

# Design managers, their organisations and work-based learning

Organisations  
and WBL

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## Abstract

**Purpose** – Designers' careers can be compromised if they are unable to understand the business context they operate in and cannot communicate effectively across other disciplines. Where governments are calling for an increase in design management skills, design careers can limit the opportunities for the development of such skills. Universities have an opportunity to support designers' professional development through work-based learning (WBL). The purpose of this paper is to present a case study of the above.

**Design/methodology/approach** – A case study, based on the master's in design management (the business side of design) at Birmingham City University, investigates designers' learning styles, their early career experiences and the challenges they face due to their lack of business understanding. Participant narratives are developed from in-depth interviews and describe professional progress through WBL.

**Findings** – The paper finds WBL lends itself to the experiential nature of designers' learning and skills acquired through WBL can have significant influence on design managers. The case study provides evidence of designers gaining insight into the business perspective and developing communication skills through specific elements of "professional learning".

**Research limitations/implications** – The small case study deals with the UK and Europe, however, implications for the universal and international aspects of practice remain.

**Practical implications** – The paper considers the importance of design management skills to designers' careers and the opportunity for designers to acquire these skills through universities via WBL.

**Originality/value** – Unique experiences highlight the value brought about through non-linear educational and professional pathways, indicating novel joint policies for higher education and employers.

**Keywords** Designing, Design management, Work-based learning, Design careers

**Paper type** Case study

## Introduction

Designers and their motivation are an important contribution to business innovation. The impact of work-based learning (WBL), on both designers and the businesses they work in, provides the motivation for this research.

Where some designers find themselves working in organisations that accommodate the absence of design management skills, many designers find there is a "glass door" or a "gap" between themselves and the rest of their organisation because they are unable to relate to the business context and communicate effectively with other disciplines and senior management. This shortfall in design management skills has been reported at both European and UK government level.

Several years ago the Design Skills Advisory Panel (2007) in the UK, highlighted the competitive issues facing the UK design industry at the time, the oversupply of design graduates and the shortfall in designers' business skills. The report stated that "In a recent survey, over half of designers identified the ability to communicate the value of design to business as a key challenge for the industry" (p. 27).



More recently, the European Design Leadership Board (EDLB) expressed concern that “The lack of design management skills is a significant barrier to the adoption and integration of design into Europe’s enterprises, organisations and governments” and called for help to ensure design graduates develop strategic thinking and the ability to engage with business (Thomson and Koskinen, 2012, p. 66). The EDLB also emphasised the importance of continuous professional development to help designers improve their ability to communicate effectively with senior management and multi-disciplinary teams.

This paper is concerned with the acquisition of design management skills as a means of empowering designers while they design and thereby enhancing their future careers. A small case study focuses specifically on the role of university and master’s level WBL in the development of these skills and is based in the Master’s in Design Management at Birmingham Institute of Art and Design (BIAD), a Faculty of Birmingham City University (BCU).

The research builds upon earlier investigations conducted, which explored the high level and quality of design management skills that can be acquired through work-based learning (WBL) (Norman and Jerrard, 2012). The purpose of this latest research is to explore in-depth the impact of master’s level WBL on individual designers and their practice in the organisations they work in.

The authors describe investigating designers and the nature of their roles, after which they considered the cultural differences between designers and non-designers and the extent of design management skills and knowledge. The paper also describes designers’ learning styles and the opportunities designers have to gain design management skills, the role of the universities and WBL in particular. The paper then discusses the findings arising from a series of in-depth interviews conducted with designers who had previously studied design management via WBL whilst in full-time employment.

## **Background**

### *Designing and the professional roles of designers*

Designers often occupy novel, sometimes unique positions within companies; design managers are expected to not only support these positions but also encompass wider company cultures with appropriately broader skills. Whilst most designers enter the workplace qualified to at least degree level, their undergraduate education will have prepared them for their roles as designers, not managers. Once in practice, commercial pressure means that opportunities for professional development are limited and designers tend to “learn on the job” with management skills often being neglected, leaving them poorly equipped to operate beyond the design domain.

