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RESPONDING TO DESIGN INDUSTRY SKILL GAPS: A MODEL OF BUSINESS PRACTICE EDUCATION OF UNDERGRADUATE DESIGN STUDENTS

Nicholas A HALL and Fiona VELEZ-COLBY

University of Salford, Lancashire, UK

ABSTRACT

The productivity and growth of UK firms depends on innovation and creativity to differentiate goods and services [1] so they can capitalise on local and global markets. For the UK design industry the challenge is to become the premier provider of creativity and innovation services to domestic and international businesses [2]. To achieve this, it must address the skill gaps hampering its business potential and service offerings [3].

Research indicates that, in addition to pure design skills and creativity, the design industry demands an awareness of business practice in design. Design students in Higher Education (HE) consider practical business skills less important than the creative aspects of their courses. Such a view is reinforced by the low proportion of marks awarded for business skills in assessed assignments in higher education [1], which places them at a disadvantage when attempting to progress into managerial roles, or when entrepreneurial attributes are required [4].

Design educators should equip design students with a strong base of practical business skills as well as creative problem-solving abilities. If designers are trained to apply creativity in a business context, communicate in a business-like manner and understand business principles, they become a valuable asset and enhance their employability. This paper presents a learning model for the development of business practice curricula in design courses and discusses how this has been aligned with the creative practices the students undertake in their discipline. It is currently used in several courses at the University of Salford.

Keywords: Business practice, design education, skills

1 INTRODUCTION

Design is now recognised as an important element of a country's competitiveness: numerous publications have evidenced how it improves levels of innovation and productivity and adds value to products and services [5]. A country's design capability therefore becomes crucial to the national economy. The UK has an established design industry that is significant in size when compared to other competing sectors internationally [6]. But, as the Cox review first suggested, there is a growing competitive threat to the industry's stability as emerging economies continue to invest in indigenous design capabilities [2]. Research since this initial report on the competitiveness of the UK creative industries has further quantified and examined the UK's design capability, defining key indicators that demonstrate our industry's effectiveness against its global competitors [6].

One of the key indicators is design education. The indicator used for this is the number of design graduates who enter the marketplace annually. In the UK, there is a significant over-supply, so the defining factor then becomes the quality and suitability of those graduates. There are longstanding issues regarding the suitability and relevance of Higher Education (HE) courses in design and the graduates they produce when compared to the skills and knowledge that the UK creative industries demand of its newly recruited employees. This has been defined as a 'skills gap' and is widely discussed in current research. There are various government and privately-funded initiatives in place aimed at tackling this contentious issue that conclude that new forms of teaching and learning are required [7]. The problem is complicated by various factors, not least an inability to reach a consensus between educators, design professionals and industry bodies as to how to bridge the gap. The issue is exacerbated by two main issues:

- the often significant differences between educational and commercial settings [1] and the failure of existing design education models to produce graduates with knowledge of, and exposure to, the business of design.
- the incorrect assumption made by design graduates that design skills are the main consideration of potential employers. In reality many employers, particularly in the creative industries, now view business and professional skills as intrinsically linked to good design [7].

Research that discusses and identifies key skills gaps within the creative industries also advocates the need to develop graduates' business skills as a vital part of their design education.

This paper discusses the issues surrounding the skills gap, and specifically identifies the key business attributes that design students should be developing during their education. It proposes a learning model for the teaching of business practice in design education that begins by incorporating an understanding of the key business and operational skills identified by industry consultation, with an overview of the UK design market place [3]. It then explores the wider global contexts in which business and design operate, examining political, social, technological and environmental issues to develop a deeper understanding of real life business contexts. [7].

2 THE CREATIVE INDUSTRIES AND HIGHER EDUCATION

Skills gaps exist within the UK design industry at every level but they are particularly large in management and leadership, thus hampering design business performance [3]. The missing skills are continually identified as 'professional skills' [1], which is vague. Research into the problem cites a wide range of issues including basic professionalism within business, discussing the limited ability of designers to research and understand the client's business and marketplace in terms of market and cultural constraints. Research also suggests that, more importantly, this has led to difficulties in delivering solutions for international clients; a failure to understand their situation and transcend cultural and language barriers [3]. UK design is seen by clients as UK- orientated, with little understanding of the trends and requirements of other nations, overlooking the fact that emerging markets may provide new income streams and opportunities. With competition increasing in both the domestic and international markets for the small business sector and the creative industries alike, the issue of addressing skills gaps in the design industry is very important to its future [8].

Much of the government research into the contribution that design makes toward the economy describes it as part of research and development (R&D) [9]. This does not fully reflect the effect that design can have on a business in terms of product, process and organisational innovation; neither does it include those additional activities in which design is intrinsically involved, such as user-focused design in product and service development, user experiences, the design of communications and the design and management of corporate identity [6].

