

# Publishing undergraduate research: linking teaching and research through a dedicated peer reviewed open access journal

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## Biography

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## Abstract

In 2015, the University of Huddersfield Press launched *Fields: the journal of Huddersfield student research*. The journal was developed with two key purposes: ensuring that high quality student research was made available to a broader audience and inspiring students to work to the highest standards by considering the potential of their work for impact in the wider world. The existing literature is reviewed regarding the growth of student research journals, as well as some of the benefits these journals can offer to students. The institutional rationale for *Fields* is outlined and the process of setting up a multidisciplinary open access student research journal is discussed. The outcomes of an evaluation are presented with particular focus to lessons learned and future developments to improve support for authors. The experience of the project team will be useful to universities and university presses considering strategies for supporting students to develop research for publication/dissemination.

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## Introduction

The University of Huddersfield is a medium sized university in the north of England. Currently home to approximately 22,000 students, the University was named Times Higher Education University of Year in 2013. In 2015, *Fields: the journal of Huddersfield student research* was developed with two key purposes: ensuring that high quality student research was made available to a broader audience and inspiring students to work to the very highest standards by considering the potential of their work for impact in the wider world.

In this paper the authors present a review of the existing literature around the growth of student research journals in the UK/US, as well as covering some of the benefits these journals can offer to students. The rationale for *Fields* in an institutional context is outlined and the process of setting up an online, open access, multidisciplinary journal for student research is then discussed, with particular consideration given to a rigorous review process and a dissemination strategy. Year one of the project, which saw the journal go from proposal to fully fledged publication, is analysed and lessons learned are discussed. It is hoped that the experience of the project team will be useful to other universities and university presses considering strategies for supporting students to develop their research for publication/dissemination.

## The growth of student research journals

The focus on the publication of undergraduate research and the associated development of undergraduate journals can be linked to a push for integrating research into teaching. In the United States, one of the catalysts for this was the Boyer Commission on Educating Undergraduates in a Research University, formed in 1995 on the understanding that undergraduate education had significantly changed. The Commission outlined ten ways to change undergraduate education, including a recommendation to link communication skills and course work.

‘Every university graduate should understand that no idea is fully formed until it can be communicated, and that the organization required for writing and speaking is part of the thought

process that enables one to understand material fully. Dissemination of results is an essential and integral part of the research process, which means that training in research cannot be considered complete without training in effective communication. Skills of analysis, clear explanation of complicated materials, brevity, and lucidity should be the hallmarks of communication in every course.’<sup>1</sup>

Following Boyer, Katkin<sup>2</sup> reported that around one third of US institutions had at least one web based or print journal for undergraduate research. However, in a later survey, Lopatto<sup>3</sup> found that ‘professional presentation’, such as presentations at professional meetings or publication in peer-reviewed journals, were less common, representing only 8% of all presentation types. A little over ten years on, the Council on Undergraduate Research<sup>4</sup> now lists 170 journals in the United States.

In the UK, Walkington and Jenkins<sup>5</sup> suggested that, ‘[u]ndergraduate research findings are rarely disseminated or subject to feedback and comment from a broad audience. For example, the UK undergraduate dissertation is often only read by the student supervisor and the assessors,’ and at the time this represented a gap in the research cycle. The implication here is that the research cycle is completed when results are shared via publication and peer review and this may lead to further questions and comments, whereas student feedback on assignments is limited and does not benefit from the subsequent refining and re-drafting required for the publication process which closes the research loop<sup>6</sup>. Indeed this echoes the call from the Boyer Commission in the United States and is also being realized by many students in the science disciplines<sup>7</sup>.

Walkington and Jenkins<sup>8</sup> proposed nine strategies for mainstreaming undergraduate research publication by building publication into dissertation, course or programme requirements, this work was subsequently used to assess a number of case studies<sup>9</sup> before being updated and enhanced by Walkington<sup>10</sup>.