Designers need to deal with discontinuity and complexity in their working environments (Veryzer, 2005) but generally are expected to innovate. They will not see themselves or their role as measurable even though their efforts often contribute significantly to the success of the company. Brown (2009) describes these common qualities through his experience of art school “[...] where everyone looked the same, acted the same and spoke the same language” (p. 5). These distinctive qualities extend into practice where design groups tend to reference value within themselves, a phenomenon typically found in all professional groups. Indeed, design solutions which themselves vary from company expectations may be viewed, by designers, as independent. Traditionally, the designer is often the more “free” employee who alone appears to have specific personal engagement with his or her work. In directing design one is aware of the necessity to encourage designers to question and think (unlike many other employees) beyond the current scope of their immediate role.

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Whilst considering the need for design management skills it is important to recognise that design management is not confined to the management of the design process, it is concerned with the overall relationship between design and business, designers and non-designers. The management of these relationships is important because design engages with a wide range of professional disciplines with potentially different perspectives to those of designers. These different perspectives are usually underpinned by different values and concerns, which, in a design-led organisation, may not be so evident. However, many designers will find themselves in situations where design has limited influence, where the non-designer is the employer or client and ultimately the decision maker. In this situation, if a designer does not have the necessary communication skills, the design process and the design outcome stand to be compromised. Consequently the purpose of design management may be said to “bridge” different perspectives, and designers can achieve this by combining both design and business insights and acquiring the ability to communicate across all disciplines, at all levels.

### *The gap*

The distinctive nature of the designer’s role and the cultural gap between designers and non-designers is well documented. Although there are many design-led organisations where this gap is not apparent, it remains clearly evident in others.

Whilst describing design thinking as a “third way” that integrates feeling, intuition and inspiration with more rational, analytical, evidence-based business approaches, Brown (2009) acknowledges he practiced as a designer for many years before he identified the gap between himself as a designer and the business world, “I realised that I was approaching the world from a set of operating principles that was different to theirs. The resulting confusion was getting in the way of my creativity and productivity” (p. 5).

The management of this gap, the relationship between designers and non-designers, is central to effective design management and successful design outcomes. Whilst design thinking is seen as an emerging discipline and increasingly being recognised by business, there remains a strong imperative for designers and design managers to acquire the language of business and the ability to link theory to practice (Kefallonitis, 2007). The UK Design Skills Advisory Panel (2007) reinforces this view, explaining that designers wishing to operate at a strategic level need to be able to “understand business drivers and markets and to work with senior management across a range of industries and disciplines” (p. 28).

The cultural gap is exacerbated by different human natures and contrasts the emotional nature of design and designers with the unemotional nature of business. To narrow the gap it is important to recognise designers’ distinctive natures, how they acquire knowledge and solve problems in particular ways. Where a designer tends to use a qualitative approach to solving problems, business tends to use a quantitative approach, so a design manager needs to be capable of understanding the quantitative approach if they want to communicate effectively and influence business decisions (Green, 2004).

Clearly designers can be educated to fulfil their traditional role, that of an artistic creator or serial innovator. However, the complexity of working life means that such creativity may be undermined if the designer is expected to create in complexities beyond his or her imagination. If a designer is to acquire the knowledge and skills to manage, it is important to take into account their motivation, education and styles of thinking (Walker, 1990), and accommodate these.

*Designer's learning styles*

During the 1970s, the concept of learning styles emerged with a number of models being developed and proposed as a means of informing teaching. Although there has since been criticism of the application of learning styles theory to teaching, the principles of Fleming's Visual, Aural, Read/write, and Kinesthetic model (Fleming and Mills, 1992) would seem to resonate with the practice of design management and the challenges faced by design managers when working with designers and non-designers.

Fleming identifies three different types of learning style: visual; auditory and kinaesthetic/tactile. Visual learners are believed to learn most effectively through what they see, auditory learners with what they hear and kinaesthetic/tactile learners by touching and doing. These learning preferences are not confined to education; they are equally applicable to the way information is assimilated in all aspects of life, including the workplace from where it is often said, most of our professional skills are derived.

Where design education's practice based teaching, learning and assessment strategies reflect designers' preferred visual and kinaesthetic/tactile learning styles, working within design communities with like-minded people is likely to reinforce these learning preferences. As a consequence, it can be argued that a designer's education and working life in the design studio environment, where everyone communicates in the same way, polarises their learning styles and may neglect their auditory learning skills. This may not pose a problem whilst a designer works within a closed design environment such as a design studio; however, if the designer wants to enter the business environment and communicate effectively with non-designers then they are likely to be at a disadvantage.

