placement away from the main clinical teaching area. Participants were asked to indicate where their students engaged in clinical teaching. The table below is a collation of their responses.

Table 2: Affiliations

(n=20)

Hospitals	[20]
Community Clinics	[17]
Specialist centres – Orthopaedics	[12]
Dermatology	[11]
General Medicine	[6]
Diabetes centre	[6]
Rheumatology	[5]
GP practices	[3]
Sports	[2]
Psycho geriatric	[2]
Paediatrics	[2]

Orthotists; Rehabilitation centre; Home visits; pain clinic – all 1 each.

The rich diversity of placement experiences may be seen in the responses to this question. It is also consistent with the research outcomes cited by Marston (1981) and Stenglehofen (1996) who both championed the use of a diverse range of clinical opportunities to enhance students' learning. All schools have some individual clinical elements of their pathway taught in placement and this highlights the local flavour of the students' practice. There could be implications for the equivalency of their respective experiences and the equity

of the teaching they receive, but responses showed that the students' placement experiences from the same schools reflected a shared experience in similar settings.

5.5 The Parity of the student experience

When transcribing the interview tapes, there was an obvious difference in the student experience whilst they were learning in different environments.

> *It must be acknowledged that absolute parity is impossible to achieve due to the variety of cases seen and the 'opportunism' that each case brings. However the placement provides a mechanism of broadening the students' experiences where the caseload of the school does not have these conditions.*

Participants were particularly asked to comment on how they ensured parity of their students' experiences when they were engaged in placement off-site. One response wished to differentiate between a placement and work experience, noting;

> *Our placement scheme is not work experience. It shares the same aims and objectives as the rest of the pathway. Our students visit a metropolitan and country placement and within these they will visit public and private sector experiences.*

Another response showed forethought to the application of the placement experience for individual students, using this as an opportunity to prepare them for their chosen area of work.

> *This is an interesting question...we do have placements but we don't try to ensure parity...we do offer a range of placement experiences in different settings. When students get to their final year they may have a post lined up so we try to place them in a setting which prepares them for their future employment.*

Some responses relied on the provision of a handbook for placement staff to follow; others used meetings with the community-based staff as the main

means of ensuring the requirements of the students' placement experiences. Topics for discussion ranged from defining clear and precise aims and objectives of the placement experience to outlining the learning outcomes and expectations of the placement related to the expected outcomes of the placement. Where a member of staff was appointed with responsibility for the placement experience, regular visits were arranged for face-to face discussions and reports to be made. Students have a major role to play in the success of their placement by providing a portfolio with a narrative to support and explain their experiences.

> *All students in placements are visited by the same member of staff whose job it is to ensure that parity of experience. All students write a reflective log or diary of their experiences. From this we can evaluate and monitor the quality and nature of their experiences.*

Problems were reported where placement providers had different philosophies; priorities and resources, where schools tried to fit the experience to the learning outcome. Another point of view was that students must be made aware of the disparity in service provision between Trusts. They would therefore be exposed to this and on returning to the University, they would be expected to prepare and deliver seminars and share their experiences. This sharing of experiences was considered to be an advantage as it sharpened the focus of their placement in a professional context.

Of course to try to ensure parity is a goal that is not always going to be realised. Some colleagues have tried to ensure that students experience the same opportunities and manage that experience within the resources of their placement provider.

This has caused a number of headaches over the years. We use a variety of different techniques to ensure some parity exists for students. Perhaps it is unfair to ask staff who are not professional teachers to act in the role of educators, but we do need to ensure that each placement gives value for money if you like.

This statement highlights the need for the placement teachers to experience a complete induction, so that they are fully aware of the requirements, and their role, in the placement experience for the students allocated to them.

Others acknowledge the enormity of the task and accept a compromise situation.

How do we ensure parity?.. well we don't. Our aim is to give students NHS experiences which are relatively common to each of them in diabetes, dermatology, surgical practice etc. We cannot guarantee parity due to the variety of caseloads seen in practice.

We know and acknowledge that not all students have the same experiences but this is managed better at the University based clinics.

Where this is the case, the student experience cannot be enhanced in the placement setting. It is managed within the clinical provision of the University provider with attempts to recreate clinical scenarios either through discussion groups or workshops.

5.6.1 Ensuring the students' placement experience

The students' active participation in a placement is a major factor in their success of their placement experience. It would seem logical that the experience in the prescribed environments would equip and inform students for future work-based experiences after they have graduated and may also serve to inform them of some of the factors which influence decisions about

the delivery of health care overall. Contributors were asked how they managed to 'plug the gaps' in a students learning experience should they miss a session.

> *As all clinical sessions are now so highly structured I am coming to the conclusion that the onus is on the students not to miss these sessions. If they do we will try to make new arrangements but this is not so easy.*

Some schools do not try to manage student absence for a variety of reasons, citing a lack of capacity to achieve this, as student numbers were high. Therefore each student only got one chance at each placement. In other cases, where a student missed a placement there was little that could be done about it. However where this became a continuous habit, the student's results were withheld until they had made up the time. This again returns to the issue of hours. The student will have lost the learning opportunity in the placement setting but would make up a number of hours at the university clinic.

Two schools have reported the relative luxury of having small numbers of student numbers to place or a higher number of placement options.

> *We don't try to plug gaps at the moment. Each student has at least two opportunities at the same placement. When numbers rise we shall have to consider this.*

Others make impromptu arrangements.

> *We operate a system of swaps and repeats which students arrange between them. Difficulties are identified by staff at regular meetings.*

One reflective comment explained that students employed other factors in the determination of their attendance at the placement sessions. One school acknowledged that some students had indicated in their module evaluations that they did not see the value of follow-up visits to the same placement. They

did not seem to appreciate the learning cycle and the potential value of further learning derived from of a second visit.

> *Where two visits are allocated for the same venue, students' attendance at some sessions tends to 'drop-off' approaching assignment deadline dates, citing that it is repetitious and unnecessary.*

It is perhaps an unfortunate trend for students to become so assessment orientated in their attitude to clinical practice. The cynicism of some students, who manipulate the system to become engaged in the bare minimum of experiences, detracts from the overall benefits from a second placement visit to the same provider and the exposure to the opportunistic learning this provides.

A system of logbooks or records held by students had been successfully introduced in some schools. These had required students to account for their attendance.

> *Each student has a CDR (clinical development record) which they complete and submit for checking by staff. We rely on the belief that the curriculum is broad enough and rounded enough to satisfy all experiences.*

These logbooks form an evidence base which students are required to bring to meetings with their university and placement-based staff, where there are verbal and written feedback mechanisms which inform the discussions. It is through these documents that students appreciate and demonstrate what they have learned and how they have applied that knowledge.

Alternatively, a range of methods for checking and ensuring students' experiences was evident by responses which detailed their preferred system for

evaluating placements and indicated how students were expected to respond to complete their commitments.

> *All our students have to complete a logbook and record a minimum of 90% attendance. Failure to achieve this will require students to make up their time in non-semester clinical time.*

Respondents considered it to be setting a dangerous precedent to set a minimum attendance rate for students, as this often becomes the norm that is acceptable.

> *We are very fortunate that our placement staff will re-arrange a session for students who have 'missed'. However if a student does not notify their instructor that they have missed a session, this is noted and the student will be interviewed and they will be required to make up that session in an arranged clinic at the University.*

Many schools operated a system where students are compelled to partake in all hours offered in the clinical area prescribed to them.

> *We monitor attendance very closely. We have a requirement of 100% clinical attendance. Staff will maintain a clinic logbook where they record all student attendance. All lost hours have to be made up before the final clinical examination. Students can make up time during term and also in the holidays provided there are staff available. As we run a service to GP practices for 52 weeks of the year it is not too difficult for students to accompany staff during holidays to the practices and thus make-up their clinical hours.*
>
> *Where a student misses a session, we contact the community provider to re-arrange another in the same area. To date we have been fortunate in doing this but if numbers increase this won't be so easy.*

One response showed that a computer package was used to track and monitor students' progress.

> *We have a computer package which logs and tracks students' placements, so we know precisely the experience of each student using this system.*

To ensure that students attend their placements, some schools operated a tough sanction regarding the students' entrance for examination or the publication of their results. Two schools reported that the ultimate sanction could be that the student fails the module, or even be refused entry into the examinations of that particular year.

> *We are fairly strict about absences. As a general rule any student who misses a session would fail that evaluation (unless there were mitigating circumstances). Students are offered the chance to fill gaps by attending different sessions elsewhere. Interestingly, absences are clearly seen to affect the quality of assessments.*
>
> *They don't miss! They know that they must complete their placement to pass the pathway. In some circumstances we have arranged for students to complete their experiences at the University which we arrange for them in the vacation time.*

It is only through such measures that these schools feel able to satisfy the requirement for 1000 hours of clinical practice. Being so specific informs the students from the outset what is expected of them and what will occur in cases where they do not meet those requirements.

5.7 The Preparation of community based staff for their role as clinical educators

The further development of placement education was the subject of a joint document produced by the English National Board (ENB) and the Department of Health (DoH). The result was a paper Placements in Focus (2001). This provided guidance for the education in practice for health care professions. It stated (p 13) that,

> *There should be clinical staff with appropriate qualifications and experience to support students' achievement.*

This quotation could be interpreted to mean that placement based staff needed to be prepared with the knowledge that the students had and that their experience would be used to guide and facilitate further learning.

The guidance also required that (p 11),

> *Staff within the environment should provide good role models. They should value learning and should enable students to reflect in practice.*

This clearly demonstrates the need for positive preparation of staff to fulfil this role and the question asked of the participants related to the preparation of community based staff.

> *All our placement teachers go through our tertiary level teachers certificate at the University and we bring the clinical teachers into the University for an induction period where they spend time with an experienced clinical tutor to observe how things are done.*

This is a forward-thinking and positive step taken by this school and one that may form a template for other schools to follow.

New guidelines regarding the teaching of health care professionals in the UK dictate that the students will be required to experience clinical practice in the multi-disciplinary settings provided in hospital and community-based clinics. It is also clear that the amount of placement-based clinical experience will increase to satisfy the statutory body's demands for 1000 clinical hours. The debate revolves around the preparedness of the community-based clinical staff to be trained as clinical educators, rather than assuming the simpler role of being a practical guide through clinical practice. Students may be vulnerable whilst on placement and become confused by the differences between what is

taught, in principle, at the university and what is directed, as common practice in placement settings.

Having established that it is the placement environment that is the important factor, rather than the parity of student experience, it would follow that the individual who controls that environment is the key to the success of the placement. Contributors were asked how they prepared their part-time or community based staff for the role as clinical educators in this setting. Many stated that they had a full time member of staff who had sole responsibility for the placement arrangements including the preparation of placement facilitators.

> *We have a clinical co-ordinator whose responsibility is to maintain the standards of placements. We run a day course to discuss the placements.*

Once again the responses varied and again reflected some disparity in the provision and perhaps the expectations of the placement itself. One reply showed that staff received no preparation, working on the principle of assumed familiarity and knowledge, but did acknowledge the need for such a scheme for staff.

> *This is a good question as we have not given any formal preparation to these staff and it is clearly something we shall have to do soon. The reason why this has not been a problem for us is that all staff are our own former students who know the system already.*

Again, the assumption here is that as former students have been through the system, they know the system and therefore can run the system. This is only a positive arrangement where the facilitator themselves had a good experience. It must be recognised that courses change over time consequently poor

facilitation may ensue. This participant demonstrated a change, from no preparation of staff in the questionnaire to this more positive response at the interview stages of data collection, having been exposed to the issue.

Interview replies showed that there was some form of induction for community- based staff, but this took different forms. Induction programmes were usually short course type arrangements, i.e. one-day meetings with university-based mentors, to meetings between university staff and community-based staff which occurred twice an academic year. The main topic was based around the achievement of the aims and objectives of the module. This is mostly followed up with a post-placement feedback meeting for students, placement staff and university staff.

Four institutions required a two-day induction into a teaching and learning course whilst another required all new staff, placement and full and part –time to undertake induction to the placement and the pathway. The remit of this induction was to set out clearly the aims and objectives of the placement and the philosophies which underpin them. A key attraction to this was the opportunity to accrue credit for the attendance of such a scheme indeed one university found that placement staff appreciated being awarded a Certificate of Affiliation as placement instructors for their records. Another school indicated some difficulty in recruiting placement staff and highlighted the perceptions of the community staff.

One of the biggest problems we have is that people think they have nothing to offer students on placement, considering themselves to be ordinary podiatrists. They don't realise the importance of their practical skills which are difficult for students to observe elsewhere

Once again, this comment highlights the need for the students to observe good examples of applied clinical practice but it is the opinion that staff should be inducted into the educational processes involved.

Most schools offered a variety of workshop type inductions to cover aspects of teaching, assessment and philosophy of their pathways of learning. However as time has progressed and community based staff have become familiar with the expectations of the placement, or where the placement provider is at a distance from the university some compromises have been negotiated.

We used to have workshops where people came to the college, but things have changed now as we cover a wide area and staff found it difficult to find time from work and travel to the college. Most placement providers know how we operate as we have been doing this for years and the system has changed little over the years. Any new instructors are recommended by the employers and these will shadow existing instructors. Each new staff member is given a comprehensive pack of placement details and these are discussed with college-based staff who keep regular 'phone' contact.

The introduction of IT access was another guidance point of guidance offered by the ENB / DoH Placements in Focus (2001) paper, p 12, which said,

During placements, students need to be able to access learning resources through the use of IT.

Access to the school web pages could be most beneficial, providing contact with the university based staff, learning support materials and guidance documentation plus any curricula developments or training needs. This was

another aspect seen to affect the continuity of experience that permeated the responses.

Only one reply required all part-time staff to hold teaching qualifications. This was a major undertaking that was considered to be a critical factor in ensuring that students received continuity of education whilst on placement.

> *Before the placement begins we bring the staff in for a number of sessions. All part time staff are encouraged to hold a teaching qualification and all of ours do. This helps the students to learn in placement and ensures some continuity in teaching.*

This theme was echoed in other schools whereby placement staff were required to undertake forms of training for the post of placement facilitator. This was linked to the individual's CPD agreements, both to satisfy the requirements of their full-time employers and their university liaison posts.

This was another of the guidance points in Placements in Focus (2001), which said (p 12),

Practitioners should be able to demonstrate that they engage in CPD

This guidance addressed concerns expressed by Fish and Purr (1991), who found that CPD for placement staff was infrequent and insufficient to facilitate efficient and effective placement experiences for the students.

Respondents were aware of the need for preparation of staff for their new roles commenting,

> *We are gradually joining the accredited supervisor-training programme which is offered for part time community based staff. Our feedback from these staff is that they find this to be essential to the success of the placement.*

*We have recently introduced a course for part time staff (*community - based*) which will become an annual update for providers of placements.*

Both of these respondents have reflected on the evaluations of their induction programmes for their placement based staff and have realised the advantages of such initiatives in enabling a variety of learning opportunities for their students in placement.

5.8 New initiatives for teaching and learning.

Another aspect for debate through this study was the introduction of any new initiatives in teaching and learning which they may be considering. Participants were asked which, if any, plans they may wish to introduce as new teaching initiatives for the future. This question was asked to establish if there were any planned new methods of education under development at the schools. Interestingly there is a leaning towards computer-based learning investments linked to portfolio work as extensions of the learning cycle.

The range of replies to this question included plans to extend clinical placement (n=3) and an extension of the use of portfolio work (n=2). The introduction of more on-line teaching (n=2) with the development of more computer based learning (n=3) was also high on the list of proposals as were plans to utilise more senior students in the peer observation of other students (n=2). Other possibilities included the introduction of outcomes based education (OBE), the development of clinical case conferencing and an increase in the role of consultant liaison, asking senior clinicians to lead

clinical symposia and the use of video conferencing. It should be acknowledged that some of the basic work underpinning clinical practice does lend itself to alternative means of teaching and learning, an example being increased use of CD ROM's and modules delivered 'on-line'. A suitable subject area could be the application of any practical aspect of the pathway using a CD ROM of a tutor demonstration and narrative, as the vehicle of teaching. This could be practised at a site away from the central clinic and linked to a practical exercise on pre-determined occasions, with a tutor assessment at the teaching clinic. A recent development to allow for tutor interaction with a group of students while 'on-line' is video conferencing. This is expensive to set up and requires students to have this facility at their residence. New innovations in internet technologies such as Blackboard ™, allows the PC to become a tutorial room, enabling conferencing between participants 'on-line' with real time interactions, via discussion boards, through the computer. Again, learning at a distance, students can take part in learning activities with colleagues away from the host site. Discussion boards, interactive sites and computer aided assessment for formative stages are all being considered. Universities may be looking at this as a means of effecting cost efficiency savings which, apart from setting up costs, would be relatively inexpensive to maintain. The staffing levels could be reduced and as this is the most expensive part of the running costs of any school, could be a motivator for the continued development of such activities. However, Davies and Pearson (2001) found that the overwhelming need of students is for informed teachers to lead their clinical development.

A Summary

1. The reliance on a number of clinical hours as an indicator of clinical competence needs to be reviewed, allowing debate about the quality of the content of the students clinical experience overall. This may be achieved by establishing clinical competences that are evaluated by examination.

2. The requirement for a pre-determined number of clinical hours should reflect the flexibility of the pathway and should make an allowance to include the pre-clinical requirement as well as observations of practice, demonstrations of practical skills and the development of psychomotor skills. Time for reflections on practice should also be included here.

3. Computer based technologies with clinical library access should be provided, in the close proximity of the clinical area both to improve the immediacy of access to such information and support student learning.

4.All students (and staff) should be required to receive induction and annual update in all matters of Health and Safety. Induction should include all clinical and orthotic laboratory protocols (including COSHH) and fire safety and evacuation protocols.
Annual update should be certificated.

5. Students should complete the whole of a prescribed placement experience and maintain a portfolio as evidence of their participation. This should be supported by a reflexive narrative which demonstrates what they have learned as a result of their placement experiences. A mechanism for recovery of 'lost' time should be enacted where appropriate to complete the placement requirements.

6. All community-based staff involved in the facilitation of placements should undergo induction into their expected role by the educational institution. They should be introduced to the aims and objectives of the placement, placed in the context of the overall philosophy of the pathway and the expectations of the outcomes. The means of assessment or reporting of a students' progress should also be standardised with clear protocols and guidelines given by the host institution.

7. Possibilities to invest in new technologies, with the adoption of on-line teaching aids and the development of in-house or commercially available CD-ROMs should be investigated to allow students access to learning materials at a time other than when a single lecture is delivered. This would enable students to re-visit areas of practical work in their own time and at their own pace. These would also serve as a useful revision aid to confirm knowledge and improve the students' confidence in their own knowledge.

Chapter 6

The Students

6.1 Introduction

Students are very important people in the changing world of higher education (H.E.). In England and Wales, a change in the funding of H.E. and the removal of maintenance grants has required some groups of students and their families to pay tuition fees. This has altered the expectations of all U.K. participants in H.E. and a cultural shift seems to have taken place, which has seen the emphasis of education move from the providers (universities) to the receivers (students). Students have become powerful consumers of H.E. and they are provided with a range of methods to evaluate their courses. Module, whole course evaluations and student forums are all means utilised to give students a voice in their own education. This shift has resulted in pathways that are more compact and focused, requiring students to be more responsible participants in their own learning. It follows that they would need to be equipped with the skills in preparation for their self-education for lifelong learning when in professional employment.

In U.K. based podiatry, although student fees are paid as part of the NHS Bursary scheme, a living allowance is means tested against parental income. Students have to apply for student loans to provide some financial support through their studies and they are required to re-pay these loans after graduation. Many students rely on part-time jobs to maintain a measure of financial security throughout the 3 years of study.

There has been a changing population of students entering podiatry. Schools report students applying for HE from different ages and from a variety of backgrounds as access to H.E. for different social groups has widened. There are increasing numbers of applicants from people returning to education after 'gap' years. Mature students who are changing careers and young parents applying when their children have reached school age make up a growing proportion of applications. There are an increasing number of acceptable routes into H.E both in the UK and from overseas responses, including local agreements with colleges, access courses, Vocational A levels, GNVQ's, NVQ's and university foundation programmes. In England, Wales and Northern Ireland, there has recently been a major change in the General Certificate of Education (G.C.E. - advanced level) taken by students of between 16 years–18 years of age. With effect from August 2000, new AS level and A2 level GCE qualifications are available which are termed Curriculum 2000. These are different to those in use at the time of writing. However, it was decided to relate all questions to the pre-2001 GCE requirements, as all UK and overseas participants would more easily understand them. In the context of these changes it was decided to develop this chapter to debate any preferred entry requirements, the minimum entry requirements accepted, the preference for particular subjects as a pre-requisite for entry and any non-standard entry routes for students.

6.2 Preferred entry requirements

I suppose I'd prefer 3 science A levels with A and B grades but this isn't realistic.

In an ideal world all centres of H.E. would prefer to accept students who had achieved the higher level of awards for admissions purposes. It is believed that this would ensure a higher standard of applicant and would enable the students to demonstrate a higher order of skills and abilities. Issues concerning recruitment and retention of students are constant sources of debate and controversy, as funding is linked to recruitment targets agreed with the WDC. However, not all students are aware of the expectations of H.E. and they have some difficulty adjusting to the rigour expected in an academic and professional pathway of learning. There is a shrinking pool of applicants who wish to enter the profession. Schools report a reduction in the level of entry qualifications to maintain a cohort size at recruitment and to ensure a funding stream. In the U.K. Podiatry suffers from the stigma of being a profession that deals with the elderly and their feet. It is not considered to be an attractive, high profile profession with potential for high earnings. Whilst many applicants choose the degree as a first choice, the numbers are insufficient to fill all of the schools of podiatry and schools have to engage a range of initiatives to ensure recruitment numbers.

In Australasia there is a different perception of the profession. Podiatry is considered to be a profession that has a high earning potential, particularly in private practice and this attracts the higher achievers to apply. This difference is reflected in the level of entry qualifications of the applicants and is debated further on page 190.

In the U.K. schools acknowledged the breadth of post-compulsory education qualifications available and which are being developed. This response is quoted from the course documentation. This is common to the U.K. schools.

> *The minimum age of entry to the programme shall be eighteen years. The normal minimum qualifications for admission to the programme at level 1 are: Degree from an educational institute within the United Kingdom, or a degree awarded by the UK Council for National Academic Awards, or equivalent; Five GCSE/ GCE passes, including two at Advanced Level, of which one should be a science, preferably Biology or Human Biology. (Two A/S levels (pre- Curriculum 2000) may be considered as equivalent to A level). Five passes of the Scottish Certificate of Education of which three are at the higher level. Five passes of the Irish Leaving Certificate at the honours level. BTEC National Diploma or Certificate with at least six merit points in second year subjects, to include at least two science related subjects (e.g. Biology, Physiology, GNVQ Advanced in Science/ Health with passes in twelve units (eight mandatory and four optional) together with an appropriate A level e.g. Biology. Access/ foundation courses in appropriate subjects. Other equivalent qualifications are acceptable.*

Whilst this seems to be an exhaustive list of entry requirements it does not provide a level of expected achievement for students within each category of award. Schools were asked for the level of preferred qualifications for acceptance onto their respective degree pathways. All were very realistic in their responses showing that competition for a diminishing number of applicants affects the preferred qualifications for entry onto the degrees.

> *We prefer 2 A levels at grade C or above, but have to re-appraise this in the light of planned numbers at intake.*
>
> *We prefer candidates to hold 3 A levels in Biology, Chemistry and English, at A or B grade.*

The latter of these responses shows that there is some tension between what is a realistic entry requirement and what is not. They continue with a note of

caution, indicating that the level of award is not necessarily a sufficient indicator of ability or for projected success.

> *'Some of our disastrous candidates have come in at age 18 years with 24+ points at A level and have caused some concern all the way through the pathway.*

Continuing on the theme of projected success, another respondent reflected that students with lower academic entry grades have had some difficulty with managing their degree level studies.

> *I would prefer to have higher entry requirements of B, B, C, and C at higher grades, as I have found that students with the bare minimum results do struggle.*

The latter response was from one of the Scottish schools, where the education system is different. Students there take Higher examinations, which equate to A levels in England, Wales and Northern Ireland.

Another set of responses confirmed that target numbers contracted by the WDC (in the UK) dictated that student recruitment numbers had to be met to satisfy any financial contractual requirements. There were other opinions expressed which demonstrated that the entry requirements flexible and there was a note of regret in acknowledging that the matter of achieving target admission numbers was the priority.

> *Our preferred entry requirements are 2 A levels at grade C or above, but this is sometimes adjusted to reflect the entry statistics of the group.*
>
> *We require students to achieve 2 A levels at grade C, however in realistic terms we do accept 2 D's.*
>
> *I would wish to see our entry requirements raised in terms of points. Currently we can and do offer places to students with a minimum of*

two A levels at grades E (4 points). Ideally I would like to see a position where we offer places to potential applicants who have at least 12 points but I very much doubt that this is realistic given the national shortage of students applying for Podiatry.

These comments confirm the current difficulty faced by professional pathways in H.E., where there is a need to enrol a number of students at the recruitment stage, to make the pathway viable in terms of funding. Where students are recruited at a low level of further educational achievement, this will have a major bearing on the retention of students once they are enrolled.

A common misconception of students is that pathways with low entry requirements are considered to offer a low level academic award or that the course must be easy. This misunderstanding of the situation is a concern, and students need to realise that each degree has to satisfy the academic rigors of any honours level undergraduate degree. However it is a reality that some pathways, at different times in the recruitment process, may have to lower their entry requirements to target their recruitment statistics.

Another set of comments acknowledged that students now had power and they had demonstrated that if entry requirements were set too high, then they would be discouraged from making application for that pathway at an institution.

'We have a problem with raising our entry requirements as this affects the number of applicants. We are fortunate that currently numbers are high at 4 applications per place but this could change'

This response was not typical of all schools relative to the numbers of applications per place available. Most other UK based schools reported the

number of applications per place to be less than 4 applicant per place available.

6.2.1 Overseas perspectives.

Responses from overseas schools showed a variance with those from the U.K. There was a different philosophy towards the post-school leaver stage of education, aiming to recruit students with a general breadth of educational experience at the age of 18 years, rather than is the case in the U.K. where there is the reliance on two or three subjects studied at depth.

> *We ask for 80 credit points at school leavers certificate, across the spread of the curriculum.*

Interestingly, there seems to be a universal problem with students' ability to manage their studies and that again the level of achievement at prior to entry was not a sufficient predictor of success.

> *If I had my way (and I know that it is impractical at this time) I would ask for students to achieve a Matriculation certificate at grade C or 60% because our attrition rate is very high.*

Clearly in this case, the opportunities for success depend in most cases on the students' academic abilities at entry to the pathway. It would appear that any lack of success causes the students to withdraw, indicating their levels of motivation and ambition may not be high, or on the other hand support for their success is not available.

One respondent indicated that their school had the luxury of being able to target recruitment figures by renegotiating the entry requirements to suit the target needs.

I am very sceptical about entry requirements – it's what they leave with that interests me! Our system works by calculating the number of students we need and then setting the TER score that will achieve this number. The actual entry requirements are a moveable feast for us here.

From this response, the reader is left with the impression that the level of entry was not the important factor. Rather it was how the students responded to their education that ensured their success.

In conclusion for this part, it can be seen from the overall sample of responses that there are some wide variations of what constitutes the 'ideal', many of which fail to recognise the reality of the situation. There is a traditional reliance on achievement levels at advanced level study prior to entry to a degree pathway. This reliance may be a hindrance to future recruitment numbers in the light of current reports of a reduction in applicants to study podiatry. The point raised from the latter overseas respondent may have resonance, and perhaps it would be worthwhile to further discuss alternative entry requirements.