In the UK the 'new wave' of undergraduate journals began in 2008<sup>11</sup>. Tatalovic<sup>12</sup> described this as a growing trend and expected more titles to be established in the coming years. Walkington and Jenkins<sup>13</sup> provided a snapshot of undergraduate research journals in 2008, listing 10 undergraduate research journals in the UK. The British Conference on Undergraduate Research (BCUR) web site lists the current undergraduate research journals in the UK<sup>14</sup>. Analysis shows 27 titles – 26 excluding the title discussed in this article. Of these, 10 appear to be archived and one forthcoming, therefore there still seem to be relatively few student research journals in the UK since the original list was compiled.

In a 2008 investigation of student science journals in the United States and Europe<sup>15</sup>, it was found that student research journals fell in to two distinct groups: those that were started by students and those that were started by faculty or departments. This appears to be true today<sup>16</sup>, indeed the BCUR website lists 10 academic led, 13 student led (with varying levels of academic involvement) and 3 with no information. In addition, many of the titles above have been developed as marketing opportunities for universities or departments rather than peer reviewed research journals. Again, of the 26 titles, the BCUR site lists 16 titles that are peer reviewed (by a mixture of academics only, academics and students and students only) and 10 titles that are non-peer reviewed showcase titles. In a survey of political science journals<sup>17</sup>, two thirds of respondents had student editors. Although 77% of the journal had a faculty advisor, only 11% of those who replied had responsibility primarily resting with faculty.

Of the titles listed at BCUR, only three active titles appear to be peer reviewed by academics and these are discipline specific titles published by Oxford University Press, British Undergraduate Philosophy Society and British Undergraduate Ophthalmology Society. The only university-based interdisciplinary title that is peer reviewed exclusively by academics appears to have been dormant since 2012. It was noted that many of the journals in the Tatalovic<sup>18</sup> study only featured the best

undergraduate work, however, this is what differentiates fully peer reviewed student research journals from the titles that perform a marketing function.

While the numbers of student research output and dedicated journals are increasing relatively slowly in the UK, Caprio<sup>19</sup> recognises a 'clear movement' on the international stage towards the recognition of the importance of the publication of student research as a key activity in developing students' written and oral communication skills. In 2012, the Indonesia Directorate General of Higher Education (DIKITI) announced a new policy to make research publication a requirement for all students in order to increase scientific publications and improve the quality of degrees<sup>20</sup>. The suggestion from DIKITI was for universities to develop their own e-journals. In the UK, there have been a number of calls for integrating undergraduate research into the curriculum as a way to develop student engagement and a way to closely link teaching and research<sup>21,22,23,24,25</sup>.

Walkington<sup>26</sup> states that journals are not the only form of research dissemination and it is worthwhile considering more diverse ways for students to disseminate their research, such as conferences, blogs or Wikipedia articles. With the creation of BCUR in the UK, the opportunity for students to present their work increased greatly. BCUR was created in 2011 by Professor Stuart Hampton-Reeves and was modelled on the (US based) National Conference on Undergraduate Research (NCUR)<sup>27</sup>.

## Benefits to students

Gilbert<sup>28</sup> considers that if undergraduate research is good enough to be published, it should be published in a 'real' journal, however, this argument is contested by Walkington<sup>29</sup>. Studies have shown a number of benefits to students writing for publication. Students found that their writing skills were seen to improve due to the back and forth nature of writing for publication, correcting grammar and style, which had not been done as part of the assignment submission process<sup>30</sup>. This opportunity to improve writing skills in the 'low risk environment' of undergraduate research journals was cited by the editor in chief of the *journal of young investigators*, a student-led initiative

to broaden the undergraduate scientific experience<sup>31</sup>. A survey of 20 students required to submit articles to *IMPULSE*, the online neuroscience journal for undergraduates, found that the process played a positive role in the laboratory work and that the students felt that they retained more information<sup>32</sup>.