Whilst considering designers' ability to communicate with non-designers and also the iterative nature of the design process the concept of tacit knowledge should be considered. Schön (1983) introduced the idea of practitioners' tacit knowledge and the potential disadvantage it creates for the practitioner when communicating. Schön describes tacit knowledge as the situation where "competent practitioners usually know more than they can say" (p. viii), and expands on the impact of tacit knowledge by describing the nature of the practitioner "In his day-to-day practice he makes innumerable judgments of quality for which he cannot state adequate criteria, and he states skills for which he cannot state the rules and procedures" (p. 49). Schön extends this to the application of theory to practice "Even when he makes conscious use of research-based theories and techniques, he [she] is dependent on tacit recognitions, judgements and skilful performances" (p. 50).

This tacit knowledge is attributed to the practitioner's distinctive ability to learn through reflection, and through reflective practice, which in turn is linked to Kolb's (1984) Experiential Learning Theory. Kolb describes the learning process as a repeated cycle of four stages, namely concrete experience, reflective observation, abstract conceptualisation and active experimentation. In other words experiential learning begins by doing something, then through reflection the practitioner examines their experience and uses this process to make sense of the situation and learn from their experience, which reinforces the belief that practitioners, and designers in this case, learn best "by doing".

Given the contrast between the experiential learning style of designers and the "ivory-tower" academic tradition of university-based education, how should universities contribute to the development of designers' design management skills and knowledge?

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### Opportunities to acquire design management skills in higher education

By the time a designer is in practice they are likely to have already invested three or four years in higher education and may be reluctant to invest further in full-time university-based education, however, there are often barriers to alternative forms of professional development. Many international design-based companies are micro businesses employing fewer than ten people where commercial pressure, the need for flexibility and the limited impact of short term, ad hoc training courses means that most learning happens on the job. The Confederation of British Industry (2011) recognises that much of the skill development within such businesses will be informal, but expresses the view that more could be done to support these businesses, particularly to “overcome the barriers they may face in engaging with the external skills system, namely time, cost and dealing with bureaucracy” (p. 8).

In fact the nature of university-based education is changing, where full-time or part-time attendance used to be the only options for taught postgraduate study, universities are increasingly offering more flexible approaches to learning and prioritising engagement with employers. In contrast to Schön’s (1983) description of the cultural rift between HE and practitioners, the troubled relationship between academia and practice, and the question of intellectual rigour in professional practice, there are now increasing numbers of educators questioning how learning takes place within universities. There are increasing collaborations between universities and industry where domains of shared values are also increasing. These opportunities, coupled with the changing nature of professional work suggest that new approaches such as WBL have an innovative and welcome role to play.

Where in the past the experiential nature of designers’ learning, the tacit nature of their knowledge and the challenge they face in articulating what they know stood to reinforce the rift between HE and practitioners, these very preferences for learning by doing and learning through reflection lend themselves to the principles of WBL. As a mode of study provided by some universities, WBL can provide the opportunity for designers to develop high-level skills whilst also enabling them to continue in their full-time practice. The continued development of WBL is seen as increasing HE capability (Stephenson and Yorke, 2013).

### The nature of WBL

WBL, well known in further education in the development of occupational skills, is designed to meet the needs of learners and their organisations through formally accredited programmes of study. The needs of individual learners are accommodated through the development of individual learning plans within these programmes (Boud and Solomon, 2001).

Raelin (2008) describes how WBL merges theory with practice and knowledge with experience. This process relies on metacognition, the student’s conscious (as opposed to sub-conscious) reflection on their work practice, with both individual and public reflection being essential to the learning process, so learning occurs during the process of doing and of expressing.

In keeping with Kolb’s (1984) theory of experiential learning, the process relies on the verbalisation of ideas; this expression can take many forms, from informal discussions and seminars to formal assessments and can be enhanced through peer learning. Moreover Boud *et al.* (2001) describe the value of peer learning where students “learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from their peers” (p. 3). The role of assessment is also central to

expression and WBL enables assessment to be designed to reflect the needs of the learner and their workplace, as well as the academic expectations of a programme (Brodie and Irving, 2007).