Contrary opinions to this were noted in responses received that considered the entry qualifications served to predict exit statistics and the likelihood of students completing the degree.

We prefer 2 A levels at grade C. Sometimes we suffer (have poor results) with less than this minimum.

Interestingly nobody raised the issue of personal skills. All decisions seemed to be made on academic grounds, when it would be reasonably expected that in any profession involved with managing people, it would seem appropriate

to agree that part of the entry decision would include evidence of high levels of interpersonal skills, knowledge of the profession and motivation.

6.3 The minimum acceptable entry requirements.

Having established the preferred entry qualifications, it would be appropriate to determine which qualifications are accepted when recruitment targets are not met. Typical replies stipulated minimum grades. These were variable but reflected the recruitment expectations of schools with some showing higher levels of entry than others.

> *We ask for 2 A levels at grades D or above. We also accept kite marked Access programmes and BTEC qualifications with distinctions awarded in the final (2nd) year units.*

One school noted,

> *The minimum requirement? This is largely driven by market forces.*

Market forces certainly had a major role to play in such decisions, as did the applicants' perceptions of the profession itself, in attracting them to apply. This response from an overseas school indicated a strongly positive attitude to the profession.

> *Podiatry is seen to be a profession with a high earning potential so competition for places is high. Our minimum entry requirements are also high therefore and we recruit from the upper 20% of the school leaver scores with 90 applications for just 20 places.*

However, this was not typical of the replies from U.K schools, where applicants view the profession less positively. This was largely due to the stereotypical association of podiatry (chiropody) with the care of feet rather than with the full scope of practice and potential for further professional development, similar to that enjoyed by other AHPs.

One school reflected the worry of attracting enough applicants. This was a developing trend for schools of podiatry and is being addressed on a national scale.

> *Recently our application rate has dropped and we are working hard to address this.*

Another school noted difficulty with students who had entered the degree pathways but had not been successful in completing the degree. Part of the problem was that some 'access' courses were not specific enough in their curriculum for the needs of the podiatry degrees, prompting schools of podiatry to begin offering their own pre-degree courses as alternative access courses.

> *We will accept some, but not all, Access courses depending on the amount of demonstrable science within the curriculum studied. We prefer a Science Foundation qualification from within the University. This is geared to general science and is acceptable for many pathways within the university.*

This comment reflects the changing status of the Access courses offered at centres in different parts of the country. Many of these have developed in partnership with local colleges and so have become less transferable to other establishments as their content is geared to merge into local courses.

Another influencing factor is the situation of the school of podiatry within the university. For example the faculty structure of the host institution may dictate policy for all divisions to follow dictating a minimum entry requirement for all of its courses.

> *This is an interesting one. We used to ask for 12 points at A level, but we are now in a new faculty and must ask for 18 points. This may cause problems for recruitment. If this is the case we will drop our offer to the original requirement at clearing time.*

This respondent's school could be placed at a distinct disadvantage by this situation, as students would be receiving offers for places at a considerably lower level from other schools, at an earlier stage of the recruitment process. This could mean that this school could be faced with admitting students with lower examination grades (through the clearing system) onto the course than would otherwise be the case.

One school admitted that they did not interview their potential students at all. They set an entry standard score and made offers against that calculation.

> *For school leavers we require 12 points in A level scores, but we don't interview them. This is due to time constraints and we may start interviewing again when time permits.*

This approach may be seen to save staff time and money in the short term, as staff will not be engaged in face-to-face interview situations. However this system of recruitment generally relies on the contents of the application form, containing details of previous exam results and predicted results, a personal statement and an academic reference. It does not allow the personal qualities, skills and attributes of the applicant to be evaluated, all of which are an essential part of a podiatrists' ability.

6.3.1 Overseas perspectives.

A variety of responses were received from overseas schools, each had a very different approach to the issue of recruitment. This was often determined by the perceptions of applicants and in their ability to gain employment and in their earning potential after graduation.

An interesting perspective was presented by one reply, which made the student responsible for finding information about the degree offered and the achievement of an entrance score set by that school. This was considered to be a part of the motivation of that student and relied on students from a particular location to apply to their local school of podiatry, knowing what was expected of them. Once again, the personal attributes of the applicant are not evaluated.

> *Firstly I have to say that we don't interview students. It is a waste of time and makes no difference to the completion rates. Students self select knowing that they must achieve our standard which is a minimum score of 80 credits on the TER scale (tertiary entrance rank).*

This respondent seems to accept that students may fail at the entry level and are therefore not recruited to the pathway. This may seem to be unfair on the student and unfair to the institution, as the funding stream will be adversely affected if this was allowed to become a common occurrence.

Other replies asked for specific levels of achievement or a ranking score. The variations can be seen below.

> *Our entry requirements are different but equivalent to the UK. We ask for a school leavers' certificate ranked on a 100-point scale. We ask for a minimum of 80 points overall.*
>
> *We require students to hold a Matriculation certificate with a pass on a higher grade (D) in Biology, Science and Maths. This is set at 50% of mark.*
>
> *Our system works on a ranking scale of between 1(low achievement) and 99(high achievement) in Year 12 assessments. (aged 18). Our students enter at about 94 / 95 on this scale, which is high.*
>
> *The school leavers have a score ranging from 1 (high) to 25 (low)- our students enter at point 4 on this scale, so we have high calibre students.*

Respondents from overseas showed a variance to the U.K. in entry requirements. Rather than depending on a score in a particular subject, their

emphasis was based in the overall ability of their applicants and seemed to reflect their belief that students should have a broad-based knowledge rather than one restricted to 2 or 3 subject areas at advanced level. This is a reflection of their education systems that encourages a more holistic approach. This perspective could change in the U.K. with the introduction of a new initiative currently being discussed. This is to remove the present A level system altogether and replace it with a broad based Baccalaureate qualification. This could have a major impact on the curriculum requirements of the professional degrees as there would be a requirement to include some remedial work to cover aspects of modules which had previously been part of the 'A' level programmes.

6.4 The requirement for a particular subject at advanced level.

The information gathered in the previous section gives evidence to suggest that the entry-level qualification is not sufficient on which to predict whether a student will be successful. Another question was asked to see if any particular subject was required to be studied in depth. Sixteen (80%) schools replied that biology, or related subject as a preferred subject at A level. One school indicated that where an applicant had scored highly in the double award science assessments at G.C.S.E level, this requirement may be waived in favour of another A level.

> *Yes, we ask for Human Biology as a desirable preference in our publicity and course leaflets.*
>
> *Biology is the preferred A level and is shown in all course publicity.*

Other schools acknowledged that other science-based A levels had much to favour them, particularly where it was applied to the body giving a clearer understanding of the subject.

> *Human Biology or PE. We have found that these subjects prepare students better for their studies within the pathway.*

Another variation in entry requirements included mathematics; others asked for a science without stipulating what that science could be, although many did specify the grade at which that subject should be achieved.

> *The B grade must be in a science subject.*

This diversity of entry requirements reflected the emphasis of the degree. For example, where the science of biomechanics is 'core' to the pathway, physics or mathematics was seen as an advantage. Where biochemistry was considered 'core' then chemistry was considered to be required.

> *We prefer Chemistry and Maths as this reflects the emphasis of our pathway. Science in Year 12 is accepted.*

A converse view expressed was based in experience rather than in tradition, which indicated that as long as a student had achieved higher level qualifications in any subject, then the student had the ability to adjust their learning capabilities to new subject areas. This is an interesting view, which challenges the traditionally held notion that a student must have a basic understanding of the subject area before applying it to a context.

> *No we don't stipulate a subject our research shows that it makes no difference in the end result of the degree classification.*

This is a bold statement to make as it is usually recognised that foundation studies in a subject of a degree include revision and contextualisation of the A level studies, prior to higher levels of application. Perhaps a case could be

made for students to be recruited without any named subjects at entry level. Rather they could be admitted to the pathway having demonstrated a level of learning ability. This idea should be the subject of further research, particularly as it may open the entry gates to a podiatry education for a wider group than is currently available. If the numbers applying to study podiatry are reducing and continue to decline, perhaps this is an option to consider alongside the personal qualities, skills and attributes of the applicant. This could add to the widening participation initiatives currently in place.

6.4.1 Overseas perspectives.

Interestingly, the overseas schools require evidence of spoken and written English language to appear on an applicant's form. It shows that in these responses English is the main language of podiatry education. These responses highlight the diverse numbers of applicants whose first language may not necessarily be English. The family or home language may be another language and adjustment to further studies may be problematical.

> *All we stipulate is that students have English at a higher level and that a science subject should be included. We do not stipulate but prefer Chemistry or Biology.*

Other options included a points score in a range of subjects. The range reflected the preferred stipulations for subjects.

> *'We do prefer candidates who achieve 25 credit points in English, 20 points in any two of either Chemistry, Biology, Physics or Maths.*

Another interesting view came in the form of a completely different philosophical standpoint. The notion of 'assumed knowledge' was introduced. This clearly is a reference to the central role that students are expected to take in pursuit of their own education.

No we operate an 'assumed information' policy in that we assume students have achieved biology, physics and or chemistry at year 12 level (aged 16-17 year). Students who have not are directed to address this skill-deficit by attending a foundation course, which we offer in the last weeks of the holiday (before commencing year 1 of the degree). Some do, pass and progress, some don't, fail and leave.

Despite a recognition of the merits of such a scheme and the level of responsibility for their own learning that students are required to assume, this response is typical of the culture of education in this country. It would be difficult to envisage this scheme being introduced into the curriculum of the U.K. podiatry education at the current time.

Another interesting idea regarding recruitment came from an overseas school, where it is the practice to use a Special Tertiary Admissions Test (STAT) for Year 12 pupils, which is operated as a school leaver examination. This test gives potential applicants an examination score, which they can use to supplement their TER scores when applying for university and is used to encourage students to go to their local university. If this scheme were to be adopted in the U.K., it could be a useful means of encouraging more local applicants to consider university education, especially where places to study were to be guaranteed. It would also serve to widen the appeal of podiatry as a profession to potential students who otherwise may not be aware of the option.

6.5 What non-standard entry routes are available for mature students?

We do have non-standard entry opportunities. Students must give a full CV of professional and academic qualifications to date. These are interviewed but we only accept these people if we feel they can cope with the course.

This response is a typical view expressed by schools. Mature students are classified as students who return to H.E. who are 21 years of age. These

applicants have a major role to play in the dynamic of the cohort of students as they have an appreciation of the 'real world' and show determination to be successful. Their application to study, once accepted onto the pathway, is generally accepted to be at a consistently high level as they strive to achieve their goal and this has been reported to have had a positive effect on the application of the younger students. The entry requirements for mature students are usually different, as these applicants have developed many useful transferable skills, which are credited to them. Therefore in the main, mature students are asked to achieve one A level, or its equivalent, to gain entry onto a podiatry degree.

> *We accept mature students on their individual merit. Generally speaking we will not accept mature students who do not have a recently gained qualification (e.g. Access to HE, one A level, etc). We like to have evidence of recent study thus demonstrating that the individual is probably capable of coping with a degree. We will not accept students with no recent academic track record. We will suggest they re-apply following the successful completion of an A level (usually Biology) or an appropriate Access course.*

In the U.K. there has been an increase in the numbers of mature students returning to H.E. after having undertaken other career paths. Universities are charged with the responsibility to increase numbers of students entering H.E.

> *Yes, currently the medical faculty is charged with widening access and we are looking at a pre-medical course for 18 years or older. We ask mature applicants to do this too. We look at the O/U (open university) modules S 101, S 102 and S 103 as alternative entry points but we have to look at when these were studied.*

Podiatry may be seen to be an attractive option as it offers students the opportunity to study for a degree, which not only awards an academic qualification but also provides a professional education, and training for practice, which promotes a career in the NHS or in self-employment. It also

offers the opportunity to study without the financial consideration of paying fees because the NHS bursary system funds tuition fees. Some mature students will have changed career completely, others return to studying after having their families and some come late to the idea of education per se.

> *About 33% of our applicants are non-standard entry requests. We take Nurses, applicants from Access courses and science foundation, the so-called year zero courses.*

The diversity of needs of this group of applicants is reflected in the diversity of pre-degree courses that are now available. Many mature returnees to H.E. do not appreciate exactly what is required in the study for a degree believing that they will be taught all they need to know and question the need for precise entry requirements for them. One school reported and explained their decision.

> *(mature) Students must satisfy the minimum entry requirements. This is based in bitter experience as in the past we have made exceptions but these have been unable to cope with the work.*

Another showed that the recency of qualifications was an issue to resolve. Applicants may have achieved A level standard many years before their application for a place on a degree. This knowledge was considered to be 'dated' and lapsed in current educational terms requiring more current evidence of study.

> *Each application is taken on its own merits. We prefer applicants to demonstrate some recent academic study or a commitment to academic study to demonstrate their ability to cope with the rigour of the pathway.*

This is a reasonable stance to adopt, as the generally accepted definition of recency in terms of academic qualifications is 3 years. Barker's study (1992) in relationship to continuing education in adults showed that academic

qualifications have less applicable value after 3 years where they have not been updated or applied.

Other responses noted that mature applicants accept that to study full time, they will have to give up an income, a career and all that goes with that to pursue their degree. They appreciate that the applicants are prepared to make a considerable investment in study time and resources, prior to acceptance, to be successful and this is reflected in their ultimate statement of results. These responses also recognise that the process of education is as important as the content and this needs to be addressed.

> *We are very aware of the needs of mature students or students returning to HE. We encourage these people to take an Access course or a part- time A level where they have the time. This at least gets back into a learning environment and used to assessment as much as anything else. We believe that motivation is a key issue at interview.*

Another set of views expressed by some schools (n = 4) highlighted the importance of the role of the interview as an indicator in the choice of an applicant. These recognised the importance of interpersonal skills and the mix of academic ability with personal attributes, which served as a better indicator of a student's potential for success, showing that they were well informed about podiatry and highlighted their levels of motivation and commitment to further study.

> *The most important criterion is the interview. Successful students are often the ones who come across better at interview.*

Two schools reported that they adopted a more formal approach to mature student applications, requiring the application to be reviewed by a panel of teaching staff to validate the claim for academic credit prior to joining the degree pathway.

Yes we have a non-standard entry route via our University's APL and APEL systems. All applications are considered by a staff panel.

Yes we do have an APL / APEL system but we haven't recruited anybody with less than the minimum entry requirements.

Overseas schools set entrance style examinations to ascertain the applicants abilities. This is a time consuming business but with the advent of computerised optical markers or readers, a multiple choice question (MCQ) paper is easier to set and mark prior to an interview scenario.

Yes we do, but it's nothing to do with the University, it is more to do with...(the country)... For mature students we have something called a STAT test, which stands for Special Tertiary Admissions Test and is an examination of their skills and is considered with their completed application form.

In the U.K., alternative, although these are considered to be equivalent, qualifications to the A level programmes, have been devised to encourage students who have more vocational abilities to enter H.E.. Some of these students with these awards have been accepted but they have a variable record of success.

BTEC and GNVQ are about the same, you can't generalise about these. We have had some real stars and some who just cannot do it at all.

The Business, Technical Educational Council (BTEC) and General National Vocational Qualifications (GNVQ) are alternative A level equivalent qualifications.

We do accept some Access courses, however as these differ across the country we will take each case separately.

One innovation was offered by a school, which offered a pre-entry update and tuition for new students who did not satisfy precisely the traditional entry requirements.

We offer a summer school to act as a preparatory course for the 1st year. This is done within the University.

No further details were proffered, however this idea may have some merit as it can be seen that many students have more difficulty with applying their knowledge to a new context in comparison to learning new material. The adoption of such a scheme would also serve to support the increasing number of students who know that they have learning difficulties, such as dyslexia, and this scheme act in a supportive, diagnostic way for those students who do not know that they have such learning difficulties. Appropriate support and guidance could be provided prior to the start of the course.

6.6 Mechanisms for students who wish to transfer between schools.

An issue for all schools to recognise and manage is the transfer of students between the different centres. Whilst the majority of students do, some students do not always complete their degrees at the same school, as they may be required to move during their student career. A common reason for a transfer request, especially where students only have fees paid is often because of a career move for their partner or as personal circumstances require them to live nearer to their parent's home as a cost-saving exercise. It is reported to be becoming increasingly difficult to allow transfer between schools due to the diversity of the programmes and because of the different placing of modules within the different pathways. Students requesting transfer could be disadvantaged as some essential modules may have been emphasised differently and may be missed altogether without some considerable requirement for remedial work.

Yes we will do this as I believe that it is important to recognise prior learning, otherwise we could lose good students. The big problem is that modularisation has occurred and our modules will not 'fit' other modules, and vice versa, so how do you credit bits of another schools module? We do try our very best to accommodate requests for transfer.

All participants recognised the problems brought about by this situation. The common response was that it was the students' responsibility to produce evidence of their learning to date and to provide an outline of their module specifications for the purposes of Accreditation for Prior Experiential Learning (APEL). This is also referred to as Accreditation for Prior Learning (APL) in some institutions. All examinations to a completed stage had to be passed and evidenced by an official university letter and students were interviewed so that they could present their case to the new school. The previous school was also asked to provide an academic and personal reference. Whilst most schools were sympathetic, it was generally felt that this was a difficult process and was not permissible to arrange transfer between all years of the degree.

Yes, we will APEL students into the pathway but only to year 1. We cannot accept APEL to year 2 as these students would be disadvantaged... they would have missed integral aspects of the degree.

Yes, we will allow transfer to the pathway but only to year 1 or sometimes year 2 of the pathway.

Transfer between countries is an attractive option for some students but this is even more difficult to achieve. It is incumbent on the students to show an equivalence of their previous studies and to match these to those of the intended institution.

We have a very clear mechanism for accreditation of APL from another institution or from overseas. It is a lengthy process but has been successfully operated over a number of years.

All schools offer similar curricula, but the order in which this is presented can cause transferring students some difficulty. Implicit in the responses was that it would be the student's responsibility to ensure that where any gaps in their knowledge is rectified by personal study.

The first or family language of students was a theme that prompted responses and there were a variety of mechanisms available to manage such an eventuality.

> *Problems have been encountered with applicants whose first language is not English. We would need evidence of their TOEFL (teaching of English as a foreign language) score before accepting an application from them. We do offer remedial support through the University for students who have such difficulties.*

Interestingly, respondents experienced in this noted problems with the whole concept of allowing students to transfer. They re-iterated the difficulties for the teaching staff to support transferring students after the transfer had taken place. They also noted that the rules, once made, could set a precedent and prompt a series of transfer requests for a variety of reasons, which was not acceptable.

> *There's a problem here as once recognition has been given, then it is given for everybody. We must exercise extreme caution as we must give consideration to the support needed for the transferring student.*

> *We will not APL students to the final year because of the differing nature of the programmes across the country. Our experience of student transfer has been variable, ranging from having to carry out considerable remedial work to get the student to the level of ours to having students compatible with ours.*

> *We have not taken students transfers from overseas but have hosted the Overseas State Registration Examination twice. Our experience of conducting these examinations has given us a view that the podiatric education in this country is superior.*

Only one reply stated categorically that they did not have a scheme to permit such activity.

We do not have a mechanism for APL for students wishing to transfer to our University.

This is somewhat surprising as most U.K. universities subscribe to the notion of having academic credit that is transferable. This is referred to as the credit, accumulation and transfer scheme (C.A.T.S.), or the equivalent. This specifically provides for academic credit to follow the student throughout their studies for their degree. C.A.T.S. allows for transfer between institutions, in theory to accumulate academic credits towards a degree.

6.7 The provision of academic and pastoral support for students

The retention of students is of paramount importance as this is linked to the funding of the pathways. A variety of initiatives were reported to support students in their learning and to retain students on pathways, these included personal tutorials; peer support; study skills support and more recently computer based learning packages where students may work at their own pace without staff being present to judge their progress. Not all respondents highlighted the needs of the institution (funding issues) when debating retention issues. There was considerable thought given to the needs of the individual (the student), and how best to support them.

Most of the institutions reported good support mechanisms for its students both in terms of academic and pastoral care. Students experiencing academic difficulties could be assessed for a variety of potential inhibitors of their progress. If students were assessed and certificated as being dyslexic, support was provided in the form of additional time for work, reading of examination papers and completion of examinations. Numeracy, literacy, other learning

needs (such as for students with hearing loss) was also be supported. Pastoral care was offered either by the university itself or by the Students Union network. Services providing financial advice and support, personal counselling, careers advice, and Occupational Health, issues were also reported by respondents.

It is accepted that the majority of students entering H.E. are well educated and prepared to manage the expectations of their degree programmes, although some are not. The widening of access to H.E. has enabled many more people to enter H.E. but their preparation is often incomplete and their studies suffer as a consequence. One point made was the requirement of students to have guidance regarding their university life.

> *One problem we have is that, I should say, that about two thirds of our students are the first to be at University. They have no role model in the family and they do not know what to expect.*

This is a common finding when interviewing students. It has also been noted that the influences and desires of parents is high in the decision-making processes about going to University in the first place. Students report that they had never written a bank cheque previously so simple budgeting of finances could be a distracter from their studies. Similarly many students had not had to look after themselves previously, so cooking, washing and ironing were major hurdles for them to accept and perhaps seek help about.

Some schools had in place initiatives that were enlightening in the ways in which they dealt with problems or potential problems. The notion of peer support was increasing in evidence in these schools using different approaches.

Students are all placed within an action learning set where they are teamed with other students from other years of the pathway, one of whom will act as a mentor.

One school had instigated a scheme whereby senior students acted as 'buddies' to new students. These students had volunteered to support and advise students after a period of training.

The 'buddies' attend clinical sessions to support the new students and they act as sounding boards for students whom otherwise may not approach a member of staff. This has proved to be very successful for all concerned as they all achieve something positive from the interactions. The buddies meet with the new students in informal groups to discuss any issues or help with revision techniques or other learning skills. They serve a social function too which is important in introducing all new students to a new learning environment.

Many difficulties exist for some students in terms of literacy, numeracy and personal skills. Students who have followed a more vocational route into H.E., for example the GNVQ or BTEC courses, are well rehearsed in writing coursework assignments but are poorly equipped to manage examinations. It is not part of their experience. Similarly, students who had previously been assessed primarily by examinations may have difficulties writing extended essay type discursive papers.

Retention of students is a central role and the mechanisms available to support students differ between institutions. Some manage these interactions in-house.

Students are free to approach their module leaders, personal tutors, pathway leaders or Head of Department where a problem arises. They would be guided to the most appropriate person depending on the severity of their difficulty.

Other responses saw the need for an external view from the outset and advised students to make an appointment with the university provided facility.

We have a student support department within the University to help with all kinds of referrals. Counselling advice is available to all.

The majority of schools relied on their teaching staff to support students.

We have a formalised personal tutor system to allow students access to a known member of staff throughout their university career.

Whilst the starting point for all schools was the staff team, it was widely seen appropriate to refer to a more specialist source of advice within the University.

First line pastoral support is offered by the staff but should the problem be a significant issue, the student is advised to liaise with that member of staff but use the University's trained counsellors.

Where language skills was a problem, either in spoken, understanding or interpretation was concerned, most schools provided appropriate support.

We have some assistance for students who have English as a secondary language. For these students we have a TOEFL support network.

An interesting variation on this was provided by a school, which recognised that students learn in different ways and that teachers teach with different styles and approaches. Where students fail to learn form a particular style and approach to teaching, they will be disadvantaged. To ensure that their students maximise the learning opportunities, they introduced the following scheme.

We operate 'drop-in' tutorials given by different staff at different times of the day. Students can attend any of these. Where problems persist, students can see any staff member but are firstly directed to the subject tutor.

Sometimes, student support may require the staff to take further steps to protect the student and provide them with the opportunity of suspending their studies, either for a period of time to address their problem, or to postpone an examination until their circumstances had changed to a more favourable situation.

There are special circumstance forms that students have to complete and submit. All special considerations must be submitted prior to exams for consideration by the panel.

A school where support is offered at a pre-entry stage to accommodate applicants mentioned another new venture.

The University has a huge centre to support students both to support pre-entry level and students with study skill deficit.

It is not known if this was a negotiated scheme and was offered prior to the student joining the pathway. This could raise issues of equal opportunities as some students who are assumed to have a complete range of study skills, but who later discover that they have latent learning difficulties, could be disadvantaged. This initiative, which in fairness has recognised a need and addressed that need, has to be handled very carefully to avoid appeals from students who may not have been diagnosed with learning difficulties and subsequently refer or fail modules.

At another centre, a respondent noted the possible advantages of mixing students from different pathways in tutorial support groups. This was a new scheme that had become university policy.

We are operating a new system this year within the department offering personal pastoral support from within the faculty. For the first time I will be seeing students from Physiotherapy, Occupational Therapy and Podiatry. This is now University policy.

The mixing of students from different pathways with mentors from other pathways is an interesting concept. It could serve to provide an objective view of a particular issue and a fresh perspective about the context of the issue. However, there is a caution to be noted here, as the advice given may not be consistent with what is taught in the different divisions and could serve to

confuse the student. It would be interesting to develop this and to ascertain what training is involved for the staff to facilitate this role and how comfortable students are with being involved with this scheme.

6.8 The introduction of students to clinical practice

Having recruited students to the pathway and supported them in the adjustment to their studies, it would be pertinent to establish the expectations of them in clinical practice, as this is the main arena of their education.

The conundrum is whether to introduce students to clinical practice at an early or later stage in year 1. This is keenly debated at all schools and there are some persuasive arguments for both poles of opinion. Those wishing to introduce clinical practice at an early stage do so in the belief that it will serve as a focus for the theoretical modules, which run concurrently. This gives a practical point of application to the theoretical subject matter and also clearly identifies the students with professional practice and gives an immediacy of that practice, rather than an abstracted overview of what is to come at a later stage. Those who prefer to introduce clinical practice at a later stage, do so in the belief that this allows the students to concentrate on the theories first and understand them, before allowing them to have a concerted period of clinical practice to apply the theoretical skills. Those following the late introduction argument, are potentially able to offer their students a shared first semester dealing with the modules covering the common subjects, for example in the behavioural and clinical sciences, with other health care professionals. This allows the students to mix with each other at an early stage and form mutual understandings of the other professions.

The questionnaire results to the question are tabulated below.

Table 3. When are your students introduced to clinically based activities?

Stage of Pathway (N = 20)	First Introduction to Clinical Activities
Year 1 Semester 1	15 (75%)
Year 1 Semester 2	4 (20%)
Year 2 Semester 1	1 (5%)

These responses included the introduction of students to clinical routines and techniques prior to clinical management of patients

A subsequent question asked to determine how early in the chosen semester students were introduced to clinical activities.

Table 4. When are the students introduced to treating patients?

Stage of Pathway (N = 20)	First Patient Treatment in this semester
Year 1 Semester 1	11 schools (55%)
Year 1 Semester 2	5 schools (25%)
Year 2 Semester 1	4 schools (20%)

In comparison with the first question, the responses to this second question shows that in of the original 15 (75%) where the introduction to clinical practice was progressed in year 1, semester 1, only 11 (55%) commenced treatment of patients in year 1, semester 1. One extra school commenced treatment in year 1 semester 2, with 3 others waiting for actual clinical treatments until year 2, semester 1, allowing for a pre-clinical year to cover the introductory science and podiatry subjects.

To make any meaningful statements about this prompted the posing of a third question.

Table 5. When are the students introduced to treating patients in the chosen semester?