Tan<sup>33</sup> found that there were benefits in the relationship between students and research advisors; students experienced mentoring and this fostered their professional growth by refining written communication skills. Reviewer feedback was highly valued by students, indeed, some students found this feedback more useful than that for assignments<sup>34</sup>, while the act of writing for publication, rather than writing assignments, 'encourages students to do their very best work and take on projects that go above and beyond the typical undergraduate paper.'<sup>35</sup> This view has also been supported by a 2013 report from the UK Higher Education Academy<sup>36</sup>, which cited 'going public' with students as a way to raise the quality of students work as they understood that their peers, academics and professionals would read the work. Walkington<sup>37</sup> concurs, stating that publication enhanced students' credibility and standing with peers.

Employability is also cited as another benefit of student research journals as it can be a useful addition to a graduate's C.V.<sup>38,39</sup>. One student who published with Bioscience Horizons commented, 'At an interview my prospective employer searched for my name on the internet, found my publication and offered me the position.'<sup>40</sup>

Students at Oxford Brookes University reported a very positive experience, including a sense of achievement, heightened understanding of the research and a sense of ownership. One comment from the module evaluation was, 'Because you are trying to find evidence that compliments/contradicts your own finding, I found myself reading a far greater number of journals/books'<sup>41</sup> and another comment from the study on students submitting to *IMPULSE*, 'Knowing that we would be submitting to *IMPULSE* made me take greater care in my research and preparation. I read more background information...'<sup>42</sup>. This ties in with research in the UK, Australia

and the United States<sup>43,44,45</sup>, which has shown that there is a link between undergraduate e-resource usage and attainment and retention. Research at the University of Michigan has shown that retention rates for students who participated in the Undergraduate Research Opportunity Program, which included research presentations and journal article publication, were improved, particularly amongst African American students<sup>46</sup>.

It appears that there is a difference of opinion as to whether student research journals actually advance research. Tatalovic<sup>47</sup> thought this was doubtful and Gilbert<sup>48</sup> asks whether any articles in undergraduate research journals will have been cited outside of their home institution. However, Luck et al<sup>49</sup> have clear evidence to show that articles in Bioscience Horizons are being cited. This may depend on the type of student research journal and as more student research journals are launched, this area warrants further investigation. Many undergraduate journals use student reviewers, often postgraduate students, and Gilbert<sup>50</sup> questions whether quality control might raise questions with those who may want to cite the article. There is certainly a question of quality control regarding the desire to disseminate all work 'warts and all'<sup>51</sup> versus the quality of the work<sup>52</sup>. Luck et al<sup>53</sup> describes the review process for the journal Bioscience Horizons as being the equivalent to a 'normal' journal, that is, to use two reviewers to guarantee quality articles and for rejection to be common, although often awkward.

Creating a publication that adhered to the standards of a 'normal' journal was a key concern when developing the process for setting up a student research journal at Huddersfield. The desire to close the research loop by bringing together teaching and research to allow students to contribute to the academic output of the University<sup>54</sup> was also a contributing factor to the process.

### Why set up a new student research journal at Huddersfield?

The literature shows that the process of preparing and repurposing work for submission challenges students to strive for the highest academic standards of quality and originality, as well as giving them valuable experience of the publishing process. This is an asset if they go on to pursue a

career in academia, but also in many practice areas requiring employees to be active in their specialist areas in terms of research and publication. The process from initial submission, through peer review and on to final publication, offers multiple opportunities for feedback and discussion and provides students with the opportunity to work closely with members of academic staff who have a wealth of research and publishing experience to draw upon.

Bearing the above drivers in mind, the idea for a student research journal at Huddersfield aimed to provide a supportive learning environment for students, which was challenging but at the same time promoted a positive developmental experience. The journal also had to align closely with a number of University strategies.