Skills within the design industry are not just about design expertise, but also delivery of creativity and innovation through business facilitation, such as contract management, marketing, sales and entrepreneurial activity. Out of 409,200 people employed by design consultancies only 60,900 are actually designers [10]. Ancillary roles in supporting, facilitating and managing design could open up enormous avenues of employment graduate designers that have both design training and a specific understanding of the impact design can have on a business.

The model proposed considers that UK design education has an international reputation for producing talented designers through the development of pure design skills [11]. The problem remains, however, that currently the skills delivered in UK HE and FE design institutions focus principally on creative skills, but not in a sufficiently relevant context [12]

Integrating this model into the course structure of undergraduate degrees should, therefore, add value to the graduate's skill set. Research identifies the following failings that affect design business competitiveness, failings that have been addressed by the business practice learning model:

- the majority of design firms are small (85% have fewer than five employees), mostly serving the domestic market and lacking the basic professional and business skills to survive in the global marketplace. Examples of these include over-servicing - poor project management that adds unnecessary work to agreed projects [13].
- design employers are poor at providing ongoing professional training and professional development for their employees. Thus, many designers reach their careers peak at a relatively early stage and lack the skills to progress into management roles [3].

- people in management and leadership positions in the creative industries often lack a fundamental understanding of business, such as the financial, market and cultural constraints that clients work within. This hinders their ability to understand the client's needs and be commercially relevant [3].

Design education will play a significant role in supplying tomorrow's designers, leaders and managers to the design industry [2]. There are issues in HE that need to be addressed:

- design has become a popular subject of study in higher education with 55,310 undergraduate design students in the UK [14] This has raised issues about the quality of the provision of education in the designer courses and the over-supply of graduate designers.
- design education needs to develop stronger partnerships with the design industry in order to develop courses that meet the skills requirements of a sector that is rapidly adapting to the demands of a growing global marketplace. [15]
- creative thinking, problem-solving, knowledge transfer methods and practical skills must be developed so that students can apply them to varied situations, for example environmental issues, new technology and the business environment, innovation and entrepreneurship.[3]

3 THE BUSINESS PRACTICE LEARNING MODEL

The business practice learning model [Fig. 1] seeks to partially address the requirement for a new perspective in the teaching of professional skills to designers. It relates to UK and global industry requirements, providing the contexts in which products and services are positioned in the marketplace by developing students' business understanding [4]. The model provides an overview of key skills and knowledge that can be used to plan business practice curricula and to deliver teaching and learning that makes students' knowledge business-relevant.

The focus of the learning model is professional development and, as such, entails a variety of teaching techniques delivered through innovative workshops, seminars and lectures. Some of these are delivered by industry professionals, others by existing teaching staff. This provides strong live scenarios and examples to contextualise theory with real world practices wherever possible [16]. The model is supported by assignments, assessment and feedback, all of which enables students to apply the concepts communicated to them for themselves.

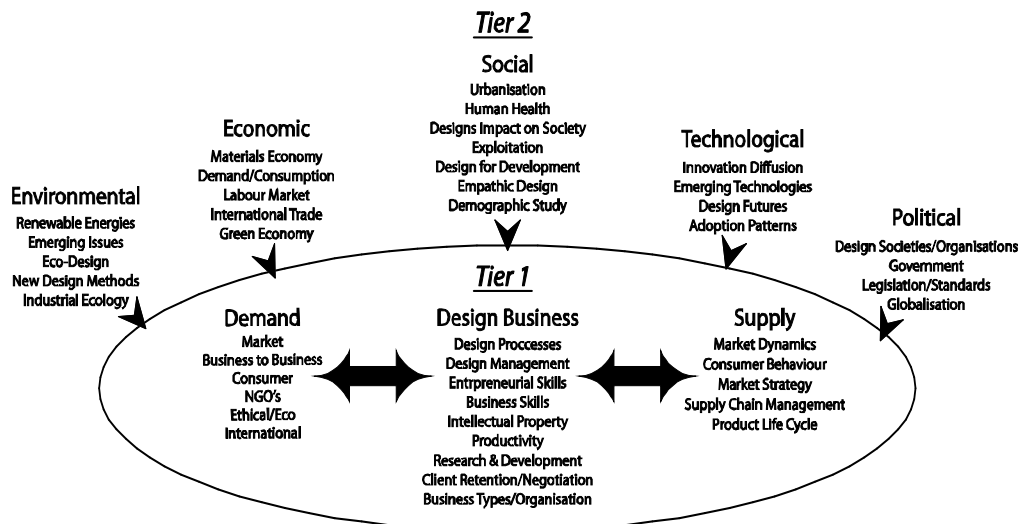


Figure 1. Business Practice Learning Model

The model structure is based on developing students' knowledge in two tiers. The first develops the fundamental understanding of the issues and theories that underpin business practice. The second examines the macro influences that change the business environment and market place in which design operates. Projects and assessment around these issues develop the students' research, communication and written skills, allowing them to investigate specific subject areas in business practice that are relevant to their design discipline. This approach corresponds with Biggs's 'Constructive Alignment'[17] by developing a learning environment that is very much focused on what the student does and not what the lecturer delivers. The teaching supports learning by actively

engaging the student in their own exploration of the topics. The learning outcomes embedded in the modules where the business practice model is applied promote deeper understanding so that students are left in a strong position to apply what they have learned in their practice. Students should be able to:

1. recognise the impact of a range of issues including historical frameworks, commercial development and potential opportunities for new design development in the future.
2. demonstrate an understanding of the implication of a designer's work and its effect on society, the economy and the environment.
3. employ appropriate research and analysis methods to explore issues, and then communicate and present conclusions in a written and verbal format.
4. demonstrate an understanding of how market theory & dynamics impact on the changing business environment.

Through independent learning, students are encouraged to develop and reflect upon the relationship between their discipline and the wider business context in which it is situated [18].

A blended learning approach is taken toward the teaching, learning and assessment on business practice modules. This develops learning through enquiry and critical thinking and enables the student to relate specific skills to their practice [19]. The blended learning environment includes face-to-face teaching with supporting e-learning so that students:

- have a clearer perspective on their progress relative to the learning outcomes
- engage with and participate in interactive learning opportunities
- engage in collaborative learning; creating supportive and flexible learning environments [18].

Key to this blended approach is the use of the Virtual Learning Environment (VLE) [20]. Which provides the platform to deliver the e-learning and supporting materials. Biggs suggests four stages in developing a learning environment, and these support the module's structure and form the basis for planning activities and assessment around the business practice model:

1. a well-structured knowledge base
2. an appropriate motivational context
3. learner activity
4. interaction with others [17]

The business modules include the use of wikitoools, blogs, discussion forums and other tools that develop innovative working practice. The e-tools are built into the learning and assessment on the module to integrate them into the learning experience.

This, however, suggests that the interconnections should be hierarchical; in fact in this situation they are aligned horizontally. This reflects business practice where issues are interrelated and influence one another. To demonstrate this, the lectures and sessions are planned in advance and shown to the student as a portfolio, so that they can visualise the interconnections in the subject matter and explore these links. The model shown is also reviewed by the students when we first introduce an assignment, thus demonstrating to them how far they have come and what they have learned.

The lectures in the modules are intended to be the stimuli for the critical thinking, independent learning and self-directed study toward the assignments that form the assessable work. The assignments, therefore, have been designed to build their understanding of how to apply the content defined by the model to their work. For example, in the first tier they are required to conduct investigative research into the marketplace for a specific brand, critically analysing the brand's use of design elements in its market strategy. Each student chooses their own brand and evidences their research into it by designing and building an online 'wikispace' that the student 'owns'. Students are encouraged to gather multiple types of research and utilise multimedia to communicate and present it in an innovative and collaborative way. Finally, they present the research findings in a 'Dragons' Den' scenario (chaired by their peers), proposing how the brand may progress in future, given the strategic indicators researched. They must present a business case for this development.

This approach facilitates greater student interaction and dialogue between peers and professionals, where both opposing and congruent views are debated.

4 CONCLUSION

The research investigated throughout this paper has identified a consensus within the design industry, namely, that design graduates and designers are ill equipped to provide businesses with the critical skills and knowledge needed to compete in today's global marketplace. It's not an issue of creativity,

but one of poor business practice that hinders improved productivity, competitiveness and leadership, all qualities needed for a rapidly developing industry that is so important to our continued economic prosperity [21].

The root of the problem can be attributed in large part to shortcomings of the education system in producing industry-ready design graduates who are sufficiently skilled to understand the business contexts of their specialist subject areas. A clearer understanding of areas such as environmental and social issues, global and national economic challenges, technological development and entrepreneurial activity, amongst others, provides the graduate with not only the skills their potential employers require, but a skills base that may help them find a position in one of the ancillary roles supporting design activity, such as account or client management.

The challenge for FE and HE is, then, to develop tools that can be implemented quickly and effectively to meet the challenges facing design graduates. This requires a new perspective in design education, one which actively and strategically engages students in a multi-disciplinary approach to their learning. This is achieved by engaging them in varied and dynamic teaching which encourages enquiry and a self-directed approach. The taught content must address key issues and align with their design practice to develop student's professionalism.

In response to these challenges the business practice learning model has been developed and implemented on various design courses at the University of Salford. The model allows learners to meet industry needs through an agile and adaptive programme which facilitates investigation into a wide range of specialist design disciplines, all within the wider context of macro factors, business practice and professionalism. This is achieved through the two tiers of the model, whilst demonstrating clear links between the tiers. This teaching model produces industry-ready graduates who are able to bridge the skills gap that is currently hampering innovation and global competition possibilities in the UK design industry, enhancing their employability and usefulness. This may also go some way towards tackling some of the issues around over-supply of design graduates, as they can be employed in other, design-related, ancillary roles [14].

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