Stage of Pathway (N = 20)	When in the semester (Week number)	Mean / Mode / Median
Year 1 Semester 1 (N = 11)	10,6,1,10,13,9,8,10,10,14,9	8.27 (8) / 10 / 10
Year 1 Semester 2 (N = 5)	1,10,1,1,10	4.6 (5) / 1 / 1
Year 2 Semester 2 (N = 4)	7,1,1,1	2.5 (3) / 1 / 1

Because of the variability in response to this question, it was considered best to show the mean, mode and median score for this table. From this table it can be seen that 7 of the 11 schools started approximately in week 10 of year 1 semester 1, 3 of the 5 started in year 1, week 1 of semester 2 and 3 of the 4 started in week 1 of year 2, semester 1. Closer examination of these figures shows that one school started treating patients in year 1,week 1, which is a surprising response but one which may be explainable with new students having observation experience acting as auxiliary helpers by way of an introduction to practice with senior students.

This exposure to initial practice can be sensitised further. It would be pertinent at this point to ask a further question regarding the actual number of clinical hours in which students engage in clinical activity. The table below shows the responses from the schools and shows the changes to the number of hours depending on the stage of the pathway the students are at.

Table 6. How many hours per week are students engaged in clinical activity?

Stage of Pathway	Hours per week in Clinical Activities	Mean
Year 1 Semester 1 (N=15)	6,6,6,6,9,9,9,9,6,6,3,6,6,3,3.	6
Year 1 Semester 2 (N=19)	6,6,6,6,9,9,9,9,6,9,9,9,7,3,6,2,3,3, **32**	**8 (19)** **6 (18)**
Year 2 Semester 1 (N=20)	12,6,9,9,9,12,12,12,10,10,10,9,10,16, 3,6,6,10,7,6	9
Year 2 Semester 2 (N=20)	12,8,9,9,9,12,12,10,12,10,9,9,11,16,3, 6,6,10,10,6	9
Year 3 Semester 1 (N=20)	15,14,12,4,20,12,18,14,12,10,9,9,13, 16,9,6,15,10,17,12	12.
Year 3 Semester 2 (N=20)	15,14,9,12,20,12,18,14,12,14,9,9,11, 16,9,6,15,10,20,12	13

Four schools noted they provided an additional 84 clinical hours arranged in blocks of clinical teaching.

This table shows some highlighted results as one school recorded a high number in Year 1, semester 2. This may be due to a block of clinical experience being undertaken, rather than a weekly hourage described in other schools responses. This may be seen to affect the norm values for the mean reading taken from the group. Both scores are provided for completeness of the table. This table shows that students increase their clinical hours as they progress through the pathway. This table also shows that on average students would be involved in clinical practice for 6 hours per week in year 1, 9 hours per week in year 2 and 12 hours per week in year 3.

Traditionally, the students' clinical abilities are developed incrementally as their experience and knowledge base develops. This is based on the premise that students progress through clinical skills in a scheme, which shows foundation level abilities, through an intermediate stage to the development of advanced level practice. To do this, their clinical practice is usually graded to

ensure a controlled transition. Interestingly, responses to the question 'Do you grade your patients' symptoms to suit the abilities at stages of their experience?' showed some variance. Sixteen schools (80%) replied that they did grade patients' pathologies to suit the students' skills, while 4 schools (20%) did not, indicating that their students practice was governed by the presentations of patients who attended.

Below is a table, which shows the schools graded their patients.

Table 7. How do you match patients to students' clinical abilities?

Year of Pathway	*Patient Symptom Classification*
Year 1	Routine / Simple nail care
Year 2	Musculoskeletal (10); primary care (4) Biomechanics (5)
Year 3	High Risk (11); Surgical (6), Sports (4) Consultant / Specialist referrals (3)

This table shows how students are introduced to graded clinical practice, graduated in an incremental manner to reflect what could reasonably be expected of them at each stage of their student career. The progression is clearly seen from foundation level to advanced level practice. This incremental progression of ability clearly demonstrates the preparedness of students at different stages of their student careers to be able to demonstrate competence in practice with a range of clinical skills by the end of year 3.

As stated earlier, it is becoming a common practice to place students in clinical placements as a means of developing their clinical skills in the real world setting. It also enables them to develop a personal identity and association with professional practice, mirroring Miller's study (1999). The evidence presented here shows that schools retain a high degree of control over their student's clinical education, to ensure that students achieve their skills along a

predetermined path. More recently, opportunities for education in placement has been widened to comply with DoH led initiatives. The provision of placement experience could be considered to provide exposure to real practice experience and to a broader range of clinical conditions that do not present in the university clinic. The emphasis is on treatment rather than on the education process.

A Summary

1. The preferred entry requirement of each course should satisfy the emphasis of that pathway. The standard of the expected grade of award should be consistent with professional learning and appropriate to achieve the learning outcomes of the pathway. Students should achieve as a minimum, the equivalent of two A level subjects at a grade determined by the pathway. A preference of D grade (or its equivalent) could be expected for students to manage the expectations of the pathways with a reasonable prediction of being successful.

2. The minimum entry requirement should be set to enable students to be successful and to have some access to remedial work, in order to reach an appropriate standard before the teaching commences. Schools may wish to set pre-entry assignments or consider the arrangement of a block summer school to enhance students' success for those with less than the 'normal' entry requirements but who have other APL experience.

3.Any preferred subject or spread of subjects should be stipulated for all applicants to achieve prior to application. The recency of those qualifications should be set appropriately to conform to the current thinking on the evidence for the currency of knowledge, which according to current research is a maximum of 3 years.

4. Transfer between schools should be accommodated where equivalency can be demonstrated between the experience of the transferee and the requirements of the proposed pathway. This is in accordance with the philosophy of credit accumulation and transfer schemes (CATS) of academic credit.

5.Where schools offer an APL (APEL) scheme, this should be transparent and precise in its application for all students wishing to transfer between schools. In the spirit of accessibility to H.E., schools should move to the position where there is the opportunity to operate an APL scheme to enable transfer between schools.

6.Institutions should provide academic and pastoral support to students enrolling onto their pathways. The introduction of peer support should be considered following the reported successful introduction of these schemes at other schools.

7.Students should engage in clinical activities at an early stage in their careers to acclimatise to the expectations of the clinical setting and to become familiar with professional routines prior to treating patients. They should be prepared to treat patients after a period of adjustment and training in techniques, preferably at the end of the first semester of year 1.

8. School clinics should grade patients' presenting conditions, and introduce students incrementally to an increasing level of complexity of pathology, as their experience and clinical education develops.

Chapter 7

The Pathway

The final domain for consideration in this series is the pathway of learning itself. This chapter will concentrate on four separate aspects of this domain that are considered to be central to clinical education. Aspects concerning methods of clinical teaching, methods employed to assess clinical teaching, issues of quality assurance and competence as well as the preparation of newly qualified graduates for lifelong learning are discussed.

7.1 Methods of facilitating clinical teaching

It is important to establish the range of teaching methods used in clinical education, to highlight the areas of commonality between the schools and to share information about the considerable advances that have been made as the degrees have developed. Before degrees were introduced, all schools used similar methods to teach similar subjects. However, since the schools have developed individualised degree pathways, there may be different emphases that need to be established. Previously, the schools communicated with each other by means of staff from one school acting as an examiner at other schools. These meetings presented an ideal opportunity for staff to exchange ideas and philosophies both about teaching, research and employment. This means of communication ceased when host institutions awarded their own degrees with a single external examiner being appointed. The loss of this communication network has meant that some schools have developed methods of teaching in isolation of others.

Colleagues were asked to indicate what methods were most commonly used to facilitate clinical learning and where in the students' stage of learning these methods were utilised.

Table 8. What methods are used to facilitate clinical education?

	Year 1	Year 2	Year 3
Portfolio	[8]	[**11**]	[10]
Non-Clinical Placements	[5]	[**8**]	[7]
Clinical placements	[6]	[14]	[**17**]
Problem based learning	[7]	[**13**]	[**13**]
Clinical tutorials	[**14**]	[**18**]	[16]
Peer group learning	[8]	[**16**]	[14]
Staff demonstrations	[**17**]	[**18**]	[15]
In-house clinical settings	[**14**]	[**16**]	[**16**]
Computer based learning	[6]	[**10**]	[9]
Conferencing	[4]	[6]	[7]
Clinical research	[6]	[11]	[**14**]
Consultant / Specialist liaison	[3]	[10]	[**16**]

Others, please specify.....

Statements of competence; video; multi disciplinary clinics; student exchanges and case studies.

This table shows the wide variety of teaching methods employed in the clinical education of podiatry students. It reflects the recognition of the need for such alternatives in response to the wider range of abilities of the students entering the pathways. It also shows the commitment to new initiatives that enable the students to be more successful and reflective of their experiences. Where the table is read by year of study, it shows that In year 1, the emphases are in staff demonstrations, clinical tutorials and a reliance on in-house clinical settings, reflecting the pre-technocratic phase as advocated by Bines and Watson (1992). In year 2, these methods continue but there is an introduction of peer group learning, perhaps acknowledging the shift to heuristic learning. This move to discovery learning, places the responsibility on the students to

contribute to their studies and search the evidence. This is referred to as the technocratic level of education by Bines and Watson (1992). In year 3 clinical placements, research and consultant led experiences have assumed a major role and this reflects the preparation of senior students for practice, in situations and environments similar to those of their future practice which Bines and Watson (1992) termed the post-technocratic level of education. Biggs (1999) refers to this phase where the students have developed a functional knowledge and are better prepared to engage in analysis of their practice and the principles that support it.

Where the table is read across by method used, it is interesting to note the emergence of portfolios in each of the years of study. This signifies a change in traditional clinical education, with a significant move towards reflection on practice rather then simply on the achievement of a skill. This also reflects the need for new methods of facilitating this aspect of the curriculum as clinical time becomes more concentrated. The responses show that the second year is where the widest variety of teaching methods are provided, possibly due to the transitional nature of the curriculum at intermediate level, where the students move from pre-clinical novices in preparation to become probationer level practitioners as indicated by Miller et al (1999).

7.2 Educational Approaches

Colleagues were also asked to analyse and identify their preferred educational approach to clinical teaching. This was asked to ascertain if a pattern emerged to support the methods of education employed. The table below shows the

results. For clarity, the descriptive terms of the approach are used in the following way. Didactic is the term used to describe a traditional lecturing situation, with the lecturer directing teaching. Heuristic is the term used here to describe the research skills employed by the student to inform their learning by discovery and coaching is used to bring the together two aspects, where the lecturer employs their skills, the so-called 'added value' component to link the theory and discovery learning together in the context of the presenting situation, which for podiatry students is the clinical experience.

Table 9. What educational approaches are used in clinical education?

Approach	Year 1	Year 2	Year 3
Didactic	**16**	14	11
Heuristic	12	17	**19**
Coaching	15	**18**	16

The table shows that all approaches are used in some form in all years. If these results were to be considered on a year by year basis, it can be seen that emphasis is given to traditional teaching methods in year 1, changing to coaching approaches to learning in year 2 with a shift to discovery learning in year 3. The didactic approach to teaching is emphasised in year 1 as indicated in this table. It is interesting to see that the need for this reduces as the pathway proceeds to the final year. The taped interviews intimated that these approaches were phased in and out of the students learning as appropriate within each year of the pathway. This reflects the growing abilities of the students to act in a professional way regarding their studies and also shows the changing dynamic of the pathways to allow these approaches to be confidently applied to professional education.

We do recognise that in the first year students need tutor-led teaching and we move away from this incrementally to the point where the final students are truly studying independently in their research projects.

This recognises perhaps that students enter the pathway with a variety of educational qualifications and the emphasis on didactic approaches may reflect the perceived need for students to have a common foundation in theory, before moving onto the practical application of theory to practice. An encouraging finding was that heuristic learning is evidenced in this table. This shows the importance of discovery learning and the role of research in clinical practice as students develop a research-based philosophy from year 1 to year 3. This style of teaching peaks in year 3 and confirms the transition towards the search for evidence as a basis for professional practice. The coaching style of teaching is emphasised in year 2, building on the application of the theory to practice in clinical modules, creating links and bridges to the practical elements of the pathways in the clinical practice modules. In year 3, the coaching approach is acknowledged but the research approach is emphasised and may be seen to be another step in the preparation of senior students to be able to justify practice. This continuum of educational style reflects the changes in education that have already been implemented and makes provision for those that may be planned for the future. It may be seen that this is a direct effect of the increased professionalisation of podiatry with the development of an increased scope of practice. This has been a feature of all AHP education that has resulted in a common understanding for the exchange of information between the professional groups to be facilitated, to improve the delivery of healthcare.

7.3 The assessment of clinical teaching.

The assessment of clinical teaching is an essential feature of the pathway but Darbyshire, et al,(1990) commented that the evaluation of student performance was a complex issue. Assessment serves different functions and this is reflected in the needs of the participants in assessment. The teaching staff needed a mechanism of evaluating a student's progress in their studies and this is managed using a variety of assessment philosophies and techniques. Students expected to be assessed; this enabled them to monitor their own progress and to make some judgement of the pathway itself. As previously discussed, students are the consumers of the pathway, so they are also the arbiters of standards. Colleagues were asked to show the range of methods used to evaluate students. Schools need to assess the students to judge their knowledge and competence to practice.

The table below shows the responses.

Table 10. What means do you use to assess students' clinical ability?

Practical Examination	[20]
Portfolios	[11]
Objective Structured Clinical Examinations (OSCE)	[18]
Objective Structured Practical Examinations (OSPE)	[8]
Peer Assessment	[4]
Self Assessment	[7]

Other, please specify ...

Case studies (3), Statements of competence (2), continuous assessment, professional conduct – 1 each.

The range and variety of alternative methods described in this table shows that the traditional reliance on practical examinations alone did not provide a satisfactory way of determining a student's success. Serious consideration was given to the assessment of the students' experience. In engaging with such a

wide variety of approaches, schools recognised that all students learn in different ways and that a reliance on traditional methods of examination does not enable all students to achieve their potential. This reflected the need to provide a range of assessment methods to accommodate the diversity of students' abilities, particularly where students have different educational experiences of assessment prior to joining the pathway. Some students may not have experienced traditional written examinations and therefore do not perform well in unseen examinations. Others prefer coursework assignments or portfolio preparations rather than practical forms of assessment. All students must be catered for within the system of assessment and pathways must provide appropriate assessment methods and support for a range of student abilities, to enable students to be successful.

7.3.1 Uses of assessment.

The introduction of learning outcomes as assessment criteria has created a need for a significant amount of assessment for all pathways, as each outcome would have to be identified and assessed. The time taken in preparing the examinations, preparing the students for the examinations, marking and giving feedback is onerous on a staff team. However, assessment has a major contribution to make to the pathway. A question was posed to ask how their schools used the range of assessments. The terms formative and summative were used, with the intended definitions of formative, being assessment which informed the students of their progress to date, in a practice scenario and summative to describe assessment which marked the end of a module and the mark counted in their overall results. The table below shows their responses.

Table 11. The uses of Summative and Formative assessments.

Method	Used Summatively	Used Formatively	Used Formatively And Summatively
Practical Examinations	[4]	[2]	[13]
Portfolios	[4]	[2]	[3]
OSCE	[7]	[3]	[8]
OSPE	[4]	[1]	[4]
Peer Assessments	[3]	[2]	[2]
Self Assessments	[3]	[3]	[1]
Others (please specify);			
Case studies	[2]	[1]	[2]
Statements of competence	[0]	[1]	[0]
Continuous assessment	[1]	[0]	[0]

The table shows that there is a range of assessment techniques that are used in both summative and formative forms. The types of assessments used provide many ways of assessing a student, allowing them different ways to express their knowledge and abilities. There is a heavy reliance seen in the use of practical examinations, which is not surprising as all students in the U.K. are required to demonstrate their clinical competence in a final practical examination to gain their final awards. This is a stipulation of the statutory body.

The introduction of peer and self-assessment as a summative method is an interesting initiative. Self -assessment is used in the tradition of personal referenced assessment and is cited as being a less threatening option for students. Davies (2001) found that peer assessment has some value at a formative stage and enabled peers to engage with the assessment process and to become familiar with the analysis of assessment. However his studies have shown that students have a mixed reaction to this and caution must be noted.

He found that when involved in self-assessment, the more able students marked their own work much more strictly than the less-able students marked their work. He suggested that this served to demotivate the stronger students and flatter the less able. He concluded that this was a natural response to their respective levels of ability. Similarly with peer assessment, care must be taken with the distribution of scripts as again, the better students have a broader understanding of the subject and expect more detail in a paper, whilst the weaker students do not, so again the marking is skewed. Some respondents indicated that they used peer group assessment to expose students to the marking process itself and to enable them to appreciate where marks are awarded. Others used a combination approach using both peer and staff based assessment to modify any extremes of marking.

7.4 Quality Assurance

> *This dominates everybody's agenda. I'm not sure that I could discuss this as this is such a lengthy subject.*

This quote typifies responses from schools as the whole quality issue is complex and multifaceted. It has a number of definitions that have been discussed earlier in chapter 1. This respondent provided their working definition.

> *Quality Assurance, in the conduct of course accreditation, it involves the institution, the professional/statutory bodies and the validating university.*

Although this response does not follow Donabedian's (2003) vision of QA, that being to improve or the increased possibility of improvement, it does portray a more TQM management model, and may serve a different agenda in management rather than in education.

Quality Assurance has a major influence in the provision of higher education. In the U.K., initiatives such as those undertaken by the Quality Assurance Agency (QAA) have been introduced to ensure that quality of education is assured and that value for money is being achieved by the universities. In Australasia, the Australasian Podiatry Council has a similar role and in South Africa the Medical and Dental Board is the advisory body. The schools of podiatry are permitted to educate and train podiatrists only after a satisfactory review. In the U.K., a quinquennial review is undertaken to review all elements of the pathway, by a joint panel of the Professional Body (SoCAP) and the HPC (JQAC). The QAA also audits these pathways under the broader umbrella of Other Subjects Allied to Medicine (OSAMs). The universities are also required to sample staff teaching, research and student support activities, as part of this audit. The burden of audit is constant and is considered to be excessive.

> *I suppose in the old days the only audit we had was the students' results. Nowadays we have questionnaires; surveys and reviews, there are so many different aspects of audit to include. These are so time consuming I just wish there was someway of rationalising them.*

Part of the interview investigation was a request for colleagues to discuss the quality assurance measures, which they employed to audit the outcomes of their respective pathways. One school starkly reported,

> *The formal chain of audit is the same here at all the other Universities.*

Unfortunately, the variety of audit tools given in response to this question is very wide-ranging and renders this statement to be meaningless, as not all

schools shared the meaning of quality assurance nor did they undertake audit review. Some only did so in a limited way.

> *We also have a staff student liaison meeting 3 times a year. Some modules (but not all) have module evaluation questionnaires. Our students also undertake a perception survey of the programme once a year.*

This respondent indicates that selection of modules for evaluation is a common feature from this school. It is not an acceptable option for schools to follow. To be effective and productive, the audit process must reflect the whole programme and the choosing of the popular modules for evaluation may be considered as a means of artificially manipulating the audit process to only show what is successful.

There was consensus that students played an important part in the audit process, again reflecting their increasing status as consumers of education. They are asked for their opinions regarding each module and also for their evaluations of the overall pathway.

> *Students complete confidential, anonymous questionnaires for each subject in each semester. These are collated into a module report and feed into the Pathway report, which is discussed at the Board of Studies meetings, where students have a representative.*

Other schools reported that they also used student evaluations but included outcomes of previous meetings, examination results and proposals for any change. These reports inform the pathway report and ultimately School Council (Board). There was considerable inclusion of the local NHS trust (employer) in the audit process. Reports were given to these bodies, as there were financial contractual agreements in place where there was a service agreement between the WDC and the schools, who were required to provide

data regarding funding agreements for education as well as for service provision to the community.

> *All stakeholders in the programme (University, NHS Trusts) are provided with a report plus an action plan detailing the outcomes of the process and methods managing the issues raised.*

Another essential contribution by the employers is the part they play in assessing the appropriateness of content, the context and applicability of the degree.

> *Employers are given confidential questionnaires to complete which we use to inform the currency of our degree.*

One school admitted that they did not use any formal quality assurance measures at all, relying on annual inspections and extensive self-evaluations of the facilities provided by the school and the outcomes (results) of the pathway. There was some acknowledgement of the need for future change, with the introduction of quality protocols, indicating that staff performance and student performance would be considered in the next two years when policies were initiated by the institution. Exposure to this issue by this study had prompted this recognition in these participants, again in the phase between the questionnaires and interviews.

Reference was made in the responses to externally appointed bodies being involved in the audit process. Each highlighted perceived weaknesses but all gained something positive from the exercise.

> *We have annual staff teaching evaluations by our Centre for Learning and Teaching (CELT), which is a good thing. They evaluate style, content and organisation of our teaching so we have that sort of audit. What we don't have (and should have in my opinion) is an external examiner, but the system here is that Universities award their own degrees.*

Another comment had some merit, in that it enabled change to be seen in an objective context and to be managed appropriately.

> *We are subject to internal review every 3 years by a staff team from another department within the University.*

This latter scheme does have a considerable disadvantage, as it does not allow for sensitive management of the pathway to respond to immediate needs that may arise.

> *We have an advisory board that monitors the quality assurance of the course. This is made up with external staff from Physiotherapy, Medicine and other Podiatry departments. Their job is to review the content and quality of the course its functionality and cost.*

This scheme allows peer review of the pathway whilst recognising the need for the inclusion of colleagues with a professional understanding to put any recommendations into a workable context.

Most schools demonstrated some form of quality audit with some being more organised that others giving priority to the audit process. One school did not, demonstrating a lack of any serious attempt to report and address quality issues in a systematic manner.

> *We have an advisory panel which meets annually or on an 'ad-hoc' basis as necessary to discuss any developments or changes.*

This apparent laissez–faire attitude towards quality assurance may be used because it is informal. It can only be responsive when required as it leaves the institution in the position that difficulties will only be recognised once they have happened and the consequences of those difficulties have occurred. Instead a more pro-active approach should be considered, which has predictive qualities to highlight problems before they affect teaching and learning.

There was a move in some schools (n=2) to provide a student forum to debate their respective pathways. This may not be as valuable as it first appears, as it denies the students anonymity and confidentiality of their opinions, therefore any comments they make may have to be guarded and have less impact than they would prefer.

> *We have an open forum with students to discuss issues or concerns about the pathway. We also have an annual staff review of the pathway to discuss proposals for any changes to the degree.*

Another forum for student involvement given was the introduction of staff – student liaison meetings. Here, student representatives from all years of the pathway met with staff in a formal meeting, which was minuted, and included within a report. These meetings were held regularly and were seen to be a mechanism for accessing student feedback at stages through the semester to enable any difficulties to be managed more quickly and immediately. These meetings acted to ensure student views were reported and recorded.

There was also an acknowledgement for the need for students to audit the staff, although this was largely viewed as a means of assessing their teaching capabilities. Some indicated that the staff were reviewed by external sources, namely by staff from another school or division; others were reviewed by students whilst in other schools staff self-evaluated their teaching skills

> *It isn't just the course which is reviewed, the staff too are reviewed by students.*

Staff development needs was another issue raised to audit the teachers. Some schools (n = 3) had instigated, as a matter of good practice, peer review of teaching. This was a formal staff appraisal by another tutor and the report was used supportively to inform the personal development review (PDR) as a

means of highlight staff needs. Review of the staff and the identification of further development was also the subject of some other responses.

> *The College seeks to appraise staff annually through its Review and Plan procedure. The College has achieved IIP(investors in people) status. Staff development, as previously identified, is well structured with needs informed by Faculty Management determined priorities and individual staff reviews.*

Another innovation introduced by one university was the appointment of a Faculty Manager to oversee all aspects of audit. The manager retained and audited the quality handbooks produced by the teaching team of a department. The appointment of such a post was seen to be a positive addition to oversee quality issues.

7.5 The need for professional competences.

> *In a positive way these (statements of competence) clearly state what we do, what our profession is about and what we teach our students.*

The interesting part of this response is the underlying sentiment indicating why benchmarks are necessary. It hints that the benchmark statements define the profession and provides an identity. This may be an opinion that is more widely held as another respondent hinted at the potential loss of professional integrity and demonstrated a protectionist tendency.

> *It is safe to say that we need to demonstrate and define baseline competences which make up the podiatry profession, otherwise we are in danger of 'others' taking them on and claiming them as their own.*

This comment recognises the key problem that underlies the profession. As stated earlier, the scope of practice in the state registered profession needs to be clearly defined to protect the profession from dilution by the number of unregulated non-registerable courses that are still currently available. Recently, there have been pronouncements to protect the public through the registration

processes of the HPC. Attendant issues such as protection of professional title; scope of practice and the requirements of registration have also been resolved by the HPC.

> *The question about competences is an interesting one. We are being pushed this way through QAA and benchmark statements.*

The resentment implied in this comment is clearly a reference to the imposition of the competences and implies a lack of evidence to support their inclusion.

Some respondents saw the requirements for competences as more of a restriction, rather than an opportunity, to the establishment of a broader scope of practice. This is echoed in the next quotation.

> *I would suggest that we don't need competences within the schools and that it is not a requirement for students. I think this is an area we should consider very carefully and again not wanting the Society to be absolutely prescriptive because that isn't a flexible approach, I believe we need to be flexible to accommodate the changes in working and clinical practices over the next 10 years.*

The next comment saw the measurement of competences to be a teacher-led role in marking a paper to show that a student has achieved a competence. This could be seen as a backward step; a return to the days when students were trained in an activity to become good 'doers' rather than being good 'thinkers' of practice.

> *This old chestnut again...I would agree that it is difficult to assess competence in clinical practice. If you are using written statements and ticky boxes you will inevitably fail to look at a student's performance holistically and this is essential in assessing clinical practice.*

This comment crystallises the remarks made by other colleagues in their taped responses. The reference to the 'ticky boxes' indicates a prescribed approach to the measurement of a practical competence without recognising the added dimension of understanding that supports the action.

As clinical competence and clinical safety are central to all our teaching, colleagues were asked for their comments on the need for baseline competences and any additions to, or omissions from, those published which they would like to see made. Comments ranged on both sides of the debate.

Aspects for inclusion were for students to develop diagnostic acumen, to interpret data to inform evidence-based practice; be able to evaluate literature and contribute to the research base of the profession. One school had removed from its profile was the teaching of orthotics, although students were taught to prescribe using commercial companies for manufacture.

Whilst there was a broad agreement regarding the need for baseline competences, it was felt that they were difficult to create. In the changing world of education at all levels, the introduction of competence statements could be seen to be restricting practice rather than as enabling its development. However, the generation of competence statements is consistent with the changing trends in contemporary society in establishing boundaries and protocols to protect the public from inappropriate interventions.

One respondent acknowledged that their school did not have competence statements for the institution based part of the course but they did have some expected safeguards for placement experiences.

> *This is a thorny issue for us, as we do not have baseline competences and minimum standards for each year of students. We do look at best practice in the context of the environment, especially on placement.*

It was also suggested that to make these competence statements meaningful, they would have to be strictly interpreted which could act to restrict progress. Another point raised was that the rich diversity of conditions encountered in practice would require an exhaustive list of competences to be generated and evaluated.

> *Ideally yes, but in practice they are almost impossible to create and almost stultify if carried too far. There are so many different scenarios that we encounter that the whole issue of competences is very difficult to get your head around.*

At best these statements would have to be written to encompass most eventualities and at worst they would have to be so prescriptive as to be impossible to verify uniformly for all students.