The University of Huddersfield published a new Teaching and Learning Strategy in 2013. The strategy described six enabling strands, the first of which referred to students as researchers. By publishing a journal of student research as part of this strand it was hoped to encourage students to aspire to the highest quality of academic work and to view their work in the context of a research environment. The University Teaching and Learning Strategy is linked closely with the overarching University Strategy, which is framed around stakeholders, aims and enablers. It explicitly states that, as key stakeholders, our students can expect:

- An education that challenges and creates excellent career opportunities
- To learn from staff at the leading edge of knowledge and application
- High quality physical and supportive learning environments<sup>55</sup>

Implementing and developing a student research journal addresses each of these key areas. This is captured in the journal's main aims and objectives:

- Showcase work that demonstrates significance, rigour and high standards of research
- An opportunity for students to develop and hone their writing for publication skills and still meet the normal academic standard expected in published journals



- A space for undergraduates who have undertaken extra-curricular research to present their findings to a wider audience and to the benefit of that audience
- Promote the development of a community of people exploring ideas through research
- An effective method of introducing undergraduate students to academic publications

Whilst it is integral that the journal is in line with the Teaching and Learning Strategy, it is equally important that it is supportive of, and supported by, the 2011-2020 Research Strategy, which focuses on providing an enabling environment from which to deliver the dissemination of research, creating a platform for impact.

### *Developing a process*

The project was developed during 2014 as a teaching and learning project under the leadership of Professor Michael Clarke, one of the University's National Teaching Fellows and Professor Tim Thornton, the Pro Vice-Chancellor for Teaching and Learning. To ensure a suitable process, fit for purpose and sustainable over time, a cross-disciplinary team was assembled from the Teaching and Learning Institute (TALI), Computing and Library Services (CLS), Marketing and Communications, and joined by representatives from each of the seven Schools.

It was important to have a combination of experience covering the subject areas, but also academic publishing experience from an editorial and publisher perspective. The original process timeline, based on existing frameworks for professional and academic publishing processes, predicted a ten month time period, this was later adjusted to a twelve month cycle with publication scheduled for January 2015 and is shown in Figure 1.