Learning within the workplace is complimentary to the more formal components of university-based learning and teaching. The design of such curriculum is not simple, as it was suggested more than a decade ago “[...] that the language of the creative arts is necessarily metaphoric, multi-layered, and qualitative, and that the rendering of multi-modal projects requires access to a range of meaning-making resources” (Doloughan, 2002, p. 62), meaning work-based programmes require investment by all involved.

WBL initially provided collaborative learning environments in association with small firms in knowledge transfer partnerships (a UK-based programme enabling businesses to improve their competitiveness through university, employer and graduate partnerships). Research into the associated WBL process shows an unusual conflation of WBL, distance learning and supported self-directed learning. The operation of contracted WBL has provided unusual insights into interactions between university, student and employer since it was first researched (Anderson *et al.*, 1994).

A review of other schemes across higher education suggests that WBL brings together partners who are stakeholders in the outcomes of the learning. Employer involvement may vary; in some instances a workplace mentor is required and can be involved to the extent of representing the candidate in negotiations with the candidate’s employers or the university where necessary. There are established WBL master’s programmes at a number of universities throughout the UK, some have far more emphasis on the involvement with the employer, whilst others give more autonomy to the student, who is very much placed at the centre of their learning.

In the authors’ experience, the pathway for this type learning falls into four main categories ranging from optional modules to wholly WBL. The four categories are:

- (1) an optional vocational module embedded within a programme of study;
- (2) a negotiated programme of study that could be work related;
- (3) a programme of study that is created from a selection of modules on offer within the university, including work-based modules; and
- (4) wholly work-based programmes involving a partnership between employer, employee/student and university.

The framework for WBL may vary between institutions but consistent throughout is the accreditation of workplace learning. The number of credits that can be gained through this process vary from institution to institution but can, in respect of some institutions, contribute to 100 per cent of the overall award. Universities that are fully supportive of WBL have central units employing personnel who deal with the processes of negotiation and Accreditation of Prior (Experiential) Learning (AP[E]L), together with the tracking of the progress of the individual student. WBL within art and design environments, however, is relatively new and so particular care has been taken to consider both existing art and design practice as well as the use of WBL in other disciplines.

The opportunity provided by WBL and the increasing pressure for designers to acquire design management skills led to the research into the value of WBL in this specific context.

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## Research methodology

A qualitative approach was applied to the development of a small case study based on the experience of six WBL graduates of the master's in design management at BIAD who studied between 2007 and 2011. A small sample was chosen in order to provide subject specificity as well as useable results only indicative for other courses and subjects. The approach was necessarily participatory (Punch, 2009), where both students and employers were briefed on the planned approach, likely processes and outcomes.

### *Sample*

The master's in design management at BIAD offers a flexible and novel learning mode of study, based on the principles of WBL, "Category 3" above. Students study over a period of two years whilst continuing in their full-time, design-related practice; their study is linked to the needs of both the individual and the workplace. Students develop individual study plans as part of a professional development module and have the option to negotiate module teaching, learning and assessment methods to accommodate their work situations. Students take part in module lectures, seminars and workshops whilst basing their primary research in the workplace. Forms of assessment vary and are designed to reflect the needs and expectations of the workplace as well as assessing achievement of learning outcomes.

The course addresses the need for design managers to develop specialist skills to bridge the gap between designers and non-designers, the particular nature of designers' learning styles and the principles of WBL in higher education.

Designers joining the course are unlikely to have experienced any significant management education or training. The curriculum embraces business management, marketing, design strategy, entrepreneurship, innovation, sustainability, design leadership and design practice including project management, intellectual property law and finance. Strong emphasis is placed on evidence-based decision making and the development of high-level leadership and communication skills.

The degree to which design management skills and knowledge were acquired and the consequent impact on designing are the subjects of this research within a variety of industries and design practices.

Those interviewed were designers with design management roles, working in both large and small organisations in the private and public sector. Half of the designers came from design-led organisations where design is core to their organisation's products or services, the other half were in positions where design could be seen as secondary to the organisation's core product or service. The designers had a range of levels and types of experience, with the most experienced having worked in design for over ten years, and the least experienced having joined the programme directly after graduation. The participant case studies included:

- a former graphic designer with over ten years' experience, working as an account manager in UK local government;
- a spatial designer working globally in the financial services sector;
- a jewellery designer working for a UK-based designer and manufacturer;
- a fashion designer working for a global apparel brand;
- a product designer who studied whilst working in design and manufacture between the UK and Hong Kong; and
- a graphic designer working in a small UK-based manufacturer supplying the global music industry.

