An examination of integrated teaching and learning approaches in marketing education

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Declaration of Originality

I certify that this work has not been accepted in substance for any degree, and is not concurrently being submitted for any degree other than that of Doctor of Philosophy (PhD) by Published work being studied at the University of Greenwich. I also declare that this work is the result of my own investigations except where otherwise indicated by references and that I have not plagiarised the work of others.

Student's signature_____ **Date**_____

Supervisor's signature_____ **Date**_____

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ABSTRACT

This thesis is submitted for the award of the PhD by Published Work. It lies within the field of marketing education and contributes to understanding how marketing educators can enhance students' higher level thinking skills by using and refining learning approaches that integrate knowledge gained in different settings and domains. Three approaches are investigated for this purpose: simulation games, dissertation study, and cross-disciplinary curriculum design. In the first two, simulations and dissertations, students are required to transfer in knowledge and skills learned in prior settings and to integrate this learning with new material in order to successfully complete the learning task. While the first two approaches come with existing frameworks that students can engage with in selected modules, the third involves designing new curriculum for Master's level International marketing programmes. The latter considers both the benefits and the constraints of integrating ideas and theories from other disciplines in order to enhance students' conceptual understanding and improve their decision making skills in the complex and multidimensional arena of international business and marketing.

The impetus for my research arises from experiences teaching marketing students over the past four decades and a recurring and perhaps increasingly urgent call from the professional and business education literature for educators to better prepare students for the complex, cross-functional, and unpredictable decision-making environments that characterise modern business. In particular, both researchers and employers argue that problems facing decision makers are rarely confined to single disciplines, but are in fact multi-disciplinary and require employees to think critically and integrate ideas from a range of sources. Research into the integration of learning, however, demonstrates that students need particular skills to be able to integrate ideas effectively and that educators should -provide both integrative exercises and supporting frameworks for students to do so.

The submission is made up of eight publications and at the meta level addresses two research questions related to how educators can meet these challenges: What are the main learning benefits and constraints for students and educators of integrated learning approaches where students are required to link knowledge, concepts and skills from new and prior learning and what recommendations can be made to support students and educators with these experiences? Findings have identified clear learning benefits, but also student, tutor, situational and institutional challenges that can either reduce the effectiveness of more integrated approaches and/or enhance their deployment and learning potential.

CONTENTS

List of publications comprising the basis of the submission

1. Brennan, R., Vos, L. & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press.
2. Vos, L., & Brennan, R. (2010). Marketing simulation games: Student and lecturer perspectives. *Marketing Intelligence and Planning*, 28(7): 882-897.
3. Brennan, R., & Vos, L. (2013). Effects of participation in a simulation game on Marketing students' numeracy and financial skills. *Journal of Marketing Education,* 35(3): 259-270.
4. Vos, L. (2013a). Improving international marketing programmes to reflect global complexity and risk: Curriculum drivers and constraints. *Journal of Teaching in International Business,* 24(2): 81-106.
5. Vos, L. (2013b). *Dissertation study at post-graduate level: A review of the research.* York: Higher Education Academy.
6. Vos, L. (2014). Marketing simulation games: A review of issues in teaching and learning. *The Marketing Review*, 14(1): 67-96.
7. Vos, L. (2015). Simulation games in business and marketing: How educators assess their students. *International Journal of Management Education,* 13(1): 57-74.
8. Vos, L., & Armstrong, K. (2015). *Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK.* Greenwich: University of Greenwich Working Papers.

1. Introduction

My published work focuses on the field of marketing education and is concerned with curriculum, teaching and learning approaches that involve the integration of knowledge and skills from different domains. The main areas and sub-areas of my research are:

- Post-graduate marketing curriculum (developing cross-disciplinary education);
- Teaching and learning design (marketing simulation games); and
- Capstone or final major projects (the postgraduate dissertation).

My work has addressed the following broad research questions:

- What are the main learning *benefits* and *challenges* for students and educators of integrated teaching and learning approaches where students are required to link knowledge, concepts and skills from new and prior learning?
- How can these challenges be mitigated or resolved and what *recommendations* can be made to support students and educators?

The body of work to be submitted for assessment includes journal articles, a report and research monographs published between 2009 and 2015. The papers to be submitted are listed above and represent both conceptual and empirical studies.

My research themes and directions have arisen from my own experiences in the classroom and from reflection on how to improve the learning experiences and outcomes of my students. In common with much marketing educational research, my work sits within the pragmatic research paradigm where the value of inquiry lies in its impact on practice and the main objective is to enhance student outcomes (Biesta & Burbules, 2003).

As students' advance in higher education, the subjects they take and learning methods they engage with tend to become progressively more complex and require the integration of concepts, ideas, theories, skills and processes learned earlier or in other settings. Integrated learning contexts provide the opportunity for students to develop skills in synthesizing and evaluating information from a wide array of often disparate sources, and these skills better prepare them for the complex problems faced in their work and in society at large (Barber, 2009; Huber et al., 2005).

My own experiences with a broad cross-disciplinary education have made me aware of the value that multiple perspectives and approaches can bring to problem solving. However, simply having knowledge of different perspectives and disciplines is not enough to allow students to find solutions to complex problems – they also need educational experiences that push and assist them to integrate knowledge in a meaningful way (Huber et al., 2005). With this in mind, I have investigated integrative learning methods including simulations and dissertations in order to illuminate their specific benefits, identify challenges and barriers to their use and provide evidence-based recommendations for improving their learning potential.

Integration of learning (IOL) is a growing area of theoretical interest (e.g. Barber, 2009) but it has only recently begun to inform my work. As Morrison (2007) notes, although the researcher is exploring and developing various theoretical frameworks within their field of interest they "*do not or probably [can] not study all there is to know in [the] area*" (p.6.), at least initially. Although not explicitly called IOL, many of the perspectives of 'integration of learning' can be found within my work and indeed offer support for my findings and recommendations. In addition, I have been able to add my own perspectives and findings, in particular how institutional, situational, student and tutor-related factors can affect the outcomes of integrated learning approaches.

This commentary begins with a discussion of the research context that has shaped my work and inspired my choice of research questions. I then explain the coherence of my work and the key themes that join it together. Given that that the overall focus of my research has been in the area of marketing education, I also discuss my philosophy of education and how this has influenced the teaching and learning practices that underpin my research as well as my research philosophy and methods. In particular, I look at constructivism and the pragmatic research paradigm. I then present an overview of my publications and how they have contributed to the themes of educational benefits, constraints and recommendations for using integrative learning approaches. Objectives, findings and limitations are also presented. The commentary concludes with a summary of the originality, contribution and impact of my work and the direction of future research.

2. Research Context

Educators in marketing and other disciplines grapple with two meta-questions, namely, *what* to teach and *how* to teach (e.g. Shulman, 1987). Regardless of how educators answer these questions, they are likely to be motivated by similar goals – to assist students' in becoming successful, adaptable, work-ready graduates who can manage the uncertainties and complexities of modern work environments.

Decisions about what and how to teach (and what to research) in marketing are shaped by institutional, professional, societal, student-related factors and extant research, among others, all of which may act as drivers or constraints for choices made and outcomes attained (e.g. Astin, 1970; Biggs, 2003). Two perspectives in particular have shaped my own teaching and research:

- The changing professional context for marketing careers; and
- The concept of integrative learning.

2.1 The changing professional context

In marketing education, the question of *what* to teach is an epistemological debate of long standing. Educators (and researchers) deliberate over whether to focus on teaching students *how* to do marketing (practical/applied) (Walle, 1991; Hulbert & Harrigan, 2012; Koch, 2013) or whether to focus on teaching *about* marketing (marketing as theory, as social function, and from a critical perspective) (Pharr & Morris, 1997; Catterall et al., 2002; Hill & McGinnis, 2007). (This debate is not unique to marketing. See for example, Parker & Pearson (2013) on management education).

The impetus for many studies on what knowledge and skills a marketing graduate should possess comes from a growing weight of evidence that graduates are not meeting the expectations of

employers, that marketing careers are more complex, have uncertain tenures, and are characterised by knowledge that is growing exponentially but, given the vast number of information sources and formats, in a fragmented manner (e.g. Kedia & Mukerjee, 1999; Ackerman et al., 2003). For example, Catterall, Maclaren and Stevens (2002) portray the modern marketing environment as offering little career stability, where knowledge and technology advance rapidly, and where globalisation has led to greater economic, social, and political instability – all of which increase the complexity of problems and decision making. In these circumstances, they argue, students need the skills and aptitudes to manage change, to solve difficult problems, to think cross-functionally, to reason critically and to make sound judgments. However, Catterall, Maclaren and Stevens (2002) contend that, despite the wealth of literature related to developing these skills, management and marketing educators have not sufficiently adapted what and how they teach, still emphasising the 'how to' of practice above the knowledge and skills needed for a more complex world:

> ....management education subscribes to an instrumental view of knowledge whereby the educators' task is to proffer a variety of models and techniques that equip managers with useful knowledge [to manage. But this emphasis on the] 'how to' of marketing management fails to meet the needs of managers who work in the increasingly uncertain and complex world....characterized by ambiguity, uncertainty, diversity, disorganization, rapid change, the erosion of traditional divisions, questioning of received truths, and the undermining of established forms of expert knowledge (p. 185 -186).

Other researchers describe the operating context for marketers and managers in similar terms and what stands out in their discussions is the boundary spanning, cross-disciplinary nature of many management problems (e.g. Crittenden & Wilson, 2005; Schlee & Harich, 2010). To deal with problems that are ill-structured, require knowledge from other disciplines, and are difficult to demarcate and contextualize, Catterall, Maclaren and Stevens (2002) call for students to have greater 'cross-functional thinking skills'; Pappas (2004) for 'meta-cognitive skills'; Spiro, Coulson, Feltovich and Anderson (1988) for greater 'cognitive flexibility' and Perkins and Salmon (1992) for more sophisticated 'transfer of learning' skills where the student can skilfully weave prior learning from a range of different contexts with new ideas.

A theory of learning that incorporates these skill definitions while adding specific recommendations for curriculum design and pedagogy is 'integration of learning' or IOL. Barber (2009), who has done much to advance the field, contends that when problems are complex and ambiguous, managers need to draw upon multiple areas of knowledge and skills, *"from multiple sources and experiences; applying theory to practice [across] various settings; utilizing diverse and even contradictory points of view; .... [and understand] issues and positions contextually"* (p.6). Early research into IOL was championed by the American Association of Colleges and Universities (AAC&U) and the Carnegie Foundation for the Advancement of Teaching who were concerned that undergraduate education is highly fragmented and does not prepare students for the complex decision making required to solve many of today's problems (Huber & Hutchings, 2008). They argued that graduates who can make connections between *"disparate information and meaningfully synthesise concepts are better prepared for success in the...evolving knowledge economy of the 21st century"* (Barber, 2009, p.1). Building on earlier work by the AAC&U and the Carnegie Foundation, Barber (2009) developed the umbrella term 'integration practices' to mean the structures, learning, strategies, and activities that span at least three ways of making connections: the ability to make connections across multiple

contexts (intecontextuality), across ideas within a discipline (intradisciplinarity) and across domains and disciplines (interdisciplinarity).

Marketing educators regularly expose students to material and assessments that require integration and indeed the marketing education literature provides many examples of ways in which courses or programmes can be made more integrative (e.g. DeConinck & Steiner, 1999; Elam & Spotts, 2004; Craciun & Corrigan, 2010). Most of these examples demonstrate Barber's (2009) integration practices even though they do not use his terms. For example, when students complete a client project (e.g. Elam & Spotts, 2004) they are operating, according to Barber's definition, intercontextually (context of the classroom and context of the client's workplace). To propose solutions to clients' problems, the students need to gain a deep understanding of their operations, culture, and current approaches to marketing and link this knowledge with ideas, theories and frameworks learned in one or more marketing modules (intradisciplinarity), plus perhaps apply accounting and finance principles learned in another module, thus adding an element of interdisciplinarity. The benefits of integrative learning experiences are highlighted by Elam and Spotts (2004) who provide evidence that marketing students will gain a deeper level of understanding of new material (by linking new material with previously learned information); better retention (as students rehearse old material to link it with new ideas); and, in working cross-functionally across a range of activities, gain real-world professional experience. However, they and others who champion integrative activities do not explore the challenges associated with their use in the classroom.

Using findings from neuroscience, Bransford, Brown and Cocking (2000) have demonstrated that for successful integration to take place, a number of prior and current conditions must exist: the student must have adequately mastered and not simply memorised the original concept(s); have adequate time to learn and process the old and new information; receive regular tutor feedback and engage in "*deliberate practice*" (p. 59) that includes monitoring and reflecting on one's learning practices. Furthermore, the more the original information was overly contextualised, the more the student will find it difficult to transfer the knowledge to new contexts (Bransford et al., 2000). For example, learning about profit and loss accounts where only accounting problems are used for examples can make it difficult for students to transfer this learning to a marketing context.

A number of other factors affect transfer and integration, thus Huber, Hutchings, Gale, Miller and Breen (2007) argue that the ability to integrate ideas successfully is a relatively sophisticated skill and students need many opportunities for both guided and unguided practice during their university education. However, higher education tends towards compartmentalisation where programmes are made up of stand-alone modules that often appear as independent subjects, thus "*[f]aculty should be intentional and explicit about opening the doors to broader integration*" (Barber, 2014, p. 12) of subjects and content. Barber goes on to say that his "*research has found that there is a lack of mentors or guides involved in students' integration [as]there are few instances in [my research] that show involvement or influence of faculty members or educational administrators in this process*" (Barber, 2014 p. 13). In addition to mentors, Huber, Hutchings, Gale, Miller and Breen (2007) propose that the curriculum be redesigned to include specific opportunities and guidance for integration. They suggest adding in curricular "*enriching activities*" (p.48) or what Kuh (2008) calls 'high impact practices', such as internships, cross-disciplinary courses, final year projects/dissertations, among other initiatives. They also recommend experiential learning activities

such as simulations that allow students to make connections between theory and practice and between ideas learned in other contexts and disciplines. However, as noted, the literature has yet to provide rich examples of evidence-based practices or issues related to their use in the classroom.

2.2 Integration and my research

Integration has been a key underlying theme in my research and in all papers put forward here. Among the main elements of the theory of integration that I address are the rationale for providing specific opportunities for students to integrate ideas, such as using marketing simulation games, and the importance of considering the challenges associated with integrating learning approaches for both students and educators (Huber & Hutchings, 2008). Below is a brief overview of how simulation games, dissertations, and cross-disciplinary curriculum, the three areas of my research, require or are built upon the integration of ideas from diverse contexts.

2.2.1 Marketing simulation games

Simulation games foster the integration of ideas learned across various modules in marketing (intradisciplinarity) and from other business disciplines (interdisciplinarity). The characteristics of simulation games include a simulated competitive environment in which rival companies make periodic decisions; the decisions provide the inputs to a software package that produces management information (such as profit & loss statements and analyses of sales patterns) which then provides the basis for the next round of decision-making. What differentiates the simulation game from other active learning techniques is that by its very nature it imitates certain aspects of the business world that are otherwise hard to bring to the classroom, notably working to deadlines, generally in teams, to make concrete decisions under competitive conditions, and then have students live with the consequences of those decisions (Gosen et al., 2000). One could argue, therefore, that simulations are also intercontextual (academic and (simulated) real world settings).

Games require students to integrate concepts successfully within their own discipline and to think cross-functionally (Chakravorty & Franza, 2005). In a marketing simulation, student teams manage a division or small firm that produces a product such as mobile phones (Simbrand©) or jeans (MyMarketingExperience©). Teams work with and integrate marketing concepts, theories and decision areas such as segmentation, targeting, positioning, branding, product development, sales, pricing, distribution, promotion, and service quality, among others. They also make decisions that involve knowledge from finance (setting budgets, interpreting profit and loss statements), human resources (hiring, training and remunerating staff), and production and operations (forecasting, setting production levels and logistics). To effectively integrate the various decision areas, students undertake financial calculations, make forecasts, estimate demand and review market and competitor research, and link theory to practice -- all of which involve trade-offs and managing constraints (e.g. fluctuations in the market environment; competitors' actions). In addition, simulation games require students to integrate skills and emotions. As Hofstede, de Caluwe and Peters (2010) note:

> One .... aspect of simulation gaming that sets it apart from most contemporary academic disciplines is that their design, playing, and debriefing require synthesis ... [they] call for integration of faculties on the part of the players. In games, intellect, motor skills, control of emotions, and social skills are all activated in an integrated, purpose-driven way. (p. 829-830)

Students generally start out with a poor grasp of the decision making environment and limited ability to transfer or apply what they have learned in other modules. However, over the 6-8 weeks that most educators schedule the simulation, students understanding, the sophistication in which they integrate decision areas, and their ability to apply theory to practice generally improves, as does their ability to critically reflect on prior decisions. My research explores student and tutor perceptions of simulation games as learning tools, their specific learning benefits, and the extensive research in business simulations over the past four decades and how student learning is assessed.