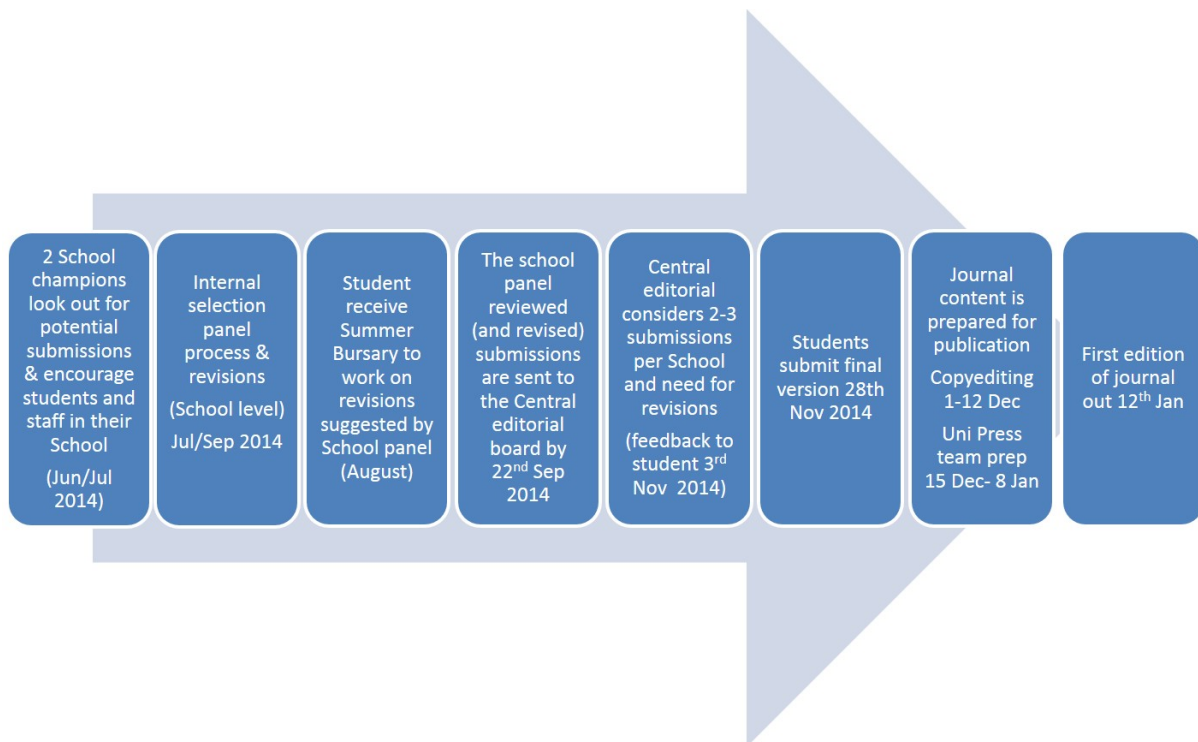


Figure 1. Journal and editorial process

The name *Fields* was decided upon after a competition and a logo designed by CLS. Once the name of the journal was decided, two marketing leaflets were produced to raise awareness with staff and students. Leaflets were given to School contacts to distribute and also handed out by the TALI project assistants to students.

Originally described as an undergraduate research journal, during the planning stage it was decided to include taught postgraduate students in order to create an opportunity for all taught courses at Huddersfield to submit papers.

#### *Submission and review process*

As part of the publication process, an editorial board was established and a process for peer reviewing the student submissions developed. For the first volume students did not submit directly to the journal, instead academic staff put forward student work that they considered to be of a high standard. For future volumes it is hoped that submissions may be initiated by students themselves or by staff who have supervised or marked work or by external examiners.

The first stage of selection of student work for the journal was undertaken by a School panel with a minimum of two members of academic staff who had a strong research background and expertise in teaching and learning. The role of these panels was to receive proposals and shortlist two or three pieces of work to be developed further over the summer by the students concerned. The school panel provided feedback to students and worked with them to ensure their submission conformed to the journal requirements. A selection form based on Research Excellence Framework (REF) criteria was developed which assessed the rigour, originality and significance of each submission. The school panels used to this evaluate student submissions and decide which to put forward to the central editorial board.

The second stage of peer review was the central university editorial board, which carried out a final review of student submissions, gave feedback to students about how to improve their submissions and then decided on the content for the edition. The central editorial board consisted of members as a representative lead from the subject areas plus the Pro Vice Chancellor for Teaching and Learning and the project lead. All board members reviewing student submissions took into account the school panel comments and suggestions. Discussion at the editorial board meeting was led by a subject representative lead from the relevant area of work but each board member commented on:

- How far each submission met the criteria for originality, significance, and rigour
- Presentation and readiness for publication of submitted version
- Any further revisions required.

After the editorial board meeting, each subject area representative contacted students about the outcome and any required changes.

## Communication and dissemination

The existence of a successful library publishing platform at the University of Huddersfield was the catalyst in the development of a student research journal and this platform is already embedded into the local academic culture<sup>56</sup>.

The University of Huddersfield Press was re-launched in 2010 as a predominantly open access publisher to provide an outlet for peer reviewed publications for University authors, to encourage new and aspiring authors to publish in their areas of subject expertise and to raise the profile of the University through the Press publications. Caprio<sup>57</sup> cites the rise of Institutional Repositories (IRs) and the emergence of library publishing services as an opportunity for collaboration between the library and faculty in publishing student research journals. The Press publishes a number of peer reviewed journals via the HOAP (Huddersfield Open Access Publishing) platform using Eprints software to create bespoke journal landing pages. This was the result of Jisc project funding<sup>58</sup> and this made it an excellent fit for the aims of *Fields* (see figure 2).



Figure 2. *Fields: journal of Huddersfield student research*<sup>59</sup>

By providing a platform for taught students to publish their academic work, the journal is creating a pathway to impact for this work, ensuring that it is communicated to academic and practice communities. Particularly important for this to work is the decision to make the journal open access, as well as the implementation of a marketing and dissemination strategy.