> *The optimum number of competences are few enough to guarantee a practitioner is safe, capable of formulating an achievable and appropriate treatment plan and capable of delivering it effectively and efficiently. Too many and you stifle progress and innovation.*

This response offered the line of least resistance and reflected the thoughts of others. In accepting that competences and their measurement will be introduced by edict, this comment recognised that only the minimum levels of practice can be agreed and recorded. The latter response was interpreted negatively indicating that professional growth and development could be

adversely affected by cost reductions, allowing funding only to provide for the minimum standard necessary.

The question of research evidence to support the introduction of baseline competences was raised. This is an issue that was raised continually and it was well made. Evidence is required to justify and implement such changes.

> *There is the SoCAP statement of minimum standards which helps, but competences should only be included where research evidence is available to validate their inclusion.*

The educational schemes in Australia are more advanced than those in the U.K. and their competence statements have been developed over a period of years. These had been written into each unit of their respective degree pathways and had therefore been incorporated into their educational processes.

> *We have the Australasian Podiatry Council's competence standards, which are applied to our graduates. These are also applied to overseas applicants when they apply to work in Australia.*

The over-riding concern of educators was that where competences were used too prescriptively, they may reduce the education of podiatrists to a technical level, rather than to embrace higher educational philosophies and the ability to further develop practice in new areas.

> *The bottom line is as always, safety to practice. Yes we do need competences but the hard thing is assessing them. I'm partly of a mind to suggest that 'gut reaction' is a key feature, because an experienced clinician knows competence when it is demonstrated in the clinical environment. It is seen in a student's attitude, application and discussion of what they do.*

The problem with this opinion is the experience of the assessor and its subjective nature. Only very experienced clinical academics can make such

judgements, but assessment requires evidence to show that it is operated uniformly and fairly for all students.

In general terms, these respondents agree that some statements of competence need to be made to identify the profession in terms of its scope of practice but that these need to be carefully considered and more widely debated before they are implemented.

7.6 The promotion of a student-led learning philosophy.

Attitudes towards teaching and learning have undergone a major change in recent years. This is, in part recognition that students learn more and retain more information when they actively engage with the subject.

> *This has more recently become important to us as we move away from the teacher- led environment. We wish to cut class contact time to allow time for research, encouraging a change in our role as disseminators of information, to a more proactive student role as problem solvers.*

Though forward thinking in philosophy, without careful preparation of students this could be ineffective to the detriment of students.

Participants were asked for their views. One colleague responded,

> *Now do you believe this, or are you being provocative? Was this driven from an educational sense or is this money driven? We certainly prefer to talk about these changes as your statement suggests! We have modules written to reflect this change of emphasis.*

This comment shows the reality of the situation, yet despite the implied sense of indignation, this response shows that financial considerations underpin most decisions in education. Other aspects to consider are the traditions of the staff teams themselves; their beliefs and opinion of 'what works' and 'what does not'. This may also be a reflection of the teachers' own learning experiences

and their concerns about negative feedback should they change teaching practices.

> *We have very mixed approaches here. Half the (staff) team want to progress and encourage student led methods of learning...the others find it hard. Students are also reluctant to follow this route..but this may be because they have picked up mixed messages from the staff. Perhaps if we had started with this method, students would not have such problems.*

It is clear that the philosophy of change is staff driven and that students could be encouraged to change their attitudes to their own education, at the start of their university career, where they are introduced to this way of working.

> *We adopt the attitude that level one is largely lecturer led and that by the time the student reaches level three a proportion (probably one third) of the delivery is student led.*

However this is not always easy to achieve, as the students believe that as they have been successful in their learning to gain entry to university, then the same techniques will be sufficient for success at this higher level of learning.

> *Students are taught that their learning potential lies within them and their attitudes to learning.*

It is also a common misconception on the part of students that they can only learn when a tutor is available to teach them. In this way they create a dependency culture, which encourages them to be passive in their learning rather than becoming active learners. Instead of crediting tutors as the fonts of knowledge they should be encouraged to see tutors as learning resources, just as they would a textbook or a computer. This way, students are encouraged to take more of a control of their own learning. One acknowledged this and managed the issue from the start of the pathway.

> *They (the students) are taught not to rely on tutors for all their learning...some students believe that they can only learn if a tutor is present.*

The responsibility for learning must lie firmly with the student. Reliance on others is acknowledged to create only a superficial level of learning, which is easily displaced. Original studies by Stroop, following his work throughout the 1930's showed that a student's performance only improved by 5% under these circumstances. More recent studies by Bines (1992) have shown that where a student becomes actively involved in their studies they retain and apply their more of their knowledge.

Another respondent recognised the difficulties involved in making students responsible for their own learning but had acceded to the students' perception and demands, again showing the power that students have. There was some movement in this philosophy as they had made a start in changing the emphases and methods of education in their school. Their response in the interview was,

> *Our difficulty is that students enter HE with a need for staff led teaching. It is very hard to change as students demand didactic teaching.*

They continued thoughtfully

> *We have recently shifted to OBE (outcomes based education) which has enabled staff to be released from teaching duties to support and enhance student learning.*

Encouragingly, this respondent indicated that they had made changes to their schemes of working between phases 1 and 4 of the data collection. They acknowledged that they had not considered such possibilities and were encouraged to do this having been exposed to the responses of all colleagues.

Respondents reported that a variety of methods were employed to ensure students were exposed to as many different styles and approaches to teaching as possible. This was thought to promote an appetite for knowledge and to stimulate students to be more proactive in the pursuit of knowledge. This may be a high ideal but is evident in schools.

> *We use different styles of teaching in different modules ranging from problem based learning, directed study, presentations of seminar work, workshops and formal presentations of research findings.*

These more active ways of learning enable students to develop a deeper level of understanding and reflects Bines' study (1992).

There was evidence of conflict between two extremes of opinion on the development of student-centred learning. Both revolved about the learning potential for mature students. One view expressed was,

> *We have found significant resistance to this in school leavers but not so much in mature students. New methods of on-line teaching allow study at a distance which they prefer.*

Whilst at the other extreme,

> *We find it increasingly difficult to adopt this style due to the nature of the students. We have a considerable number of mature students who find the student-led learning philosophy difficult to cope with. I think it comes down to entry criteria. We believe that in the future we will have to move much more towards the student led delivery but we fear quality will suffer.*

The issue of quality was taken up in another response. It concentrated on the learning potential experienced by students. This was a very reflective, considered response from an experienced colleague who thought it time to

review the balance and take some form of view which was more in keeping with the needs of the students.

> *In many ways this is true, but I do have to say that there is nothing as effective as a Podiatrist discussing podiatry issues in the lecture format. We have moved away from this style to a CBL on-line teaching. This is all well and good to cover a lot of material or to deliver material at a distance...but I think we have lost something and our students agree. I think that Universities are encouraging this because it saves money. Apart from the setting up costs, if this system goes ahead, staff will be released to do more research and hence bring in money to the University.*

This response recognises the traditional role of clinical teachers in a professional context. Their experience shines through in this response and recognises that there are underlying financial agendas to a decision to move towards student-led education but at a cost; that being a reduction in the effectiveness of the learning experience and the loss of the contribution of the added-value from an experienced academic clinician.

Increased opportunities to study at university have meant that a broader range of entry qualifications are now available for students but that there can only ever be some loose levels of equivalency between these rather than a confirmation of absolute comparison.

> *We are concerned with the balance of this. We have found that 1st years cannot cope with an expectation of student led learning in the early stages, especially where the A level points score at entry is low, or where applicants have a BTEC, GNVQ background.*

In conclusion, it is acknowledged that attitudes are changing regarding the emphasis of responsibility for learning, and the introduction of CBL in subject areas such as anatomy, physiology and pathology has provided a modern

source of learning support. The use of IT is considered to be the hallmark of student-led learning and is key recommendation in the Dearing Report (1997).

There is a strong opinion held among these respondents that in clinical teaching there is no adequate substitute for the experienced clinical academic in supporting student learning and this opinion was reinforced by the findings of Davies and Pearson (2001) research that was based in student comments.

7.7 Lifelong learning

Lifelong learning is an admirable aim, sought by all respondents. It is the means of continuing with personal and professional development and provides the recognition of evidence-based practice on which professional growth and integrity rests.

> *Lifelong learning is different to CPD. It is a philosophy and encourages students to learn from experience and study and to apply their knowledge to their continuing practice. It is a part of being a professional.*

This response indicates that students' attitudes are at the centre of this debate. Their approach to learning and their appreciation of knowledge is not something that is taught, rather it is the development of a positive attitude to learning that maintains professional development.

> *You are quite right. It is an attitude which you have to try to establish in students. We do this by encouraging students to attend conferences, present papers and publish papers. They are exposed to EBP at every opportunity as a way of reinforcing the message of currency of practice.*

Colleagues were asked to discuss the measures they employed to promote lifelong learning within their own curriculum.

> *...do we have these ?.... is this related to professional development? ...no, no, we do do this...we have a curriculum based on student enquiry.*

This response was transcribed from a taped interview. The respondent genuinely needed to 'think out loud' to confront this issue, before concluding that lifelong learning was supported in their school.

Many respondents reported that they had changed their teaching in the final year having less (class) contact and more tutorial support, with a greater emphasis on research and technology based provision. They reported that the lifelong learning concept was reinforced throughout the undergraduate pathway and that all students were aware of the requirement for professional CPD after they had graduated. It was anticipated that this would then become part of their personal development as a professional whilst at university. Staff could demonstrate the fluidity of current concepts and the need to revise and renew clinical practices within an evidence base. One report received illustrated this understanding perfectly.

> *Students are left with the thorough understanding that anything they are given is not the answer, it is only the answer for today...which will need reviewing as evidence is available, therefore creating a new viewpoint.*

However, to be realistic students will also need to know that there is in general a lack of evidence to support current clinical practices and they were encouraged to be active researchers and thereby contribute to that evidence base. Many people associated lifelong learning with CPD. Whilst CPD was a professional requirement to update knowledge, lifelong learning was

considered to be a philosophical approach that used enquiry skills to challenge existing concepts and seek evidence to support and justify clinical practice.

> *I agree with this and would argue that once you stop learning it's time to give up!*

Some schools have developed this concept further, teaching students that gaining their professional degree was just the start of their professional learning. Others had encouraged a questioning ethos to learning so that when students had graduated they were encouraged to return for Masters / PhD level study.

> *How do we start with this? Well we start by making students independent practitioners and independent learners...it's more about finding the answer, a realisation if you like about having to respond to a changing world and the curriculum must prepare students for that change.*

Perhaps one of the most important points to emerge from this question was the emphasis placed on a research approach to study across the 3 years of the course. The encouragement of reflection, to inform good clinical practice and the ability to interpret other research findings would trigger and support the pursuit of CPD outside the university experience. The whole point being that good practitioners have well developed intellectual skills and are therefore knowledgeable in well-supported research evidence to support their clinical practice.

A Summary

1. Clinical teaching is a rich and varied specialism requiring a range of methods to be successful. The current range of methods employed encompasses the needs of schools to enable its provision. Further developments and sharing of good practice ideas between schools is to be encouraged.

2. The schemes of assessment reflects the needs of the respective pathways, but should include the opportunity for the practical examination to be experienced formatively and summatively at all schools. Other types of assessments should be encouraged but the use of peer and self-assessments should not be considered for summative evaluations without further study.

3. The QAA's benchmark statements regarding students should be subjected to a research enquiry to determine their worth. They should be flexible enough to recognise the variation of the pathways offered. This needs wider discussion with Pathway leaders and it may be altered where a case is made and supported in the literature.

4. The introduction of clinical competences should be written in a flexible way to encompass the philosophies of all schools. These may be negotiated further utilising a DELPHI technique to enable a working compromise to be decided.

5. Following an initial introduction to the subjects at foundation level, the students should be encouraged to be made more responsible for their own learning and engage in research and student-led learning scenarios. This would allow some discrimination between the levels of the students' abilities.

6. The research-based ethos could engender a positive attitude to learning and enable the transfer of this philosophy to lifelong learning that would serve to maintain and update the graduate through their professional career.

Chapter 8

The Final Consultation

This is the final part of the results and presents the feedback from the expert participants, presenting their comments after they had received the summaries of points for each of the four domains. The outcomes will be the concluding part of this study, to generate additional statements to augment the QAA statements. These additional statements have been distilled from the consultations with this group of podiatry pathway leaders. The recommendations will be offered to the professional body and may possibly be used to inform a part of the overall extended quality audit in podiatry education.

To recap, in the UK, the QAA in concert with SoCAP had formulated a set of outcome-based benchmarks for use in the measurement of the quality of podiatry education. The educational literature suggested that this provided an incomplete and inadequate position and did not wholly recognise the range of factors that affected quality issues. Therefore colleagues were asked to consider the 4 domains of education that had been taken from the original literature. They were asked to consider and discuss these key areas that could be used to augment the competence statements and contribute further to the improvement of podiatry education. They were asked to complete the fourth phase of data collection forms and to make any further comments that they felt to be appropriate. Altogether 32 statements were collected and collated, of which 28 were accepted unanimously. This demonstrates the achievement of the stated aims of this study.

8.1 The accepted statements

Regarding Staff.

1 As a minimum requirement, all teaching staff should hold a relevant first degree, preferably at a 2 (i) level of award and this should be supported by a higher award within 3 years of commencing the post. Applicants with an honours degree at 2 (ii) level of award should be considered for teaching positions depending on their experience or CPD evidence related to the expectations of the post.

2 All new teaching staff should undertake a period of induction into the administration, health and safety as well as to all of the education and assessment processes of the employing institution. This should also extend to part time and placement based staffs.

3 Full time teaching staff, at a senior level of appointment, should have a minimum of 2 years clinical experience.

4. An experienced colleague should mentor new full-time staff during a probationary period of one year.

5. Annual CPD is considered to be essential for all grades of teaching staff. This should be certificated for evidence of attendance and completion of the module(s). The CPD experience should also include educational as well as professional areas of provision.

6. The current requirements for CPD in the U.K. need to be reconsidered for teaching staffs who are actively involved in the delivery of CPD.

7. The importance of research activity should also be emphasised to encourage further development of the profession as well as the development of clinical practice.

8. Any clinically active teacher should be required to evidence 15 hours of 'core' clinical study of CPD but that their other CPD credit could be evidenced by negotiation in areas pertinent to their personal and professional requirements to their employment.

9. Staff should maintain a portfolio of evidence of their CPD activity for annual appraisal, where agreed goals have been set in advance. Although the portfolio is the personal property of the individual, they may be asked to allow their line manager to have access to this material as part of their personal development review (PDR).

Regarding Resources

10. The reliance on a number of clinical hours as an indicator of clinical competence needs to be reviewed, allowing debate about the quality of the content of the students clinical experience overall.

11. The requirement for a pre-determined number of clinical hours should reflect the flexibility of the pathway and should make an allowance to include the pre-clinical requirement as well as observations of practice, demonstrations of practical skills and the development of psychomotor skills. Time for reflections on practice should also be included here.

12. Computer based technologies with clinical library access should be provided in the close proximity of the clinical area both to improve the immediacy of access to such information and support student learning.

13.All students should be required to receive induction and annual update in all matters of Health and Safety. Induction should include all clinical and orthotic laboratory protocols (including COSHH) and fire safety and evacuation protocols. Annual update should be certificated.

14. Students should complete the whole of a prescribed placement experience and maintain a portfolio as evidence of their participation. This should be supported by a reflexive narrative, which demonstrates what they have learned as a result of their placement experiences. A mechanism for recovery of 'lost' time should be enacted where appropriate to complete the placement requirements.

15. All community-based staff involved in the facilitation of placements should undergo induction into their expected role by the educational institution. They should be introduced to the aims and objectives of the placement, placed in the context of the overall philosophy of the pathway and the expectations of the outcomes. The means of assessment or reporting of a student's progress should also be standardised with clear protocols and guidelines given by the host institution.

16. Possibilities to invest in new technologies, with the adoption of on-line teaching aids and the development of CD-ROMs should be investigated to allow students access to learning materials at a time other than when a single lecture is delivered. This would enable students to re-visit areas of practical work in their own time and at their own pace. These would also serve as a useful revision aid to confirm knowledge and improve the students' confidence in their own knowledge.

Regarding Students

17. The minimum entry requirement should be set at an appropriate level to enable students to be successful and to have some access to remedial work to get them to an appropriate standard before the teaching commences. This is considered to be between 10 and 12 points on the pre-curriculum 2000 scale. This equates to 2 A levels at C + C or C + D grades for the UK.

18 Schools may wish to set pre-entry assignments or consider the arrangement of a block summer school to enhance students' success for those with less than the usual entry requirements but who have other APL experience.

19. Transfer between schools should be accommodated where equivalency can be demonstrated between the experience of the transferee and the requirements of the proposed pathway. This is in accordance with the philosophy of credit accumulation and transfer schemes (CATS).

20. Where schools offer an APL (APEL) scheme, this should be transparent and precise in its application for all students wishing to transfer between schools. In the spirit of accessibility to H.E., schools should move to the position where there is the opportunity to operate an APL scheme to enable transfer between schools.

21. Institutions should aim to provide academic, pastoral and social support to students enrolling onto their pathways. The introduction of peer support should be considered following the reported successful introduction of these schemes at other schools.

22. Students should engage in clinical activities at an early stage in their careers to acclimatise to the expectations of the clinical setting and to become familiar with professional routines prior to treating patients. This should be enacted after a period of adjustment and training in techniques in the first semester of year 1.

23. School clinics should grade patients' presenting conditions, and introduce students incrementally to an increasing level of complexity of pathology, as their experience and clinical education develops.

Regarding Pathway issues

24. Clinical teaching is a rich and varied specialism, which requires a range of methods to ensure student learning. The range of methods should be sufficiently broad to provide a range of teaching and learning methods to address the needs of individual students. Further developments and sharing of ideas between schools is to be encouraged.

25. The schemes of assessment should reflect the needs of the pathways, but should include the opportunity for a variety of methods to be incorporated into the curriculum. The practical examination should be experienced formatively and summatively for students at all schools. Other types of assessments should be encouraged but the use of peer and self-assessments should not be considered for summative evaluations.

26. The introduction of clinical competences should be written in a flexible way to encompass the philosophies of all schools. These may need to be negotiated further to enable a working compromise to be decided.

27. Following an initial introduction to the subjects at foundation level, the students should be encouraged to become more responsible for their own learning and engage in research and student led learning scenarios.

28. Schools should engender a positive attitude to learning and enable the transfer of this philosophy to lifelong learning and attitudes, which would serve to maintain and update the graduate through their professional career.

8.2 The eliminated statements

The four statements eliminated from the final set are given below with some explanatory commentary. Each response achieved a mean scored of less than 3, therefore below the threshold of the agree option.

1. *All teaching staff should apply to become full members of the ILT within 2 years of commencing the post. At the very least, all teachers should achieve associate membership as soon as possible after appointment. For overseas schools, staff should be accredited teachers of their institutions.*

The mean score for this response was 2.9. Three respondents (25%) disagreed with this statement and it was rejected. This was a surprising result in the context of the recommendations of the Dearing Report (1997) and the governmental support accorded to this. The comments from the taped interviews had suggested strong support for this but the mean score result signalled a rejection of this statement. This statement proved to be problematical for the participants as they were unsure about the long term role, effect and credibility of the ILT (in the UK). Colleagues reported that their preference was for new staff to be introduced to their roles as part of their in-house induction programme.

2. *The preferred entry requirement of each course should satisfy the emphasis of that pathway. The standard of the expected grade of award should be consistent with professional learning and appropriate to achieve the learning outcomes of the pathway. In the UK, students should achieve as a minimum, the equivalent of two A level subjects at a grade determined by the pathway. A preference of D grade could be expected for students to manage the expectations of the pathways with a reasonable prediction of being successful.*

The mean score for this statement was 2.9 and so was rejected. Three responses (25%) affected this outcome, notably one failed to register any score but offered a comment, another disagreed with the statement and a third strongly disagreed with it. Some colleagues felt that this level of requirement was too prescriptive and that some schools would be penalised if this were to be made a mandatory entry requirement. Schools preferred to have flexible entry requirements and to offer support to students throughout the programme as it became necessary. Others thought the suggested level had been set too low and could affect the students' ability to succeed on the pathway, which is rigorous and academically demanding. Again, the rejection of this statement could be considered to be surprising, particularly where there is a reported reduction in applications to study podiatry, which has been a developing national trend for the previous 5 years. This is a worrying development and the insistence on higher levels of A level achievement may be seen to be counterproductive. Whilst taking this stance may bolster the academic reputation of a degree programme within an institution, it is not realistic in a shrinking pool of potential applicants.

3. *Any preferred subject or spread of subjects should be stipulated for all applicants prior to application. The recency of those qualifications should be set to conform to the evidence regarding the retention and currency of knowledge. The qualification is considered to be current if recorded within 3 years of commencing the degree.*

The mean score for this statement was 2.8, the lowest mean score, and was rejected. One respondent failed to register a score, two disagreed and another strongly disagreed. (33%) There was some support for the idea of a pre-degree course to serve as an orientation for mature students or for those with non-typical entry qualifications, but overall, colleagues felt that the latter part of

the statement was restrictive and may affect recruitment of potential students who fell outside this stipulation. The participant who did not score this point commented that they felt it to be nonsensical for subjects to be stipulated at all. They felt that students should be made aware of the requirements of the pathway and they should be admitted to the pathway having established their ability at advanced level. Students would be taught all they needed to be taught as part of the undergraduate study as a matter of course.

4. *The Society's benchmark statements regarding students should be subjected to a research enquiry to determine their worth. They should be interpreted as a template for audit of the quality of the pathway but should be flexible enough to recognise the variation of the pathways offered. This needs wider discussion with Pathway leaders and changed where a case is made and supported in the literature.*

The mean score for this statement was 2.9 and was rejected. Two respondents (16%) , who disagreed and strongly disagreed respectively, affected this result. This statement was supported by some of the respondents, possibly those who felt that the original benchmark statements were 'imposed' rather than debated. However the overall outcome suggested that to undertake such an exercise would be a waste of time and unlikely to yield anything of value.

Interestingly, more recently moves have been made to debate the entire notion of the benchmark statements through journal articles and conference presentations, to include and inform a wider constituency of the professional membership.

8.3 Validity of this study

To have a meaningful application, research outcomes have to be valid. To be valid the outcomes need to measure what they say they measure. In this study the responses are considered to be valid as they provide answers to the questions posed precisely and collectively.

However, validity has different aspects and these need to be explored further. Anderson and Herr (1999) argue that practitioner-based research requires rigorous validity criteria to ensure that it achieves its objectives (in this case change) better than other methods can achieve. They place validity into five sub- categories of Outcome Validity, Process Validity, Democratic Validity, Catalytic Validity and Dialogue Validity. Each of these will be introduced and discussed in the context of these findings.

Outcome Validity

> *This is the level of validity, which is considered to have been achieved where actions have occurred that have led to a resolution of a problem or question.*

In this study, although an overall acceptance of these outcomes by the professional body cannot be predicted, change has already been evident in the responses from some individuals at stages through the data collection. With respect to the latter rejected point, there is currently active debate and rounds of consultations occurring to review these statements. Individual contributors have also acknowledged the need for further debate regarding some aspects of each of the four domains under analysis in this research with some colleagues embracing ideas and including them in their own curricula as the study has

developed. Therefore it is reasonable to claim some partial outcome validity and it may be the case that the individuals may exert some influence over the professional body's acceptance of these recommendations.

Process Validity

This refers to the extent to which questions are framed and resolved in a manner that permits ongoing learning.

Whilst there were extremes of responses demonstrated in this study, these were not the norm. Most respondents indicated willingness to debate and clarify their own perspectives and that for each domain there was room for further discussion. In many cases the fact that they had been asked the question made them think about their own circumstances and focused their thoughts regarding these issues. In some individuals, this process had reinforced their opinion in some areas but for others this had enabled them to think about and challenge established protocols.

Democratic Validity

This is seen as the extent to which the research is collaborative and equally beneficial.

This was the strongest part of the validity process in this study, as all participants were acknowledged experts in their profession. They had been informed of the nature of the research, the method to be utilised and were given a major role in controlling their responses with editing rights of the tape. Their continued participation has enabled refinement of the questions after the initial questionnaire stage, which allowed pertinent issues to be highlighted, about which they all concur. They were willing participants. The final stage of ensuring the definitive statements was lead by them before the statements were

submitted to the professional body for their comment. In this way, all participants had contributed to the 'community of researchers' and their responsibilities in shaping recommendations increased as the research unfolded.

Catalytic Validity

> *This refers to the emphasis on transformational potential for all participants and a deeper understanding of the issues under discussion.*

The advantage of being a single co-ordinating researcher is having sole access to the taped comments. The tone of voice used, the speed of speaking and the use of words give subtle clues to the underlying intended meaning of the words spoken and presented on tape. This is open to misinterpretation and can only at best represent the single researcher's views. However, it was clearly the case that colleagues were interested in taking part in this study once introduced to it and they were sufficiently motivated to maintain their input at each stage. They understood their own working practices and were motivated enough to share their views. Whilst this study did not present them with a radical agenda, it did enable them to challenge their views and the views of their respective professional bodies. More importantly perhaps was that it included them in the debate and allowed them the opportunity to voice their thoughts and comments. It also enabled them to confront their beliefs and prompted their responses and actions. This clearly demonstrates the potential for change and for all to understand issues by challenging their views on the four principle domains of this study.

Dialogue Validity

This refers to the extent to which the researcher has gone to seek cultural and reflective dialogue with an appropriate peer group.

In order for dialogue to be productive and for change to occur, discussions must take place. It is only through dialogue that debate is possible. For this study, face-to-face debate was impossible (although requested in some cases) as participants were situated around the world. However the questionnaires, taped interviews and feedback mechanisms used in this study had kept all respondents informed at each stage of the study. All colleagues were given an equal opportunity to discuss the issues and were given access to the summary of agreed points from each of the four domains, to which they had all equally contributed. The collation of responses from the final round of data collection is given in appendix 8, showing the statements which had been formulated from discussions with colleagues and which may be used to inform additional criteria to support the existing benchmark statements.

8.4 Reliability of this study

There has never been an investigation of this nature involving this group of participants consequently there is no previous research to make reference to for guidance and regarding the formulation of questions. The domains chosen were similar to those used in the original literature regarding the education of medical practitioners.

In most forms of research, reliability can be demonstrated by referring to the consistency of data between responses gathered. One aspect to be considered

is the reliability of responses across time, determining the similarity of responses to a question or to see if change has occurred. Another aspect is to look at reliability in terms of the similarity of responses between observer(s), at a single round of consultation, where judgements are made about the issues involved.

Hibberd (1990) considered action research to have the remit of promoting change in a system or process that exists in a complex social setting. In this study, the cyclical means of data collection had exposed participants to the issues at each stage of the process and provided an opportunity for a change in their responses and attitudes towards an issue between cycles of data collection. This affected the longitudinal reliability of the study. Robson (2002) considered action research to have a flexible design as its basis. He suggested that the issues of reliability were hard to control and manage in a flexible design and that some authorities have suggested that the concept is inappropriate in respect of action research. It can be argued that reliability across the whole of this kind of study is very difficult to assure because by its very nature change is prompted between cycles of exposure to the issues, affecting the repeatability of responses. Some reliability may be noted in responses made by the same individual at both the questionnaire and interview stage of the study. However, some changes had been effected in between these stages in some of the responses. These are recorded on page 268.