2.2.2 Dissertations

The postgraduate dissertation is a summative experience that involves integrating learning from across the curriculum (intradisciplinarity) as well as professional and personal skills. Depending on the topic, it can also be interdisciplinary (when, for example, a management student undertakes a marketing related dissertation) or intercontextual (if for example, the student does a dissertation based on a topic from their professional life). Dissertations involve skills in searching for, selecting, analysing, synthesizing and critically reflecting on marketing theory, literature and prior research. Students may then build new knowledge in the form of a conceptual framework and, following their primary research analysis, through interpreting their results and making recommendations.

Students are also required to determine and justify an appropriate methodology, method and research instrument(s), and for many, particularly international students, this can be the first time they have done so (Bitchener & Baskurtmen, 2006). In addition to research skills, students need personal skills such as motivation, commitment, perseverance and good time management. Given the range of skills and the depth and breadth of knowledge required, the dissertation is one of the most challenging integrative academic experiences (Todd et al., 2006). My research explores the challenges that students and supervisors from across disciplines face with dissertation study in order to provide insights and recommendations for postgraduate marketing dissertation supervisors and also specific challenges faced by marketing supervisors in the UK. The latter uses a conceptual framework developed from the work of Astin (1970) and Biggs (1989) in order to categorise the challenges in terms of their potential for mitigation and solutions.

2.2.3 Cross-disciplinary curriculum

International management and marketing careers are by their nature interdisciplinary and cross-disciplinary and professionals working in these areas call for graduates to have a broader knowledge base (e.g. Alden et al., 1991; Smith et al., 2000).[1] For example, McDaniel and Smith (1987) surveyed 225 company executives about what they considered the most important areas of knowledge for international marketing graduates; economics, politics, language, and social customs were the top four cited. Laxton, Patzer, and Howard, (1991) and Crittenden and Wilson (2005) have also argued for students to be educated across a range of disciplines to help them develop a 'global mindset' that will make them better equipped to manage complex problems, often involving political, economic or cross-cultural dimensions (See also Catterall, et al., 2002; Nummela et al., 2004) . My

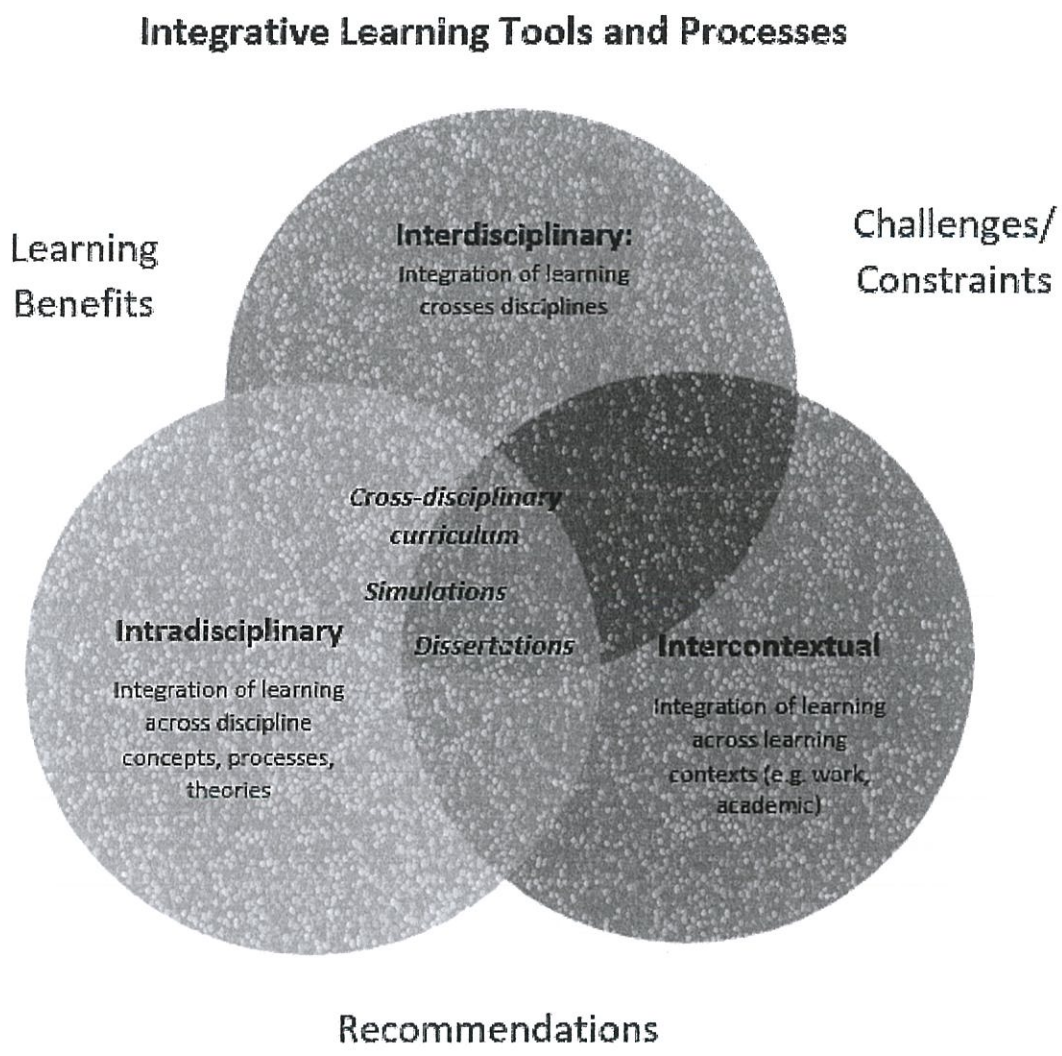
[1] (According to Stember (1991) cross-disciplinary means viewing one discipline from the perspective of another and interdisciplinary means integrating knowledge and methods from different disciplines, using a real synthesis of approaches. They are often used interchangeably however as I do here).

research explores the benefits and constraints associated with developing international marketing *curriculum* that includes exposure to other social science disciplines like political science, political economy and cultural anthropology as a means to develop such a mindset.

Figure one presents a framework of my research across simulations, dissertations and curriculum development. As teaching tools and approaches, each involves more or less intradisciplinary, interdisciplinary and intercontextual thinking, depending on how they are structured. While the literature on integration in higher education or that on integrative practices in marketing education provide insights into different ways of integrating marketing and cross disciplinary knowledge (e.g. Elam & Spotts, 2004), it is limited in terms of investigating the challenges faced by the educator or students in using these approaches or how they can be managed. For example, Craciun & Corrigan (2010) provide a list of factors that could inhibit the use or effectiveness of integrative learning approaches such as finding materials, motivating students to take courses offering integrative projects, and dividing the work equally among academics, but they do not investigate them. In addition, the more general literature on integration of learning has considered how students integrate knowledge, but despite recommendations to educators to deliberately teach integration skills, few have yet to provide evidence-based examples of what works (e.g. Youatt & Wilcox, 2008).

Using qualitative, quantitative, literature based and case study approaches, my research looks at institutional, situational, student and tutor-based factors that can affect the design, development and outcomes of integrative learning approaches. I also investigate and provide recommendations for ways to improve their implementation and learning potential.

Figure One: The integrative dimensions of simulations, dissertations and cross-disciplinary curriculum in marketing education.



In the next section, I outline my educational and research philosophies and how these have influenced my teaching approaches and research methods.

3. Research Philosophy and Methods

As Morrison (2007) notes, research choices about educational matters "*are guided implicitly and explicitly by researchers' practical, personal, professional and/or disciplinary interests*" (p. 8). While solving educational problems, enhancing student learning outcomes or exploring approaches are the main aims (Biesta & Burbules, 2003), educational research is also influenced by one's educational philosophy and its inherent ontology, epistemology, preferred teaching and learning methodologies and methods. My teaching and research approaches have been influenced by the educational philosophy of constructivism.

From an ontological perspective, constructivism is based on the idea that truth or reality is socially constructed and negotiated (Biesta & Burbules, 2003). This perspective is associated with a subjective epistemology in which individuals construct their own world view, generating knowledge

and meaning from an interaction of context, assumptions, motives, intentions, and previously acquired knowledge with new ideas in a given context (Sutinen, 2008). Constructivists argue that there are multiple interpretations of reality and not one objective truth (objectivism). As a philosophy of education, some constructivists, often called radical constructivists (e.g. Von Glasersfeld, 1995), see the student as having the main responsibility for learning and for constructing his or her own knowledge with the teacher playing a minimal role. Most constructivists, however, argue that context of learning is important to how students construct knowledge and since that context is generally made up of both peers and teachers with whom students are interacting with, we cannot ignore the influence of others on learning (Wertsch & Toma, 1995). Teachers, for example, are not value neutral actors; rather, they are making curricular choices, and interpreting and responding to situations based on their beliefs, assumptions, experiences and on local constraints (Sutinen, 2008) and therefore it is difficult to claim that their individual values/contexts play no part in their decisions and actions.

Constructivism is not a pedagogy; however, many learning methodologies or approaches have been influenced by it. These include experiential learning, problem-based learning, reality-based learning, and discovery learning (e.g. Sherwood, 2004; Smith & Van Doren, 2004; Kolb & Kolb, 2007). The theme that connects these methods is that learning happens best when students use active, hands-on approaches to constructing knowledge. Proponents argue that learning is more powerful when it is situated within the context it applies to, and where the individual can bring his or her own experience to the current situation to build and test new knowledge that is meaningful for them (Sutinen, 2008).

As noted, experiential learning is a constructivist pedagogy. Gray, Peltier and Schibrowsky (2012) state that active or "*experiential learning is a cornerstone of marketing education and a signature pedagogy for the discipline*" (p. 233). Experiential learning approaches in marketing education include simulation games, live-case projects, consultancy, educational drama, field-trips, and work placements, among others. The underlying assumption supporting the use of these methods is that students learn about marketing through experiencing aspects of the marketing function for themselves, rather than just being told about it from teachers and teaching-related resources such as textbooks, videos, and case studies. Following from Strauss's (2011) definition of experiential learning as ... "*[requiring] students to learn new material, reflect on it, connect it with previously learned experiences and concepts, apply it to complex, semi-structured problems, and internalize the new knowledge*" (p. 313), we can say that dissertations are also a form of experiential learning. Indeed, experiential learning, particularly when viewed from Kolb's (1984) experiential learning cycle - concrete experience, reflective observation, abstract conceptualisation, and active experimentation, requires integration of previously learned material with new ideas in at least two of the four stages.

The educational and pragmatic philosophers, Charles Herbert Mead (1932) and John Dewey (1955) were both early theorists of constructivism. However, while many later thinkers argued that all or almost all learning should be 'learning by doing' with minimal direct instruction from the teacher (see for example Von Glasersfeld, 1995), both Mead and Dewey saw a more substantial role for the educator including direct instruction. In Dewey's (1998) view, for example, the teacher builds the framework for learning and helps '*interpret and construct the problem*' (Sutinen, 2008, p. 9) for

students who may be facing challenges in learning. More recently, Kirschner, Sweller and Clark (2006) argue that evidence from neuroscience demonstrates that teachers must at times provide a pretty substantial framework for what is to be learned, particularly when the material is new to the students. They should also step in to structure and scaffold the learning to help students make connections between ideas. In the words of Reeves and Okey (1996), I am therefore a 'moderate constructivist' and support "*the integration of direct instruction with opportunities to explore, experiment, and problem solve*" (p. 192). The important role that I see for the educator has influenced my research objectives, in particular investigating what lecturers see as the main challenges student face with simulations and dissertations. The important role of context in shaping student learning has influenced my research into the institutional, situational, and student based factors that impact on learning environments, outcomes and content. Finally, at the heart of all my work are the students who are constructing their own knowledge and developing thinking and cooperative skills within these multifaceted, integrative contexts.

Since constructivism is associated with the research paradigm of pragmatism, the next section discusses my research philosophy and methods.

Research methods

My research sits with the philosophical paradigm of 'pragmatism', a diverse philosophy developed by Charles Herbert Mead, William James and John Dewey, among others (Thayer, 1982). It was John Dewey who made the greatest overall contribution to pragmatism in educational research and as noted above his perspectives have infused my teaching as well as my research. The main perspectives of Dewey's (1998) pragmatism are:

1. The value of inquiry lies in its impact on practice and its practical consequences.
2. Educators should themselves be investigators.
3. The emphasis on inquiry is the problem being investigated; methodology and methods follow from the type and nature of the problem and will take into account any situational constraints.
4. Truth comes from experience; experience is the interaction of the researcher with his or her environment and social context; knowledge is therefore socially constructed (this is really the essence of constructivism) and inquiry is laden with values, beliefs, and assumptions; we research particular things because we are interested in and value them;
5. Research conclusions are not fixed because the world is ever changing and each problem we examine will have its own unique issues for which past conclusions may not serve; thus educational research is ongoing.

Pragmatic research is about addressing questions and finding solutions to problems found in practice and the value of research in this paradigm is measured by whether the conclusions provide useful advice or help (marketing) educators see problems in a new light (Hall, 2013). Writing on Dewey's educational research perspectives, Biesta and Burbules (2003) note that

> ...[e]ducational practice is the beginning and the close of all educational inquiry...It provides the data and the subject matter that form the problems of inquiry and.... practice is 'the final test of value of the conclusions of all researches' (Dewey 1929b, p.16 as quoted in Biesta and Burbules, 2013, p. 79).

Furthermore, since educators are those who are dealing with issues in practice, they should themselves be investigators of educational practices and outcomes in order to find solutions and new ideas for their own contexts (Biesta & Burbules, 2003).

Most marketing education researchers are interested in investigating ways to improve student learning (Gray, et al., 2012), and the main journals in the field[2] are pragmatic in orientation. They invite research that focuses on ways to enhance marketing education, on new teaching techniques, new theories of education, or new perspectives on the life and working environment of marketing students, graduates and educators (Steward, M., 2015, Editor at the Journal of Marketing Education (JME) in correspondence with the author). For example, the 'about us' section of the Journal of JME web site, notes that editors look for "the latest teaching/learning strategies and tactics in marketing education" and submissions are judged on their significance in improving learning (Journal of Marketing Education(b), n.d.)

Because pragmatic research is focused on the problems or concerns of educational practitioners, no particular research methodologies or methods are recommended a priori. Dewey's (1998) guidance on methods is to not exclude any particular type but to choose a method or methods 'intelligently', given the nature of the specific problem at hand (Hall, 2013). In addition, Garrison (1994) notes that pragmatic researchers should continually reflect upon and be frank about how their own values, beliefs, assumptions and interests guide their choices, explanations, theories and approaches. Furthermore, from the pragmatist's viewpoint, all inquiry is contextual and thus influenced by factors such as one's research community, institutional priorities, ethical guidelines, particular journal interests and requirements, and by resource constraints such as time and cost. According to Biesta and Burbules (2003), researchers should also acknowledge how these situational factors have influenced their choices.

My own research approach has followed the practice of other marketing educators who publish in the main journals in the field. While the majority of articles in the two main journals – the Journal of Marketing Education (JME) and Marketing Education Review (MER) are empirical (74% for JME and 62% for MER during the period 2000-2009) (Gray, et al., 2012), they do not espouse a particular research paradigm or philosophy and authors rarely explain their methodological theory. Neither the journals' publication guidelines, nor, from my experience, the comments of reviewers include requests for these aspects of an author's work. A clear explanation of the study design, methods used and data analysis are what they require and they seek pragmatic outcomes – how the findings will impact practice (e.g. Journal of Marketing Education (b), n.d.).

My own research has also been influenced by various situational factors. For example, our work on simulations and numeracy and financial skill development (Brennan & Vos, 2013) involved a form of quasi-experiment that did not include a control group as is normally expected (see Trochim (2006) on quasi-experimental designs). Our University ethical guidelines would not allow us to run the simulation for some students while giving other classmates a separate learning experience; nor would we have deemed this acceptable. Time and financial constraints affected the size of our

[2] The main journals in marketing education are: Journal of Marketing Education, Marketing Education Review, Journal for the Advancement of Marketing Education

sample for another study on simulations – tutor perspectives the use of simulations and the challenges involved-- since the interviews involved travelling to different Universities across the UK.

Finally, Dewey (1998) argues that findings from research help to address problems in specific situations; *"even if that [research is] something called a 'representative sample'... it can never tell us once and for all what to do"* because each educational problem will be unique in some way and it is up to educators *"to use the outcomes of research in their own practical inquiries and in the judgments involved in their problem solving"* (Beista & Burbules, 2003, p. 110). In summary, pragmatists, do not see research as providing lasting solutions or answers to educational challenges or questions, but rather as offering new intellectual and practical resources for educators day-to-day problem solving and to provide insights into new approaches. One of the main reasons cited for the lack of durability of findings is that the educational environment is constantly changing; *"educators today are challenged by issues that did not exist previously"* (Biesta & Burbules, 2003, p.111). Input from professional marketers on what skills graduates need, new technologies, and newly emerging discoveries about how students learn are just some factors that have created different educational priorities and thus new directions in marketing education research. In the 1980s and 1990s assessment was a key theme in the research; while it is still important today, a more recent priority has been the investigation of how technology is affecting marketing careers and marketing education (Granitz & Pitt, 2011). This has led to greater interest in simulation games in marketing, for example, and to interest in my own published works in the area.