*Fields* adheres to the standards laid out by the Press and as such, all articles are given DOIs (digital object identifiers) and authors are asked to sign a licence to publish, which assigns the right to first publication to the journal, but allows the author to maintain copyright under a Creative Commons Attribution Licence (CC BY). In addition, the peer review process is transparent and made available on the journal landing pages<sup>60</sup>. The press also requires that the editorial Board and peer reviewers are also made aware of the Committee on Publication Ethics guidelines<sup>61</sup>.

To ensure that the journal employs a pro-active stance on communication and dissemination, a marketing strategy was developed and put into place. This tied in with the Research and Enterprise Marketing Strategy and was given the full support of the Central Marketing department, developed using the same aims and expectations used for communicating academic work from a staff member. As well as supplying a level of professional marketing support, this strategy encouraged the team to think about the positioning of the journal within existing markets, as well as considering academic, practice, industry, policy and public contacts or organisations who might benefit from having access to the journal and being made aware of its creation. As a result, a list of these contacts was compiled, including organisations such as BCUR, the HEA, the Chartered Institute of Library and Information Professionals (CILIP) and UKSG<sup>62</sup>.

The journal has received almost 500 full text downloads in the first 2 months after publication and these downloads have come from a number of countries around the world, which certainly shows the discoverability of using the HOAP platform.

## Evaluation

As part of the pilot project, an evaluation of processes was undertaken. This consisted of meeting with all colleagues involved to discuss and review the process and sending a short survey to students whose work was submitted.

### *The submission process*

Nineteen student submissions were selected by panels in the seven schools, students were then given feedback on how to develop the work to fit to the journal guidelines and standards. Two students did not complete the required revisions and were subsequently not put forward to be considered by the central editorial board. Following the initial peer review from the School panels, the *Fields* editorial board then decided that five student submissions did not fit with the scope of the journal. These were rejected and the authors were contacted. This meant that the first volume of *Fields* features twelve student papers.

*Fields* was created with guidelines that encouraged non-textual submission, particularly from the Schools of Art, Design and Architecture and Music, Humanities and Media, however, only two submissions were received and only one of these made it into the first volume. This was a disappointing outcome and the team would like to develop these types of submissions.

### *From submitted work to journal article*

As expected, it was challenging for the students to rewrite their submissions and to get to grips with the requirements and terminology of the publishing process. One student commented that, 'It felt like quite a big jump, academically, from dissertation to journal article but the feedback helped a lot with that transition.'

Student comments received supported the literature regarding the benefits of students getting support from academic staff during the process<sup>63</sup>, for example,

'I thoroughly enjoyed the process and the opportunity to be a part of a published journal, the advice and journey of the first and second drafting experience to ensure a perfected end piece. Additionally, it was a great first publishing experience as the University staff were very helpful, and although some of the process was confusing at the beginning, because it was the first time I had produced an extensive piece for a publication, it was a perfect process for learning.'

Another student commented, 'The feedback from the school panel was extremely helpful. It not only helped me re-write my submission but encouraged me to reflect on my work.'

However, although a comprehensive set of notes for contributors were produced by the team, a review of the process revealed areas that needed to be more detailed. Student authors required more detailed guidance on many areas, including writing an abstract, what to add in an acknowledgement section, the format of figures and copyright of images. Indeed, the copy editing process revealed many unreferenced figures that needed to be further incorporated into the text or removed as appropriate, which should have been identified in the peer review process. A new revised set of notes has now been written and attached to the *Fields* web pages<sup>64</sup>.

### *Timing issues*

Walkington<sup>65</sup> found that, '[t]he time taken to get work to publication standard whilst students were preparing to leave, or had already left, the university was challenging', and that a number of articles were lost in this part of the process due to author's time commitments. Therefore it was key to ascertain whether students would be willing to commit to the additional work and if the student's supervisors would be available over the summer period. In some cases this led to a delay in decision making at School level. It is clear that a timeline with built in flexibility is necessary to a process that supports students with other commitments.

'I was very grateful for the flexibility with deadlines, as sometimes I had either my professional work to complete, or academic study.'

