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The Future is Always Now; Evolving Life-cycles in Fashion

Original Citation

Conlon, Jo and Taylor, Andrew (2016) The Future is Always Now; Evolving Life-cycles in Fashion. WhichPLM (an independent digital magazine).

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The Future is Always Now; Evolving Lifecycles in Fashion
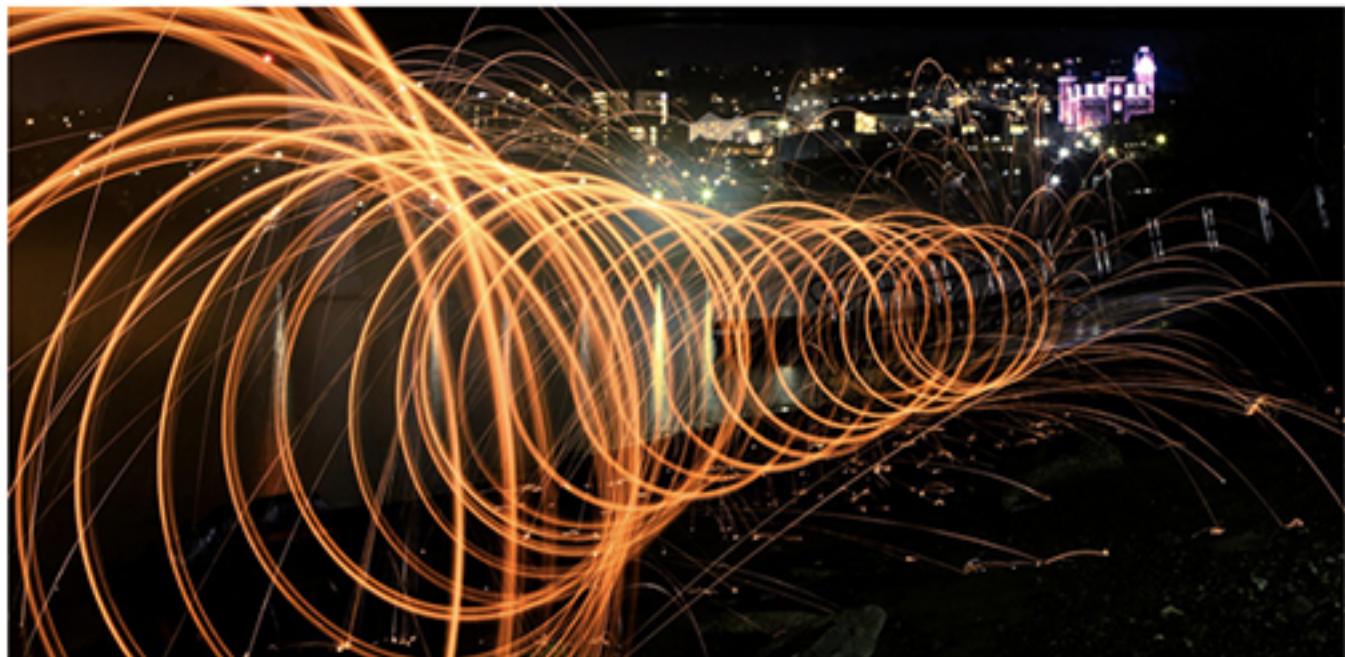
Jo Conlon & Andrew Taylor, both Senior Lecturers at the University of Huddersfield, share their first exclusive guest blog with us. The duo discusses the education around technology in fashion, and the journey UoH has undergone to add PLM to the curriculum, as well as their plans to blur the lines between higher education and industry in the future.

Fashion has forever been characterized by change, volatility, complexity and dynamism, yet the mainstream fashion of the past was seasonally predictable. Today, it is unrecognisable, mutating rapidly beyond the limits of our collective imaginations.

What is driving and accelerating ongoing change today? Technology is primarily fueling our collective, addictive drive for accessing the latest trends; all of this is in our hands and at the touch or swipe of a super vivid screen we are immersed in personal devices giving the consumer the power to increase demand and, with this, transform the retail industry.