In summary, my research into integrative teaching approaches as a way to enhance students' thinking skills and career prospects has been within the pragmatic paradigm. My choice of methods and research designs have been motivated by my own perspectives and experiences, by the marketing education research community (including journals in the field) and by situational factors such as ethics, time and cost constraints. Naturally, all of my work has resulting limitations and I have tried to be open and clear about them in my writings. It is these approaches to and characteristics of my research that situate my work within the pragmatic paradigm. Table one provides a summary of the research methods used in my publications.

Table One: Research methods employed 2009-2015

Publication type	Paper	Main theme	Method(s) used
Working paper	Brennan, R., Vos, L., & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press.	Student perspectives on simulation games	Quantitative -Survey
Journal article	Vos, L., & Brennan, R. (2010). Marketing simulation games: Student and lecturer perspectives. *Marketing Intelligence and Planning*, 28(7): 882-897.	Student perceptions of the learning from simulation games and lecturers perspectives on their value and challenges	Quantitative and qualitative: Survey of students, interviews with lectures

Journal article	Vos, L. (2014). Marketing Simulation Games: A review of issues in teaching and learning. *The Marketing Review*, 14(1): 67-96.	Analysis of the simulation game literature and research; key themes, debates and recommendations	Literature review and analysis
Journal article	Vos, L. (2015). Simulation games in business and marketing: How educators assess their students. *International Journal of Management Education,* 13(1): 57-74.	How tutors who use marketing simulation games assess their students; principles and practices of assessment	Mixed methods – survey+ interviews
Journal article	Brennan, R., & Vos, L. (2013). Effects of participation in a simulation game on Marketing students' numeracy and financial skills. *Journal of Marketing Education,* 35(3): 259-270.	Do simulation games improve student's numeracy and financial skills and do they improve students' self-efficacy with numbers?	Quasi experimental without control group
Journal article	Vos, L. (2013)(a). Improving international marketing programmes to reflect global complexity and risk: Curriculum drivers and constraints. *Journal of Teaching in International Business,* 24(2): 81-106.	Drivers and constraints in developing a more cross-cultural international marketing programme at postgraduate level	Case study
Report	Vos, L. (2013)(b). *Dissertation study at the post-graduate level: A review of the research.* York: Higher Education Academy.	Analysis of the literature and research on dissertations: challenges and recommendations	Literature review and analysis
Working paper	Vos, L., & Armstrong, K. (2015). Perceptions of the Challenges associated with supervising postgraduate marketing dissertations in the UK. Greenwich University Working Papers, Greenwich.	Supervisor perspectives on the challenges associated with postgraduate marketing dissertations	Qualitative - interviews

4. Commentary on published works

The following commentary considers how my published works have demonstrated the educational benefits of integrative learning tools and curriculum, provided recommendations for educators and illuminated various challenges and constraints to their use and development. I have grouped the discussion by themes in my research into simulation games, cross disciplinary curriculum and dissertations.

4.1 Simulation games: Integrating marketing and business concepts in complex competitive environments

My simulation game research comprises four journal articles and one working paper; each is discussed below.

Simulation games have been used in marketing and business education for over 50 years and games in business and management have been researched extensively (e.g. Bredemeier & Greenblat, 1981; Faria et al., 2009). As noted above, one of the main learning benefits is that simulations require students to integrate conceptual and functional decision areas from many modules taken over the course of their degree and thus gain a more holistic perspective on marketing decision making. They also allow students to practice higher level skills valued by employers including communication, goal setting, team working, problem solving, critical thinking, and analysis of both research and financial data (e.g. Hofstede et al, 2010). Games are inherently experiential and constructivist in learning orientation. In making decisions and interpreting results, students are actively constructing knowledge and meaning about how marketing decisions are made and reflecting on the process. With tutor support, the result can be a powerful pedagogy that allows for immersion and intense, extended experiences of problems and contexts similar to the real world.

As introduced above, my work on the educational *benefits and challenges/constraints* of simulations as integrative learning tools involved research on student and tutor perspectives, an analysis of the extensive literature on management and marketing simulation games, a study of how tutors assess student learning from simulations, and a more specific investigation into whether simulation games can enhance students' numeracy and financial skills. I have also made *recommendations* to enhance student learning from simulations. The limitations of my simulation research papers are noted at the end of this section.

4.1.1 Simulation games: Student perceptions of the benefits to their learning

- Brennan, R., Vos, L., & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press

The overall purpose of the research in the first paper by Brennan, Vos and Willetts (2008) was to understand better how students perceive and respond to marketing simulation games in order to make better use of simulations in the curriculum. Specific objectives concerned the differential responses of students to games based on demographic factors and prior educational and working backgrounds. A multi-part questionnaire was administered to 137 students at two UK Universities who had recently played a simulation called 'The Marketing Game!'. Students were asked to rate the learning value of simulations compared with 12 other learning methods (e.g. case studies,

seminar discussion, assignments, and lectures) on a scale of 1-5. Students ranked simulation games higher than all other learning methods listed.

We also measured student perceptions of their affective and cognitive responses to playing the game. Using 23-Likert-scale questions adapted from Brennan & Ahmad (2005) that included statements about business games and analysis skills, learning how strategy works in the real world, team working skills, and understanding theoretical concepts, among others, we identified what students believed they had learned from playing the game. The ten items with the highest mean score (scale of 1-4) were significantly above the scale mid-point of 2.5. Finally, students rated their enjoyment of the game as 8.01 on a 10 point scale despite initial claims that they found the game to be complex and difficult to understand. They were also strongly of the opinion that the simulation was a useful learning experience, that they had improved their team working skills and higher level thinking skills (e.g. application and analysis), and now had a better understanding of how business decisions areas are integrated. We found no significant differences amongst students based on the different factors tested, but found some evidence that older students who had worked full time rated the game higher in effectiveness than others, particularly for learning analytical skills.

The paper provided some support for the contention that complex teaching and learning approaches where students are required to integrate a range of concepts learned earlier and elsewhere, do not cause students to disengage but rather generally have the opposite effect. The majority of students find them challenging and enjoyable. Whereas other studies have demonstrated that complex learning activities can cause student frustration, often leading them to disengage with the process (D'Mello & Graesser, 2011) our study on student perceptions demonstrated an alternative perspective. The results of the study may have been biased by the fact that the survey was administered very soon after the students had played the game when they were still feeling enthusiastic about the learning experience compared to other approaches not experienced recently. For example, in Karns' (2006) study of marketing student preferences for various learning methods, students scored simulations lower than internships, field trips and class discussions; however, they were still in the top 7 of 21 preferred learning activities. Other studies on simulations conducted both before and after our own also demonstrate student's affective and cognitive perceptions; students were enthusiastic about them and felt they had learned a great deal (e.g. Bredemeier & Greenblatt, 1981; Loon et al., 2015). A meta-analyses of business game simulation research carried out by Faria et al., (2009) supports our findings that students see simulations as improving their analysis and decision making skills better than many other learning approaches.

4.1.2 Simulation games: Tutor perspectives on their benefits and barriers to use

Additional research on tutor perspectives was carried out to develop the working paper into a journal article (Vos & Brennan; 2010). We considered the *benefits* of games as perceived by the marketing educator, and the *challenges* they face. We received a small research grant from BMAF (Business, Management, Accounting and Finance Network) to carry out eight interviews at UK Universities. The paper added to our understanding of the reasons why perhaps more educators do not use them despite enthusiasm from students and positive benefits to learning cited in the literature. The educators interviewed were very positive about simulations and many felt that they offer an unrivalled method for teaching important work-based skills such as team work, decision-making, meeting deadlines, and integrating and analysing numerical data frequently encountered by

marketing managers. Educators also felt that no other learning method could provide the same level of practice or depth of learning. There was a striking level of commitment from the majority of the interviewees to the use of simulation games, with most putting in a great deal of time and effort to support students and to provide a powerful learning experience.

Tutors also discussed challenges to simulation use and their views on potential barriers to adoption; particularly cost, time needed to study the game, the steep learning curve, and the difficulty of finding unbiased advice about suitable games to deliver desired learning outcomes. Two other studies corroborate our findings on barriers to use. Faria and Wellington (2005) found that the two most common reasons given for not adopting business-related games is the lack of preparation time and the lack of information on available games. Using a sample from a wide range of disciplines, Lean, Moizer, Towler and Abbey (2006) initially found support for the barriers identified in our and the Faria and Wellington (2005) study. However, upon deeper analysis of their survey findings they found that the claims of insufficient time and resources appeared to be hiding educators' lack of confidence in using them. This may explain our finding that most tutors who use games are lone enthusiasts within their departments and have difficulty encouraging others to adopt games or to engage with them as part of a teaching team.

Our paper has continued to generate a great deal of interest and requests for assistance, hosting of workshops and input into product design (more on this below). To date, the paper has been viewed/read 70 times (researchgate.net) and cited 20 times (scholar.google.com). Although the study was limited by the small sample, it has added to the literature on learning *benefits* of games and also added to the limited research into the *challenges* that marketing tutors in particular face in using them.

4.1.3 Simulation games: Measuring specific learning benefits – numeracy and financial skills

- Brennan, R., & Vos, L. (2013). Effects of participation in a simulation game on Marketing students' numeracy and financial skills. *Journal of Marketing Education,* 35(3): 259-270.

My early research studies on simulations increased my interest in learning about their specific *benefits*, how other educators use them in the classroom, and what *challenges* they face. In terms of specific benefits, I was interested in whether simulations contribute to developing skills that are often deemed to be particularly weak amongst marketing students, those of numeracy and financial skills (e.g. Ganesh et al., 2010; Pilling, et al., 2012). A number of studies have demonstrated the benefits of simulations in developing team working skills (Wolfe, 1997; Doyle & Brown, 2000), in reflecting and teaching the actual knowledge and problems faced by professional marketers (Faria & Wellington, 2005), in better preparing students for employment (Wolfe & Roberts, 1993), in developing analytical and strategic skills (Wolfe, 1997; Klassen & Willoughby, 2003) and in motivating and engaging students (Garris et al., 2002). However, although simulation games require students to work with numbers and financial data, there was a gap in the literature on the benefits of marketing simulation games in developing students' numeracy and financial skills.

My co-author and I hypothesised that a marketing simulation game is a good medium for learning about quantitative and financial concepts because a simulation game is an engaging learning experience that students become absorbed in and thus business and marketing students will find it easier to acquire numerical and financial skills when they are contextualized in a simulated real-

world experience. We also sought to determine if students' self-efficacy with numbers would increase after they had played the game because many undergraduate students in social science subjects are known to lack confidence with numbers and have math anxiety (Zeidner, 1992). Self-efficacy is a concept developed and tested by Bandura (1997) and is the self-evaluation of one's ability and/or chances for succeeding on particular academic tasks.

We received an Academy of Marketing teaching and research development grant in 2011 to support the single-institution exploratory study at a university in London. We used a modified quasi-experimental design involving a test taken by 127 respondents before game participation and 88 respondents after game participation. The study did not meet the full requirements of a quasi-experimental study because it did not have a control group (Trochim, 2006), as noted above, for ethical reasons.

The test had four components – a set of demographic and previous educational background questions; a set of self-efficacy questions designed using scales (Betz & Hackett, 1983), 10 numerical questions and 5 questions related to financial accounting. The questions were designed to be at the level expected of a typical English school leaver; specifically, the easier questions matched the foundation and higher tier levels of the English General Certificate of Secondary Education in mathematics whereas harder questions slightly exceeded this level. The financial accounting questions came from an introductory marketing textbook.

We found that there were substantial and significant improvements in most students' numerical and financial performance after participating in the simulation game, but that there was no improvement (and possibly a small decline) in self-efficacy related to these tasks. Thus, we were able to demonstrate that when maths-related learning is integrated within an enjoyable learning experience and one that requires them to use maths skills weekly, skills can be improved, even if it does not increase students' confidence that they can succeed with maths. In addition, our quasi-experimental method allowed us to go beyond perceptual studies to measure actual learning gains from simulations (numeracy and financial skills).

The paper has been cited 8 times (scholar.google.com).

4.1.4 Simulation games: Analysis of key themes in the literature

- Vos, L. (2014). Marketing simulation games: A review of issues in teaching and learning. *The Marketing Review*, 14(1): 67-96.

In my role as UK Discipline Lead for Marketing at the Higher Education Academy (2011-2014) and as Director of the Education Sub-Committee at the Academy of Marketing, I hosted two marketing education workshops, one based on marketing simulations and one that invited other academics to discuss their own educational research. An outcome of these workshops was a request from the editor of the Marketing Review to guest edit and submit a paper for a volume on marketing education. In preparation for the workshops and guest editing, I undertook a review of the literature on management and marketing simulations over the past five decades (Vos, 2014). The paper identified the main themes in the literature, the types of research most commonly used to investigate learning gains from simulations, the challenges most often investigated, and recommendations for mitigating them. Among the challenges are issues associated with measuring

the validity of games as learning tools, selecting and implementing games, experiential learning and team work. In addition the paper underscored the critical role of the tutor in providing ongoing support and clarification.

I found that one of the most researched themes in the business simulation games literature during the period from 1960 to the late 1990s was whether simulation games increased students' higher level cognitive skills (application, synthesis and evaluation) from Bloom's taxonomy of learning (e.g. Gosen & Washbush, 2004) and whether this learning could be objectively measured using post-game paper and pencil tests. As Anderson & Lawton noted in their 2009 meta-analysis of these studies, *"we have continued to be very disappointed with how little we can objectively demonstrate regarding what students learn from participating in simulation exercises"* (p. 200). Most of these studies are positivist in orientation and reject other research that asks students what they learned as being too subjective and thus not valid as measures of learning gains.

My analysis of the literature demonstrates how the attempt to measure learning gains using objective (generally multiple-choice) post game tests and Bloom's taxonomy has led to an underestimation of the learning that takes place from simulations; furthermore, that it is in fact very difficult to objectively measure learning gains on Bloom's taxonomy beyond knowledge and comprehension for any form of learning, particularly using paper and pencil tests (e.g. Thavikulwat, 2012). In the past fifteen years, this kind of research has fallen out of favour. Researchers now use other measures of learning benefits from games, including whether game decision making architecture mirrors decision making in marketing careers (Faria & Wellington, 2005) and how the integrative nature of simulation learning helps prepare students for decision making throughout their lives (Faria, 2001; Hofstede, et al., 2010). Furthermore, studies have shown that student reports of what they have learned are often quite accurate, particularly if they appear in reflective writing assignments or in self-assessments of their learning (Hattie, 2008). Other researchers are investigating new ways to measure and enhance student learning from games. For example, Phillips and Popovic (2012) have demonstrated how games promote mastery learning and act as a continuous process of improvement by giving students many opportunities to work on essentially the same problem.

The review article also identified key themes in the research on how to improve the learning from simulations. In particular the literature emphasises the critical role of the tutor and supports the 'moderate constructivist' view that the tutor, in providing cognitive and emotional support to students during the game, can greatly enhance the likelihood that deeper levels of learning will take place. Scaffolding refers to the role of the teacher in first diagnosing students' current understanding of a topic and then applying instructional tools to bridge any gaps between what they currently know and what they are expected to know or do (Rosenshine & Meister, 1992). With simulations, tutors who actively engage in scaffolding enhance students' learning (e.g. Wilson et al., 2009). Tutors are better able to do this the more they have practiced and learned the game themselves because this prior understanding is critical to their diagnosing students' decision results and identifying weaknesses in understanding (Issenberg et al., 2005). By providing formative feedback and well-structured debriefing conversations, tutors can assist students in understanding their failure to meet objectives and help them link theory to practice. Crookall (2010), for example, argues that the real learning from simulations comes from the debriefing and not from the game itself, so it is important

for tutors to spend time analysing student decision results and then discussing them. If students are to become more effective in integrating their learning, debriefing by the tutor and reflective practices by the student are critical (see also Mawdesley et al., 2011) and this is supported in Barber's (2009, 2014) work on integration of learning. The marketing simulation literature mentions 'integration' of learning and ideas as a key benefit of simulations but does not make reference to the theories of integration of learning as developed by Barber(2009). Barber (2009) on the other hand does discuss the importance of scaffolding to integration of learning. His suggestions that tutors explicitly require students to revisit prior theories and concepts learned in other contexts and that the tutor fills in the gaps with suggestions and examples also sounds very much like debriefing and formative feedback.

4.1.5 Simulations: Assessment practices and outcomes

Vos, L. (2015). Simulation games in business and marketing: How educators assess their students. *International Journal of Management Education,* 13(1): 57-74.

My paper on how tutors assess student learning from simulations (Vos, 2015) filled a gap in the literature. While many researchers have investigated what students learn from simulations, and some have investigated how educators assess business games (e.g. Gosen & Washbush, 2004), none has looked at how marketing educators assess the learning that has taken place. As Phillips and Popovic (2012) note, *"games with assessment components give teachers the opportunity to assess more complex skills than traditional tests can capture and give a more comprehensive understanding of what students know"* (p.28) so identifying how tutors assess their students and what they believe works is important to investigate.