However, one student highlighted that a more detailed timeline would have been helpful, '...I think I would have found a timeline useful so that I could see at the beginning when the various deadlines would occur (e.g. dates for first draft; revisions; final submission; minor amendments; publication). However, the deadlines set did allow sufficient time to produce the draft and subsequent revisions.'

A bursary was made available in two instalments to support students in undertaking the required work to edit and rewrite their papers. Students selected by Schools at the first stage received the first instalment of £150 and the second instalment of £250 was awarded to students when they got to the second stage of the process and were put forward to the central editorial board.

All students who responded to the feedback survey supported the University offering a bursary to support them whilst rewriting. Four of the students said they would possibly have completed the work without a bursary but that it should be available to other students who would not be able to support themselves financially.

‘The bursary was very important to me, as the article experience did take a lot of time to perfect, before submission and afterwards, and was able to support me during this time. The money did allow me more freedom to travel to various places such as libraries for study and better atmospheres to write in.’

Another student remarked, ‘...the bursary was important and helped me rewrite my submission. It was used to purchase books to update references and specify terms.’

### *Impact of rejection*

One of the submissions rejected at the editorial board level was from one of the highest achieving students in that year. They had worked closely with staff in terms of revising their work so there was concern that the student had left the University following a negative experience of the process. However, it should be noted that this particular student had difficulties cutting their dissertation down by more than a couple of hundred words, which highlights the issues for some in adapting work written for examination to become suitable for publication.

This was possibly a consequence of the submission process of the first year of the journal where students were selected rather than submitting themselves. This may have led to a



misunderstanding that the journal would publish student dissertations in their entirety. Going forward, the central editorial board will emphasize to School contacts that they need to ensure the student understands that their work (or aspects of their work) has the potential to be developed into a journal article but that *Fields* does not publish full length dissertations.

#### *Disciplinary considerations about authorship*

An issue regarding authorship arose at the final editorial board meeting where the final selection of twelve articles was made. Guidance to the Schools had specified that all the *Fields* submissions were required to be student authored, however, some of the submissions from the sciences included joint staff and student authorship and in one case the student was not the lead author. After further investigation, it was discovered that this was due to the collaborative way much of the data in the papers was used. The School in question considered that student and staff co-authorship would be a more inclusive approach and one that better reflected current disciplinary practices. Although Walkington considers that co-authorship is a strategy that could be used<sup>66</sup>, when the board was consulted, most other disciplines considered that co-authored papers would be more appropriate for main stream journals and that any staff contribution for *Fields* should be noted in the acknowledgment section. In the above cases, after discussion with the academic co-authors, one paper was changed to a single author, one paper was accepted with joint authors and one paper was withdrawn.

Generally, most of the academic staff involved in *Fields* thought it needed to be clearly student work. For future volumes, *Fields* could consider a number of the areas of best practice set out by the student journal, Bioscience Horizons (see Table 1):

**Can the student's supervisor be named as an author on the manuscript?**

Where appropriate the paper may contain multiple authors to reflect both the intellectual ideas and practical research contributions to the paper, but the student author should accept responsibility for the team.

<p><b>Supposing the student or supervisor does not agree to the conditions or cannot meet the submission dates?</b></p> <p>The conditions are not negotiable. The author and their supervisor/senior academic must agree to the conditions when submitting a manuscript for consideration by the Journal.</p>
<p><b>What is the supervisor's role?</b></p> <p>The supervisor must agree to the submission of a manuscript to the Journal. The supervisor may advise the student but not re-write the manuscript. The supervisor may be a co-author on the paper, but the student must be named first and takes responsibility for the paper.</p>

Table 1. Adapted from Bioscience Horizons faqs<sup>67</sup>

## Lessons learned

Despite efforts made to communicate the aims and scope of the journal as well as the publisher requirements and author guidelines, there were issues with copyediting, writing style/structure, copyright and permissions which only came to light late on in the process cycle. It was felt that the majority of these issues stemmed from a lack of effective communication in terms of what was expected of student work at this level, and a lack of support in some areas to help the students with the conversion and repurposing of their work from dissertation level to academic article.