There have been many radical changes in health care and more are planned for the future. It was considered to be important to undertake research of this

nature to establish potential weaknesses and areas of improvement to the quality audit of podiatry education to augment the benchmark statement.

8.5 The final response from the professional Body

The Director of Education of the professional body was asked for his initial thoughts and comments and this was provided in his e-mail response. His full response is given in appendix 9. The main comments were very positive and encouraging. There was a recognition that the current outcomes-based, benchmark statements, which had been derived by the QAA with the Professional Body, may not provide as complete a position as could be expected. He continued that the benchmark statements could be considered to be quantitative in nature and that any attempt to introduce qualitative data to balance the overall debate would be a welcome addition.

The use of quantitative methods of measuring competence is considered to be mechanical and prescriptive by its nature but it can be useful in many of its applications. However, where issues pertaining to clinical practice and safety to practice are concerned, the acknowledgement of other, significant qualitative factors needs to be accommodated in the audit of effectiveness.

It appears that the issues raised could be accepted for further debate by the professional body at a later date in a wider arena. The intention of this study was well received and may have created a climate for future change. One of the main factors was that the constituency of the contributors to this research was inclusive of the pathway leaders of the podiatry degrees and these people

meet separately to discuss progression of the development of the degrees. The issue of international recognition of qualifications has also been resolved to the extent that with effect from 2002, graduates of recognised pathways may now mutually practice in either the U.K. or Australasia, without the requirement to sit the entrance examination, although these individuals would still be required to register with the HPC to practice in the U.K. as a registered podiatrist. Whilst this study cannot claim the credit for these events, it could have been factor in the initiation of the discussions.

The final paragraph of the professional body's response may have a more pertinent interpretation, especially regarding any future discussions relating to the findings of this thesis and their adoption in any future policy. As a 'matter of faith' it is understood that the debate may only be forwarded where the decision makers believe that these statements can be implemented to enhance the quality of podiatry education. This may take some time to progress further, as there is traditionally resistance to the implementation of any changes that may be seen to make judgements of, or impositions on, an already overworked community of staff. It may be that the action of recognising a set of vulnerabilities is sufficient for this stage and that the implementation of moves to change the 'status quo', particularly where there is no legislation requiring this to happen is unlikely to occur in the near future. A similar situation developed regarding Ashford's earlier work in the development of clinical competences in 1990 and 1991. His work was published and debated at the time but the requirement for such competences to be introduced to the health professions occurred 10 years after his initial research. It may be that a similar

set of circumstances could develop in the future and this research may be re-visited as a template for future professional development.

The responses to the interview and questionnaire show that there is clearly recognition of the need for further discussions in this area. The willingness of the participants to engage with this research and to participate so honestly and openly is testament to their willingness to debate these issues further. However there seems to be an underlying acceptance that at the present time it is not appropriate to implement further major change. Consideration must be given to the additional work requirements brought about by the recent implementation of the benchmark statement, the requirements for annual professional CPD, the demands of personal scholarship and developments in the degree pathways themselves, as a result of the new initiatives in the education of health care practitioners.

Chapter 9

Conclusions and Recommendations

This investigation has for the first time, sought and gained the collective opinions of the pathway leaders of the schools of podiatry in the U.K., Australasia and South Africa. The intention was to engage them in a series of discussions about issues pertinent to criteria, originally drawn from the literature that may affect the quality of education for modern podiatry graduates. This was purposefully enacted to replicate the original work in medical education undertaken by Flexner (1924) and apply it to current podiatry education. The fact that these participants had been asked these questions had exposed them to a broader arena of debate in aspects that do not normally feature at their traditional meetings. The pathway leaders from around the world included in this study had infact never met in person as a collective group, so this was an ideal opportunity for them to gain, at first hand, knowledge of what current opinion in an anonymous forum.

The aims of the study have been achieved. New criteria have been identified, developed and agreed to augment the QAA statements. Also, international recognition of the qualifications of these partner schools has been achieved.

It may be helpful at this stage for this chapter to be developed as a retrospective analysis of the study, to highlight and discuss the relative Strengths, Weaknesses and Opportunities that have arisen as a result of this study.

9.1 Strengths

The results chapters are presented using quotations from the taped interviews and collated questionnaire responses. They are analysed using content analysis and are examined for interpretation of meaning and supported by literature sources and reflective comments in a social context. The strength of this method was enhanced as one researcher conducted the collection, collation, recording and interpretation of the findings of the study and the interference with the responses was minimal.

The choice of action research as a methodology was considered to be a major strength. It has enabled all of the participants to engage with the questions posed in a cyclical manner. Change has occurred and the opportunity for improvement has also been provided. This has had an effect, as some responses were modified in some form between the questionnaire stage and the taped interview stage of the study. Subsequently other actions that have occurred having been appraised of the findings.

The choice of this group of participants is considered to be a strength. They have answered the questionnaires and interviews as individuals and then they have been exposed to the views of others collectively, having been provided with the summary of responses given by all participants. This has enabled these key personnel, the decision makers in education, to confront these issues and to gain an overarching understanding of the issues raised in the study, based in their peers' responses. These key personnel have acted to promote change. The constituency of participants to this group was made purposely, to engage them in discussions about specific issues for which

they had responsibility and control. This group have expert information about these issues based in both their experiences and the philosophies of their employing institutions.

Key findings showed that there was consensus of opinions about 28 of the 32 statements generated by the participants, itself a positive step forward.

These new statements were warmly accepted by the Director of Education of the professional body (UK) and could be used to inform further debate. He indicated that these statements provided a qualitative aspect to the original quantitative view.

The scoring system used on the Likert scale responses followed the rationale proffered in the previous research by Saunders (1999) and was again seen to be a strength. It enabled the respondents to reply either positively or negatively to the selection of statements, concentrating their responses on the statements. This was considered to be a strength, as it allowed the representation of the results to reflect total agreement by all participants rather than a majority view. Therefore no individual was placed in a position where their views could be compromised or misrepresented. It allowed the statements to be offered to the professional body in the full confidence that all participants had agreed to their inclusion.

One major change, possibly prompted by this study, is the recognition of overseas qualifications between the U.K. and Australasian schools. It is now possible for graduates from these countries to practice in the respective

countries without the need for a qualifying examination. This is a significant move and is broadly welcomed. Collaboration between the U.K., Australian and South African schools continues to develop and has become closer with the adoption of new teaching techniques and changes to assessment.

The study has informed the professional body (UK) of these additional responses by these participants. It is clear that at the original time of approaching the Director of Education (SoCAP) there was no scheme in place, or in the immediate planning phase to create such statements.

9.2 Weaknesses

The omission of some stakeholders in the whole process of education of podiatry students may be considered to be a weakness. It was thought to be more appropriate at this time to restrict the constituency of researchers to allow for specific responses. One experienced respondent commented that the widening of participation often only served to broaden the agenda and diluted the original intention of the study. A diagram on page 270 sets the scene for possible future group contributors.

The reliability of any action research study is very difficult to achieve, as by the very nature of action research responses have the potential to change. The originality of the study had an impact on reliability but that has largely been overcome using questions based in the literature. However, where this study may be considered to have a reduced reliability, it does achieve a high level of validity, which is discussed further in Chapter 10.

Although the currency of some reference materials could be considered to be dated, this was unavoidable in some cases as there is an acknowledged dearth of materials concerned with podiatry education *per se*. However, in some other cases this was undertaken purposely, to ensure the original intention was applied to podiatry education, rather than as an adaptation of the original that had been filtered through other contexts and circumstances of another discipline.

The data collection method using a taped interview would perhaps change should the study be repeated. Person to person interviews may have elicited more information and the points raised could have been investigated further from that individuals' perspective, although the control of the interview would have shifted towards the researcher, who may have to provide explanations differently for different participants. The method employed in this study gave control of the interview to the participants and was conducted equally.

Although it would not be possible to use another expert sample, as all pathway leaders were originally included in the study, it would have been stronger had all pathway leaders remained involved. The reduction in responses, although entirely understandable, occurred through school closures, staff changes and differences in the teaching calendar years between the northern and southern hemispheres. Originally 21 schools were approached to take part in this study. But as one was closing, 20 replied representing a 100% response. Of these respondents, 16 (80%) returned the interview tapes and 12 (60%) responded to the final phase of data collection

to agree the final list of statements. However, the issues were debated and finally agreed to form a unanimous support of the accepted statements. The original intention of interviewing participants at an international conference was originally muted as was on-line interviewing. But this proved impossible to achieve. If funding were made available through sponsorship for travel, perhaps person-to-person interviews would have been possible and more certain.

9.3 Opportunities

These are mainly directed towards the potential impact of this study. There is a dearth of literature or research pertaining to podiatry education in the public domain. Internet searches and journal searches are not productive. This was an opportunity to contribute some significant work to the profession's archive, providing a background to the development of the profession from an historical perspective and in terms of its journey from simple beginnings to what it has become today, namely a mature health care profession that is responsibly developing its practice base.

The Director of Education of SoCAP has accepted that the previously adopted QAA statements of competence, by themselves, cannot assure the quality of podiatry education. There needs to be some consideration of additional measures to complete the audit cycle. This study may be influential in taking the audit cycle further forward to make a more positive contribution to the professional development of podiatry education.

All participants have looked very carefully at their respective staffs' needs and recognised the possibilities of improving their staff teams using simple supportive mechanisms. Some have clearly indicated change in their working practices as a result of participating in this study, others confirming their methods and have been prepared to share their good practice.

Areas where change has occurred between the stages of the data collection for this study, thus justifying the action research approach, are: -

a) One school has instigated personal development reviews, (PDRs) for their staff teams to develop their abilities.

b) Another has introduced a limited amount of outcomes based education as a trial for their students. This was a brave step to take bearing in mind the traditional expectations of their students and culture of that institution.

c) Another has introduced CBL to facilitate student empowerment, enabling them to take control of their own learning.

d) More recently, one school has implemented a staff induction programme for new staff to be inducted into their role as a teacher and the same school has re-introduced the need for its staff to hold a teaching qualification

e) One overseas school has re-introduced a registration examination that had not been provided for graduates of that country for many years. This examination equates to registration standards required to practice in the U.K.

f) One school has introduced a scheme of CPD for their staff.

The mentorship of new staff, the support of new staff and the recognition of means of gaining a teaching qualification after appointment, has been introduced in some schools where previously this was not the case. This

change may have been prompted by the Dearing Report (1997), but as 5 years had elapsed between the publication of this report and these more recent changes, the conclusion could be that this study may have influenced this decision.

All staff are encouraged to achieve a higher degree and the move to create a better-qualified staff team are all positive steps that have been activated.

It is incorrect for this study to claim all credit for these changes as many schools have been very proactive in this way and this was reflected in their students work, but it is certainly fair to say that once exposed to these initiatives, those who had not acted in this way moved to adopt this position for their staff.

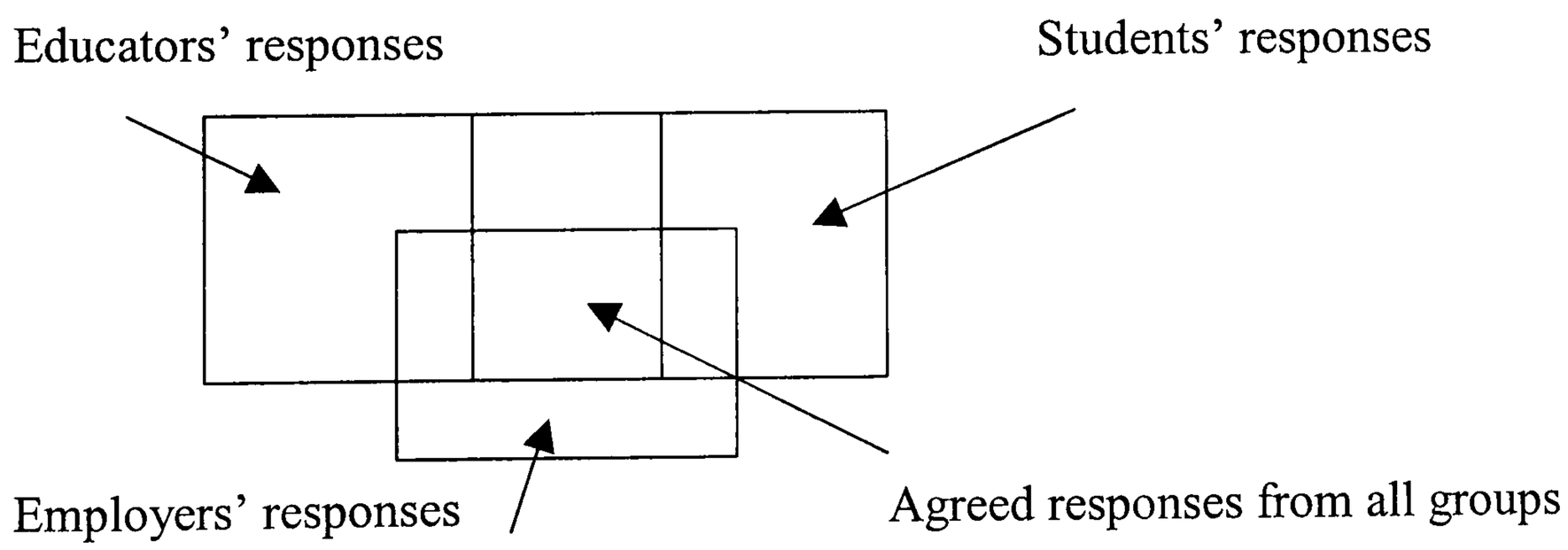
The professional body for podiatrists, SoCAP, has commenced wider consultation within the membership about CPD and the whole issue of the respective update modules that are required for the accreditation of courses. Whilst it is recognised that the HPC will drive any future requirements of professional standards in education in consultation with the relevant professional bodies, the prospect of compulsory, evidenced CPD has been mooted and may be linked to re-registration in the future.

For teaching staff, this is a major move forward as it is entirely consistent with the actions of the ILTHE, which is currently consulting its membership on the need for CPD in the areas of teaching and advancement; the mechanism of its accreditation and the whole issue of the content required.

The consensus drawn from the questions regarding resources shows that most schools have recognised the need for modern health care practitioners to have access to a range of sources of media and reference. A reliance on books and tutors is no longer deemed appropriate or safe. It appears that most schools now include some IT facilities in or near to the clinical environment. This is a feature that is being reflected in NHS practice in the U.K. with access to computer technologies as developments continue to occur in the clinical fields.

Future developments in pursuit of parts of this study may include canvassing opinions from similar numbers of the NHS managers (the employers) and students (the consumers). This could be a logical step to take in the future, as these groups would add different dimensions to the debate. The agreed outcomes of these extended discussions could provide a template to take forward for all stakeholders in the process of podiatry education and present an agreed set of criteria to augment competences, as demonstrated in the diagram below.

Figure 6 Potential future contributors to the debate



Eventually, the patients too may need to be consulted, as they are ultimately the consumers of the service aspect of educational process.

Although some change has been effected, in accordance with Fullan's work (1982) not all the areas discussed have been adopted in full, indeed they may not be adopted at all in any official capacity. But the evidence is presented here that change has occurred and the opportunity for the improvement of podiatry education has been achieved.

The effects of national and professional politics may have an influence on the partial or total introduction of the recommendations of this study. New government initiatives to protect the public and the need for more stringent safeguards in health care practice require a practitioner to be ever better prepared and educated for practice.

The professional body's response seems to indicate an underlying acceptance that the present time is not an appropriate time to implement further change of this type, consideration must be given to the additional work requirements brought about by the recent implementation of the benchmark statements; the requirements for annual professional CPD and developments in the degree pathways themselves, as a result of the new initiatives in the education of health care practitioners.

The political agendas that influence education-based decisions have also shaped many colleagues' responses and this reflects their institutions in terms of culture and expectations. It is acknowledged that whilst all health professional education providers may have ideas of improving their pathways, these decisions are deeply affected and influenced by the restraints imposed by national and local government policies, the priorities

of local NHS Trusts and their needs for the future manpower planning with health professionals.

A developing concern for educators is the developing use of the term 'Education' interchangeably with 'Training'. The use of these terms synonymously is strictly speaking incorrect. The opportunity presented here is to be able to reiterate the difference. 'Education' provides the skills and knowledge to learn, research, evidence and support current and future knowledge. It prepares students to develop alternative strategies to create and manage future change. The education process takes time and requires investment and as found by Franklin (1997) provides for adaptation in the circumstance of future change.

In contrast 'training' in its basic form is seen simply as dealing with the mechanics of learning how to perform a task. The range of knowledge required is reduced and could be accomplished in a shorter time frame. It is thus seen to be cheaper to achieve with fewer skills required of the student.

It is a particular concern that financial decisions dictate the content and length of health professional pathways, to the detriment of the professions and ultimately to the health care provided by graduates to their clients and patients.

9.4 What is the potential impact of this study?

Having been exposed to these potential vulnerabilities, the professional body has acknowledged their existence and a willingness to consider these statements further.

Individual schools have demonstrated change in their practices and in the organisation of their resources as shown in section 9.3.

One of the rejected statements regarding the need for teaching staff to hold a teaching qualification is not consistent with the developments envisaged by the ILTHE and is contrary to the findings in the literature by D'Andrea and Gosling (2001). It is also contrary to the recommendations of the Dearing Report (1997), but this was only a recommendation, although supported by the government. The professional body may wish to further debate this and make a decision.

9.5 The contribution to new knowledge

As stated earlier, the reason for undertaking this study was originally based in the recognition of potential weaknesses in the quality circle of podiatry education. The literature relating to other disciplines suggests that competence-based education by itself is inadequate. For health care professionals, this is a major concern and perhaps the statements discovered through this research investigation may serve to augment those provided by the QAA.

The original response to questions asked of the professional body highlighted the need for such an investigation and having involved the key personnel, who are central to making decisions in such matters, it has been concluded that there is some reasonable doubt on the reliance on outcome based competences as quality markers. There is some room for improvement and the findings of this study may have some influence to bring the closure

of the quality circle to a more complete stage. It is interesting to note that in the U.K. the Department of Health (DoH) published a document, "Streamlining quality assurance in healthcare education" (March 2003). This document requires the Workforce Development Confederations (WDCs) to ensure that the staff teams employed to fulfil the contracted educational requirements are '*appropriately experienced and qualified*'. It is recognised that any further action needs to be taken forward at a higher level by the HPC, under the direction of the professional body that serves to advise the statutory body.

Chapter 10

A short personal narrative of the process of conducting this research

10.1 Reflections

This chapter is a reflective narrative of this study; the trials and tribulations encountered on this journey through a research project that has the potential to either have a wide range of effects within the profession of podiatry, or no immediate effect at all. There is always this risk when undertaking a study of this kind that nothing may come of the effort, as indicated in the works of Fullan (1982). Although official pronouncements are not anticipated, changes in some schools of podiatry have occurred. It was hoped from the start that the study could act to lead the group of participants to a position where they would be more aware of the wider issues, which in turn could be facilitated through critical discussion.

The initial starting point was based on a personal reflection after a QAA assessment of courses offered within my own department, as part of a group of health care professions in the University. This was a taxing experience but showed me that as a group of professional pathways they had exposed inadequacies and so were vulnerable to the charge of having an incomplete quality circle.

The issue for me was that podiatry education had moved from a state, where previously there was some equilibrium between the pathways but because it had metamorphosed to exist as separate pathways offered at separate institutions, differences now existed. At the start of the study, all but one of the

of the schools had standards based in outcomes which were agreed by their own institutions but the statutory body, until recently, did not have an overarching set of statements to inform professional requirements, relying on the JQAC guidelines working within the parameters set by their institution. This was the starting point. At the time of asking the professional body the original question there was no such set of statements in existence. However in response to QAA requirements, a panel was convened and these statements had been formulated and set for discussion. Some of the chosen panel were themselves pathway leaders of podiatry degrees, while others were not. Therefore their involvement in the process could be deemed to be unequal. It seemed that my question had highlighted an omission in the provision and had prompted a change in as much as the changes were implemented quickly. This was reflected in some of the responses in the results chapters.

The other issue to note was that my original question introduced the concept of international and national recognition of qualifications; again a concept not mentioned anywhere in previous discussions. At the time of originating this study, it was not possible to practice as a podiatrist in another country without having to take examinations to prove professional ability. This requirement was considered to be an unnecessary barrier to practice, as all countries, in this study, offer degree pathways which themselves share many common foundations. This issue was also quickly addressed by a panel from the professional body, which funded two senior colleagues to visit the overseas schools, including all those who were participants in this study, to investigate areas for understandings regarding recognition of qualifications. So once again

the original question highlighted an area of vulnerability for development and had prompted change. The respective degrees in podiatry awarded by schools in the U.K, Australasia and South Africa are now mutually recognised and graduates no longer have to take and pass an entrance examination to practice in either country.

These actions caused me some concern as my original question was being addressed and my contribution to a new understanding of the situation had been undermined. This left me to search for a related area, which was not being addressed. I realised that nowhere in any literature distributed by the professional body, were there statements about the factors that supported podiatry education, those which influenced the curriculum, to produce graduates with appropriate education, skills and abilities. Certainly there were expectations, unwritten understandings and elements that were taken for granted. At quinquennial reviews and inspections the staff CVs and resources were discussed, but these criteria were not in any way regulated or required. Each school had separate arrangements and expectations but there was nothing agreed on a national basis. I saw this as a potential weakness because as a profession we could be accused of disparity between schools. Therefore the quality of the product of each school, the graduates, could be affected and we could not ensure the quality until this was addressed. Therefore my question was refined to address these issues specifically. I proposed to investigate the criteria, which may influence podiatry education, with the intention of formulating a set of statements to strengthen and enhance the benchmark statements. This was to become my contribution to new knowledge in this professional context.

Up to this point the professional body appeared to be basing all claims for quality in the outcomes statements or benchmarks, making an assumption that these were the only quality markers of worth. The analogy with industry came to my mind where the evaluation of the quality of a product cannot only be based in the final presentation of the product itself. Whilst it may appear to be fit for its proposed purpose, any evaluation of its quality must include the quality of the materials used to make that product. So it is the investments in that product which are critical factors in the quality equation. So too in education, the quality of the investments must also be evaluated and ensured to influence a curriculum that provides graduates who are fit for practice. The literature search of educational practices in general medicine followed some of the seminal work by Flexner (1924). The work of Jessup (1991) and Hyland (1994) had been influential in the understanding of the role of competences applied to education and this was considered to be an appropriate starting point for my study. Four main areas, the staff, the resources, the students and other course information were considered central to this study and formed a template used for this study to be applied to podiatry education.

The question I then asked myself was "What right do you have to ask this question?". This was a question that prompted a lot of soul searching, as I realised that I may be about to embark on a critical study that could be misinterpreted and used against my own profession. Equally, the study could have far-reaching effects into any such recommendations for other health professions. My response was that as a practitioner of many years experience in the education of podiatrists, I have every right to question the methods I am

using and to promote change where appropriate. There was a sense of responsibility to carry out this investigation to determine the level of support for such statements. The involvement of colleagues as my community of researchers enabled me to introduce a range of issues in an open forum and generate debate. Just as spending from the public purse needs to be justified, so too do the HE institutions and students need to be assured that their tutors are capable of undertaking their education and facilitating their learning. As the consumers of the pathways, they are the ones who complete the evaluations and are the ones who judge the pathway and its future vitality and development. Again I recognised that any changes may not be enacted in these terms and phrases, but that at the very least the questions had been asked, aired in public and debated.

The next question I had to resolve was how would I undertake such a study. The aim was to promote a positive change for the profession through all schools of podiatry. I have been a lecturer in podiatry for over 24 years and I felt that I was a sufficiently informed and experienced participant to pursue this study. However, to promote change successfully it is recognised that the social actors who make any change had to be equally involved in this study. The list of participants developed to include myself as the primary researcher, the professional body as initial and final contact and the pathway leaders of the schools of podiatry as the agents of change. At the start of this study in 1999 there were to be 21 participants from Schools of Podiatry around the world. Disappointingly, this number was immediately reduced to 20 as one U.K. based school was being closed with the staff being re-deployed and

students being relocated to another school. The number of those willing to continue with the second phase of the study, the interviews, reduced to 18 as two schools exercised the option to withdraw after the questionnaire stage. Of these, 16 returned the interview tapes, one overseas participant explained that their school was undergoing closure and another expressed some uncertainty about their school's survival. Of the 16 remaining, only 12 returned the final stage attitude questionnaires. It was from this list that the final information was collected, collated and used to inform the final list of statements. This was disappointing as up to this point the support for this study had been positive and forthcoming. It transpires that one colleague had been recently appointed as the pathway leader for their course and another was about to move to another area of work in a different university and their replacement was not in post. Two sets of responses were not returned, without explanation.

Clearly degree pathways in Podiatry are vulnerable with the closure of two schools within the time span of this study, which started in 1999. Another is being closed due to financial considerations by the host university and a fourth is moving from a research-based university to be sited within one of the new universities, again as a result of budgetary factors. Finance is seen to be a central feature of a schools' survival and all schools of podiatry need to recognise that others may also close unless the quality of their provision can be justified and assured. It must also be conceded that while quality of education is important, it may not be as important as cost as evidenced by the closure of some schools. The economic realities of funding education are again evident.

10.2 The justification of the research method

I chose action research as the most appropriate method of study for this project as the literature suggested that this would be an adaptable method, which would provide a mechanism for promoting change and for realistically involving the change makers in each section of the study. As the original question itself may have been instrumental in promoting change on two points, the development of benchmark statements for undergraduate podiatrists and the international issue of mutual recognition of qualifications, I was heartened that the professional body was amenable to suggestions in other areas.

A question asked of me by my supervisors concerning my methodology. "In what sense was my method Action Research". For a comparison I chose investigative research, which is a methodology that follows a process through to completion of the study and was not acted upon until the outcome was known and published. This is also considered to be research that is generalisable to other areas. I did not choose to engage in a single one-off study simply to satisfy the criteria of this Doctor of Education degree. I wanted to prompt the professional body into seeing the need for these additional statements and for these to be adopted and evaluated as part of an on-going research activity, to maintain the move to improve the quality of podiatry education. It was therefore essential that I chose a methodology which could be continued and developed and could be revisited in a cyclical series of future evaluations, refinements and actions should these suggestions be adopted and taken further. However, interpretative research is a qualitative

method of research in which the researcher lays major emphasis on the norms, perceptions and views of respondents in the study, but serves to survey the respondents. I am happy to defend my choice of action research, as I needed a method of research that would enable me to approach colleagues on a regular basis whilst keeping their interest and co-operation in this study. Change has occurred at the level of individual schools as previously stated. I also needed a method that could be adapted to this specific context and was iterative. I was particularly looking for a method of research that formed an essential link between the 'thinking world' and the 'real world', one that allowed a transfer of ideas and actions between these two areas and one that prompted a cycle of change in the responses between the stages of data collection. I considered this to be the best way of promoting a search for improvement and to promote the acceptance and eventual application of the recommendations of this study.

Literature on action research suggested it was a style of research that was flexible but it did not have to follow a prescribed method like the interpretative tradition. I was influenced by the work of McNiff (1992 p 3), who gave 7 key characteristics of Action Research, describing it as,

1. Practitioner generated

I am the practitioner. Having had over 24 years experience in the education and training of podiatrists I feel able to approach this subject with a sense of authority and confidence. This quickly transformed from an individual action to include the major actors in this study, namely the pathway leaders (practitioners also) of the schools of podiatry and the professional body.

2. Workplace oriented

The workplace is the setting for the clinical curriculum of the podiatry students' experience and this is a common feature to all participants' pathways.