In education we are increasingly aware that CAD & CAM is resigned to Fashion history. IoT and mobile technologies are omnipotent, pervasive, real world power tools of the buyer, the merchandiser and the retailer, as they stylishly fit in the creative hand of the millennial professional, which affects and influences all aspects of our everyday lives. We expect to pull, stream, push and transfer data everywhere. Our undergraduate young professionals live in a world where computers and the Internet have always been on and accessible. Most students have grown up with desktop computers in the home and have used several different mobile phones during their early teens.

Since the inception of the University of Huddersfield's BA Fashion Textiles Buying Management course in 2004 the content of the curriculum has, like many fashion business programmes, predominantly delivered theoretical knowledge of the industry and its global complexities by various traditional channels: PowerPoint lectures, finance scenarios, visits and guest speaker activities (including multiple visits from WhichPLM), with foundation skills development in digital focused creative practice workshops, using technology to present trends, source fabric, develop and communicate ranges professionally in MS Office and the Adobe Creative Suite.

An educational partnership was formed with PTC for FlexPLM in 2014 and this was integrated into second year teaching on the Fashion Buying Management programme in 2014-15. The programme for learning was a blend of traditional lectures, extracurricular WhichPLM Academy study, hands-on sessions in FlexPLM, global industry guest lectures and student research into PLM. We did not want to simply add PLM as another topic to the curriculum. We sought an immersive experience whereby our students could work collaboratively within a PLM system, simulating their future working environment.

Participation in the WhichPLM Academy remains a key feature, with students benefiting from external in-depth knowledge and expertise that captures the history of PDM, CPM, PLM and the strategic use of PLM for the future. By

The Fashion Textiles Buying Management team at the University of Huddersfield has recognized that, today, PLM frames professional practice and offers an affordance for curriculum transformation. We have created a new, and we believe unique, learning programme for the next generation of industry professionals by using PLM as a framework and a platform to re-think the learning design of the course and to model wider future educational practice.

PLM provides a framework that permeates all aspects of the body of knowledge and provides a holistic view of industry processes, an up-to-date context for study within a supportive network and the opportunity to critique traditional practices and thereby generate new practices.

From 2005, through our research and increased exposure to industry technologies in 3D product and scanning with pro-active high-end industry collaborations, we encouraged new uses of technology aligned with broader, real world practices to be introduced into the programme. Given the fast pace of technology developments and increasing investment in fashion-specific PLM solutions by retailers and brands, we realized its value and were keen to introduce PLM education at all levels in the programme to ensure that our graduates enter employment with a baseline of PLM knowledge, recognising the realistic solutions it can generate, the problems it can solve and opportunities it can provide. Therefore, PLM had to be at the centre of the future education programme as an immersive experience simulating industry practice not as an under-utilised monolithic software installation. What was sought through curriculum innovation was the development of a mindset capable of utilizing technological innovations to critique existing processes and practices and create alternatives that respond to the demands and opportunities of new times, new needs and changes in circumstances.

Two internal bids for investment in PLM building on an existing educational partnership for fashion industry CAD design were initiated in 2006 and 2009, but these were unsupported as it was unclear how PLM could be integrated effectively.

As in industry, securing funding is not the only challenge for this type of transition from PDM to PLM. It is not as simple as adopting a technology, a clear vision of its use is required. PLM must be seen as an approach or methodology that supports an enterprise-wide strategy or equally to support a broad curriculum. Mirroring industry, courses traditionally also have a function-focus perpetuating a "functional – silo" view. Additionally, any practical sessions on the software are typically based on the software vendor's training packages, which reinforce the technical and functional aspects of the system rather than provide a holistic business management experience. Furthermore, the accelerated pace of software development makes teaching expertise unlikely and up-skilling a challenge when software is perpetually evolving. Unlike

participating in the WhichPLM Academy we believe our students benefit from a unique learning experience that has been carefully and generously developed to empower them with a depth of understanding that you can only gain from true experts. A particularly outstanding feature is that it is designed for the RFA sector and is future-focused. Danielle Newman, a current second year, commented on gaining her bronze certification that the experience was all insightful and she was reassured that the course was up-to-date with industry, as the source was from an industry professional service. The experience has given her a real advantage with future employment as it has increased her knowledge of the PLM systems available and how they are changing the face of the fashion industry. She said that her student group found Mark's most recent talk very useful as it covered, in depth, how PLM affects all sectors in the fashion industry. She also added that it was very beneficial to the first year students who are new to PLM, as his talk has put their PLM assignment into context of industry.