### *Data collection*

The data collection was based on detailed, semi-structured interviews conducted via telephone or Skype and lasted between 30 and 45 minutes. The interviews were conducted outside of working hours and designed to be informal, to allow participants to revisit and reflect on their careers and capture rich accounts of their workplace and university-based experiences. The participatory approach allowed for the development of the questions on an individual basis and, in order to concentrate precisely on the experience of the students, employers perspectives were not included at this stage of the research. The interviews were recorded and subsequently transcribed for analysis.

From the teaching, learning and design literature a number of interview questions were developed to explore with the interviewees:

- reasons for joining a master's in design management;
- perceptions of the relationship between designers, non-designers and senior management within the workplace.
- understanding, or not, of learning and communication preferences;
- the overall experience of studying via WBL; and
- the impact of skills and knowledge gained on personal design practice.

The design managers were asked about their motives for studying design management, how they view the role of design within their organisations, their preferred learning styles, how they managed their WBL and how they believe it has impacted on their practice and the organisations they work within. Intellectual capital as a form of exchangeable currency has provided the focus for impact review questions in early research (Gibbs and Garnett, 2007).

Analysis of the interview transcripts was based on the themes identified through the literature (Punch, 2009; Silverman, 2013): motivation for study, relationships with business, the experience of WBL and its impact on careers. The research was conducted with the informed consent of the graduates within the ethical guidelines of research at BCU. The ethical approach was to maintain anonymity, this included preserving participant anonymity in dissemination whilst providing important information about their professional lives.

## **Findings**

### *Motives for study*

The main design themes in this research include motivations for the study and designers' views on design's relationship with business. Themes dealing with learning include WBL, its management and impact.

Participants saw the master's in design management as a precise investment in their future careers, in some cases this was based on their belief that they had progressed as far as they could using their design skills and would not progress further without acquiring what they generally describe as business and management skills, "I was stuck in a rut, I'd been working as a designer for about 10 years [...] I wanted to lead a business or run a business in due course" and "I didn't feel I had the appreciation of business that was necessary to grow and expand my career".

Participants described the development of their design skills through years of design practice but were concerned by the lack of guidance in the development of their management skills, they joined the course to gain access to guidance, management



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theory and principles, “I had to learn everything from experience, I didn’t actually read about design management or how you manage people [...] after eight years working in industry I needed an answer”. As one designer put it, “say if you did an MBA, you would have that ability to step back and understand [...] I wanted to understand management techniques and why they are applied in a particular way at management level”.

The participants were looking to develop personally, in keeping with the view of the UK Design Skills Advisory Panel (2007) they were looking to develop their management skills and gain access to knowledge around strategy, marketing and business in general. In some cases the design managers believed they were isolated from the rest of the organisation and needed these skills and knowledge for their careers to progress.

#### *Designers’ views on design’s relationship with business*

The isolation that some of the participants described was reinforced by almost all the participants’ views about the role of design in business, all but one interviewee expressed powerful views about the gap between themselves and other disciplines within the workplace.

Reflecting on difficult experiences, there was a distinct theme of designers’ early career naivety in common with that of Brown (2009). Interviewees described their expectations of a design-centred world and a lack of understanding of design’s relationship with other business and organisational disciplines, “I thought that design would be the driving force, as it were, that we were the important people!”

For some early career designers the way businesses view design had been quite shocking, their design education had focused on the design world, they expected design to be at least on a par with the importance of other parts of the business, when in fact this was not always the case. Having said that, one design manager based in Hong Kong seemed comfortable with the differences in business disciplines, seeing them as “helpful and normal”, and linked the need to manage cultural differences in business to the East West cultural differences he also has to factor into his practice.

One interviewee’s account of his graphic design career to-date captures the full breadth of potential experience through his account of two contrasting work environments, he describes his first position working for a multinational print company, “In this environment, the role of design was reduced to a mere process of designing and outputting as quickly as possible [...] it was a reality check that shattered my rose tinted view of the role of design in business”. However, a change of position to a small, design-led manufacturing business introduced a completely different culture, “It was a breath of fresh air and liberation from my previous role, I observed senior management genuinely passionate about design and all its intricacy, pit-falls and potential”.