The paper also inquired into educators' assessment practices and whether there were similarities in this regard. In particular, the paper sought to gauge the degree to which tutors employ evidence-based assessment practices that have been demonstrated to enhance student learning outcomes. I chose the body of literature on authentic assessments (AA) as the basis for this evidence-based set of practices for two main reasons. First, it is a robust research area with a depth of empirical studies seeking to conceptualize, operationalise and test the value of the stated principles as contributing to student learning. (E.g. Newmann et al., 1996; Jackson et al., 2002) and second, AA is a form of assessment that uses real world or practical examples as its basis, similar to simulation games. Other authentic assessment principles include the requirement that students perform (be experiential) and/or create a 'product' as output and that the tasks be intellectually challenging and of sufficient complexity. In addition, AA should provide students with multiple assessment opportunities (both formative and summative), regular feedback, clear briefing on assessments (so they become 'assessment-literate'), opportunities for reflection, and be collaborative (e.g. Darling-Hammond & Snyder, 2000; Schell, 2000; Gulikers et al., 2004). The tenets of authentic learning are based on principles and practices in constructivist-based education.

The study used a mixed-methods approach beginning with a survey of 35 business and predominantly marketing game users followed by in-depth interviews with eight of those who responded to the survey. While the survey used open-ended options and a number of scales in order to obtain additional qualitative information, the interviews allowed further exploration of tutors' principles, practices and experiences with simulation assessment. The majority of the respondents

provide a range of assessment opportunities for students including presentations, quizzes, reports, and in most cases, reflective essays or logs. They also emphasised how critical weekly formative feedback and debriefing sessions are to student learning. The survey and interviews demonstrated a surprising consistency in the approach to assessment used by simulation tutors and that the majority use all authentic assessment practices.

A particularly important finding from the study, however, is that even with plenty of tutor support and many opportunities to demonstrate their learning, some students do not perform well on simulation assessment. When asked why they thought some students performed poorly, tutors reported that skill weaknesses were a problem, in particularly weaknesses in numerical, financial, analytical and critical thinking skills. They noted that weaker students fail to engage with the simulation, had globally poor attendance rates, and did not undertake the necessary prior reading. Those who performed less well were also not able to link theory to practice, think strategically or work well in teams and these did not improve over the course of the game. My previous research (Vos & Brennan, 2010; Brennan, et al, 2008;) demonstrated that the majority of students believed they had made cognitive learning gains in analysis, critical thinking, and strategy and that many students did improve their numeracy and financial skills. The paper on assessment, however, provided evidence that, from the educators' perspective, this is not the case for all students. Tutors felt that weak prior skill development and lack of engagement with the simulation could not be overcome during the course of the module to move some students into higher levels of cognition. This provided a needed counterpoint to the generally positive literature on student experiences with and learning from simulations. It also presents a challenge to those who use integrative learning tools and a basis for future research into ways to engage weaker students. To date, the paper has been read 28 times (researchgate.net) and achieved 3 citations (scholar.google.com).

4.1.6 Simulation research – limitations

My single and co-authored simulation research has a number of limitations. The small sample sizes used in the empirical work mean that the findings on student perceptions, tutor views and on improvements in numeracy skills cannot be generalised. Fortunately, quite a lot of other research – albeit across business subjects not only marketing --supports the findings on student and tutor perceptions of their value and tools for learning (e.g. Chin et al., 2009). The validity of the quasi-experiment and findings in the numeracy paper is limited by it being a single institution study that did not include a control group. Furthermore, since the results of the learning were measured just after the students' had completed the game, we cannot claim that the improvement in numeracy skills were long lasting. Also, as noted, undertaking the research into student's affective and cognitive responses so soon after the simulation may have biased their responses as presented in the first paper.

The literature review paper could have been improved with a more rigorous approach to identifying key themes. Content analysis could have been valuable in this paper. In addition to the small sample used in the assessment research, some consideration as to why simulation games lend themselves so well to authentic assessment regimes could have further added to our understanding of AA and experiential learning activities.

4.2 Cross-disciplinary curriculum

Paper: Vos, L. (2013) (a). Improving international marketing programmes to reflect global complexity and risk: Curriculum drivers and constraints. *Journal of Teaching in International Business,* 24(2): 81-106.

My research into curriculum drivers and constraints associated with developing a more integrative, cross-disciplinary approach to postgraduate programmes in international marketing (Vos, 2013) was founded on the premise, introduced above, that decision making in international environments is complex, unpredictable, and occurs within more volatile and variable macro environments – a contention supported by both the literature and key stakeholders (e.g. Alden et al., 1991; Chew & McInnis-Bowers, 2004; Aggarwal, 2011).

My objective was to highlight evidence of the *benefits* of a more cross-disciplinary curriculum, particularly one where the macro-environmental factors culture, politics and economics are covered in more depth than one finds in the typical postgraduate international marketing programme. I considered in some detail how the concepts of political and economic risk can be integrated into the curriculum using resources from the disciplines of international politics and political economy. Given that the literature on developing curriculum in marketing is very limited (Dennis, 2014), I also sought to investigate both the *drivers* and *constraints* that support and hinder the development of marketing curriculum, particularly within a UK context. The paper followed a *case study approach* based on the redesign of a Master's programme in international marketing at a large London-based university. The conceptual framework of drivers and constraints was designed following a review of the professional and academic literature on curriculum development as well as that on the content and pedagogy for international business and marketing programmes.

Drivers, as noted, include the professional and academic literature on managerial competencies for operating in international environments. Other drivers include the built-in resource of having a large population of international graduate students from which to draw experiences and examples and the UK higher education authority (QAA) subject benchmark statements for postgraduate business programmes on the skills and knowledge that graduates should have. The main constraints for a more cross-disciplinary curriculum are largely institutional and situational in nature and are related to time, resources and university management priorities that can restrict innovation. In addition, current international marketing textbooks were shown to be too limited in the depth and theoretical discussion of politics, economics and culture to meet the professional requirements for greater knowledge and skills in these areas (e.g. Priovolos, 1987; Leonidou, et al., 2007). The paper provided a set of guidelines for how an integrated cross-disciplinary programme could be created using the drivers and constraints as a framework. It also provided *recommendations* for programme structure and content.

Student reports for the two years following the set-up of the programme were very positive, particular with respect to the new module on political and economic risk, and student engagement with the programme was high. The paper is limited, however, because it is a single case study that does not provide information on the outcomes of the redesign and how the students' benefited

from the integration of other disciplines themes and approaches. Empirical research is needed to determine whether the new curriculum enhanced students' career prospects or addressed concerns about graduates critical thinking and problem solving skills in international contexts. In addition, evaluation is needed on whether the content selected was the most appropriate for developing these skills and prospects.

4.3 Dissertations as integration of learning – tutor and student perspectives

- Vos, L. (2013) (b). *Dissertation study at the post-graduate level: A review of the research*. York: Higher Education Academy.
- Vos, L., & Armstrong, K. (2015). *Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK.* Greenwich: University of Greenwich Working Papers.

Dissertations are similar to simulations in that they require students to integrate a range of prior learning and skills and to do so in a relatively time-constrained environment. Anecdotal, experiential and research data show that tutors and students are often dissatisfied with the experience and find it challenging (Delamont et al., 1998; McCormack, 2004; Armitage, 2006). My work on dissertations focuses more on the *challenges* and *recommendations* for improving the learning and less on learning benefits. The first paper is a critical review report (Vos, 2013) synthesizing a range of studies from across disciplines on what both educators and students find to be the main challenges of dissertation study and to provide key recommendations for managing these challenges. Five themes were identified in the literature that contribute to dissatisfaction and poor outcomes: the student-supervisor relationship; problems with teaching and learning research methods; difficulties in managing student motivation through various stages; the challenges of student diversity, cultural background and prior preparation; and, issues related to academic dishonesty.

Of particular interest are the differences in perceptions between the experience of students and that of supervisors. Among the many differences, students often complain that supervisors take too long and provide inadequate feedback, can be difficult to contact and that the tutor often takes the student's understanding and prior learning for granted. Conversely, supervisors complain that students demonstrate poor time management, often not showing up for scheduled meetings or contacting them until very late in the process, and that many lacked motivation for the dissertation. Despite students perceptions that their knowledge of the process is taken for granted, supervisors have concerns with students' preparation to undertake a dissertation, arguing that their skills and knowledge of the process are weak even after research training (Dong, 1998; Lumadi, 2008; Drennan & Clarke, 2009).

Students' challenges with the dissertation process are particularly acute in narrowing down a topic for research, in critically reviewing the literature, and in applying concepts learned in research methods. As noted above, many students may be undertaking these processes for the first time, or for the first time over such an extended piece of writing. Bransford, Brown and Cocking (2000) have argued that if the student has limited experience of the original concepts, did not learn them well the first time or were taught a subject like research methods, for example, that was overly contextualised to marketing research, then the student will have problems integrating the necessary skills and concepts in the academic dissertation.

The report led to the first of two requests for workshops with marketing dissertation supervisors, this one from Royal Holloway in 2013. The comments of tutors were remarkably similar to the findings from my research on what challenges academics face, thus adding some validity to those findings. Their comments also confirmed another finding from the literature that most supervisors work independently and rarely share ideas or good practice (Armitage 2006). While the reasons may be different, it is interesting that both dissertation and simulation tutors tend to work alone thus minimising the potential to improve collective knowledge on these integrative experiences. The report concludes with recommendations from the literature on how to mitigate the challenges associated with the five themes and 25 subthemes.

Findings from this report set the foundation for a co-authored research study into UK postgraduate marketing educators' experiences with dissertation supervision. Our aim in this working paper was to investigate whether they face similar challenges to those in other disciplines (Vos, L., & Armstrong, K. (2015). *Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK.* Greenwich: University of Greenwich Working Papers). Interviews were carried out with ten marketing dissertation supervisors at UK Universities and the paper reported on their perceptions of the process, the challenges students face and other factors that educators see as hindering both students' and tutors' from getting the most out of the experience.

The paper used a conceptual framework developed from the work of Biggs (1999) and Astin (1970) on factors that affect learning in higher education. Biggs' (1999) 3P model (presage, process, and product) and Astin's (1970) inputs-environment-outputs model (IEO) set out a range of factors that are contextual to the learning situation and exist prior to it. From their work, we extracted two groups of factors that affect and influence the learning experiences and outcomes of students doing postgraduate dissertations, namely *contextual* factors (student, institutional, and situational) and *process* related factors (procedural, transactional and relational). The interviews with supervisors were analysed for evidence of these factors. In addition, we found that the challenges discussed by the respondents were very similar to those identified in the earlier report (Vos, 2013). However, this paper added the impact of institutional and situational factors on the dissertation experiences and outcomes. For example, respondents felt that research methods courses are generally not appropriate preparation for an academic dissertation and that both they and the majority of students had too little time in a one year's Master's degree to learn the needed skills and to complete a good dissertation. The time pressure particularly affects those from overseas, however, making the dissertation an even more challenging experience for this cohort.

5. Originality and Impact

The following section will highlight the theoretical, educational practice and managerial impact and/or originality of my work.

Theoretical contributions

1. The ability to integrate learning from across the marketing discipline, from marketing and other disciplines, and from academic and professional contexts is deemed essential for the

challenging problems graduates will encounter in their working lives (e.g. Elam & Spotts, 2004). As Schneider (2008) notes, "*above and beyond the lenses of a particular discipline, employers need workers who can, in a systematic way, reflect on what they are encountering in the field and use insights gained in the field to question, to modify, to connect, and... to integrate things they learned in academic settings*" (p.3). Researchers have demonstrated how students integrate knowledge (Barber, 2009) and provide recommendations for curriculum design and learning approaches that build these skills (Huber et al., 2005; Kuh, 2008; Craciun & Corrigan, 2010). My work has highlighted particular benefits of integrative learning experiences in marketing education: high levels of student engagement (simulations), cognitive and affective learning gains (simulations), and preparing students for more complex working environments (simulations, cross-disciplinary curriculum). A particular contribution has been the potential of simulation games for developing students' numeracy and financial skills, a key concern of marketing educators and employers (Ganesh et al., 2010). After the study was published, we received a request from the American Psychological Association Psyctests database (http://www.apa.org/pubs/databases/psyctests/index.aspx) to add our scale on students' self-efficacy with succeeding at numeracy and financial tasks to their database. The paper remains the Journal of Marketing Education editors' first choice paper for evidence-based marketing education methods (Journal of Marketing Education (a), n.d.).

2. Research exists in marketing education for ways to development more integrative, cross disciplinary teaching (Alden et al., 1999; Elam & Spotts, 2004; Crittenden & Wilson, 2006), but within the broader integration of learning literature nor the marketing education literature is there much consideration of the perceptions of students and educators of the challenges or constraints to developing and implementing integrative learning experiences, nor what may hinder greater use of these approaches in marketing education (e.g. Peltier et al, 1995). The majority of studies make recommendations for how to design integrative experiences or provide case studies on implementing programmes, generally with positive conclusions (e.g. Schleede & Lepisto, 1984; Prestwich & Ho-Kim, 2007). On the other hand, my work has highlighted challenges to designing and implementing integrative learning experiences. Below is a summary of the institutional constraints, student and tutor-related factors that can be a hindrance to these experiences:

2.1. Situational factors and institutional policies, practices and resources:

- Developing a cross-disciplinary curriculum in a post graduate marketing course is hindered by management priorities that leave fewer resources available (time, people) for real curricular innovation. An additional hindrance is the limited time available in a one year Master's degree to cover a breadth and depth of topics from across disciplines (Vos, 2013a).
- The learning experience and outcomes from postgraduate marketing dissertations are also affected, mostly negatively, by the short time available to learn and integrate the many skills required (Vos & Armstrong, 2015).
- The structure of most degree programmes is such that modules are taught quite independently of each other and contextualised to their specific learning outcomes. My research has shown that student skill weaknesses can hinder their learning in integrative

experiences and this may in part be a result of disparate modules that present knowledge and skills in such highly contextualised ways. As Bransford, Brown and Cocking (2000) note, where activities and exercises associated with learning are overly contextualised, for example, when financial statements are overly contextualised to accounting problems, the learning may not be easily transferred to other contexts such as marketing tasks that call for students to interpret financial data.

- An additional situational factor that emerged in the simulations and dissertations research is that tutors often work alone and do not share good practices or solutions to mitigate student problems and skill weaknesses. This lack of knowledge sharing represents lost opportunities to improve or extend the benefits of integrative experiences. It also means the concerns that most colleagues have (e.g. that the research methods module is not the best training for the dissertation) are not brought forward to learning committees or management for solutions to be developed.

2.2. Student-related factors:

- Given that students who join a Master's degree in marketing tend to have very different prior educational experiences (both in terms of how they are taught and what they have studied), a good proportion of the time for the degree needs to be spent in covering core marketing concepts and in preparing them for what is often a new learning experience -- the dissertation --thus leaving less time for enhancing the learning with cross-disciplinary content (Vos, 2013a).
- Successful integrative learning experiences presuppose that students have mastered or at least have competence in the prior skills and knowledge they bring to the experience (Bransford et al., 2000). My research on simulation assessment and dissertations supports this contention, demonstrating that when critical prior skills are weak (numeracy; knowledge of marketing concepts; linking theory to practice) students are not able to benefit or benefit as much from integrative learning (Vos, 2014).

2.3 Tutor-related factors

- The role of the tutor is critical for students to get the most out of integrative learning approaches, most of which are constructivist in orientation and experiential with students constructing their own knowledge and meaning. In these contexts, the tutor needs to be particularly good at diagnosing student knowledge and skill weaknesses, in understanding problems from the student point of view, and in scaffolding the learning to overcome these weaknesses (e.g. Kirschner, et al. 2006) My research on marketing dissertations has shown that tutors may have different expectations than students and fail to diagnose the challenges students face and this will affect their ability to support student learning. For example, what tutors see as lack of motivation and poor time keeping on the part of students may have more to do with skill weaknesses, lack of confidence and emotional factors. This may also be the case with students who are not engaging with simulations (Vos, 2013b; Vos & Armstrong, 2015).
- Integrative experiences are more complex because they involve synthesis of concepts and skills from prior and current learning. Tutors may need to devote more time up front in

designing the learning experience so they can both anticipate and manage student learning difficulties when they arise. The greater complexity and the need for more preparation time may account for why simulation users tend to be alone within their departments; others may feel they do not have the time or lack the confidence to implement games (Vos, 2014).

These insights are of value to marketing educators who are seeking to integrate the curriculum but who may be facing challenges in their development or in achieving good student outcomes. My work has also laid the foundation for future research into integrative practices in marketing education.

3. My work has contributed a new stream of research into assessing student learning from marketing simulations and authentic assessment practices in marketing education. To date, there has been a paucity of research into the kinds of assessments and assessment practices used by marketing simulation tutors and of those none involves an empirical study into educator practices. The findings from my work also provide some counterbalance to the overwhelmingly positive research on learning benefits from simulations by demonstrating that not all students do well and that some struggle considerably. I have also identified that from the lecturers' perspectives skill deficits are the main reason why students do poorly. These findings are of value to those undertaking research on improving integration of learning, simulation teaching, experiential learning and authentic assessments.