3.Seeking to improve something

I seek to improve the quality of podiatry education by highlighting the need for such statements of standards in the 'input' side of the quality audit cycle.

4. Starting from a particular situation

The originating point was personal experience in a QAA review, which set some searching questions and showed some vulnerability in our provision.

5. Adopting a flexible trial and error approach

This study is flexible in that it allows all participants an equal opportunity to present their views and to feedback their comments. This informs their collective views which are again sent back to them all for information and to seek their general agreement of the principles included.

6. Accepting there are no final answers

As political and professional needs change, so too does the climate of change. This study accepts absolutely that there are no final answers, as all research, like professional development itself, is continuously changing. However, my experience informs me that change is cyclical and I would hope that in the future this might influence professional thinking in some way.

7. Aiming to validate any claims it makes by rigorous justification processes.

McNiff (1992) indicates that validation lies in the inter-subjective agreement of the nature of the improvement and whether that improvement has taken place. I can inform the reader that this study has produced inter-subjective

agreement, but McNiff's latter point cannot be claimed until the professional body responds more fully to the findings of this study.

My study was also required to be subject-specific and needed to ensure that the participants were engaged with the subject at each stage to prompt their thoughts. It must be remembered that all the participants are themselves busy people, with a demanding work schedule of their own, so to get their involvement and for them to make such contributions indicates their willingness to engage in the study. Participants were asked to read the prepared script of prompts for debate prior to taping their comments. From the transcriptions, this clearly occurred and was evidenced by the number of times the tapes were re-wound, checked and the comments edited, providing a range of responses that were considered and precise. This informed me that in some cases, an initial response had caused them to think about these issues and their taped comments show that in considering their responses, they acknowledged the need for further debate in all four domains. In one response I was invited to act as an external consultant in their school to assist with initiating changes such as those proposed in this study.

Another point raised was the issue of the initiation of the study. This was originally a personal question and I acknowledge this. However it quickly became a participative study after the analysis of the questionnaire data. This change from a singular perspective to a multiple participant study is supported by McNiff (1992), who says that although an idea starts with an individual, who appraises their own practices, it quickly became evident that there was a

need to include 'expert others' to further debate and refine issues set in a wider context. The collective sharing of thoughts and ideas which could be used to formulate an agreed set of values, which themselves could then become the foundation of change in the future. Apart from one participant who did not return the questionnaire, only one other decided to take no further part in this study. Twenty pathway leaders did complete and return the questionnaire and sixteen of them consented to the taped interview. Their enthusiasm to take part was also indicative of their willingness to debate these issues further. Some obviously voicing their opinions for the first time, as they had not been consulted previously about some of the issues raised.

Throughout this research, I have maintained a cycle of interaction with the participants, twice with the professional body and three times with the pathway leaders, on each occasion refining the questions and eliciting their considered responses. Hopkins (1993) cited this close involvement with participants as another essential feature of action research. It is interesting to see that some positive effect had taken place in one particular school. It reported on the questionnaire that they had not been active in promoting CPD in their staff, but by the time their responses came back to the taped interview, they had commenced interviewing their staff to agree staff development needs in this area. This clearly indicated that having thought about their current provision and recognising a weakness, areas of change had been promoted and were actively being implemented directly as a result of this study.

It is also anticipated that this style of research will generate a culture of trust between participants by mutual involvement in the formation and final decision-making processes provided by this style of study. It is also anticipated that it will facilitate a learning and professional developmental continuum between schools, with each participant being prepared to share their ideas and beliefs.

10.3 The Analysis Framework

Analysis of the data by content analysis has been undertaken. I have followed Robson's (1999) model of reflecting actual data. However the researchers' dilemma is always in the interpretation of information. In recognising this I have attempted to present data following Robertson's (2000) three concepts approach, namely reciprocity, reflexivity and reflexion-on-reality. I have also included for completeness the concepts of negotiation and cultural shift as given in other action research papers. This is threaded through chapters 4 to 8.

Negotiation implies discussion between parties to resolve an issue. It is these dialectical processes that enable the sharing of knowledge to promote change. This is the bedrock of any action research as it is truly a participative interaction between collaborators in the achievement of a goal. The negotiation in this study was undertaken by questionnaire and taped interview. The interviews were conducted as conversations between colleagues and the final agreements were unanimous.

For this study, I have been fortunate to recruit the majority of pathway leaders of the schools of podiatry, many of whom are contemporaries. We have shared

the many professional developments and changes that have occurred in a professional context and have been instrumental in developing many more through our own contributions to research. They perceived my part in the study to be as an equal, neither as a critic nor an expert. Therefore there exists a mutual respect between all parties and as we share a common professional culture it may explain the high quality of honest, personal responses to the questionnaires and interviews. All respondents have agreed with the final set of statements and there are sufficient grounds for confidence to take this work forward to the next stage of recommendation to the professional body.

The cultural shift is seen as the interpretation of events among participants to a cultural framework. To achieve this there has to be some form of cultural transition, which is a change of beliefs, brought about by a shared response to actions taken by a group and this may be positive or negative. This is supported in the work undertaken by Somekh (1993) and Brown (1989) who thought that the process of forming a cultural belief was supported by social interaction. Richards (1991) saw this to be important as it is only within groups that social interaction and conversation can take place. I have successfully included the educationalists who most influence professional change in this study and have brought into the public domain the issues and following a series of conversations I have achieved an agreed set of statements to which all have contributed.

Reciprocity is the challenge presented between the current position and the benefits of future change. It is achieved through the sharing of ideas and the development of new ideas to support future change. Robertson (2000) saw that

these need to be explored, both for the education of students and for the professional standing of the profession itself. I am happy that this has been achieved because the taped responses have shown preparedness on behalf of all participants to contribute fully to this study. They have shared their thoughts in a frank and honest manner and have been prepared to give their personal opinions. They have been critical of themselves, their institutions and their respective professional bodies.

Robertson (2000) cites reflexivity as a concept closely related to reflection, which Giddens (1979) originally referred to as self-awareness, the ability to understand one's own knowledge and the transformation in belief that follows. This actually questions the understanding of knowledge itself. In this case it asks each participant if they do what they do because it is accepted practice, or if they can see the possibility for change in these areas. The comments received were considered, and informative and having asked these questions I am confident that there is a climate for change in relationship to these areas.

Reflexion-on-reality allows the discussion to be made public and the thoughts of others to be shared (anonymously) with all participants and thus widens the debate and therefore enhances knowledge. It enables the individual to look at their own circumstances and identify ways of improving their methods and schemes of learning. This has been achieved with the evidence given in the results chapters, culminating in the results of this study reported in chapter 8.

The results of the statements that had been rejected were heavily influenced by only one or two negative responses and these may have been accepted after further debate. However there is an inherent danger to continuous debate in that it tries to accommodate all possible opinions and may dilute the effectiveness of any outcomes.

10.4 What have I gained from this project?

I have a better understanding of a wider variety of research methods and have enjoyed the challenges set. This has enabled me to be more active in publishing and presenting the findings of my research and has brought benefits for my students through being better informed. The element of this project concerning the introduction of computers to clinical education has already resulted in one presentation at the Association of Learning Technologies in Edinburgh, in September 2001 and a collaborative paper of this presentation is currently in press with the professional journal, to share the findings with other colleagues in the field of education. Other papers and presentations will also be written directly as a result of this thesis.

Having undertaken this study and discovering these findings, I have been encouraged to apply to become a Partner to the Health Professions Council (HPC). Recently, I have been appointed as Registration Assessor and Visitor. These roles are directly involved in quality issues pertaining to podiatry education. The Registration Assessor role requires me to evaluate applications for admission to the Register of Podiatrists held by the HPC. Registration enables applicants to practice in the NHS and all applications need to be assured to protect the public. The Visitor role involves visiting a range of

establishments that currently provide education and training for podiatry /chiropody. The role will require visitors to evaluate the standards of the establishments to determine if they satisfy the requirements of the HPC.

It is a personal ambition to be successful in this project. There is vast potential for staff to have their professional development needs identified and for them to develop a ladder of opportunity in their progress through professional advancement to Masters and Doctorate level awards. There is a dearth of podiatrists with doctorates, particularly those who have stayed in the clinical side of the profession. I believe that I am the first podiatrist to enrol on the Ed.D. route, although I am happy to report that two more colleagues have started the Ed.D. at a London University and we have been in close contact to support each other. Others too are considering this award, particularly as education is changing at a fast pace and the level of interest in educational issues is growing. I intend to remain an active clinical academic but will use the knowledge and experience gained through studying for this award to inform and facilitate my students' future studies. Hopefully I will also be able to act as a first supervisor to colleagues and be able to support them through the pursuit of their own higher degree award. It will also provide me with a spur to encourage both staff and students to advance their post-graduate studies in a similar way, particularly in forwarding their academic credibility through further research and publishing joint papers with them.

Discussions with local NHS managers about the new guidelines on staff duties and salaries for NHS staff contained in the 'Agenda for Change' (1999) document, have shown that there may be a change in thinking towards the

pursuit and achievement of higher awards, particularly in clinical disciplines requiring multi-disciplinary cooperation. This is seen as a route to gaining consultant status and the potential for high salary increases that are being discussed. Only the fullness of time will show if these moves will increase the recognition of the abilities of health care professions. Therefore, there is an argument for a viable pool of podiatrists who hold Ph.D or Ed.D qualifications to lead and support these developments in a professional context. Very recently (2003) the first professional Doctorate in Podiatry has been established at a university in the U.K. This is an encouraging and most welcome development as it demonstrates professional advancement at the highest level and a further academic development of the profession. This also recognises the needs of clinicians to develop their professional academic advancement and addresses the criticism that for staff to access professional advancement to this level, they had formerly applied for doctorate level awards in other areas. Of particular interest will be how these proposed changes in status affect the perceptions of the other healthcare professionals and the general public towards the profession itself. Perhaps, more importantly, the effects on the perspectives of potential students and the future benefits for recruitment to podiatry degrees.

In conclusion, this study has presented me with a range of challenges and prospects. I anticipate that it could lead to further opportunities in educational areas through personal research, conference presentations and publications, but more importantly I hope to be able to support both colleagues and students in the successful pursuit of higher academic awards.

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Appendix 1

Academic and Practitioner Standards

Podiatry (Chiropody)

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Preface

This benchmark statement describes the nature and standards of undergraduate programmes of study in podiatry that lead to awards made by higher education institutions in the UK in the subject. It is published in association with a number of other statements in the health care professions that are listed below[1].

The statements are cast within an overarching health professions framework that illustrates, on the one hand, the shared basis upon which the education and training of health care professionals rests and, on the other hand, the uniquely profession-specific context within which undergraduate programmes are organised. The format of the statements seeks to reflect these two dimensions.

The initial section of this statement sets out the overarching framework under three main headings:

- the broad expectations of the practitioner as a professional;
- the application of principles and concepts in securing, maintaining or improving health/well-being;
- the knowledge, understanding and skills associated with the professions that underpin the education and training of practitioners.

The main section of this statement, in addition to describing the nature and extent of programmes leading to awards in podiatry, describes the profession-specific expectations and requirements under matching categories.

The key feature in this statement, as in the associated statements, is the explicit articulation of the academic and practitioner standards associated with the undergraduate award in podiatry. This duality reflects the significance of the academic award as the route to registration for professional practice and formal recognition by the professional and regulatory body. The section on standards in this statement, therefore, describes the expectations and requirements for 'fitness for award', 'fitness for practice' and 'fitness for first post and continuing professional development'. The statement on standards accords with the relevant level descriptor for awards in the qualifications framework proposed by the Quality Assurance Agency for Higher Education.

This statement also includes a section on teaching, learning and assessment. It draws attention to the central role of practice in the design of learning opportunities for undergraduates and the importance of ensuring that professional competence developed through practice is adequately assessed and rewarded. It also notes how essential it is that the integration of theory and practice is a planned process within the overall arrangements made for teaching and learning.

The statement acknowledges the need to put the prospective client/patient at the centre of the undergraduate's learning experience and to promote within that experience the importance of team-working and cross-professional collaboration and communication. Implicit in the statement are the opportunities that exist for shared learning across professional boundaries, particularly in the latter stages of training when inter-professional matters can be addressed most productively. It is essential that the opportunities which exist for shared learning in practice are optimised, as well as best use being made of those opportunities that prevail more obviously in class-room based activities.

This statement and the associated statements will therefore allow higher education institutions, in partnership with service providers (where appropriate), to make informed curriculum choices about the construction of shared learning experiences as one of a number of means of promoting improved collaborative practice and addressing a range of issues which span professional accountability and professional relationships.

Finally, the statement does not set a national curriculum for programmes leading to awards in podiatry. It acknowledges that the requirements of the professional and regulatory body need to be incorporated into the design of programmes but beyond that it allows for local interpretation in the overall design of the curriculum. Its essential feature is the specification of threshold standards, incorporating academic and practitioner elements, against which higher education institutions are expected, as a minimum, to set their standards for the award.

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[1] Dietetics, Health Visiting, Midwifery, Nursing, Occupational Therapy, Orthoptics, Physiotherapy, Podiatry (Chiropody), Prosthetics and Orthotics, Radiography, and Speech & Language Therapy.

The health professions framework

In the context of undergraduate education and training for the health professions, this section sets out an overarching framework which informs programmes leading to awards in podiatry.

A. Expectations of the health professional in providing patient/client services

This section articulates the expectations of a registered professional within health care services. It is set in terms of the award-holder being 'fit for practice in first post' and, therefore, describes what is regarded as a minimum range of expectations of a professional that will provide safe and competent practice for patients/clients in a variety of health related contexts.

A1 Professional autonomy and accountability

The award holder should be able to:

- maintain the standards and requirements of professional and statutory bodies;
- adhere to professional codes of conduct;
- understand the legal and ethical responsibilities of professional practice;
- maintain the principles and practice of patient/client confidentiality;
- practise in accordance with current legislation applicable to health care professionals;
- exercise a professional duty of care to patients/clients/carers;
- recognise the obligation to maintain fitness for practice and the need for continuing professional development;
- contribute to the development of evidence based practice within a professional context;
- uphold the principles and practice of clinical governance.

A2 Professional relationships

The award holder should be able to:

- participate effectively in multi- and inter-professional/multi-agency approaches to health and social care where appropriate;
- recognise professional scope of practice and make referrals where appropriate;
- work, where appropriate, with other health and social care professionals and support staff and patients/clients/carers to maximise health outcomes;
- generate and maintain effective interactions with relevant external agencies;
- disseminate evidence-based practice with members of the multi-disciplinary team;
- maintain appropriate relationships with patients/clients/carers that respect their rights and dignity.

A3 Personal and professional skills

The award holder should be able to:

- demonstrate the ability to deliver patient/client centred care to an explicit level and quality of service;
- draw upon appropriate knowledge and skills in order to make professional judgements, recognising the limits of his/her practice;
- communicate effectively with patients/clients/carers and other relevant parties when providing care;
- assist other health care professionals, support staff and patients/clients/carers in maximising health outcomes;
- prioritise workload and manage time effectively;
- engage in self-directed learning that promotes professional development;
- practise with a suitable degree of self-protection;
- contribute to the well-being and safety of all people in the work place.

A4 Profession and employer context

The award holder should be able to:

- show an understanding of his/her role within health and social care services;
- demonstrate an understanding of government policies for the provision of health and social care;
- take responsibility for his/her own professional development;
- recognise the value of research and other scholarly activity in relation to the development of the profession and of patient/client care.

B. Principles and concepts: applications

All health care professionals draw from their knowledge and understanding of the established concepts, frameworks, models and theories associated with their particular profession. This knowledge and understanding is acquired from theory and practice. It forms the basis for making professional decisions and judgements about the deployment in practice of a range of appropriate skills and behaviours, with the aim of meeting the health needs both of individual clients/patients and of groups, communities and populations. These decisions and judgements are made in the context of considerable variation in the presentation, the setting and in the characteristics of the client/patient health needs. They often take place against a backdrop of uncertainty and change in the structures and mechanisms of health care delivery.

Sound professional practice is essentially a process of problem solving. It is characterised by four major phases:

- the identification and analytical assessment of health needs;
- the formulation of plans and strategies for meeting health needs;
- the performance of appropriate, prioritised health promoting/health educating/caring/therapeutic activities;
- the critical evaluation of the impact of, or response to, these activities.

B1 Identification and assessment of health needs

The award holder should be able to:

- gather relevant information from a wide range of sources including electronic data;
- adopt systematic approaches to analysing and evaluating the information collected;
- communicate effectively with the client/patient, (and his/her relatives/carers), group/community/population, about their health care needs;
- use a range of assessment techniques appropriate to the situation and make provisional identification of relevant determinants of health and physical, psychological, social and cultural needs/problems;
- recognise the place and contribution of his/her assessment within the total health care profile/package, through effective communication with other members of the health and social care team.

B2 Formulation of plans and strategies for meeting health needs

The award holder should be able to:

- work with the client/patient, (and his/her relatives/carers), group/community/population, to consider the range of activities that are appropriate/feasible/acceptable, including the possibility of referral to other members of the health care team and agencies;
- plan care within the context of holistic health management and the contributions of others;
- use reasoning and problem solving skills to make judgements/decisions in prioritising actions;
- formulate specific management plans for meeting needs/problems, setting these within a timescale and taking account of finite resources;
- record professional judgements and decisions taken;
- synthesise new theory and practice.

B3 Focused activity

The award holder should be able to:

- conduct appropriate activities skilfully and in accordance with best/evidence-based practice;
- contribute to the promotion of social inclusion;
- monitor and review the ongoing effectiveness of the planned activity;
- involve client/patient/members of group/community/population appropriately in ongoing effectiveness of plan;
- maintain records appropriately;
- educate others to enable them to influence the health behaviour of individuals and groups;
- motivate individuals or groups in order to improve awareness, learning and behaviour that contribute to healthy living;
- recognise opportunities to influence health and social policy and practices.

B4 Evaluation

The award holder should be able to:

- measure and evaluate critically the outcomes of professional activities;
- reflect on and review practice;
- participate in, and review, audit and other quality assurance procedures from a uni- and multi-professional perspective;
- contribute to risk management activities.

C. Knowledge, understanding and skills

The education and training of health care professionals should reflect multi-disciplinary and inter-disciplinary practice. Its essential characteristic is the integration of theory and practice. It draws from a range of well-established disciplines in the biological and social sciences that provide the underpinning knowledge and understanding for sound practice. However, each health care profession will draw from these disciplines differently and to varying extents to meet the requirements of their speciality. It is this contextualisation of knowledge, understanding and skills that is characteristic of the learning in specific health care programmes. Consequently, in this introductory section, the attributes and capabilities expected of the graduate in podiatry are expressed at a fairly generalised level, with many of the skills being those higher order intellectual capacities associated with graduates more generally. The more specific elements of knowledge, understanding and skills are described in the main body of the statement.

C1

The award holder should be able to demonstrate:

- a systematic understanding of the key concepts of the disciplines that underpin the education and training of all health care professionals, and a more detailed knowledge of some of these. The latter would include a broad understanding of:
  - the structure and function of the human body, together with a knowledge of dysfunction and pathology;
  - health and social care philosophy and policy, and its translation into ethical and evidenced based practice;
  - the relevance of the social and psychological sciences to health and healthcare;
  - the role of health care practitioners in the promotion of health and health education;
  - the legislation and professional and statutory codes of conduct that affect health and social care practice.

C2

The award holder should be able to demonstrate:

- a capacity for self-reflection and an understanding of the limitations of the key concepts of the underpinning disciplines.

C3

The award holder should be able to demonstrate:

- an ability to gather and evaluate evidence and information from a wide range of sources; to think logically systematically and conceptually; to draw reasoned conclusions or to reach sustainable judgements, and to apply these in practice.

C4

The award holder should be able to demonstrate:

- an ability to derive solutions to problems based on the collection, interrogation and interpretation of information and data obtained from a variety of sources, and to draw on established analytical techniques in the broad field of health and social care.

C5

The award holder should be able to demonstrate:

- an expertise in the range of skills and procedures that are common to all healthcare professionals, particularly:
  - effective skills in communicating information, advice, instruction and professional opinion to colleagues, patients, clients, their relatives and carers; and, when necessary, to groups of colleagues or clients;
  - effective and efficient use of information and communication technology;
  - the ability to manage self, including personal time and workload management, and uncertainty and change in the workplace.

C6

The award holder should be able to demonstrate:

- an ability to use methods of enquiry to collect and interpret data in order to provide information that would inform or benefit practice.

C7

The award holder should be able to demonstrate:

- a range of communication skills and interpersonal skills that are key to the effective performance of all healthcare staff, and to their interactions with colleagues, patients and clients, and others encountered during their professional life.

C8

The award holder should be able to demonstrate:

- confidence in engaging with technology, particularly the effective and efficient use of information and communication technology.

C9

The award holder should be able to demonstrate:

- confidence in understanding, manipulating, interpreting and presenting numerical and narrative data.

Academic and practitioner standards in podiatry (chiropody)

Introduction

Podiatry is the clinical discipline concerned with the diagnosis and comprehensive management of foot and lower limb pathologies. This involves the management of a wide variety of disorders, injuries and local manifestations of systemic conditions. This podiatric management may be curative, preventative or require long-term palliation or health education. Podiatrists have opportunities to specialise in a diverse range of clinical practice that include podiatric surgery, podiatric sports medicine, podiatric biomechanics, diabetes, rheumatology, podo-paediatrics and gerontology.

The graduate podiatrist may be employed in a variety of workplace settings that may be within NHS trusts, social services, self-employed private practice, industrial and commercial sectors, education and research. Whilst podiatrists predominantly work single handed in varied locations, podiatry is also practised within an interdisciplinary context. Podiatry is a relatively small profession numbering approximately 8,000 within the professions allied to medicine.

In an educational respect, the term podiatry has replaced chiropody, in recognition of the universality of the title podiatry in the English-speaking world and the comparative wealth of the literature base available. The use of the term podiatry is gradually replacing that of chiropody and in this transitional period both terms are frequently used interchangeably. In respect of the *1960 Professions Supplementary to Medicine Act*, chiropody remains the profession which is regulated. Until the *Act* is reviewed to enable recognition of the title podiatrist, graduates of degrees in podiatry, who are eligible for admission to the state register do so as chiropodists.

Whilst this statement is applicable to the United Kingdom, it recognises the distinctive country specific variations which may apply in terms of organisational, educational and practice concepts. This may include for example the Scottish requirement of four years for a vocational honours degree and the special Welsh language provisions required by the *1993 Welsh Language Act* in Wales. The statement takes account of European legislation and the directives, which apply to the recognition of qualifications within the European Community. These are considered within the context and standards expressed within the statement.

Courses of study in podiatry offered in the UK that lead to eligibility for state registration are either at degree or honours degree level. All such courses must meet the requirements as laid down by the respective professional and statutory bodies. Currently degree programmes leading to eligibility for state registration are only offered through three or four year full time degree/honours degree routes. This may not remain the case, as other modes of delivery may become available. It is accepted that widening access to higher education is a current national objective and advanced standing will be a component of the entry regulations of undergraduate programmes. Degrees leading to eligibility for state registration should ensure that such arrangements enable the student to achieve the standards laid out in the benchmark statement. The statement reflects the requirement for structured clinical practice as a component of the undergraduate course. There is a clear recognition of the requirements of the professional, statutory and academic bodies via tripartite validation mechanisms. This process is achieved in partnership with professional and statutory bodies and other stakeholders. Opportunities to study podiatry are offered in 13 institutions throughout the UK.

Nature and extent of programmes in podiatry

Podiatry is practised by specialist practitioners who are capable of both independent and interdisciplinary clinical practice. They are skilled in assessing the needs of their patients and of managing both chronic and acute conditions affecting foot and lower limb function. These skills are often practised independently of medical referral and medical supervision. The key role of the podiatrist is to maintain and enhance locomotion function and tissue viability, to alleviate pain and reduce the impact of disability thereby maintaining/improving the quality of life for patients. Podiatric practitioners can provide care to the whole population and so provide clinical services for a diverse range of patients. These particularly include children, the elderly, athletes, people with a learning disability, people with a physical impairment and patients whose health status place the viability of their lower limb at high risk.

Podiatric management is predicated on accurate assessment and diagnosis that leads to the implementation of an appropriate management plan. This recognises the inter-relationship of systemic and extrinsic factors with the function of the lower limb. Effective management is achieved by the implementation of a range of approaches including health promotion, surgical, mechanical and pharmacological therapies.

Podiatrists work predominately in primary care in single-handed community practice and also as members of specialist multi-disciplinary teams in the acute sector within the NHS. In addition, many podiatrists work in private or commercial environments.

As competent professionals, podiatrists subscribe to the maintenance and development of their skills and knowledge to maintain their clinical currency within the expanding evidence base available to the profession. They are responsible for the quality of care they provide for their patients by employment of the principles and practice of clinical governance.

Podiatrists work within the context of a sound knowledge and understanding of health policy, business principles and health economics, treating their patients with an ethical and caring approach. Effective practice requires the recognition and understanding of the social and economic context of their patients in assessing, planning, delivering and evaluating care. This can only be achieved through the effective application of interpersonal and personal transferable skills.

- recognise the need to develop and maintain current psychomotor skills necessary for effective patient assessment and management. In doing so ensure that skills development satisfies medico-legal requirements of podiatric practice and meets the needs of the work place setting obligation to maintain fitness for practice;
- demonstrate an understanding of the need to manage and respond effectively to the rapidly changing nature of the profession of podiatry and the context in which it is practised;
- evaluate podiatric and related research and other evidence to inform and develop practice with regard to the function and disorders of the lower limb and foot;
- continue to develop specific podiatric treatment strategies for the treatment of locomotor and foot disorders;
- demonstrate a basic level of understanding of the evolving policy agenda that impacts on the delivery of health care and the practice of podiatry;
- uphold the principles and practice of clinical governance.

A4 Profession and employer context

The award-holder should be able to:

- contribute to and maintain a safe health care environment within a range of working environments eg private practice, the national health service, patients' own homes, care homes;
- demonstrate an understanding of the role of the podiatrist within public and private health care sectors;
- know about current developments in health care policy and how these impact on podiatry;
- recognise the value of research and other scholarly activity in relation to the development of the podiatry profession and for the benefit of patient care.

B Principles and concepts: application to podiatric practice

Principles and concepts held by the profession of podiatry that are applied to maintain or improve lower limb and foot health.

B1 Patient/client assessment

The award holder should be able to:

- communicate effectively with the patient, or the patient's relative/guardian/carer or other health care practitioner, to obtain a general physical, medical, social, and behavioural history together with a detailed history of the presenting complaint;
- conduct appropriate and valid neurological, vascular, biomechanical, dermatological and podiatric examinations of the patient's lower limb and associated structures, modifying practice according to patient need;
- conduct or requisition, where appropriate, specialist clinical or laboratory tests (eg X-ray, blood test, microscopy and culture) in order to reach accurate conclusions relating to lower limb health status;
- utilise contemporary technologies that aid in patient assessment eg computerised gait analysis equipment;
- recognise situations where the best interests of the patient can be more appropriately served by a different health professional or a multi-disciplinary approach to care.

B2 Formulation of plans and strategies for meeting health needs

The award holder should be able to:

- use a problem solving approach to identify and integrate the findings gathered from patient history taking and physical examination, to formulate and test a diagnosis and arrive at and implement a negotiated podiatric treatment plan;
- understand the need to seek a second opinion and/or consult with colleagues and/or other members of the health care team to inform the treatment plan;
- in negotiation with the patient/patient guardian/carer, select appropriate podiatric techniques in accordance with current best practice/research. These can be selected from mechanical debridement of skin and nails, prescription and manufacture of orthoses, administration of prescription only and non-prescription medicines, local analgesia techniques, surgical procedures for skin and nail conditions, physical therapeutic modalities, and use of chair-side devices;
- demonstrate the ability to record and communicate accurately the outcomes of patient assessment, diagnosis and management plans.