It was agreed that there are measures which could be considered for the next publication cycle to try and address these issues and further improve the experience for both staff and students who engage with the journal. This has already been partially addressed by a revised version of the notes for contributors' pages as discussed above.

In order to address issues around preparing students for the jump from dissertation writing to article writing, a writing workshop will be held to prepare the 2015 cohort. This will be based on

the current retreat and workshops run by the School of Human and Health Sciences for their ongoing project *developing a culture of publication*, now in its third year, which has successfully re-purposed and published a number of masters' dissertations in academic journals<sup>68</sup>. This will provide a supportive space in which students can raise questions, as well as covering some key areas relating to publication including the importance of copyright and permissions. This will be an additional level of support for students and at the same time improve the level of work returned to the journal at the revision stage.

An option for further work at Huddersfield is to consider the adoption of a number of strategies put forward by Walkington and Jenkins<sup>69</sup> and subsequently extended by Walkington<sup>70</sup> regarding sustainability, specifically:

- Strategy 1. Build publication into dissertation and honours-level requirements
- Strategy 2. Build publication into course and programme requirements
- Strategy 8. Make the employability benefits of researchers clear to students
- Strategy 11. Building a culture where students want to participate and expect to be involved

However, there are a number of strategies that do not fit the remit of *Fields* going forward:

- Strategy 6. Involve undergraduate students in the publication process
- Strategy 7. Train postgraduate students as reviewers for undergraduate research journals
- Strategy 12. Ensuring students submit their work before leaving the institution
- Strategy 15. Allowing co-production with staff.

## Future plans and sustainability

Mariani<sup>71</sup> suggests that departments should think carefully about whether there are sufficient resources to enable the sustainability of student research journals and this is certainly

something that needs to be considered going forwards. At the moment, *Fields* remains a strategic project and as such has central support and financing which is essential to maintaining the journal processes.

One way to do this would be to embed student research into the undergraduate curriculum<sup>72</sup>. This was not the case in the pilot year for *Fields*, indeed during the process of selecting titles, there was some support for the publication in 'traditional' scholarly journals from the sciences, which supports the arguments put forward by Gilbert<sup>73</sup>. However, *Fields* is becoming embedded by inclusion in the student module handbook and by the use of staff champions.

Caprio<sup>74</sup> raises concern that students will have little or no experience of writing for communication and builds on the concept of scaffolding<sup>75</sup>, e.g. using poster sessions, student conferences, blogs, wikis, multimedia objects and co-authored (student-faculty) papers to accompany student research journals. At Huddersfield there is some activity here, for example co-authored papers in the School and Human and Health Sciences<sup>76</sup> and a student research festival to promote, foster and enable students as researchers<sup>77</sup>, but this activity needs to continue and become more effectively joined up for future years.

## Conclusion

This article has presented a review of and an update to the information about student research journals including a discussion of the benefits to students in developing their work for publication. The details of setting up *Fields* have been outlined together with an explanation of how developing the journal fitted into institutional teaching and learning as well as research strategies. The benefits of a pre-existing online, open access publishing platform via the university press have also been discussed. The outcomes of an evaluation have been presented and particular focus has been given to important lessons learned and future developments to improve support for student authors.

The journal was officially launched on 17 February 2015 by the Pro Vice Chancellor for Teaching and Learning and included a number of presentations by the student authors.<sup>78</sup>

Tan<sup>79</sup> concluded that although undergraduate students would start the experience of research insecure and fearful, they would end the endeavour experiencing fulfilment, and this certainly appears to be the case for one who spoke at the event and was later interviewed for the University's politics blog, Harold Wilson's Pipe,

'The experience of writing for the journal has certainly been a positive one. It has allowed me to develop publication skills, improve my academic work and take on board different perceptions and criticisms. The opportunity has also allowed me to revisit a piece of work that I am particularly proud of and present it to a wider audience.'<sup>80</sup>

Volume 2 of *Fields* is now in the planning stage, with a publication date of early 2016.

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