Contribution to educational practice

1. My work in all three themes – integrative cross disciplinary curriculum; simulations and dissertations has benefited other marketing educators and led to requests to share the findings at conferences and workshops and to act as an advisor on product development. My work on curriculum provided an impetus for the set-up of a community of practice for UK educators who are interested in discussing and sharing ideas on curriculum development and review. Findings from my research and issues that emerged in discussions (via a closed LinkedIn discussion forum), led June Dennis (Associate Dean of teaching and learning at Wolverhampton University) and I to undertake a broader study into challenges faced. An online survey was developed and sent to 182 marketing academics. We received 32 responses to the survey and delivered two Academy of Marketing workshops (2012, 2013) around challenges educators face when undertaking marketing curriculum projects. In addition, we hosted a workshop at the University of Southampton in 2012 to discuss curriculum innovation in marketing and the associated challenges. Although not specifically about cross-cultural curriculum, my work on the drivers and constraints associated with curriculum innovation acted as a foundation for the discussion. In particular, similar constraints were expressed by survey participants and by those in the workshop – most curriculum development and revision projects in marketing are hindered by insufficient time and resources being allocated for the depth of research and thinking needed for significant innovation.

   The dissertation research is the first that is specific to postgraduate marketing educators in the UK and brought requests from Robert Gordon University and, as noted above, Royal Holloway to host workshops for marketing academics. My work on simulations led to a

request from a number of educators to hold a workshop on how best to set up and deliver game-based teaching (held in Birmingham in May 2013 and attended by 13 marketing academics from across the UK). In addition, I was asked to work with Pearson publishers on the development of their simulation game – My Marketing Experience. I have acted as an advisor on game features, on resources to help tutors and on designing the simulation to the level of learning. I continue to advise Pearson and will host a simulation workshop with them on simulations at the 2016 Academy of Marketing Conference.

2. My small but growing reputation as a researcher in marketing education led to my appointment as UK Discipline Lead for Marketing at the Higher Education Academy (HEA) (2011-2014). Given that a key part of my role was to visit marketing departments at UK universities to share and discuss good practice and research, I was able to share my work on dissertations, curriculum and simulations with marketing educators at over 50 institutions as well as at workshops and conferences in addition to building my knowledge of marketing and marketing education research. I also authored a tri-monthly newsletter -'The Marketing Education Digest - that appeared on the HEA website and wrote a monthly educational blog post. This role then led to my appointment as Chair of the Academy of Marketing sub-committee for Education where I continue to provide support to colleagues on marketing education research and evidence.

Managerial Implications

1. Within my research and in my many discussions with fellow marketing academics are recurring themes about student skill deficits, the lack of time and resources available for real curricular innovation, the challenges associated with almost all aspects of the dissertation experience, and in some cases, the lack of academic engagement with and funds for new software such as simulations. Each of these themes represents a potential lost opportunity to enhance student learning and to students getting the full benefits of integrative learning experiences that could better prepare them for the evolving, discipline spanning knowledge economy. My reviews of the educational literature and my own research have demonstrated that we have the knowledge and evidence to enhance student learning in marketing but that various institutional and situational factors inhibit their implementation and benefits. With the upcoming Teaching Excellence Framework, greater emphasis will be placed on Universities to demonstrate their teaching quality and the degree to which students' learning has been enhanced and enriched. It is hoped that my findings can spark departmental discussions on ways to improve the dissertation experience, in particular, but also ways to overcome the barriers to curricular innovation.

6. Conclusions and Future Research

The integration of learning is the process by which students build higher levels of understanding, meaning, intellectual capacity and capability, and skills. However, successful integration is not a given. First, prior learning can affect how well students integrate ideas, theory and practice. If students have knowledge and skill deficits, integration of prior with new learning is threatened. If the context in which particular concepts were taught is very different from the context to which they

are now be applied, this can also affect integration. Second, the role of the tutor is critical to successful integration of new and prior learning. Researchers working in education and in neuroscience have demonstrated that students need a framework for integrating ideas in order to develop a more complex understanding (this might be the teaching approach such as a simulation or dissertation or through more informal teach structured frameworks) and ongoing scaffolding and feedback on the part of the tutor to help students transfer in the appropriate prior learning, appreciate its relevance to the current context, and link it to new ideas or possibly more complex problems (e.g. Kirschner et al., 2011; Sousa, 2011). Therefore, specific opportunities need to be created and teaching structured so that students' can integrate effectively. Finally, careful attention needs to be paid to what ideas and concepts should be integrated in order to best prepare marketing students for their working lives as well as their ability to collaboratively address societal problems that are interdisciplinary in nature.

My research has considered how teaching tools (simulations), learning experiences (dissertations) and curriculum design (cross-disciplinary education) act as processes for integrative learning and I have identified a range of challenges to how these approaches can limit their effectiveness. Students, tutor based, institutional and situational factors can act as constraints and barriers to learners. The theoretical, educational and managerial implications of my work present opportunities for marketing educators and their managers to reconsider and perhaps revise aspects of the marketing curriculum, teaching and learning so as to build in more integrative experiences to address the knowledge and skill gaps of marketing graduates and to give them a real competitive advantage in their careers.

Future Research

In order to provide more evidence for the value of integrative approaches, my future research will attempt to better conceptualise the concept of integration of learning as it applies in marketing education. In the literature, the notion that integration is beneficial is often simply taken for granted (e.g. Elam & Spotts, 2004); however, it has not been clearly conceptualised. Across the general education literature it is sometimes called integration, experiential learning, connected learning or transfer of learning and thus lacks a more useful definition for theorising.

My future research will seek to conceptualise integration as it applies in marketing education and work towards increasing our evidence base on:

- How students integrate knowledge and the mechanisms that underlie integration in marketing plus the factors that both hinder and promote integration;
- How to identify when successful integration is indeed taking place and signs or signals that help the tutor to recognise when it is not;
- Specific interventions that enhance integration of learning not only with simulations and dissertations, but also in other learning contexts;
- How to effectively build in opportunities for integration throughout the marketing curriculum and provide evidence for what knowledge to integrate;
- Specific measures of the effectiveness and the learning benefits of integrated learning experiences; and

- How to reduce the situational, institutional, student and tutor related challenges and barriers to integrative learning experiences

My research has provided some evidence for the benefits of specific integrative tools and approaches, particularly in engaging students and developing higher level thinking skills. However, many challenges remain if we are to ensure that the potential gains from these approaches are fully realised for our students.

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Appendix One: Complete publications output

1. Brennan, R., Vos, L. & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press.
2. Vos, L., & Brennan, R. (2010). Marketing simulation games: Student and lecturer perspectives. *Marketing Intelligence and Planning*, 28(7): 882-897.
3. Brennan, R., & Vos, L. (2013). Effects of participation in a simulation game on Marketing students' numeracy and financial skills. *Journal of Marketing Education,* 35(3): 259-270.
4. Vos, L. (2013a). Improving international marketing programmes to reflect global complexity and risk: Curriculum drivers and constraints. *Journal of Teaching in International Business,* 24(2): 81-106.)
5. Vos, L. (2013b). *Dissertation study at post-graduate level: A review of the research.* York: Higher Education Academy.
6. Vos, L. (2014). Marketing simulation games: A review of issues in teaching and learning. *The Marketing Review*, 14(1): 67-96.
7. Vos, L. (2015). Simulation games in business and marketing: How educators assess their students. *International Journal of Management Education,* 13(1): 57-74.
8. Vos, L., & Armstrong, K. (2015). *Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK.* Greenwich: University of Greenwich Working Papers.

Appendix Two: Declarations of Co-authorship of published works

1. Brennan, R., Vos, L. & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press.
2. Vos, L., & Brennan, R. (2010). Marketing simulation games: Student and lecturer perspectives. *Marketing Intelligence and Planning*, 28(7): 882-897.
3. Brennan, R., & Vos, L. (2013). Effects of participation in a simulation game on Marketing students' numeracy and financial skills. *Journal of Marketing Education,* 35(3): 259-270.
4. Vos, L., & Armstrong, K. (2015). *Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK.* Greenwich: University of Greenwich Working Papers.

Submission by Lynn Vos for a Degree of Doctor of Philosophy by Published Works

Declaration of co-authorship of published work

Brennan, R., Vos, L. & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press.

Ross Brennan	45%
Lynn Vos	45%
Roger Willetts	10%*

Date 7-3-2016

*Please note that Roger Willetts has retired and could not be found to sign this document. Dr. Ross Brennan is signing to confirm the contribution of all authors

Submission by Lynn Vos for a Degree of Doctor of Philosophy by published works

Declaration of co-authorship of published work

Vos, L., & Brennan, R. (2010). Marketing simulation games: Student and lecturer perspectives. *Marketing Intelligence and Planning*, 28(7): 882-897.

The estimated contribution of each author to the publication was as follows:

Lynn Vos	50%
Ross Brennan	50%

Date 7-3-2016

Submission by Lynn Vos for a Degree of Doctor of Philosophy by published works

Declaration of co-authorship of published work

Brennan, R., & Vos, L. (2013). Effects of participation in a simulation game on Marketing students' numeracy and financial skills. *Journal of Marketing Education,* 35(3): 259-270.

The estimated contribution of each author to the publication was as follows:

Ross Brennan	50%
Lynn Vos	50%

Date 7-3-2016

Submission by Lynn Vos for a Degree of Doctor of Philosophy by published works

Declaration of co-authorship of published work

Vos, L., & Armstrong, K. (2015). *Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK.* Greenwich: University of Greenwich Working Papers.

The estimated contribution of each author to the publication was as follows:

Lynn Vos	60%
Kate Armstrong	40%

Signed: —

Date: February 23, 2016

Appendix Three: Published Works

Lynn Vos

Submitted in partial fulfilment of the requirements of the University of Greenwich for the Degree of Doctor of Philosophy on the basis of published work

March 2016

Publication One: Brennan, R., Vos, L. & Willetts, R. (2009). *Marketing simulation games: Usage and tutor perspectives* (UK), Middlesex University Working Papers, London: Middlesex University Press.

Using simulation games in the marketing curriculum.

Brennan, Ross and Vos, Lynn and Willetts, Roger (2009) *Using simulation games in the marketing curriculum.* In: Middlesex University Working Papers, 2009.

Abstract

While a substantial amount of research has been conducted into the use of simulation games in business and marketing education, little of this has focused on the student experience. In this project we undertake a comparative analysis of student experiences of the use of the same marketing simulation ('The Marketing Game!') at two universities in the UK. The overall purpose of the study is to understand better how students perceive and respond to simulation games, in order to make more effective use of simulations in the curriculum. The design of the study enables us to analyse the comparative responses of different categories of students (different demographic categories, and other categories thought to be relevant including prior educational qualifications and work experience), thus providing advice to marketing educators on the likely responses to simulation games of different groups of students within a diverse student body.

Student Experiences of the Use of a Marketing Simulation Game

Ross Brennan, Lynn Vos & Roger Willetts

Abstract

While a substantial amount of research has been conducted into the use of simulation games in business and marketing education, little of this has focused on the student experience. In this project we undertook a comparative analysis of student experiences of the use of the same marketing simulation ('The Marketing Game!') at two universities in the UK. The respondents to the survey questionnaire were final year marketing students who had recently completed a module in marketing strategy on which 'The Marketing Game!' was used. The overall purpose of the study is to understand better how students perceive and respond to simulation games, in order to make more effective use of simulations in the curriculum. The design of the study enables us to analyse the comparative responses of different categories of students (different demographic categories, and other categories thought to be relevant including prior educational qualifications and work experience), thus providing advice to marketing educators on the likely responses to simulation games of different groups of students within a diverse student body.

Key words: Marketing education; business simulation; marketing games

Student Experiences of the Use of a Marketing Simulation Game

Introduction

Marketing educators have long accepted that they cannot rely solely on didactic methods; the nature of the subject necessitates that, in addition to addressing a body of knowledge through lectures and reading, students must engage in active learning (Wright, Bitner and Zeithaml, 1994; Smith and Van Doren, 2004). Several different pedagogic techniques are harnessed for this purpose, including historical case studies, live case studies (where students develop the case studies themselves), real-world research and consultancy projects, in-basket exercises, role playing, and educational drama (Daly, 2001; Kennedy, Lawton and Walker, 2001; Baruch, 2006, Pearson, Barnes and Onken, 2006). The simulation game is a widely used active learning technique. The characteristics of simulation games include a simulated competitive environment in which rival companies make periodic decisions; the decisions provide the inputs to a software package that produces management information (such as profit & loss statements and analyses of sales patterns) which provides the basis for the next round of decision-making. What differentiates the simulation game from most other active learning techniques is that by its very nature it mimics certain aspects of the business world that are otherwise very difficult to bring to the classroom, notably working to deadlines, often in teams, to make concrete decisions under competitive conditions, and then having to live with the consequences of those decisions.

In addition, team-based simulations allow students to practice specific skills valued by employers – communication, problem solving, critical thinking, and analysis of both verbal and financial data - within an environment that allows for failure to be redressed, and for alternative strategies to be employed without the possibility of long- term punitive consequences. Given the degree of complexity, games encourage students to integrate concepts successfully within their own discipline and to think cross-functionally, the latter being an outcome that is more difficult to achieve through other learning methods (Chakravorty & Franza, 2005).

In the project described here we investigated undergraduate student experiences of the use of a marketing simulation game ('The Marketing Game!'). The purposes of this paper are to explain the background, rationale, research objectives, research methods for the project, and to present and discuss findings from the survey concerning student perceptions of learning methods generally and of 'The Marketing Game!' (henceforth 'TMG!') in particular. In the following section, we examine prior studies of simulation games, with a focus on their use in marketing education specifically. The subsequent section explains the research objectives and the research methods employed in the present study. Following this, we move on to discuss the results from the student survey, and to draw conclusions for educational practice.

Prior research into the use of business and marketing simulation games

Business simulation games have been in use in higher education for at least 50 years, with the first documented use at the University of Washington in 1957 (Faria, 2006). By 1998, up to 97.5% of all accredited business universities in the United States were using business games as a learning tool. Marketing simulation games are particularly popular and Faria and Wellington (2004) found that 64.1% of 1,085 faculty members in American Universities were using games with a focus on marketing. In a more limited and earlier study carried out in the U.K, Burgess (1991) found that computerised simulation game were used in 92% of the 272 business and management departments that responded to his survey.

The research studies that proliferated as the usage rate of games increased can be categorised into four main themes: the educational value of simulation games; the relative merit of simulation games compared with other learning methods; the external and internal validity of business games; and how best to implement and use them. Although there is limited research that specifically addresses the student experience or student feelings around games, many researchers also remark on how students perceive the use of simulation games and on the general positive feelings that they experience. Our study was primarily concerned with student perceptions of the *educational value* and of the *implementation method* of the simulation game, and so our discussion of prior research will focus on these two themes.

Research into *the educational value* of games suggests that they give participants a "valid representation of real world issues facing managers" (Wolfe and Roberts, 1993, p22) including enhanced skills in strategy formulation, analysis of multiple variables, integration of a range of marketing concepts and tools, manipulating financial concepts, problem-solving, communication and team-work (Keys and Wolfe, 1990; Gopinath and Sawyer, 1999; Jennings, 2001; Zantow, Knowlton and Sharp 2005; Faria, 2006). Other studies have investigated the value of games in improving student outcomes. Faria (2001) reported on 79 comparisons between the use of simulations and other teaching methods including cases, readings, and lectures. End of class exams demonstrated that students who had engaged in the simulation performed better on average than those who had been taught using other methods. Drea, Tripp and Stuenkel (2005) found a statistically significant difference in performance on post-game assessment between those who had participated in a marketing game and those who made up the control group. Of the eight administrations of the experiment, the researchers found consistent evidence of a positive effect on student learning. Cook and Swift (2006) drew similar conclusions in a study linked to learning outcomes on a sales management simulation. The researchers were able to demonstrate high correlations between statements such as the game "improved analytical skills", "improved problem solving", "helped learn concepts", "applied what was learned in class", and "taught fundamentals". In comparison with learning from the textbook, participants perceived the simulation to be considerably more effective in "teaching course concepts, promoting the development of high level skill sets, and providing an overall positive educational experience".

Most authors agree that active learning approaches including simulation games need to be underpinned with knowledge gained from more traditional methods such as lectures and readings (Livingstone and Lynch, 2002; Laverie, 2006), and that for successful learning to occur, students must also have the opportunity to reflect systematically on their experience and to grasp how it connects to the course content and learning outcomes (Herz & Merz, 1998; Hatcher & Bringle, 2000; Young, 2002, Peters & Vissers, 2004). So successful implementation of a simulation game requires prior lectures and readings to equip students with the necessary conceptual knowledge, regular reminders of how the game fits into the learning outcomes, an effective post-simulation debriefing exercise, and assessment tools used both during and after the game to allow for the reflection needed to solidify and make sense of their learning.