B3 Focused activity

The award holder should be able to:

- demonstrate the ability to utilise safely the full scope of treatment regimes available to the podiatrist in the successful management of a patient presenting with a lower limb problem;
- effectively use appropriate clinical techniques in accordance with the best accepted practice;
- demonstrate competency in:
  - mechanical debridement of skin and nails;
  - prescription and manufacture of orthoses;
  - administration of prescription only and non-prescription medicines,
  - local anaesthesia techniques;
  - surgical procedures for skin and nail conditions;
  - physical therapeutic modalities;
  - use of chair-side orthoses.
- demonstrate competency in the use of appropriate therapeutic technologies that aid in patient treatment, eg ultrasound, electrosurgery, laser therapy, infra-red, heat & cold, cryosurgery and chemical cautery;
- demonstrate a competence in the recognition and adaptation of approaches to practice to meet the needs of modifying circumstances to include physical, psychological, social, environmental, cultural, occupational activity and economic factors;
- demonstrate the ability to identify and respond to a range of clinical incidents, threats and psycho-social crises, eg violent patients, alcohol, substance and drug abuse;
- demonstrate the ability to act swiftly and appropriately in the best interest of the patient and in accordance with contemporary practice for the maintenance of life in a clinical emergency, such as anaphylaxis, toxic reaction, epileptic attack, faint, hypo/hyperglycaemic attack, heart attack;
- provide written instructions to a patient concerning details of a podiatric treatment regime requiring patient self-treatment/advice;
- obtain and record informed consent for the treatment plan;
- conform to current data protection legislation;

- record the podiatric management plan and its evaluation in order to convey precise meaning to the podiatrist and/or others who may be required to follow-up the treatment and to satisfy medico-legal requirements.

B4 Evaluation

The award holder should be able to:

- in the context of evidence based practice, demonstrate the ability to conduct an ongoing evaluation of the podiatric management plan against treatment milestones using recognised health outcome measures;
- use information gathered in evaluating the podiatric management plan to judge its effectiveness, reviewing and revising the plan as necessary in negotiation with the patient;
- demonstrate effective listening and re-assessing skills to ensure that podiatric treatment is appropriate;
- recognise that clinical problem solving can be an inexact art, and in solving one problem another may arise for which further action may need to be taken;
- demonstrate an ability to undertake clinical audit in a podiatric context;
- use the knowledge and critical appraisal of relevant podiatric and related research and evaluation methodologies to enable and facilitate an evidence based approach;
- demonstrate the ability to recognise the limits of one's own practice, referring or discharging the patient as necessary.

C. Subject knowledge, understanding and associated skills of a podiatrist

Subject knowledge, understanding and associated skills that are essential to underpin informed, safe and effective podiatric practice. In order to be able to carry out an appropriate podiatric assessment, diagnosis and treatment plan the award holder should be able to demonstrate:

C1 Systematic knowledge and understanding of the key concepts that underpin podiatry including:

- Anatomy and human locomotion studies
  Human anatomy with particular reference to the foot and lower limb, that includes an overview of the gross anatomy of organ systems underpinning the later study of podiatry, podiatric biomechanics, surgery, pharmacology and medicine. He/she will have an understanding of the development of normal human bipedal stance and locomotion across the life cycle in order to develop competence in analysing gait.
- Histology
  Detailed knowledge of the cell and its intercellular components, the structure and function of tissues with special reference to skin that informs understanding of general and podiatric tissue pathology.
- Physiology/immunology
  Homeostatic mechanisms, cell physiology and biochemistry; cardiovascular, respiratory, neurological and endocrine systems plus an overview of hepatic, renal and digestive systems that provides knowledge of normal human functioning and underpinning for the study of pathology and medicine. Understanding of aspects of microbiology and immunology to underpin understanding of pathological processes as applied to the lower limb and foot.
- Podiatric orthopaedics and biomechanics
  General knowledge and understanding of the basic principles of biomechanics; causes and mechanisms of dysfunction with a specific focus on effects on the lower limb and foot; detailed study of congenital and acquired changes to normal structure and function; the effects of abnormal structure and function on stance and locomotion and the tissues of the lower limb.
- Systemic and podiatric pathology
  Systemic disease and the local manifestations that occur in the lower limb and foot, eg diabetes melitus, the arthropathies, neurological disorders, peripheral vascular disease dermatology, oncology, blood dyscrasias; the sources and effects of acute and chronic trauma to the foot and lower limb; effects of systemic and local infections on the foot.
- Podiatric therapeutic sciences
  The underpinning theory that relates to the management of podiatric pathologies. This includes therapeutic indications, contraindications and complications that may arise from podiatric intervention using:
  - pharmacology (to include local analgesia, anaesthetics, topical pharmacology and prescription only medicines schedules with reference to podiatrists' access to drugs);
  - surgical interventions (this includes- procedures performed under local analgesia, skin and nail surgery, principles of orthopaedic foot surgery);
  - operative and psychomotor skills (including scalpel reduction of skin and nail lesions and foot ulcer debridement);
  - mechanical therapies (to include the therapies underpinned by biomechanical principles such as the prescription of casted and non-casted orthoses, chair-side devices and footwear modifications);
  - physical therapies (to include exercise, manipulation, rehabilitation, principles of physio-therapeutic modalities - eg ultrasound, electrosurgery, laser therapy, infra-red, heat & cold, cryosurgery and chemical cautery).

- Behavioural sciences:
  - social and psychological factors that have an impact on patients' health and their implications for, and contribution to patient care, recognising the psychosocial effects of loss of mobility and pain and the role of the podiatrist in their amelioration. This is in the context of improving the patient's quality of life, mobility and independence;
  - the significance of non-compliance/concordance in relation to foot health and its effect on the patient/practitioner relationship;
  - the human factors that impact on the patient/practitioner relationship eg in special populations;
  - the principles of non-discriminatory practice.
- Foot health promotion/education
  The principles and challenges of behaviours and extrinsic factors that impinge on foot health. The principles underlying strategies employed by patients' in self-care of the feet.
- Professional studies
  The nature and scope of the podiatry profession to include:
  - concepts of the 'professional self' including aspects of professionalism in manner, dress, speech, integrity and confidentiality consistent with contemporary standards and which recognise cultural differences;
  - health service policies, the organisation and delivery of health care;
  - multi-disciplinary working;
  - codes of conduct, regulatory and legislative frameworks that apply to podiatry.

C2 A capacity for self-reflection on the extent and limitations of:

- the professional scope of the podiatrist within independent and multi-disciplinary practice;
- independent podiatric practice particularly in the context of both the public and private sectors, recognising the particular demands of the commercial sector in relation to self-employment;
- evaluating and monitoring the efficacy of podiatric treatment in the context of life-long learning and evidence based practice.

C3 An ability to gather and systematically evaluate data/evidence, drawing reasoned conclusions/solutions with particular regard to:

- the professional competence of the podiatrist within independent and multi-disciplinary practice;
- autonomous podiatric practice in respect of diagnosis, management and evaluation;
- using research and other data to inform current practice and continued professional development.

C4 An ability to derive solutions to podiatric problems based on data collection and interrogation to:

- evaluate and, where appropriate, initiate changes to podiatric practice.

C5 An expertise in an appropriate range of skills and procedures essential for the practice of podiatry including:

- primary assessment and diagnostic skills that underpin podiatric management plans;
- time management including ability to prioritise competing demands;
- professional, organisational, business and financial skills associated with the self employed single handed podiatric practitioner;
- communicating podiatric information/advice to patients.

C6 An ability to use methods of enquiry in order to collect and interpret data in order to:

- undertake a substantial project demonstrating some original thinking utilising established methods of enquiry;
- provide information to the patient in the context of obtaining informed consent.

C7 An ability to use a range of communication and interpersonal skills in order to communicate with:

- other healthcare practitioners in a precise and unambiguous language using accepted medical terminology as appropriate;
- patients and carers using language which is appropriate to and understood by the lay person;
- podiatric colleagues using podiatric terminology which is common to all podiatrists.

C8 Confidence in engaging with technology and ability to use technology that underpins podiatric practice including:

- a working knowledge of the specialist equipment used in analysing gait, assessing vascular and neurological status;
- safely using a range of therapeutic equipment in podiatric management;
- technological systems that facilitate the management of podiatric practice;
- information technology skills which include a knowledge of the use of statistical packages and the ability to make use of word processing packages for report writing.

Teaching, learning and assessment

Decisions about the strategies and methods for teaching, learning and assessment are for institutions to determine, but should complement the learning outcomes associated with health profession programmes. It is not for benchmark statements to promulgate any one, or combination of, approaches over others. However, this benchmark statement promotes an integrative approach to the application of theory and practice. It underlines the significance attached to the design of learning opportunities that facilitate the acquisition of professional capabilities and to assessment regimes that ensure these are being both delivered and rewarded to an appropriate standard. Fundamental to the basis upon which undergraduates are prepared for their professional career, is the provision of programmes of academic study and practice-based learning which lay the foundation for career-long professional development and lifelong learning to support best professional practice and the maintenance of professional standards.

Teaching, learning and assessment in podiatry

The overall aims and expected final outcomes of degrees in podiatry, together with the specific requirements of particular subjects, modules and clinical experience should inform the choice of both learning and teaching strategies and associated methods of assessment.

The podiatric model of clinical learning should be fully integrated within the curriculum. It should be characterised by the provision of specialist teaching clinics. A good model of clinical education should provide:

- a highly managed clinical learning environment that is closely related to the educational needs of students and the clinical needs of patients;
- the introduction to a structured clinical environment at an early stage in the students' course;
- close, standardised supervision of students that facilitates the development of precise psychomotor skills;
- integration between theory and its clinical application facilitated by clinical academics in podiatry;
- a facility in which students' practical application can be assessed/examined in a standardised framework.

All teaching and learning within undergraduate podiatric curricula, should be designed to underpin the phased development of clinical competence using knowledge and understanding, analytic and intellectual skills, personal transferable skills and clinical skills as the key building blocks.

Clinical learning should be a dynamic process whereby the novice develops his/her clinical expertise in order to achieve clinical competence on graduation. This should be achieved through the provision of a highly structured and carefully organised range of clinical learning opportunities involving a variety of selected and relevant patients with increasingly complex problems. Staff should tailor their teaching and learning approaches to meet sensitively, the needs of students on an individual and group basis. Students are increasingly challenged in their clinical work in order to develop their clinical reasoning skills. Placement education supplements students' clinical learning, once they have acquired their basic clinical skills, in order to provide them with enhanced learning opportunities.

Assessment

A wide range of assessment strategies should be employed in order to be able to test specified programme learning outcomes. A range of formative and summative approaches should be used in non-clinical and clinical environments. Clinical assessments might include reflective portfolios, objective structured clinical examinations, case based studies and formal tests of competence.

Academic and practitioner standards

The standard expected of the threshold graduate is outlined below. Threshold is taken to mean that standard of achievement demonstrated at the end of the educational experience, at the point of registration. This is at unclassified or at honours degree level. Achievement meets the requirements of the statutory body for state registration and the Society of Chiropodists and Podiatrists for membership.

A	**Working as a professional** The award-holder should be able to: • demonstrate achievement of the standards required for state registration; • recognise legal and ethical boundaries as determined by professional and statutory bodies; • demonstrate an awareness of the challenges inherent in single-handed podiatric practice in public/private sectors; • recognise the need and value of lifelong learning to ensure continued competence to practice; • understand the differing roles of the podiatrist in single handed and multi-disciplinary practice and demonstrate awareness of the roles of colleagues in the cross-professional team; • recognise the limits of one's own scope of practice and demonstrate ability to refer to other health and social care professionals when appropriate; • understand the principles involved in working with others including foot care assistants, podiatric surgery assistants, appliance technicians and administrative staff; • evaluate research and other evidence to inform one's own practice; • appreciate service requirements for the practice of podiatry in a wide range of clinical contexts including primary care, acute sector, private, commercial and social care environments; • practise podiatry within the NHS, private, or commercial sectors, either as a single-handed independent practitioner or as part of a larger organisation; • demonstrate an understanding of the need to manage and respond effectively to the rapidly changing nature of the profession of podiatry and the context in which it is practised; • demonstrate a basic level of understanding of the evolving policy agenda that impacts on the delivery of health care and the practice of podiatry.
B	**Application of principles and concepts** The award-holder should be able to: • demonstrate an ability to establish the nature of the patient's podiatric and associated problems based on the use of a range of communication skills and information gathering; • select and demonstrate relevant vascular, neurological, musculoskeletal, locomotor, and dermatological tests and interpret these findings together with relevant laboratory reports pertinent to the patient and their podiatric and associated problems; • integrate and synthesise available sources of information in order to consider differential diagnoses to arrive at a safe podiatric diagnosis, or to identify the necessity for further referral or investigations; • identify and consider therapeutic options based on those currently available and formulate a podiatric management plan. Negotiate this with the patient and, where required, other relevant parties. Review, and if necessary modify this plan in the light of experience and consultation, clearly setting out the options and potential outcomes ; • organise and/or perform treatment techniques using specialist podiatric, surgical, physical, pharmacological and mechanical therapies. These may be supplemented where appropriate with advice to the patient about self-management, health promotion and support for carers and/or relatives; • demonstrate the ability to recognise and manage the consequences of adverse effects of podiatric intervention and clinical emergencies; • review the effectiveness and progress of podiatric therapeutic intervention in negotiation with the patient. In the light of objective assessment of achievement of the treatment goals, modify or re-design the plan ; • Identify where required the need for referral and ensure the necessary communication to effect optimum care within the multi-disciplinary team; • demonstrate an ability to communicate effectively and record accurately the process and outcome of the patient intervention.

C	**Subject knowledge and understanding**
	
	The award-holder should be able to:
	• demonstrate systematic knowledge and understanding of the key areas as outlined in C1;
	• demonstrate awareness of the need to self-manage all aspects of podiatric practice particularly in the context of independent practice in public/private sectors;
	• describe and analyse information relevant to the practice of podiatry and be able to develop a basic re-interpretation of key factors in relation to their practice;
	• reflect critically on podiatric practice and evaluate in the light of contemporary evidence;
	• demonstrate the ability to apply specialist podiatric knowledge and skills to identify and determine the solution of familiar and unfamiliar problems;
	• demonstrate an ability to prioritise workload in an effective process of self and practice management;
	• construct critical argument ensuring that the viewpoints of others are considered and weighted and incorporated where appropriate;
	• demonstrate an ability to use research and enquiry techniques to collect, analyse and interpret relevant information and to subsume this into podiatric practice;
	• demonstrate the use of effective processes by which information may be gathered and disseminated to patients, peers, other professionals and the public in a clear and precise manner via a variety of means which include verbal, paper based and electronic methods;
	• ensure that effective methods of communication are utilised to optimise patient understanding in order that negotiated podiatric treatment plans may be implemented with informed consent;
	• demonstrate the ability to communicate effectively within a group;
	• use a range of communication and presentation skills to provide health education;
	• recognise and address the difficulties of good communication with patients who have impaired sight, hearing, learning difficulties, or other special needs taking care to overcome any personal prejudices;
	• demonstrate an ability to prioritise workload in an effective process of self and practice management;
	• describe and analyse information relevant to the practice of podiatry and be able to develop a basic re-interpretation of key factors in relation to their practice;
	• reflect critically on podiatric practice and evaluate in the light of contemporary evidence;
	• demonstrate the ability to apply specialist podiatric knowledge and skills to identify and determine the solution of familiar and unfamiliar problems;
	• demonstrate an ability to use research and enquiry techniques to collect, analyse and interpret relevant information and to subsume this into podiatric practice;
	• construct critical argument ensuring that the viewpoints of others are considered and weighted and incorporated where appropriate;
	• utilise C&IT to support practice, in particular be able to use and interpret data from a range of equipment including:
	  • gait analysis equipment such as in vivo pressure measurement systems, electronic goniometry;
	  • vascular and neurological equipment such as vasoflow and biothesiometer;
	  • interrogate podiatry databases via on-line and off-line resources.
	• be aware of the value of electronic management and record systems in the management of patient caseloads and as research/audit tools;
	• demonstrate the ability to use number skills to enable good practice in respect of calculation of dose, interpretation of physiological, biomechanical and research data.

Podiatry (chiropody) benchmarking group membership

Mr David Ashcroft (facilitator)	Society of Chiropodists & Podiatrists
Mr Paul Blakeman	Staffordshire University
Mr Brian Ellis	Queen Margaret University College
Mr Paul Frowen	University of Wales Institute Cardiff
Dr. Margaret Johnson	New College Durham
Mrs Janet McInnes	Leaf Hospital
Ms Penelope Renwick	University of Huddersfield
Mr Warren Turner	University College Northampton

Benchmarking steering group

Mrs Margaret Andrews	North East Wales Institute of Higher Education
Mr David Ashcroft	Society of Chiropodists & Podiatrists
Mrs Pauleen Auty	Leeds Metropolitan University
Miss Lesley Barrowman	National Board for Nursing, Midwifery & Health Visiting for Northern Ireland
Mrs Valerie Beale	Somerset Health Authority
Ms Mary Boyle	National Board for Nursing, Midwifery & Health Visiting for Scotland
Mrs Ann Clarke	Bedford Hospital NHS Trust
Ms Helen Davis	Royal Hallamshire Hospital
Professor Anne de Looy	Queen Margaret University College
Miss Faye Doris	University of Plymouth
Mr Martin Duckworth	College of St Mark & St John
Mr Brian Ellis	Queen Margaret University College
Miss Anne Fagan	Hospital of St John & St Elizabeth, London
Mrs Janice Gosby	UK Central Council for Nursing, Midwifery & Health Visiting
Ms Valerie Hall	University of Brighton
Mrs Julia Henderson	University of Hertfordshire
Mrs Anne Hopkins	University of Wales Swansea
Mr Stephen Hutchins	University of Salford
Mr Tom Langlands	English National Board for Nursing
Ms June Leishman	The University of Abertay Dundee
Professor Jeffery Lucas	University of Bradford
Professor Dame Jill Macleod-Clark (co-chair)	University of Southampton
Ms Diane Marks-Maran	Thames Valley University
Mrs Susan Montague	University of Hertfordshire
Mrs Christine Mullen	South Manchester University Hospital NHS Trust
Mr Luke O'Byrne	East Berkshire NHS Trust
Mrs Audrey Paterson	Canterbury Christ Church University College
Ms Robyn Phillips	Welsh National Board for Nursing, Midwifery & Health Visiting
Professor Mike Pittilo (co-chair)	Kingston University & St George's Medical Hospital
Mrs Lorna Povey	Wolverhampton Health Care NHS Trust
Mrs Jarina Rashid-Porter	Coventry Healthcare NHS Trust
Mr Gwilym Roberts	College of Occupational Therapy
Miss Jennifer Routledge	University of East Anglia
Mr Ian Rutherford	University of Nottingham
Mrs Sandra Sexton	University of Strathclyde
Ms Gail Stephenson	University of Liverpool
Professor Averil Stewart	Queen Margaret University College
Mrs Sandra Walker	Royal College of Speech & Language Therapists
Professor Mary Watkins	University of Plymouth

Appendix 2

University of
HUDDERSFIELD

Monday 1st November 1999

Dear Mr Ashcroft,

I am a Senior Lecturer at the Division of Podiatry at the University of Huddersfield.

I have embarked on a Doctorate of Education and am now at the thesis stage.

The central theme of my dissertation concerns issues relating to "Clinical Teaching in Podiatric Education" and will centre around the generation of recognised and agreed standards of pre-registration clinical teaching, within Podiatry education. The intention is to generate standards of clinical teaching, which can be recognised, agreed and acknowledged on a national and international scale, allowing full consideration of reciprocity of qualifications.

I aim to gather data by involving all the pathway leaders of degree courses at all Schools of Podiatry within the U.K, Australia, New Zealand and South Africa, by questionnaire in the first instance, with a follow-up semi-structured interview based on the emerging issues which are generated by this exercise.

The starting point is to ask you if there are any guidelines used by the Society which inform the decisions of the reviewing panel when they undertake quinquennial reviews of the Schools. Clearly decisions and judgements are made about each School, their strengths and weaknesses in the context of their resource investments by their host institution. There must therefore be some variability allowed between Schools and their provision of clinical teaching.

I should be grateful if you would furnish me with a copy of the broad list of acceptable indicators, which form the present benchmark.

Yours sincerely,

C S Davies
Senior Lecturer in Podiatry

Queensgate Huddersfield HD1 3DH UK Telephone 01484 422288 Fax 01484 516151 http://www.hud.ac.uk
Vice-Chancellor: Professor John R Tarrant BSc PhD
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Appendix 3

26th November 1999

Hi Chris

There are no standards of the sort you are requesting for evaluating schools. However the new QAA/NHSE/PSB methodology for QA Reviews post 2001 will utilize 'benchmarks', yet to be developed, for the assessment of courses. Benchmarks have been piloted for Law, History etc. but their utilisation for vocational courses are yet to be determined & evaluated.

The Society will shortly have to set up a benchmarking group together with representatives from employers, HE and the stat. body to progress this method of evaluating courses.

It will be a common methodology across all courses in all subjects in the UK. You might find writing to the QAA in Gloucester & asking them for sample benchmarks used in other subjects like history etc (there are only six pilot subjects so far) may be of background use to you. It is certainly QAA policy to use them now as some sort of proxy for standards.

David

David Ashcroft
Director of Education
Society of Chiropodists and Podiatrists
1 Fellmongers Path, Tower Bridge Road, London SE1 3LY

Tel: 020-7234 8628 (direct line) or 020-7234 8620 (switchboard)
Fax: 020-7234 8621
email: da@scpod.org

Appendix 4

University of
HUDDERSFIELD

January 21st 2000

Dear

I am a Senior Lecturer in Podiatry at the University of Huddersfield.

I am studying for the award of Doctor of Education and would be pleased for your advice and assistance in providing data for my study.

The theme of my thesis is about issues of "Clinical Teaching in Podiatry Education'. It is hoped to record the variety of methods used in Clinical Teaching across the Schools of Podiatry. This may be helpful to establish some standards, which can be recognised and accepted by Schools of Podiatry in the U.K., Australia, New Zealand and South Africa, who share a scope of practice and a common philosophy in Podiatric education.

The enclosed questionnaire comprises of 12 key questions, all related to the provision of Clinical Teaching and I would be very grateful for your responses to them.

This should take no longer than 20 minutes of your time and should not inconvenience you in any way. This will complete phase one of the data collection.

For phase two of the data collection, I will need to follow up each questionnaire with a semi-structured interview to debate further the emerging issues arising from the questionnaire. If you are not available in person, I should like to contact you 'on-line', and would be grateful if you would provide me your e-mail address in the space provided at the end of the questionnaire.

With your permission I should like to contact you again at a later period to arrange a convenient date and time for this interview, when all phase one data has been collected, collated and analysed.

You will notice that each questionnaire is number coded. This is to enable me to link the questionnaire to the interview. Only I know this code and the record of codes will be destroyed after the interview.

Please be assured that all information gathered will be respected with absolute confidentiality and neither you, your pathway nor your institution will be identifiable in the final written thesis.

Queensgate Huddersfield HD1 3DH UK Telephone 01484 422288 Fax 01484 516151 http://www.hud.ac.uk
Vice-Chancellor: Professor John R Tarrant BSc PhD
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If you would prefer not to take part in this data collection exercise, please return the questionnaire unanswered to me in the envelope provided, so that I know by the code not to issue a second copy or to try to arrange an interview with you.

If you require any clarification of any question, please contact me on: -

Telephone: 01484 – 472684
An answer phone is available should I not be available. I will return your call.

Or by e-mail on: - c.s.davies@hud.ac.uk.

Or by postal address at: -

C S Davies
Division of Podiatry
University of Huddersfield
Queensgate
Huddersfield
HD 1 3 DH
West Yorkshire.

Yours sincerely,

C S Davies BSc (Hons), M.Ed., D.Pod.M., S.R. Ch.
Senior Lecturer in Podiatry

Ed.D – Questionnaire - Clinical Teaching in Podiatry Education – Code

For the purposes of this study, the working definition of clinical teaching is :-

"..the work involved in integrating all aspects of the students' theoretical knowledge with their professional practice in the management of patients.."

For colleagues offering a 4 year degree pathway, please only refer to the clinical teaching of years 1 – 3 for the purposes of this study.

Please place a cross [x] in the boxes best representing your responses.

1. (a) When are your students introduced to clinically based activities ?

Year 1 semester 1 [ ] semester 2 [ ]

Year 2 semester 1 [ ] semester 2 [ ]

1. (b) When are your students introduced to treating patients

Year 1 semester 1 [ ] semester 2 [ ]

Year 2 semester 1 [ ] semester 2 [ ]

2. When are they introduced to treating patients in that semester?
Please give the week number [ ]

3. How many hours per week are they engaged in clinical activities ?
Please give a number of hours in each box.

Year 1 semester 1 [ ] semester 2 [ ]
Year 2 semester 1 [ ] semester 2 [ ]
Year 3 semester 1 [ ] semester 2 [ ]

4. What is the staff – student ratio provided in these sessions.
Please give a number in the space provided.
Year 1 [1 :] Year 2 [1 :] Year 3 [1 :]

5. What methods of facilitating clinical teaching do you utilise ?

Please indicate the year in which these methods are used :-

Portfolio [ ]
Non-Clinical Placements [ ]
Clinical placements [ ]
Problem based learning [ ]
Clinical tutorials [ ]
Peer group learning [ ]
Other, please specify.....

Staff demonstrations [ ]
In-house clinical settings [ ]
Computer based learning [ ]
Conferencing [ ]
Clinical research [ ]
Consultant / Specialist liaison [ ]

6. Do you have any plans to introduce new teaching initiatives in the future ?
Please specify which....

7. Apart from the clinical teaching base, where else do your students engage in clinical teaching ?

Hospitals [ ]
Community Clinics [ ]
Specialist centres – Orthopaedics [ ]
Dermatology [ ]
General Medicine [ ]
Other, please specify [ ]
.....

8 (a) How do you assess clinical teaching ?

Practical Examination [ ]
Portfolios [ ]
Objective Structured Clinical Examinations (OSCE) [ ]
Objective Structured Practical Examinations (OSPE) [ ]
Peer Assessment [ ]
Self-Assessment [ ]
Other, please specify [ ]

8 (b). Who assesses your students?

Full time University Staff [ ]
Part time staff [ ]
Hospital staff [ ]
Community staff [ ]

9. Please mark in the boxes below whether you use any of these forms of assessment summatively, formatively or both summatively and formatively.

Method	Summatively	Formatively	Both
Practical Examinations	[ ]	[ ]	[ ]
Portfolios	[ ]	[ ]	[ ]
OSCE	[ ]	[ ]	[ ]
OSPE	[ ]	[ ]	[ ]
Peer Assessments	[ ]	[ ]	[ ]
Self-Assessments	[ ]	[ ]	[ ]
Other.....	[ ]	[ ]	[ ]

10. Do you grade your patients symptoms to suit the abilities at stages of their experience?

Yes [ ] No [ ]

If yes, please indicate the typical expectations of each year group.

Year 1 [ ]

Year 2 [ ]

Year 3 [ ]

11. How would you describe the overall educational approach to clinical teaching ?
You may feel it appropriate to mark more than one option.