This recognition of the culture gap was linked to the participants’ acceptance that the business world thinks and communicates differently to the design world. At an educational level, emergent acceptance of this is often elusive. In the experience of the authors, initial career success of new entrants to a company from design management courses cannot be easily predetermined without some experience of the workplace. Informal discussions with employers appear to support this; this hypothesis helped in the design of the overall course.

#### *Perceptions of learning and communication preferences*

When asked about learning styles and their preferences, the design managers demonstrated limited awareness of these, this may have been due to the terminology

so they were prompted with examples, which enabled them to discuss how they believe they learn.

There were strong preferences for learning by doing, taking a practical approach and being visual. The visual and practical emphasis of design education was described, with design projects and assessments being practical but also research being conducted visually through the development of mood boards and similar.

Commenting on the workplace one designer identified the difference between visual and non-visual people and the challenge this poses, describing the difficulty of communicating with senior management “number crunchers”, this also highlighted the need for designers to understand business’ quantitative approach, “They’re reeling off numbers and I’m thinking ‘I have no idea what that is! What does it look like? What colour is it?’”.

This vulnerability of the designer when communicating with other disciplines that are often the decision makers was further demonstrated by one designer’s account of how he had changed his approach through experience, how he had become more articulate, learning to use the appropriate language to influence people, “I think I’ve improved a lot in the way I use language now and how I communicate with people, so rather than getting all angry and panicky, I communicate”.

Throughout the interviews the design managers expressed a lack of confidence arising from their early experiences as designers and a clear desire to be able to communicate with other disciplines on equal terms. Such eagerness chimes with newer interpretations of Kolb’s learning cycle in management education (Vince, 1998) and also highlights the newer application of Donald Schön’s practitioner reflection in design teams (Stempfle and Badke-Schaub, 2002).

### *Managing WBL*

The opportunity to study whilst remaining in full-time practice was seen as essential by the participants, it is unlikely that they would have interrupted their careers for full-time study. Although the postgraduate study added to their workload, and at times it was difficult to reconcile the competing demands of work, study and personal life; this was seen as acceptable and part of the investment in their futures.

Participants identified the need to be able to work independently as work-based students can feel isolated. Apart from the core lecture programme, contact with other students is often minimal and work commitments mean meetings with tutors can be difficult to arrange, particularly if the workplace is a distance away, or even in another country. The interviews revealed that the degree to which a WBL student integrates their learning could not easily be engineered without the regular contact, support and encouragement of the university.

The participants contrasted the value of WBL with a more theoretical approach, expressing a strong preference for experiential learning as defined by Kolb (1984), the application of theory to real life problems in the workplace, developing tangible solutions, learning through evaluation and reflection. “Research for a purpose with actionable outcomes that genuinely benefit business rather than research for assignment grades sake”.

The interviews provided evidence of Schön’s (1983) concept of tacit knowledge and the value of the course in learning to articulate. In several cases the participants described how the management principles and analysis tools they researched during the course were often approaches that they had encountered in the workplace but had not recognised as being formal processes, “You’re already undertaking a number of these activities or tasks but you’re probably just calling them a different name” and “I think that people do a lot of these things naturally but are now doing them in an

enhanced way, with a higher level of consciousness". The identification or naming of theories and understanding how they can be applied had given the design managers insights into the business process, providing frameworks and structured approaches that they could articulate and explore through their own work.

The designers had all integrated work-related problems into their study and observed that where the workplace often fails to make time for reflection (unless there has been a problem), their study had created the opportunity to develop their reflective practice, "the thing I found most useful was the time for reflection, taking time, stepping aside, thinking about it and coming back to it".

With regards to the role of assessment, two of the participants commented on the process of assessed presentations, or peer learning as identified by Boud *et al.* (2001, p. 3), describing "standing up in front of your peers", as extremely valuable. First as a test of the ability to present a coherent, evidence-based argument when exposed to "people who think in a different way and are challenging in their thoughts", and second, as a formal reflection process and means of "capturing" what has been learned, or metacognition as described by Raelin (2008).