These additional pillars of the simulation experience not only lead to deep learning, but are also important in the affective domain. Although not a key theme in prior research, many authors have reported on the positive emotions that students experience during simulation games (Coleman, 1966, Brenenstuhl 1975; Orbach, 1979; Szafran & Mandolini, Bredemeier & Greenblat, 1981). Research into the advantages of business games compared to other educational methods indicates greater levels of student enjoyment and commitment than with case studies, action learning projects, lectures or readings (Low, 1980; Malik and Howard,1996; Jennings, 2001). Fripp (1994) argued that students

find simulations to be both stimulating and enjoyable experiences and that this enhances their learning. In their research into why people use business games, Gilgeous and D'Cruz (1996) found that keeping participants motivated and interested was a key reason, and games that are best at encouraging motivation are those that are deemed by students to be both interesting and "fun". Furthermore, effective use of simulation games can lead to positive behavioural changes, such as enhancing students' ability to get organised, adapt to new tasks, resolve conflicts and work effectively in groups/teams (King, 1997, Certo & Newgren, 1977, Teach & Govahi, 1988). In terms of behavioural adaptations, Solomon (1993) found that simulations can also heighten self-awareness and allow students to examine their own behaviour, particularly when working within a group.

However, Doyle and Brown (2000) reported that simulations can also create anxiety and frustration in students, particularly when there are periodic administration difficulties with the running of the game. In these cases, student frustration can have a negative effect on their learning. Wolfe & Chacko (1983) and Jaffe & Nebenzahl (1990) also reported on the impact of group size and group cohesion on student achievement and satisfaction. A group size of three appears to be most effective and group cohesion is often more important than how motivated individual team members were.

Finally, students can feel a lack of control when they undertake a simulation since they must absorb a relatively large amount of information in a short period of time, and then act upon it in a way that leads to successful outcomes. Walters & Coalter (1997) argued that individual characteristics, such as risk propensity, need for achievement, and locus of control will influence engagement and satisfaction; however, limited additional research has been conducted into the effects of negative emotions and negative emotional experiences during the simulation process, and how these emotions and experiences affect learning. Where it is discussed in the literature, the general conclusions are that the instructor must be actively involved with the game, well prepared and organised, willing to provide support and assistance, and careful to show the relationships between learning in the game and key course concepts and outcomes (McKenney & Dill, 1966; Knotts & Keys, 1997). In other words, a positive overall simulation experience is more likely to occur when instructors ensure that the additional pillars mentioned above are built in.

Research method

Research purpose and objectives

It is widely acknowledged that marketing educators must strive to provide students with an educational experience that prepares them for the world of work. A marketing education cannot simply involve the acquisition of a body of knowledge; it must also make students more employable by endowing them with work-relevant skills and competences. The marketing simulation game seems to provide an excellent opportunity to deliver valuable skills through a medium that students find highly engaging – in other words, an environment in which students are primed to learn because of their positive affective response to the educational experience. The project investigates the validity of this important assertion.

The overall purpose of the study was to understand better how students perceive and respond to simulation games, in order to make more effective use of simulations in the curriculum. An important proposition to be investigated is that students generally have a positive affective response to simulation games, and that this primes them to respond well cognitively. Hence, the enjoyable, competitive atmosphere of the game provides a strong motivation for students to learn about both

specific marketing topics (notably consumer behaviour and target marketing, in TMG!) and about general business matters (notably profit & loss analysis, and forecasting).

Specific objectives concern the differential responses of different categories of students to simulation games. We hypothesise that there may be differences in response between different demographic groups (male/female, ethnic background, and so on), between those with more or less employment experience, between those with different prior educational experiences (for example, traditional or vocational school-leaving qualifications), and between those from different cultural backgrounds. Prior research has indicated that student perceptions of the effectiveness of learning methods can vary with such demographic characteristics (Brennan and Ahmad 2005).

Sampling and data collection

A multi-part questionnaire, administered to cohorts of students at the University of Northampton and Middlesex University, asked students who have played TMG! to rate the learning value of simulations in relation to other learning methods, and measured student perceptions of their own affective and cognitive responses to playing the game. The questionnaire employed in this study was suitably adapted from questionnaires used successfully by the co-researchers previously to investigate student perceptions of the case study method, and of educational drama, on marketing courses (Brennan and Ahmad 2005; Brennan and Pearce 2008). The survey was administered in a classroom session at the end of the module on which TMG! had been used. For the great majority of the respondents (90%) this had been their first experience of playing a business or marketing simulation game.

The analysis presented here is based on data collected from a total of 137 students (32 from the University of Northampton and 105 from Middlesex University).The demographic characteristics of the respondents to the questionnaire are shown in Table 1. The sample represents the wider population of undergraduate students at the two universities fairly well. There is an approximate balance between male and female respondents; the age distribution represents a characteristic mix of traditional young undergraduates aged in their early 20s (in the final year), and a reasonably large number of mature students. The diversity of the sample in terms of ethnic origin reflects the typical ethnic mix of post-1992 universities in London and the south-east of England. A substantial minority of the respondents received their secondary education outside the UK.

Table 1: Respondent demographics

		Frequency	Percentage
Gender (n=137)	Male	76	56
	Female	61	44
Age (n=137)	20-21	51	37
	22-23	63	46
	24 or older	23	17
Ethnic origin (n=136)	White	50	37
	Asian or Asian British	35	26
	Black or Black British	33	24
	Other	18	13
Secondary education (n=137)	In the UK	86	63
	Outside the UK	42	31
	Partly in UK, partly outside	9	6

Table 2 shows that a substantial minority of the respondents claim to have had full-time work experience (defined on the questionnaire as working full-time for the same employer for more than six months). All but a handful of respondents claimed to have worked part-time, and 65% were in part-time employment when they completed the questionnaire; the modal category for part-time employment was between 10 and 20 hours per week. As would be expected, the older respondents were more likely to have had full-time work experience than the younger respondents (61% of those aged 25 or over had full-time work experience, compared with 29% of those aged 21 or 22).

Table 2: Respondent work experience

		Frequency	Percentage
Have you ever worked full-time for more than 6 months? (n=136)	Yes	57	42
	No	79	58
Have you ever worked part-time? (n=137)	Yes	129	94
	No	8	6
Are you working part-time now? (n=137)	No	49	36
	Yes, < 10 hrs p week	20	15
	Yes, 10-20 hrs p week	56	41
	Yes, > 20 hrs p week	12	9

Discussion of findings

In the discussion of the survey findings we first compare student perceptions of different learning methods (including 'The Marketing Game!'), and then concentrate on responses concerning 'The Marketing Game!', looking initially at the mean responses from the whole sample and subsequently at comparisons between different categories of student (men/women, and so on).

Table 3: Rank order of student perceptions of learning method effectiveness

Learning method	Rank	Mean score
Business game (e.g. The Marketing Game!)	1	4.21
Question & answer sessions in seminars	2	4.06
Assignment-based research	3	4.02
Discussions with other students	4	3.88
Private reading (e.g. textbooks, articles)	5	3.78
Case study analysis	6	3.75
Group work	7	3.64
Presentations	8	3.60
Lectures	9	3.56
Self-guided research	10	3.55
Watching a video	11	3.22
Computer-based learning (e.g. Blackboard)	12	3.16

1. Question asked: "What is your opinion of these learning methods? Rate each learning method on a scale from 1 to 5 where 1 means '1 never learn anything when this method is used' and 5 means '1 always learn a lot when this learning method is used'.
2. Mean score is on a scale from 1 'never learn anything' to 5 'always learn a lot'.

Table 3 shows the mean score (on a 1 to 5 scale) and the rank (calculated from the mean scores) for 12 learning methods. For all of these learning methods the mean score is significantly above the scale mid-point of 3.0 (i.e. using a t-test we can reject the hypothesis that the true mean is 3.0). The 'business game' learning method is easily ranked first. However, we should observe that this research was conducted with classes who had just finished playing 'The Marketing Game!', and for most of the students this had been their first experience of a business game, so that their responses were probably

influenced by the novelty and immediacy of having recently experienced the game. Nevertheless, we can state with high confidence that students believe that they learned a lot from playing the game and found it to be highly effective when compared with other learning methods. Figure 1 illustrates this point further, showing that nearly 50% of respondents claimed that they 'always learn a lot' when using a business game. Again, we would advocate caution in interpretation, since for most respondents this was their first experience with such a game. Nevertheless, the principal risk of interpretation here would seem to be that the degree of learning that the respondents claim to have experienced during the game may be exaggerated because of the immediacy and novelty of the experience. It is very unlikely that the respondents' opinions about the game would change from strongly positive to neutral or negative with greater distance from the experience of playing the game.

Figure 1: Student perceptions of learning method: Business game (e.g. The Marketing Game!)

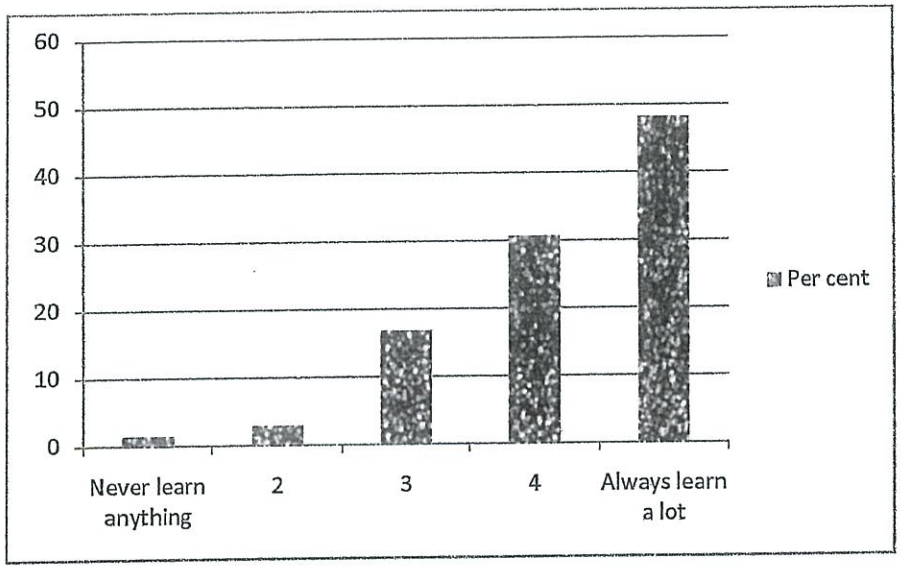


Table 4: Rank order: student perceptions of learning benefits from business games

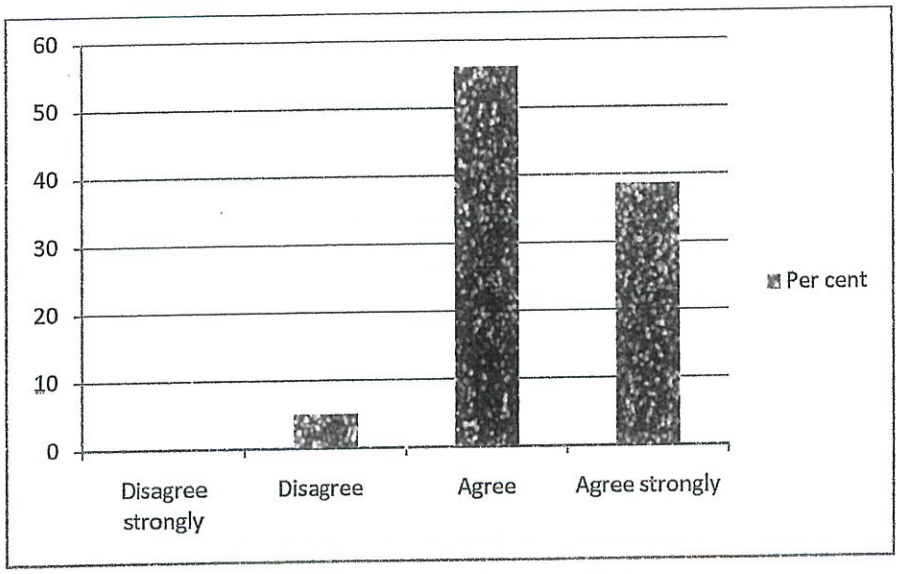
To what extent do you agree that:	Rank	Mean score
'Business games are a good way to practise using analytical tools'	1	3.34
'Business games help me understand how business decisions are made'	2=	3.32
'Business games illustrate how business/marketing strategy works in the real world'	2=	3.32
'Business games help me understand theoretical concepts'	4	3.30
'Doing analysis for business games helps me to develop useful business skills'	5	3.25
'Working on business games has helped me to develop my team working skills'	6	3.24
'Working on business games has helped me to develop my skills in business analysis'	7	3.23
'I usually contribute to business game discussions in class'	8	3.21
'Working on business games gives me the confidence to express opinions'	9	3.11
'Business games are a useful way to discuss business problems in class'	10	3.08

1. Mean score is on a scale from 1 'disagree strongly' to 4 'agree strongly'

The next step in the analysis was to investigate in what ways the students felt that their learning had benefited from playing 'The Marketing Game!' This was measured using a battery of 23 Likert-scale items adapted from a questionnaire used by Brennan and Ahmad (2005) to study student perceptions of the case study method. The ten items with the highest mean scores are shown in Table 4. The scores for all of the items shown in Table 4 are significantly above the scale mid-point of 2.5 (i.e. using a t-test we can reject the hypothesis that the true mean is 2.5). To illustrate the responses visually, we present a bar chart for the first item in Table 4 ('Business games are a good way to practise using analytical tools') in Figure 2; the bar charts for the first few items in Table 4 are all very similar to Figure 2, although for most of the variables – in contrast to the responses shown in Figure 2 - there were one or two 'disagree strongly' responses.

From these results we conclude that the respondents were strongly of the opinion that 'The Marketing Game!' had been a useful learning experience, and that the nature of the learning included many experiential components, such as understanding how business decisions are made, improving team-working skills, and illustrating how strategic decisions are made in the real world.

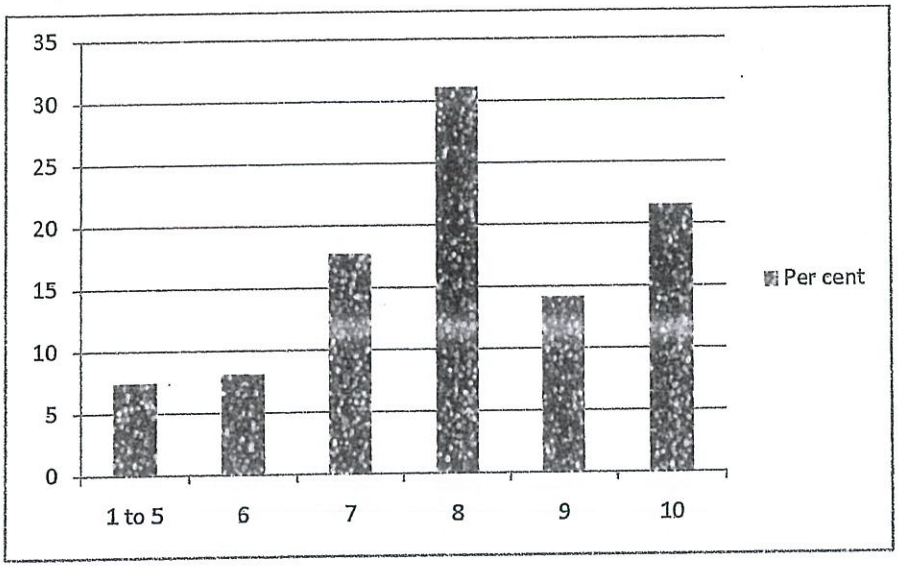
Figure 2: "Business games are a good way to practise using analytical tools"



We were also interested to establish how students responded affectively to 'The Marketing Game!' Figure 3 illustrates the responses to a question about the enjoyment of 'The Marketing Game!' The great majority of the responses, on a scale from 1 (low enjoyment) to 10 (high enjoyment) were between 7 and 10, with 8 as the modal response and a mean response of 8.01. Clearly, the results from our survey indicate that our sample of students believed that the game was an effective learning method, which delivered a wide range of learning benefits, and which they enjoyed playing.

We now move on to examine differences in perception between sub-groups within the sample.

Figure 3: "Using a scale from 1 (did not enjoy at all) to 10 (absolutely great!) indicate how much you enjoyed 'The Marketing Game!'"



1. Mean score on 1-10 scale = 8.01, standard deviation = 1.48

Differences in response between categories of students

An exploratory factor analysis (using principal factor analysis and varimax rotation) conducted on the 23 items used to measure student perceptions of learning benefits identified six factors with eigenvalues greater than 1.0, explaining 63% of the variance in the data. The two factors explaining the largest percentage of the variance (40% in all) were interpreted, based on the items of which they were comprised, as "analysis" (28% of variance) and "skills" (12% of variance). The mean score (on a scale from 1 to 4 as defined in Table 4) for "analysis" was 3.22, and the mean score for "skills" was 3.06. These factors were used in the subsequent analysis to test differences between sub-groups of the sample. The results of the between-group comparisons are shown in Table 5.

Table 5: Comparative analysis of responses to 'The Marketing Game!'