Going "live" in 2014 with PTC's FlexPLM was instrumental in transforming the programme. Included in this first year was a "live" PLM event, which created an opportunity for all Buying Management undergraduates to understand more about PLM. Students worked in product category development teams to create a product range for George at Asda, using FlexPLM to source, collate and manage information on inspiration, trends, materials, sourcing, sizing and proposed line plan budgets. Each business group presented their final proposals to a guest industry panel. A final year participant said: "The event week was insightful on many levels. Working with other years on the project was very enjoyable and a fantastic opportunity to network with industry leaders. Having minimal knowledge of PLM systems to begin with, we now have a good insight to how the system is integrated into the industry and it has opened new doors for us in research and career prospects. A great week to be a part of!"

In turn, these activities have prompted students' future research interests allowing them to create and innovate with emerging technologies. They have produced case studies and dissertations that articulate and visualise future use-cases, actively investigating the potential of technologies such as PLM in association with the associated technologies of 3D, the IoT, data analytics and social media. Using a phased implementation model in the following academic years, 2015–16 and 2016-17, PLM has been further integrated to frame at least one third of study within the programme. Our students now benefit from an integrated, industry technology focused, learning experience. This provides a strong framework for learners to connect their learning and work placement experiences and to research together exploring strategic, real world applied opportunities for extended and innovative PLM technologies. The most valuable benefits we see of integrating PLM into the program are in its power to nurture creative and innovative networking.

This ongoing partnership and the associated curriculum transformation all are the basis for Jo Conlon's doctoral research – a professional doctorate in education, investigating how a PLM approach can reshape fashion business education and present a case study of learning in this landscape of practice. This research illustrates a learning design model transforming the curriculum to better prepare all students for occupational practice, and empower them to question embedded conventions, create radical changes to the existing system, embark on new careers and to be confident in their abilities to make positive contribution to the industry and their communities.

Following establishing PLM as a platform in the curriculum, we now anticipate the emerging possibilities of extended functionality of PLM in association with other business software solutions, the emerging opportunities of extended-PLM, that integrate consumer feedback to inform buying decisions, virtual sampling in 2D and 3D in partnership with Optitex to reduce lead-times and waste. This also

industry there are no ROI calculators for PLM in education, making a business case for transforming the curriculum difficult.

Though without the necessary funding support we were unable to access the PLM solution, we strongly felt the migration to PLM and associated interconnected digital design and manufacture technologies was necessary. From 2009, a conceptual framework of PLM in conjunction with open source collaborative software was devised to reconfigure a second year module mimicking industry processes and practices and displaying the interconnected nature of the elements in the process. This first iteration was part of Masters level study disseminated at UCA. This augmented a new working reality for our students, where they experimented with software of their own choice, providing them with the necessary foundations to go into industry to embrace new technologies including PLM with confidence.

Although this first reconceptualization was successful, attending the 2011 DS UK PLM Forum was pivotal. WhichPLM's CEO & Founder, Mark Harrop, presented a convincing argument that a proprietary PLM solution was necessary in order to provide the enterprise-wide backbone on which other technologies would increasingly connect. Given the pace of change in both the industry and technology, there is certainly a place for free to use tools, but there was clear evidence that our future graduates' working environment would be within a PLM system and therefore this should be included in our educational programme. As the influencers of the future, our students can then go on to imagine how to connect these technologies together creating significant efficiencies and proposing radical changes to the existing system.

provides the opportunity for connecting applications and data analytics, and the IoT to inform buying decisions.

Next, in an era of smart, connected products we intend to establish a community of smart connected learners, working collaboratively within a data driven system. We need opportunities for our students to hear first-hand experiences, to observe and influence PLM implementations, and to be more active and valued members within the industry. We seek to dissolve the boundaries between higher education and industry where outward and future facing, confident individuals work together on reimagining possibilities for the future industry, thriving and striving for better business outcomes in the new data and tool-rich environment. What past and new and emerging technologies have and will influence the way we work in the future?