#### *The impact on designing and the workplace*

All the participants described their study as having given them increased confidence, with references being made to feeling more valued, more in control and feeling "less intimidated", especially when dealing with highly qualified colleagues or senior management.

This increased confidence was attributed to being better informed through research, familiarity with business: "tools and techniques" and the ability to apply these tools, as one design manager observed: "I've got the missing pieces of the jigsaw now". Another interviewee explained how the involvement of the university had added credibility to her work, with the result that the employer was willing to provide greater freedom for research and to put new ideas into practice.

The designers described how they had acquired insights into the business perspective and what their organisations needed, which in turn had led them to become more effective communicators "my communication skills and confidence rocketed, like threefold". Participants described themselves as more articulate, adapting the way they communicate to the audience and being more in tune with the language expected, "It's got to be quick, clear and concise [...] otherwise you're wading through piles of information, they get bored and walk off".

The ability to take an evidence-based approach and articulate ideas in terms that other disciplines can relate to led to significantly increased confidence and effectiveness. One interviewee described how the master's had equipped him with the insight necessary to understand the relationship between design and business and to be able to articulate "design reasoning and solutions to business people who are not trained to listen to designers".

Overall, the participants saw themselves and their outlooks as changed, these changes being attributed to both the master's and their progression into more design management-focused roles. They described different approaches to their work where they are "not as insular", collaborating with other disciplines, being more business oriented and seeing themselves as part of the whole business; thus, bridging the cultural gap.

## **Conclusions**

Within the limitations of this small UK case study a clear case is made for the empowerment of international designers through the acquisition of design management

skills and knowledge, which can impact significantly on their designing. Whilst there is a strong element of “learning on the job” for designers in practice, this has its limitations and designers stand to become isolated from other domains within the workplace if they are unable to develop business insight and the ability to communicate with non-designers. Where traditional academic approaches might not be appropriate, universities are becoming more flexible, and those offering WBL can provide designers with the opportunity to acquire essential skills and knowledge in ways that are appropriate to their learning styles and in conjunction with their full-time design practice.

Higher education, in adopting and committing to WBL will need to recognise new settings for learning (Butters, 1995). An increased recognition of flexible, non-linear student pathways which co-benefit employers, is needed. Also the use of WBL within HE’s portfolio would provide greater student choice in negotiation for study. This is perhaps an ideal use of contracted learning, where a collection of work specific learning episodes are packaged around the learner but within the existing module or credit framework offered by the university. WBL has the potential to transform the HE environment and positively silence the critics of universities where the ivory-tower criticism features. However, despite such enthusiasm there now needs to be more research into the longer-term impact and value of WBL particularly for universities offering design degrees.

From this research it is clear that WBL improves the value of higher education without altering its perceived purpose. It is also clear that all design-based industries constantly require a development of knowledge capital and an empowerment of those working in design. In order to do this they will need to adopt a practice of organisational learning themselves. Overall, in order for a design company to become a learning organisation it will need to align entrepreneurial actions with those which build capacity. In this way, rather like universities, a more flexible approach should be used in relation to knowledge and its business growth.

WBL may be seen as liberating but it is also important to promote the responsibility of the individual, as Slayton (2002) originally stated, “[...] a literal displacement of the individual into an environment of associative relationships establishes a form of authorship in which there is no singularity of ownership, origination or directorial oversight” (p. 231). This appears to be confirmed.

The research also indicates that there are links between professional competence and experiential curricula. The potential to represent professional life within the existing university course was significantly enhanced by the integration of the “external curriculum” found in WBL. This is not new, however, within design teaching the professional operation of designing and its management is significantly enhanced through WBL. Furthermore such an experiential approach appears to stimulate ongoing innovation in the organisation. The important innovatory role that design and designing takes is through establishing connections between previously unlinked project elements. WBL, from this evidence, represents an opportunity to share and benefit from new innovative design knowledge.

Universities have to not only recognise the external curriculum but to carefully, seamlessly integrate a learning process within it. The research found that there were specific links between the experience of WBL and the new managers’ ability to work in professional roles. Design-centred organisations should acknowledge that learning takes place every day within their organisation; learning which develops new, valuable knowledge. Harvesting such knowledge is a systematic process, often stimulated by a graduate with new investigative skills, placed within the workplace. This, in the future might include eliciting and evaluating the employers experience in relation to that of the student.

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### Further reading

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