Year 1
Didactic (traditional teaching) [ ]
Heuristic (discovery) [ ]
Coaching (developing student skills) [ ]
Other , please specify.....

Year 2
Didactic (traditional teaching) [ ]
Heuristic (discovery) [ ]
Coaching (developing student skills) [ ]
Other , please specify.....

Year 3
Didactic (traditional teaching) [ ]
Heuristic (discovery) [ ]
Coaching (developing student skills) [ ]
Other , please specify.....

12 (a) Do you require teaching staff to hold an appropriate first degree ?

Full time Yes [ ] No[ ]

Part time Yes [ ] No[ ]

Placement based staff Yes [ ] No[ ]

12 (b) Do you require teaching staff to hold a recognised teaching qualification ?

Yes [ ] No[ ]

If yes, please indicate below which you accept:-

Thank you for completing this questionnaire.

A return envelope is provided. I would like to receive replies for February 25th 2000 to allow for collation and analysis to take place .

Any emerging issues will be used to shape the next phase of my study, the semi-structured interviews, which I have provisionally planned to take place in the May to July period of 2000.

Please indicate here if you are willing to take further part. Yes [ ] No [ ].

Please provide your e-mail address here :- [ ]

Please indicate if you intend to be a delegate at the Society of Chiropodists and Podiatrists Conference during May 2000. Yes [ ] No [ ].

Thank you

C.S.Davies

Appendix 5

Dear

Thank you for completing and returning my questionnaire, and also for indicating your continued cooperation in this study.

I am still looking at 'baseline standards of teaching' in Podiatry with a view to developing a provisional set of standards, which could be the starting point for discussions between all Schools of Podiatry that share a common philosophy and background. A second point may be to pave the way for an agreement of reciprocity of qualifications between participating countries. (U.K., South Africa, Australia and New Zealand).

This is the final phase and once again should not invade on your time too much – please don't be put off by the 90-minute tape --- it is all we have in stock!! Unfortunately, I am unable to meet with you face to face, so have constructed this method of 'distance interviewing'.

I'd like you to read the attached set of prompts and discuss with me on the tape, some of the issues from the questionnaire. These have emerged as themes that have potential for common ground and need further refinement before any recommendations can be put forward.

Please be assured that any information given will be dealt with in a confidential manner. The tape is coded for my purposes only and will be destroyed after transcription has taken place. Again, neither you, your pathway nor institution will be identified in the final report.

Please read the prompts and if necessary make some notes of your own and then speak onto the tape when you are ready.

To ease my transcription, please preface any point with the number corresponding to the points for discussion. When you've finished, please play it back to ensure that it has recorded (!) and that it covers what you want to say.

Many thanks for your input and continuing support.

P.S. – DON'T FORGET TO PRESS RECORD'

Chris Davies

The aim of this follow up interview is to promote discussion at an individual level and to identify common themes, which might form the basis of minimum standards which could be reasonably expected of clinical teaching. This has a broader remit than simply discussing clinical competences, including the other significant influences of Staff, Resources, Students and common pathway issues.

It is hoped that we may eventually be able to identify a mechanism for ensuring parity across the schools, whilst retaining the individuality and strengths of each school.

1) Staff

The staff drive the curriculum at each school. They are the major influences in the development of the pathway and are essential in the educative process. (Please include in here, full time, part time and other teaching staff).

In the UK, it will be a requirement for all new teaching staff to have some recognised teaching qualification.

Please comment concerning a possible baseline requirement for all teachers to hold: -

a) BSc (Hons) level 1st degree
b) Teaching qualification
c) A commitment to Continuing Professional Development (CPD) – professional update
d) Clinical experience ... (please indicate how much 1 year, 2 years.)

How would you ensure that staff are achieving CPD? –

a) Annual Personal Development Review (PDR) interviews
b) Portfolios of evidence of update – annually
c) Induction training and a pack containing relevant protocols – as necessary

What do you think would be an appropriate requirement for CPD?

a) 20 hours per year? certificated / non –certificated ? assessed / non-assessed ?
b) 15 hours per year ? certificated / non –certificated ? assessed / non-assessed ?
c) 10 hours per year ? certificated / non –certificated ? assessed / non-assessed ?
d) other hours per year ? certificated / non –certificated ? assessed / non-assessed ?

1) Resources

a) Apart from the standard clinical equipment required to teach clinical skills, (chairs, stools, autoclaves, clinical units and instruments) what do you think could be reasonably expected as a minimum additional resource ?
(e.g. clinical reference library on site; on-line facilities in clinic; CD ROM access on site)

b) Please discuss how you ensure your students safety to work within the clinical / laboratory environments?

c) Time is a factor all tutors would say is a scarce commodity. Bearing in mind in the UK that the Society of Chiropodists and Podiatrists has a recommendation of a 1000-hour clinical time;

How do you interpret this and how would you like to see it interpreted ?

Do you have separate Clinical Treatment time and Clinic Supporting studies time ?

2.1 Affiliations

All schools have indicated that part of a students learning is carried out in a placement away from the main clinical teaching area. Please discuss the following :-

a) How do you ensure parity of the students experience when they are on placement off-site ?

b) How do you prepare your part-time / community based staff for their role as clinical educators ?

c) How do you 'plug the gaps' in a students learning experience should they miss a session ?

3. Students

In the U.K., there is a minimum requirement that students hold a basic number of 5 awards to include a good level of numeracy and literacy based on their GCSE results aged 16 years. (Year 11). At Advanced level , (HSC, aged 18, Year 13), they are required to hold a minimum of two GCE advanced level awards with a preference for a science subject (in most schools, a biological subject is preferred).

3.1 Please give your comments about:-

a) your minimum entry requirement
b) your preferred entry requirement
c) do you stipulate a particular subject as a requirement for entry ?

3.2 Please discuss if you have a non-standard entry routes for mature students ?

4.2 Do you have a mechanism for Accreditation of Prior Learning (APL) for students wishing to transfer from another institution either within your own country or from overseas?

4.3 What mechanisms you have to provide academic or pastoral support for students experiencing difficulties ?

4. Pathway Issues

4.1 Quality Assurance is a major influence in the provision of education.

Please discuss the quality assurance measures you employ to audit the outcomes of your pathway.

4.2 Ashford (1990, 1991) completed an exercise to determine an agreed set of clinical competences, which could be reasonably expected of a graduating student. These were based in 4 major domains, Clinical Practice, Communication, Knowledge base and Professional Issues, within each there are a number sub-headings. Research by Stengelhofen (1996) shows that although it is possible to agree a set of competences, it is a very different matter to implement and assess them in practice and whilst we have some consensus, we do need to be able to demonstrate an overall commitment to competences.

Clinical competence and clinical safety are central to all our teaching. Would you comment on the need for baseline competences and any additions or subtractions you would like to see made ?

4.2 Attitudes about teaching have changed significantly with the need to demonstrate a shift away from traditional tutor led teaching, towards a student led learning philosophy.

Please discuss the measures you employ to promote and ensure this change.

4.2 Lifelong learning is an admirable aim, sought by all pathways. Please discuss the measures you employ to promote lifelong learning within your curriculum.

You can press the 'STOP' button now. Please replay part of the tape to check that it has recorded.

I am indebted to you for you comments and thank you again very sincerely for your input. I hope that between us, we have created a forum for future dialogue to fulfil the remit of this study.

Chris Davies

References

Ashford R.L. 1990 . Identifying the competences required by a state registered chiropodist: A DACUM Workshop. *Journal of British Podiatric Medicine.* 45 .7. pp 129-132

Ashford R.L. 1991. Chiropodial competences identified by the Delphi Technique. *Journal of British Podiatric Medicine.* 46. 7.pp 123-126.

Stengelhofen.J. 1996. *Teaching Students in Clinical Settings.* Therapy in Practice 37. Chapman and Hall. London.

Appendix 6

University of
HUDDERSFIELD

Friday. December 14th 2001.

Dear Colleague,

Re: - Doctor of Education thesis

Augmenting competence: an investigation of criteria, which may enhance Podiatry Education

I am writing to you for the final time to ask you to complete the enclosed forms, which show the points you have already contributed and about which there is a broad agreement. From this exercise, I am looking to facilitate the formulation of a set of criteria that may be influential in the education of podiatry students.

The professional body (and in the U.K. the QAA) has produced a set of benchmark statements or competences that have been recently published. The literature suggests that by themselves these give an incomplete measurement of the students' learning experience. The creation of a set of supportive criteria may be helpful to supplement and strengthen the benchmark statements.

It is my intention to forward these to the professional body, and to ask that they be considered and discussed as part of an augmented quality system, to ensure the future quality of the education provided for podiatrists.

This is the third and final phase of data collection where I shall be asking for your participation in this research study. I realise that some of these points may be a little contentious and they may not be immediately applicable to your current circumstances. However there is a majority view expressed in all of these points and it is clear that schools already include some of these issues, albeit in an ad hoc manner. The adoption of these points is not organised by the professional body, rather they are included as part of the requirements of the individual institutions. This inconsistency across the schools may show inequality in the provision of podiatry education and that the profession may be vulnerable to criticism in areas included.

For international recognition of qualifications to be readily accepted, a concise and transparent quality cycle must be seen in operation, to reassure the professional bodies in partner countries and it is hoped that the adoption of these points may enable such discussions to be successful.

Queensgate Huddersfield HD1 3DH UK Telephone 01484 422288 Fax 01484 516151 http://www.hud.ac.uk
Vice-Chancellor: Professor John R Tarrant BSc PhD
INVESTOR IN PEOPLE
An exempt charity and a centre of excellence for vocational education and research

I thank you for your continued support and for being part of the 'community of researchers' in my study.

I should be grateful if you could return these forms to me in the envelope provided by January 21st 2002, so that I may meet my research deadlines.

If you prefer to fax your responses the number is given below.

Thank you.

Yours sincerely

C. S. Davies
Division of Podiatry
University of Huddersfield
Queensgate
Huddersfield
HD 1 3 DH

Tel: - 01484 – 472684

e-mail: *c.s.davies@hud.ac.uk*

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Regarding Staff.

1 As a minimum requirement, all teaching staff should hold a relevant first degree, preferably at the 2 (i) level of award and this should be supported by a higher award within 3 years of commencing the post. Applicants with an honours degree at 2 (ii) level of award should be considered for teaching positions depending on their experience or CPD evidence related to the expectations of the post.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

2 All new teaching staff should undertake a period of induction into the administration, health and safety as well as to all of the education and assessment processes of the employing institution. This should also extend to part time and placement based staffs.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

3 All teaching staff should apply to become full members of the ILT within 2 years of commencing the post. At the very least, all teachers should achieve associate membership as soon as possible after appointment.

For overseas schools, staff should be accredited teachers of their institutions.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

4. An experienced colleague should mentor new full-time staff during a probationary period of one year.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

5 Full time teaching staff, at a senior level of appointment, should have a minimum of 2 years clinical experience.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

6. An experienced colleague should mentor new full-time staff during a probationary period of one year.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

7. Annual CPD is considered to be essential for all grades of teaching staff. This should be certificated for evidence of attendance and completion of the module(s). The CPD experience should also include educational as well as professional areas of provision.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

8. The current requirements for CPD need to be reconsidered for teaching staffs who are actively involved in the delivery of CPD.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

9. The importance of research activity should also be emphasised to encourage further development of the profession as well as the development of clinical practice.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

10. A compromise position, which may be acceptable, could be to accept the current requirements for CPD as the initial working model. Any clinically active teacher should be required to evidence 15 hours of 'core' clinical study of CPD but that their other CPD credit could be evidenced by negotiation in areas pertinent to their personal and professional requirements to their employment.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

11 Staff should maintain a portfolio of evidence of their CPD activity for annual appraisal, where agreed goals have been set in advance. Although the portfolio is the personal property of the individual, they may be asked to allow the pathway leader to have access to this material as part of their review analyses if linked to funding requirements.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments

Regarding Resources

12. The reliance on a number of clinical hours as an indicator of clinical competence needs to be reviewed, allowing debate about the quality of the content of the students clinical experience overall. This may be achieved by establishing a range of clinical competences to be evaluated by examination.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

13. The application of the requirement for a pre-determined number of clinical hours should reflect the flexibility of the pathway and should make an allowance to include the pre-clinical requirement as well as observations of practice, demonstrations of practical skills and the development of psychomotor skills. Time for reflections on practice should also be included here.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

14.Computer based technologies with clinical library access should be provided in the close proximity of the clinical area both to improve the immediacy of access to such information and support student learning.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

15. All students (and staff) should be required to receive induction and annual update in all matters of Health and Safety. Induction should include all clinical and orthotic laboratory protocols (including COSHH) and fire safety and evacuation protocols. Annual update should be certificated.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

16. Students should complete the whole of a prescribed placement experience and maintain a portfolio as evidence of their participation. This should be supported by a reflexive narrative that demonstrates what they have learned as a result of their placement experiences. A mechanism for recovery of 'lost' time should be enacted where appropriate to complete the placement requirements.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

17. All community-based staff involved in the facilitation of placements should undergo induction into their expected role by the educational institution. They should be introduced to the aims and objectives of the placement, placed in the context of the overall philosophy of the pathway and the expectations of the outcomes. The means of assessment or reporting of a student's progress should also be standardised with clear protocols and guidelines given by the host institution.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

18. Possibilities to invest in new technologies, with the development of on-line teaching aids (CD ROMs) should be investigated to allow students access to learning materials at a time other than when a single lecture is delivered. This would enable students to re-visit areas of practical work in their own time and at their own pace. These would also serve as a useful revision aid to confirm knowledge and improve the students' confidence in their own knowledge.

Strongly Agree	Agree	Disagree	Strongly disagree

Any further comments please:-

Regarding Students

19.The preferred entry requirement of each course should satisfy the emphasis of that pathway. The standard of the expected grade of award should be consistent with professional learning and appropriate to achieve the learning outcomes of the pathway. In the UK, students should achieve as a minimum, the equivalent of two A level subjects at a grade determined by the pathway. A preference of D grade could be expected for students to manage the expectations of the pathways with a reasonable prediction of being successful.

Strongly Agree	Agree	Disagree	Strongly disagree

Any further comments please:-

20. The minimum entry requirement should be set to enable students to be successful and to have some access to remedial work to get them to an appropriate standard before the teaching commences. Schools may wish to set pre-entry assignments or consider the arrangement of a block summer school to enhance students' success for those with less than the 'normal' entry requirements but who have other APL experience.

Strongly Agree	Agree	Disagree	Strongly disagree

Any further comments please:-

21. Any preferred subject or spread of subjects should be stipulated for all applicants prior to application. The recency of those qualifications should be set to conform to the evidence regarding the retention and currency of knowledge. The qualification is considered to be current if recorded within 3 years of commencing the degree.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

22. Transfer between schools should be accommodated where equivalency can be demonstrated between the experience of the transferee and the requirements of the proposed pathway. This is in accordance with the philosophy of credit accumulation and transfer schemes (CATS).

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

23. Where schools offer an APL (APEL) scheme, this should be transparent and precise in its application for all students wishing to transfer between schools. In the spirit of accessibility to H.E., schools should move to the position where there is the opportunity to operate an APL scheme to enable transfer between schools.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

24. Institutions should aim to provide academic, pastoral and social support to students enrolling onto their pathways. The introduction of peer support should be considered following the reported successful introduction of these schemes at other schools.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

25 Students should engage in clinical activities at an early stage in their careers to acclimatise to the expectations of the clinical setting and to become familiar with professional routines prior to treating patients. They should be prepared to treat patients after a period of adjustment and training in techniques, preferably at the end of the first semester of year 1.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

26. School clinics should grade patients' presenting conditions, and introduce students incrementally to an increasing level of complexity of pathology, as their experience and clinical education develops.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments :-

Regarding Pathway issues

27. Clinical teaching is a rich and varied specialism, which requires a variety of methods to enact. The current range of methods is sufficiently broad to encompass the needs of schools to enable its provision. Further developments and sharing of ideas between schools is to be encouraged.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

28 The diet of assessment reflects the needs of the respective pathways, but should include the opportunity for the practical examination to be experienced formatively and summatively at all schools. Other types of assessments should be encouraged but the use of peer and self-assessments should not be considered for summative evaluations.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

29. The Society's benchmark statements regarding students should be subjected to a research enquiry to determine their worth. They should be interpreted as a template for audit of the quality of the pathway but should be flexible enough to recognise the variation of the pathways offered. This needs wider discussion with Pathway leaders and changed where a case is made and supported in the literature.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

30. The introduction of clinical competences should be written in a flexible way to encompass the philosophies of all schools. These may need to be negotiated further to enable a working compromise to be decided. The difficulty is that the assessment of students could become a mechanical process rather than an holistic appreciation of student's abilities.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

31. Following an initial introduction to the subjects at foundation level, the students should be encouraged to become more responsible for their own learning and engage in research and student led learning scenarios. This would allow some discrimination between the levels of the students' abilities.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

32. Schools should engender a positive attitude to learning and enable the transfer of this philosophy to lifelong learning and attitudes, which would serve to maintain and update the graduate through their professional career.

Strongly Agree **Agree** **Disagree** **Strongly disagree**

Any further comments please:-

Appendix 7

	1	2	3	4	5	6	7	8	9	10	11	12	Mean
1	2	3	3	3	3	4	4	4	2	4	4	3	3.25
2	4	4	3	4	4	4	4	4	4	4	4	3	3.83
3	3	3	2	3	2	4	4	3	3	3	3	2	2.9166667
4	3	4	3	4	4	4	3	3	3	4	3	4	3.5
5	4	4	4	4	4	4	3	4	1	2	4	4	3.5
6	3	4	4	4	4	4	3	4	3	4	4	3	3.6666667
7	3	3	3	4	4	4	3	3	4	4	4	3	3.5
8	4	3	3	0	4	4	3	4	1	4	4	4	3.1666667
9	3	3	4	3	4	3	3	4	4	3	4	2	3.3333333
10	3	3	3	4	4	3	3	4	4	4	3	3	3.4166667
11	3	4	3	3	4	4	3	4	4	4	3	3	3.5
12	3	3	3	4	3	4	4	0	4	4	4	4	3.3333333
13	3	4	3	4	4	4	4	2	4	4	4	4	3.6666667
14	3	3	3	3	4	4	4	3	1	4	4	4	3.3333333
15	4	4	3	3	4	4	4	0	1	4	4	4	3.25
16	3	4	3	4	3	4	3	4	4	4	4	3	3.5833333
17	4	3	3	4	4	4	3	4	4	4	4	3	3.6666667
18	3	4	2	3	3	3	3	4	4	4	4	3	3.3333333
19	0	3	2	3	3	4	3	4	1	4	4	4	2.9166667
20	2	3	3	3	4	4	4	4	3	3	3	3	3.25
21	3	3	3	2	0	4	4	4	2	3	4	2	2.8333333
22	3	3	3	3	4	4	3	4	3	4	4	3	3.4166667
23	3	3	3	3	4	3	4	3	0	4	3	4	3.0833333
24	3	3	2	4	4	4	4	3	3	4	3	3	3.3333333
25	3	2	3	4	4	4	4	2	2	4	2	3	3.0833333
26	4	3	3	3	4	4	3	3	1	3	4	2	3.0833333
27	3	3	3	4	3	4	4	4	0	2	4	3	3.0833333
28	3	3	3	4	4	4	3	4	0	3	3	2	3
29	4	3	2	3	3	3	3	3	1	3	4	3	2.9166667
30	4	3	3	4	3	3	3	4	0	4	4	4	3.25
31	4	4	3	3	4	4	4	3	3	4	4	4	3.6666667
32	4	4	3	4	4	4	4	4	3	4	4	4	3.8333333

Appendix 8

Friday 15th February 2002

Dear Mr Ashcroft,

Re: Doctor of Education thesis.

Augmenting competence: an investigation of criteria which may enhance Podiatry Education

I originally wrote to you in November 1999, concerning a research thesis I have been undertaking pertaining to clinical teaching in podiatry education. The outcome of this study is the formulation of a set of additional statements, which may be used to enhance the quality of the podiatry education.

I have recently completed this and would be grateful if you could furnish me with some initial thoughts about the introduction of such statements to supplement the benchmark statements that have been recently introduced. I would then be able to report this to inform my study.

The professional body (in the U.K., with the QAA) assesses the quality of podiatry education based on the outcome statements or benchmarks, which have been recently published.

The educational literature suggests that outcome based statements provide an incomplete position and by themselves they do not wholly recognise the quality issues involved. This study investigated other criteria which could have a major influence in the educational experience of podiatry students.

The pathway leaders of the Schools of Podiatry in the UK, Australia, New Zealand and South Africa were asked to consider four domains, namely the staff, the resources, the students and the pathway, which are collectively considered to be the central tenets of podiatry education. Through a series of questionnaires, semi-structured interviews and Likert scale attitude responses, colleagues were asked to discuss and refine the additional criteria which make podiatry education effective and successful. Their contributions have informed this study.

From an initial set of 32 statements, a final set of 28 statements is given below.

Another aspect that came from this study was the issue of the International reciprocity of podiatry qualifications. For this to be effected, a concise and

transparent quality cycle is required to be seen in operation, to reassure the professional bodies in partner countries and the adoption of these points may enable such discussions to be successful.

I would be grateful if you could provide me with some comments for inclusion in my final presentation.

Yours sincerely.

C. S.Davies. BSc (Hons). M.Ed., D.Pod.M., S.R.Ch.
Principal Lecturer in Podiatry

Regarding Staff.

1 As a minimum requirement, all teaching staff should hold a relevant first degree, preferably at a 2 (i) level of award and this should be supported by a higher award within 3 years of commencing the post. Applicants with an honours degree at 2 (ii) level of award should be considered for teaching positions depending on their experience or CPD evidence related to the expectations of the post.

2 All new teaching staff should undertake a period of induction into the administration, health and safety as well as to all of the education and assessment processes of the employing institution. This should also extend to part time and placement based staffs.

3 Full time teaching staff, at a senior level of appointment, should have a minimum of 2 years clinical experience.

4. An experienced colleague should mentor new full-time staff during a probationary period of one year.

5. Annual CPD is considered to be essential for all grades of teaching staff. This should be certificated for evidence of attendance and completion of the module(s). The CPD experience should also include educational as well as professional areas of provision.

6. The current requirements for CPD in the U.K. need to be reconsidered for teaching staffs who are actively involved in the delivery of CPD.

7. The importance of research activity should also be emphasised to encourage further development of the profession as well as the development of clinical practice.

8. Any clinically active teacher should be required to evidence 15 hours of 'core' clinical study of CPD but that their other CPD credit could be evidenced by negotiation in areas pertinent to their personal and professional requirements to their employment.

9. Staff should maintain a portfolio of evidence of their CPD activity for annual appraisal, where agreed goals have been set in advance. Although the portfolio is the personal property of the individual, they may be asked to allow their line manager to have access to this material as part of their personal development review (PDR).

Regarding Resources

10. The reliance on a number of clinical hours as an indicator of clinical competence needs to be reviewed, allowing debate about the quality of the content of the students clinical experience overall.

11. The requirement for a pre-determined number of clinical hours should reflect the flexibility of the pathway and should make an allowance to include the pre-clinical requirement as well as observations of practice, demonstrations of practical skills and the development of psychomotor skills. Time for reflections on practice should also be included here.

12. Computer based technologies with clinical library access should be provided in the close proximity of the clinical area both to improve the immediacy of access to such information and support student learning.

13.All students should be required to receive induction and annual update in all matters of Health and Safety. Induction should include all clinical and orthotic laboratory protocols (including COSHH) and fire safety and evacuation protocols. Annual update should be certificated.

14. Students should complete the whole of a prescribed placement experience and maintain a portfolio as evidence of their participation. This should be supported by a reflexive narrative, which demonstrates what they have learned as a result of their placement experiences. A mechanism for recovery of 'lost' time should be enacted where appropriate to complete the placement requirements.

15. All community-based staff involved in the facilitation of placements should undergo induction into their expected role by the educational institution. They should be introduced to the aims and objectives of the placement, placed in the context of the overall philosophy of the pathway and the expectations of the outcomes. The means of assessment or reporting of a student's progress should also be standardised with clear protocols and guidelines given by the host institution.

16. Possibilities to invest in new technologies, with the adoption of on-line teaching aids and the development of CD-ROMs should be investigated to allow students access to learning materials at a time other than when a single lecture is delivered. This would enable students to re-visit areas of practical work in their own time and at their own pace. These would also serve as a useful revision aid to confirm knowledge and improve the students' confidence in their own knowledge.

Regarding Students

17. The minimum entry requirement should be set at an appropriate level to enable students to be successful and to have some access to remedial work to get them to an appropriate standard before the teaching commences. This is considered to be between 10 and 12 points on the pre-curriculum 2000 scale. This equates to 2 A levels at C + C or C + D grades for the UK.

18. Schools may wish to set pre-entry assignments or consider the arrangement of a block summer school to enhance students' success for those with less than the usual entry requirements but who have other APL experience.

19. Transfer between schools should be accommodated where equivalency can be demonstrated between the experience of the transferee and the requirements of the proposed pathway. This is in accordance with the philosophy of credit accumulation and transfer schemes (CATS).

20. Where schools offer an APL (APEL) scheme, this should be transparent and precise in its application for all students wishing to transfer between schools. In the spirit of accessibility to H.E., schools should move to the position where there is the opportunity to operate an APL scheme to enable transfer between schools.

21. Institutions should aim to provide academic, pastoral and social support to students enrolling onto their pathways. The introduction of peer support should be considered following the reported successful introduction of these schemes at other schools.

22. Students should engage in clinical activities at an early stage in their careers to acclimatise to the expectations of the clinical setting and to become familiar with professional routines prior to treating patients. This should be enacted after a period of adjustment and training in techniques in the first semester of year 1.

23. School clinics should grade patients' presenting conditions, and introduce students incrementally to an increasing level of complexity of pathology, as their experience and clinical education develops.

Regarding Pathway issues

24. Clinical teaching is a rich and varied specialism, which requires a range of methods to ensure student learning. The range of methods should be sufficiently broad to provide a range of teaching and learning methods to address the needs of individual students. Further developments and sharing of ideas between schools is to be encouraged.

25. The schemes of assessment should reflect the needs of the pathways, but should include the opportunity for a variety of methods to be incorporated into the curriculum. The practical examination should be experienced formatively and summatively for students at all schools. Other types of assessments should be encouraged but the use of peer and self-assessments should not be considered for summative evaluations.

26. The introduction of clinical competences should be written in a flexible way to encompass the philosophies of all schools. These may need to be negotiated further to enable a working compromise to be decided.

27. Following an initial introduction to the subjects at foundation level, the students should be encouraged to become more responsible for their own learning and engage in research and student led learning scenarios.

28. Schools should engender a positive attitude to learning and enable the transfer of this philosophy to lifelong learning and attitudes, which would serve to maintain and update the graduate through their professional career.

Appendix 9

Monday 4th March 2002

Hi Chris

Sorry to have been so long in getting back to you.

As you know, at the invitation of the QAA, the Professional and Statutory body together, produced the benchmark statements in line with the requirements set down by the QAA.

I would not disagree with the educational literature if it suggests that outcome based statements provide an incomplete position.

My own view is that benchmarking, as defined by the QAA, is in my opinion, a quantitative exercise and does not pay any attention to qualitative outcomes. I am also not aware of the evidence base on which the QAA have predicated their benchmarking process.

It seems to be something of a matter of faith. Any addition to the literature which introduces a qualitative aspect to supplement and inform the quantitative approach to benchmarking, would be a welcome addition.

It would seem your work may be an attempt at doing this.

Regards

David Ashcroft

Director of Education
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