Comparator variable	Enjoyment		Learning: Analysis		Learning: Skills	
	t-value	significance	t-value	significance	t-value	significance
Gender						
Men/Women	0.93	n.s.	0.98	n.s.	1.31	n.s.
Ethnicity						
White/Asian	1.87	0.07	1.92	0.06	2.56	0.01
White/Black	0.21	n.s.	1.13	n.s.	1.33	n.s.
Asian/Black	1.36	n.s.	0.53	n.s.	1.39	n.s.
Secondary education						
In UK/Outside UK	0.91	n.s.	1.76	0.08	0.82	n.s.
Entry qualification						
A levels/GNVQ	0.47	n.s.	0.47	n.s.	0.32	n.s.
Worked full-time?						
Yes/No	0.57	n.s.	0.57	n.s.	1.67	0.09

Perhaps the most striking characteristic of Table 5 is that few of the between-group differences are statistically significant. That is to say that, in most cases, one cannot reject the null hypothesis that there is no difference between the mean scores of the categories. This suggests that, while there may be subtle differences between the responses of different student categories to the game,

overwhelmingly *all* categories of student perceive it to be a beneficial and enjoyable learning method that delivered learning benefits in terms of both analysis and skills. There is some evidence that students who described their ethnicity as 'Asian or Asian British' were significantly more positive about the game than students who described themselves as 'White' (note that the Asian category does not include 'Chinese', since this was included as a separate category, but there were too few respondents in this category to use it for analysis). From Table 5 we can see that there may be some difference between students who were educated at secondary level in the UK, and those who were educated outside the UK (the latter recorded higher scores), and between those with and without full-time employment experience (those with full-time experience recorded higher scores).

There is some evidence in our data of covariance between age, full-time work experience, and a positive response to 'The Marketing Game!' We observed above that age and full-time work experience are correlated, and Table 5 shows a weak association between full-time work experience and a positive response to the game. In Table 6 we show the correlation coefficients between the factors "analysis" and "skills", and the variables 'age' and 'enjoyment'. Enjoyment is highly correlated with both "analysis" and "skills", consistent with the hypothesis that a positive affective response to the game is associated with a strong cognitive response. Age shows no significant correlation with "skills", but a moderately strong correlation with "analysis". This provides some tentative support for the hypothesis that older students found the game to be a more effective learning experience, particularly for learning about analytical methods, than younger students.

Table 6: Correlations of perceived learning, age and enjoyment of 'The Marketing Game!'

Variable 1	Variable 2	Correlation coefficient	Significance
Learning: Skills	Age	0.07	n.s.
Learning: Skills	Enjoyment	0.476	0.00
Learning: Analysis	Age	0.194	0.03
Learning: Analysis	Enjoyment	0.505	0.00

Conclusion

Simulation games are not an undiscovered educational technique. Nevertheless, we believe that the potential educational contribution of marketing simulation games has been far from fully exploited. In particular, from our own practice we have observed that this is one of the most effective tools for engaging students actively in the learning experience. Many of the students who play marketing simulation games become absorbed in the game, determined to improve their team's performance, and realise quickly that in order to achieve good performance they need to understand and apply important marketing principles. The results from the survey of students support these contentions. Of course, we must emphasise that what we have measured are student *perceptions* of their enjoyment, overall learning from, and components of learning from a single marketing simulation game. These clearly represent limitations on this study. In addition, the sample of students was taken from only two universities in the south-east of England, and the generalisability of the findings is therefore strictly limited.

Within those limitations we have confirmed the general findings from earlier literature that students enjoy simulation games and believe that they learn a lot from them. Going beyond these earlier studies, we have provided some evidence that student perceptions of their learning from simulation games seem to be particularly strong in terms of aspects of analysis and aspects of skill development.

Of particular concern is the use of simulation games with an increasingly diverse population of students in the UK. The once homogeneous UK higher education body of students has become increasingly heterogeneous, partly reflecting the increasing diversity of UK society in general, and partly reflecting government policy to widen access to higher education. It is important for marketing educators to understand how different categories of student are likely to respond to marketing simulation games. Our findings in this respect are encouraging, since there did not seem to be marked differences between different demographic categories of students in their response to the game. There was some limited evidence that 'Asian or Asian British' students, students who received their secondary education outside the UK, and mature students had more favourable attitudes towards the game. However, these findings are tentative and further research would be needed to establish how valid they are.

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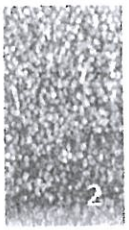

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Marketing simulation games: student and lecturer perspectives

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Abstract

Purpose – The paper aims to contribute to the wider adoption of simulation games in marketing teaching. The purposes of the research reported here are to understand marketing students' perceptions of the learning achieved from the use of simulation games, and marketing lecturers' perceptions of the barriers to increased use of simulation games.

Design/methodology/approach – A structured questionnaire was administered to 137 final-year marketing undergraduates studying at two British universities and eight semi-structured interviews were conducted with marketing lecturers currently using simulation games in their marketing teaching.

Findings – Students perceive the simulation game to be a highly effective learning method, delivering valuable knowledge and skills. In addition, students find the game to be an enjoyable learning approach. Lecturers are enthusiastic about this learning method, but note some barriers to adoption; particularly cost, the steep learning curve, and the difficulty of finding unbiased advice about suitable games to deliver desired learning outcomes.

Research limitations/implications – Limitations are that the empirical base for the quantitative study was only two universities in the UK, and the questionnaire concerned only student perceptions of their learning, not an objective assessment of actual learning. It is recommended that the study be extended to a wider sample of universities, and that the approach be widened to include an assessment of the measurable learning outcomes achieved rather than just student perceptions.

Originality/value – The degree of student enthusiasm for simulation games is striking. Lecturers also find the method very engaging, but acknowledge that there are important barriers to more widespread simulation game adoption.

Keywords Marketing, Simulation, Video games, Action learning, Undergraduates, United Kingdom

Paper type Research paper

Introduction

Marketing educators have long accepted that they cannot rely solely on didactic methods; the nature of the subject necessitates that, in addition to addressing a body of knowledge through lectures and reading, students must engage in active learning (Wright *et al.*, 1994; Smith and Van Doren, 2004). Several different pedagogic techniques are harnessed for this purpose, including historical case studies, live case studies (where students develop the case studies themselves), real-world research and consultancy projects, in-basket exercises, role playing, and educational drama (Daly, 2001; Kennedy *et al.*, 2001; Baruch, 2006; Pearson *et al.*, 2006). The simulation game is a widely used active learning technique. The characteristics of simulation games include a simulated competitive environment in which rival companies make periodic decisions; the decisions provide the inputs to a software package that produces management information (such as profit and loss statements and analyses of sales patterns) which provides the basis for the next round of decision making. What differentiates the simulation game from most other active learning techniques is that by its very nature it mimics certain aspects of the business world that are otherwise very difficult to bring to

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the classroom, notably working to deadlines, often in teams, to make concrete decisions under competitive conditions, and then having to live with the consequences of those decisions.

In addition, team-based simulations allow students to practice specific skills valued by employers – communication, problem solving, critical thinking, and analysis of both verbal and financial data – within an environment that allows for failure to be redressed, and for alternative strategies to be employed without the possibility of long-term punitive consequences. Given the degree of complexity, games encourage students to integrate concepts successfully within their own discipline and to think cross-functionally, the latter being an outcome that is more difficult to achieve through other learning methods (Chakravorty and Franza, 2005).

In the project described here, we investigated both the undergraduate student and the marketing educator perspectives on the use of a marketing simulation game ("The Marketing Game!" ("TMG!")). The purposes of this paper are to explain the background, rationale, research objectives, and research methods for the project, to present and discuss findings from the survey concerning student perceptions of learning methods generally and of "TMG!" in particular, and to discuss the findings from a qualitative study of marketing educator views on the use of simulation games. In the following section, we examine prior studies of simulation games, with a focus on their use in marketing education specifically. The subsequent section explains the research objectives and the research methods employed in the present study. Following this, we move on to discuss the results from the empirical phases of our study, and to draw conclusions for educational practice.

Prior research into the use of business and marketing simulation games

Business simulation games have been in use in higher education for at least 50 years, with the first documented use at the University of Washington in 1957 (Faria, 2006). By 1998, up to 97.5 per cent of all accredited business universities in the USA were using business games as a learning tool. Marketing simulation games are particularly popular and Faria and Wellington (2004) found that 64.1 per cent of 1,085 faculty members in American Universities were using games with a focus on marketing. In a more limited and earlier study carried out in the UK, Burgess (1991) found that computerised simulation game were used in 92 per cent of the 272 business and management departments that responded to his survey.

Research into the educational value of games suggests that they give participants a "valid representation of real world issues facing managers" (Wolfe and Roberts, 1993, p. 22) including enhanced skills in strategy formulation, analysis of multiple variables, integration of a range of marketing concepts and tools, manipulating financial concepts, problem solving, communication and team work (Keys and Wolfe, 1990; Gopinath and Sawyer, 1999; Jennings, 2002; Zantow *et al.*, 2005; Faria, 2006). Other studies have investigated the value of games in improving student outcomes. Faria (2001) reported on 79 comparisons between the use of simulations and other teaching methods including cases, readings, and lectures. End of class exams demonstrated that students who had engaged in the simulation performed better on average than those who had been taught using other methods. Drea *et al.* (2005) found a statistically significant difference in performance on post-game assessment between those who had participated in a marketing game and those who made up the control group. Cook and

Owens-Swift (2006) drew similar conclusions in a study linked to learning outcomes on a sales management simulation. The researchers were able to demonstrate high correlations between statements such as the game "improved analytical skills", "improved problem solving", "helped learn concepts", "applied what was learned in class", and "taught fundamentals". In comparison with learning from the textbook, participants perceived the simulation to be considerably more effective in "teaching course concepts, promoting the development of high-level skill sets, and providing an overall positive educational experience".

Most authors agree that active learning approaches including simulation games need to be underpinned with knowledge gained from more traditional methods such as lectures and readings (Livingstone and Lynch, 2002; Laverie, 2006), and that for successful learning to occur, students must also have the opportunity to reflect systematically on their experience and to grasp how it connects to the course content and learning outcomes (Herz and Merz, 1998; Hatcher and Bringle, 2000; Young, 2002; Peters and Vissers, 2004). So, successful implementation of a simulation game requires prior lectures and readings to equip students with the necessary conceptual knowledge, regular reminders of how the game fits into the learning outcomes, an effective post-simulation debriefing exercise, and assessment tools used both during and after the game to allow for the reflection needed to solidify and make sense of their learning.

These additional pillars of the simulation experience not only lead to deep learning, but are also important in the affective domain. Many authors have reported on the positive emotions that students experience during simulation games (Coleman, 1966; Brenenstuhl, 1975; Orbach, 1979; Szafran and Mandolini, 1980; Bredemeier and Greenblat, 1981). Research into the advantages of business games compared to other educational methods indicates greater levels of student enjoyment and commitment than with case studies, action learning projects, lectures or readings (Low, 1980; Malik and Howard, 1996; Jennings, 2002). Fripp (1994) argued that students find simulations to be both stimulating and enjoyable experiences and that this enhances their learning. In their research into why people use business games, Gilgeous and D'Cruz (1996) found that keeping participants motivated and interested was a key reason, and games that are best at encouraging motivation are those that are deemed by students to be both interesting and "fun". Furthermore, effective use of simulation games can lead to positive behavioural changes, such as enhancing students' ability to get organised, adapt to new tasks, resolve conflicts and work effectively in groups/teams (King, 1977; Certo and Newgren, 1977; Teach and Govani, 1988). In terms of behavioural adaptations, Solomon (1993) found that simulations can also heighten self-awareness and allow students to examine their own behaviour, particularly when working within a group.

However, Doyle and Brown (2000) reported that simulations can also create anxiety and frustration in students, particularly when there are periodic administration difficulties with the running of the game. In these cases, student frustration can have a negative effect on their learning. Wolfe and Chacko (1983) and Jaffe and Nebenzahl (1990) also reported on the impact of group size and group cohesion on student achievement and satisfaction. A group size of three appears to be most effective and group cohesion is often more important than how motivated individual team members were.

Finally, students can feel a lack of control when they undertake a simulation since they must absorb a relatively large amount of information in a short period of time, and then act upon it in a way that leads to successful outcomes. Walters and Coalter (1997)

argued that individual characteristics, such as risk propensity, need for achievement, and *locus* of control will influence engagement and satisfaction; however, limited additional research has been conducted into the effects of negative emotions and negative emotional experiences during the simulation process, and how these emotions and experiences affect learning. Where it is discussed in the literature, the general conclusions are that the instructor must be actively involved with the game, well prepared and organised, willing to provide support and assistance, and careful to show the relationships between learning in the game and key course concepts and outcomes (McKenney and Dill, 1966; Knotts and Keys, 1997). In other words, a positive overall simulation experience is more likely to occur when instructors ensure that the additional pillars mentioned above are built in.

Research method

Research purpose and objectives

The review of prior literature has demonstrated that marketing educators believe it is important to provide students with an educational experience that prepares them for the world of work. A marketing education cannot simply involve the acquisition of a body of knowledge; it must also make students more employable by endowing them with work-relevant skills and competences. The literature suggests that marketing simulation games seem to provide an excellent opportunity to deliver valuable skills through a medium that students find highly engaging – in other words, an environment in which students are primed to learn because of their positive affective response to the educational experience. The project investigates the validity of this important assertion.

The overall purposes of the study were to understand better how students perceive and respond to simulation games, and to investigate what barriers marketing lecturers perceive to the adoption of simulation games, in order to make more effective use of simulations in the curriculum. The empirical study comprised two phases: first, a questionnaire administered to students who had used TMG! At two British universities, and, second, qualitative interviews with marketing lecturers who use a simulation game (although not necessarily TMG!) in their teaching.

An important proposition to be investigated was that students generally have a positive affective response to simulation games, and that this primes them to respond well cognitively. Hence, the enjoyable, competitive atmosphere of the game provides a strong motivation for students to learn about both specific marketing topics (notably consumer behaviour and target marketing, in TMG!) and about general business matters (notably profit and loss analysis, and forecasting). In addition, specific objectives concern the differential responses of different categories of students to simulation games. We hypothesise that there may be differences in response between different demographic groups (male/female, ethnic background, and so on), between those with more or less employment experience, between those with different prior educational experiences (for example, traditional or vocational school-leaving qualifications), and between those from different cultural backgrounds. Prior research has indicated that student perceptions of the effectiveness of learning methods can vary with such demographic characteristics (Brennan and Ahmad, 2005).

Sampling and data collection

A questionnaire, administered to cohorts of students at two British universities, asked students who have played TMG! to rate the learning value of simulations in relation to

other learning methods, and measured student perceptions of their own affective and cognitive responses to playing the game. The questionnaire employed in this study was suitably adapted from questionnaires used successfully by the co-researchers previously to investigate student perceptions of the case study method, and of educational drama, on marketing courses (Brennan and Ahmad, 2005; Brennan and Pearce, 2008). The survey was administered in a classroom session at the end of the module on which TMG! had been used. For the great majority of the respondents (90 per cent), this had been their first experience of playing a business or marketing simulation game.

The quantitative analysis presented here is based on data collected from a total of 137 students (32 from University A, located in eastern England, and 105 from University B, located in north London).The demographic characteristics of the respondents to the questionnaire are shown in Table I. The sample represents the wider population of undergraduate students at the two universities fairly well. There is an approximate balance between male and female respondents; the age distribution represents a characteristic mix of traditional young undergraduates aged in their early 20s (in the final year), and a reasonably large number of mature students. The diversity of the sample in terms of ethnic origin reflects the typical ethnic mix of "new universities" in southern England. A substantial minority of the respondents received their secondary education outside the UK.

Table II shows that a substantial minority of the respondents claim to have had full-time work experience (defined on the questionnaire as working full time for the same employer for more than six months). All but a handful of respondents claimed to have worked part time, and 65 per cent were in part-time employment when they completed the questionnaire; the modal category for part-time employment was between ten and 20 hours per week. As would be expected, the older respondents were more likely to have had full-time work experience than the younger respondents (61 per cent of those aged 25 or over had full-time work experience, compared with 29 per cent of those aged 21 or 22).

	Frequency	Percentage
Gender (n = *137*)		
Male	76	56
Female	61	44
Age (n = *137*)		
20-21	51	37
22-23	63	46
24 or older	23	17
Ethnic origin (n = *136*)		
White	50	37
Asian or Asian British	35	26
Black or Black British	33	24
Other	18	13
Secondary education (n = *137*)		
In the UK	86	63
Outside the UK	42	31
Partly in UK, partly outside	9	6

Table I.
Respondent demographics

	Frequency	Percentage
Have you ever worked full time for more than six months? (n = *136*)		
Yes	57	42
No	79	58
Have you ever worked part time? (n = *137*)		
Yes	129	94
No	8	6
Are you working part time now? (n = *137*)		
No	49	36
Yes, < ten hours per week	20	15
Yes, ten to 20 hours per week	56	41
Yes, > 20 hours per week	12	9

Table II. Respondent work experience

The qualitative analysis presented here, concerning the lecturer perspective on marketing simulation games, is based on semi-structured qualitative interviews with marketing lecturers who were currently using a simulation game in their marketing teaching. Eight qualitative interviews were carried out, each of approximately one-hour duration. The interviews were digitally recorded and professionally transcribed, and the analysis was conducted on the interview transcripts. All of those interviewed were full-time faculty members in university business schools, two were female and six male, seven worked at UK universities, and one at a university in Ireland.

The student perspective on the simulation game

In the discussion of the survey findings, we first compare student perceptions of different learning methods (including TMG!), and then concentrate on responses concerning TMG!, looking initially at the mean responses from the whole sample and subsequently at comparisons between different categories of student (men/women, and so on).

Table III shows the mean score (on a 1 to 5 scale) and the rank (calculated from the mean scores) for 12 learning methods. For all of these learning methods, the mean score is significantly above the scale mid-point of 3.0 (i.e. using a *t*-test, we can reject the hypothesis that the true mean is 3.0). The "business game" learning method is easily ranked first. However, we should observe that this research was conducted with classes who had just finished playing TMG!, and for most of the students this had been their first experience of a business game, so that their responses were probably influenced by the novelty and immediacy of having recently experienced the game. Nevertheless, we can state with high confidence that students believe that they learned a lot from playing the game and found it to be highly effective when compared with other learning methods. Figure 1 shows this point further, showing that nearly 50 per cent of respondents claimed that they "always learn a lot" when using a business game. Again, we would advocate caution in interpretation, since, for most respondents, this was their first experience with such a game. Nevertheless, the principal risk of interpretation here would seem to be that the degree of learning that the respondents claim to have experienced during the game may be exaggerated because of the immediacy and novelty of the experience. It is very unlikely that the respondents' opinions about the game would change from strongly positive to neutral or negative with greater distance from the experience of playing the game.

Learning method	Rank	Mean score
Business game (e.g. TMG!)	1	4.21
Question and answer sessions in seminars	2	4.06
Assignment-based research	3	4.02
Discussions with other students	4	3.88
Private reading (e.g. textbooks and articles)	5	3.78
Case-study analysis	6	3.75
Group work	7	3.64
Presentations	8	3.60
Lectures	9	3.56
Self-guided research	10	3.55
Watching a video	11	3.22
Computer-based learning (e.g. blackboard)	12	3.16

Table III.
Rank order of student perceptions of learning method effectiveness

Notes: Question asked: "what is your opinion of these learning methods?" Rate each learning method on a scale from 1 to 5 where 1 means "I never learn anything when this method is used" and 5 means "I always learn a lot when this learning method is used"; mean score is on a scale from 1 "never learn anything" to 5 "always learn a lot"

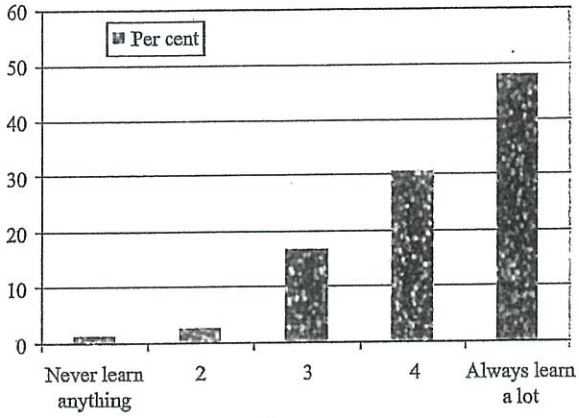


Figure 1.
Student perceptions of learning method

Note: Business game, e.g. TMG!

The next step in the analysis was to investigate in what ways the students felt that their learning had benefited from playing TMG! This was measured using a battery of 23 Likert-scale items adapted from a questionnaire used by Brennan and Ahmad (2005) to study student perceptions of the case study method. The ten items with the highest mean scores are shown in Table IV. The scores for all of the items shown in Table IV are significantly above the scale mid-point of 2.5 (i.e. using a *t*-test, we can reject the hypothesis that the true mean is 2.5). From these results, we conclude that the respondents were strongly of the opinion that TMG! had been a useful learning experience, and that the nature of the learning included many experiential components, such as understanding how business decisions are made, improving team-working skills, and illustrating how strategic decisions are made in the real world.

To what extent do you agree that	Rank	Mean score
"Business games are a good way to practise using analytical tools"	1	3.34
"Business games help me understand how business decisions are made"	2	3.32
"Business games illustrate how business/marketing strategy works in the real world"	2	3.32
"Business games help me understand theoretical concepts"	4	3.30
"Doing analysis for business games helps me to develop useful business skills"	5	3.25
"Working on business games has helped me to develop my team working skills"	6	3.24
"Working on business games has helped me to develop my skills in business analysis"	7	3.23
"I usually contribute to business game discussions in class"	8	3.21
"Working on business games gives me the confidence to express opinions"	9	3.11
"Business games are a useful way to discuss business problems in class"	10	3.08

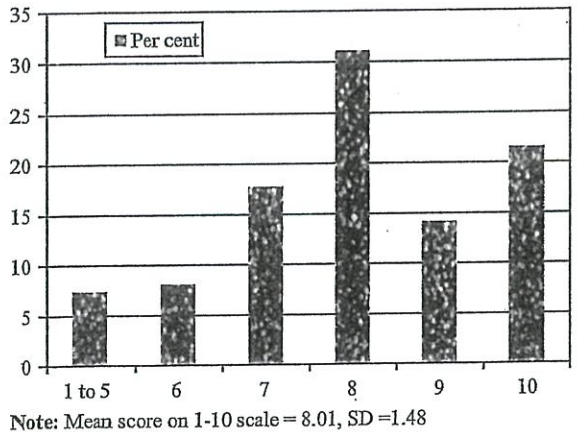
Note: Mean score is on a scale from 1 "disagree strongly" to 4 "agree strongly"

Table IV.
Rank order: student perceptions of learning benefits from business games

We were also interested to establish how students responded affectively to "TMG!". Figure 2 shows the responses to a question about the enjoyment of "TMG!". The great majority of the responses, on a scale from 1 (low enjoyment) to 10 (high enjoyment) were between 7 and 10, with 8 as the modal response and a mean response of 8.01. Clearly, the results from our survey indicate that our sample of students believed that the game was an effective learning method, which delivered a wide range of learning benefits, and which they enjoyed playing.

Differences in response between categories of students

An exploratory factor analysis (using principal factor analysis and varimax rotation) conducted on the 23 items used to measure student perceptions of learning benefits identified six factors with eigenvalues greater than 1.0, explaining 63 per cent of the variance in the data. The two factors explaining the largest percentage of the variance (40 per cent in all) were interpreted, based on the items of which they were comprised, as "analysis" (28 per cent of variance) and "skills" (12 per cent of variance). The mean score



Note: Mean score on 1-10 scale = 8.01, SD =1.48

Figure 2.
Using a scale from 1 (did not enjoy at all) to 10 (absolutely great!) indicate how much you enjoyed "TMG!"

(on a scale from 1 to 4 as defined in Table IV) for "analysis" was 3.22, and the mean score for "skills" was 3.06. These factors were used in the subsequent analysis to test differences between sub-groups of the sample. The results of the between-group comparisons are shown in Table V.

Perhaps, the most striking characteristic of Table V is that few of the between-group differences are statistically significant. That is to say that, in most cases, one cannot reject the null hypothesis that there is no difference between the mean scores of the categories. This suggests that, while there may be subtle differences between the responses of different student categories to the game, overwhelmingly all categories of student perceive it to be a beneficial and enjoyable learning method that delivered learning benefits in terms of both analysis and skills. There is some evidence that students who described their ethnicity as "Asian or Asian British" were significantly more positive about the game than students who described themselves as "White" (note that the Asian category does not include "Chinese", since this was included as a separate category, but there were too few respondents in this category to use it for analysis). From Table V, we can see that there may be some difference between students who were educated at secondary level in the UK, and those who were educated outside the UK (the latter recorded higher scores), and between those with and without full-time employment experience (those with full-time experience recorded higher scores).

There is some evidence in our data of covariance between age, full-time work experience, and a positive response to "TMG!" We observed above that age and full-time work experience are correlated, and Table V shows a weak association between full-time work experience and a positive response to the game. In Table VI, we show the correlation coefficients between the factors "analysis" and "skills", and the variables "age" and

Comparator variable	Enjoyment *t*-value	Enjoyment Significance	Learning: analysis *t*-value	Learning: analysis Significance	Learning: skills *t*-value	Learning: skills Significance
Gender						
Men/women	0.93	n.s.	0.98	n.s.	1.31	n.s.
Ethnicity						
White/Asian	1.87	0.07	1.92	0.06	2.56	0.01
White/Black	0.21	n.s.	1.13	n.s.	1.33	n.s.
Asian/Black	1.36	n.s.	0.53	n.s.	1.39	n.s.
Secondary education						
In UK/outside UK	0.91	n.s.	1.76	0.08	0.82	n.s.
Entry qualification						
A levels/GNVQ	0.47	n.s.	0.47	n.s.	0.32	n.s.
Worked full time?						
Yes/No	0.57	n.s.	0.57	n.s.	1.67	0.09

Table V.
Comparative analysis of responses to "TMG!"

Variable 1	Variable 2	Correlation coefficient	Significance
Learning: skills	Age	0.07	n.s.
Learning: skills	Enjoyment	0.476	0.00
Learning: analysis	Age	0.194	0.03
Learning: analysis	Enjoyment	0.505	0.00

Table VI.
Correlations of perceived learning, age and enjoyment of "TMG!"

"enjoyment". Enjoyment is highly correlated with both "analysis" and "skills", consistent with the hypothesis that a positive affective response to the game is associated with a strong cognitive response. Age shows no significant correlation with "skills", but a moderately strong correlation with "analysis". This provides some tentative support for the hypothesis that older students found the game to be a more effective learning experience, particularly for learning about analytical methods, than younger students.

The lecturer perspective on simulation games

The interview phase of the project revealed a great deal of enthusiasm among those who have adopted marketing simulation games. In several of the universities visited, the interviewee was more or less a lone enthusiast. There was a striking level of commitment from the majority of the interviewees to the use of simulation games, with most believing that marketing educators should make more use of simulations. The types of learning outcomes sought from the use of the game were universally of a practical nature, usually to do with analytical, team working and personal skills development. Simulation games are seen, by their proponents, to be an unrivalled method for teaching a number of skills which are considered to be valuable, and which cannot readily be taught using other learning methods. Skills of the following types were mentioned: the ability to meet deadlines, the ability to work in teams of individuals with mixed skills towards a concrete and time-constrained goal, the ability to assimilate and to analyse numerical data of the type frequently encountered by marketing managers (for example, sales revenue and gross profit margin, gross contribution, and market share). It is the concrete, decision-orientated and data-driven nature of the marketing simulation experience that game adopters believe to be particularly valuable for their students' learning. A common thread in the interviews was the belief that the skills learned in the course of playing the simulation game were of value in the work-place, so that students who played the game would be better prepared for junior marketing or sales positions than those who had not.

The game adopters, although very enthusiastic, were not uncritical about game design. For example, a sales management simulation was considered to be in some respects "unrealistic", because it over-simplified the nature of the sales management task and offered the game player too much flexibility in adjusting elements of sales remuneration. Nevertheless, the lecturer still considered the game to be a valuable exercise because of the skills (data analysis, working to deadlines, and so on) that were involved. She observed, however, that the "unrealistic" aspects of the game would make it unsuitable with certain students, notably post-experience students, since they would be likely to dwell on the flaws in the game design rather than participate enthusiastically. At the other extreme, an international marketing simulation which was considered to be highly realistic, came in for criticism because it provided the students with so much data that they were tempted to devote too much of their time to playing the game – so diverting time from other important learning tasks on the course. This highlights one potential, and unexpected, drawback to playing a simulation game, namely the "opportunity cost" involved. Clearly, playing a simulation game requires learning time to be devoted to it. Mostly, this is a mixture of in-class time and student private-study time. However, on the majority of courses the simulation game is one out of several learning methods employed, with different learning methods designed to achieve different learning outcomes. Since students often find the simulation game to be

highly involving, there is a risk that they will divert more of their study time to the game than the lecturer intended, and may spend less time on other learning methods. Only one of our interviewees had overcome this possibility entirely, by devoting the entirety of a 12-week module to playing the simulation game. In all other cases, the game was a component of a module (or course).

A particular concern for the interview phase was to identify the barriers to adopting simulation games. The key barriers that emerged were as follows:

(1) financial cost;

(2) searching for and evaluating games;

(3) concerns about the learning curve:

- concerns about ability to facilitate the learning process;
- concerns about administrative work-load; and
- prevalence of necessary skills among marketing lecturers.

(4) uncertainty about learning outcomes.

Financial cost was not a universal concern, but in the financially uncertain times when the interviews were conducted (Summer 2009) the matter was raised by several interviewees. The nature of the course on which the simulation is used makes a difference: for example, where MarkStrat is used on an executive education course, cost is unlikely to be an issue because of the revenue directly generated by the course. However, for core undergraduate teaching, the cost of the simulation may be more of an issue. At one institution, the interviewee wanted to switch to a new simulation game which he had evaluated as preferable in important respects to the simulation that he had been using for ten years. However, he had encountered considerable difficulty in obtaining the budgetary authority to make the necessary investment.

Searching for and evaluating games was considered to be a lengthy, time-consuming and uncertain process. If the lecturer has certain learning outcomes in mind, and believes that a game would be the best way of delivering them, then a search process will be initiated. However, there is no guarantee that a game exists that will deliver the desired learning outcomes, and reliable sources of information about the objective merits of different games are difficult to find. Information provided by game suppliers is regarded as unreliable, since they are perceived to be in the business of selling games, rather than helping lecturers to achieve their educational goals.

There are several concerns about the learning curve. First, with the majority of games lecturers perceive there to be a substantial amount to be learned by the tutor before they can effectively facilitate student learning (and there is anxiety that they may not learn enough prior to starting the related teaching sessions, and so be unable to answer student questions effectively). Second, prior to using a simulation game, the lecturer is uncertain about the weekly administrative workload involved in game administration, and may be concerned that the workload will be unmanageable. Third, some of the simulation games (such as TMG! and MarkStrat) provide substantial amounts of financial and numerical data; for some marketing lecturers, providing advice to students on financial and numerical analysis can be daunting. It is possible that some marketing lecturers, who might otherwise use games, avoid them because they experience anxiety about the need to advise students on financial and numerical analyses.

Finally, prior to using a particular simulation game, the lecturer may well be uncertain about the learning outcomes that the game will genuinely deliver. This raises the possibility that a module (course) could be carefully planned, with an integrated simulation game, but that the lecturer could find out during the teaching term (too late to make adjustments to the teaching and learning strategy) that the game cannot deliver the intended outcomes. This barrier is closely related to the issues associated with searching for and evaluating games, and the availability of objective, reliable information about what learning outcomes a game can deliver.

The interviewees were asked what advice they would provide to newcomers to marketing simulation games to overcome these barriers. For the most part the responses were, although perfectly reasonable and no doubt correct, essentially platitudes – for example, to be fully prepared before starting to use the game, and to be clear about what learning outcomes one wishes to achieve through the game. However, one thing that stands out from the interviews is the value of obtaining advice from a lecturer who has already used the game that one is thinking of adopting, and who can therefore provide trusted and practical advice about the educational value of the game, the administrative burden associated with the game, and the steepness of the learning curve the lecturer can expect.

Conclusion

Simulation games are not an undiscovered educational technique. Nevertheless, we believe that the potential educational contribution of marketing simulation games has been far from fully exploited. In particular, from our own practice, we have observed that this is one of the most effective tools for engaging students actively in the learning experience. Many of the students who play marketing simulation games become absorbed in the game, determined to improve their team's performance, and realise quickly that in order to achieve good performance they need to understand and apply important marketing principles. The results from the survey of students support these contentions. Of course, we must emphasise that what we have measured are student perceptions of their enjoyment, overall learning from, and components of learning from a single marketing simulation game. These clearly represent limitations on this study. In addition, the sample of students was taken from only two universities in the south-east of England, and the generalisability of the findings is therefore strictly limited.

Within those limitations, we have confirmed the general findings from earlier literature that students enjoy simulation games and believe that they learn a lot from them. Going beyond these earlier studies, we have provided some evidence that student perceptions of their learning from simulation games seem to be particularly strong in terms of aspects of analysis and aspects of skill development.

Of particular concern is the use of simulation games with an increasingly diverse population of students in the UK. The once homogeneous UK higher education body of students has become increasingly heterogeneous, partly reflecting the increasing diversity of UK society in general, and partly reflecting government policy to widen access to higher education. It is important for marketing educators to understand how different categories of student are likely to respond to marketing simulation games. Our findings in this respect are encouraging, since there did not seem to be marked differences between different demographic categories of students in their response to the game. There was some limited evidence that "Asian or Asian British" students,

students who received their secondary education outside the UK, and mature students had more favourable attitudes towards the game. However, these findings are tentative and further research would be needed to establish how valid they are.

Marketing simulation games are not for everyone and they are not for every module. Clearly, they are most useful where the lecturer has learning outcomes related to the world of marketing management practice, understanding the decision-making process, analysing and interpreting financial and marketing data, working to deadlines, and working in teams. Often, this will be on final-year undergraduate modules and on postgraduate modules where the lecturer wants to give the students a taste of practical marketing decision making before they enter the work-place. The more complex games, such as MarkStrat, are also suitable for use with post-experience MBA and executive education groups, to enable those who already have management experience to test out alternative marketing strategies in the safe environment of the simulation.

What are the factors that inhibit marketing simulation games from being used more widely? First, there is the matter of cost: generally there is an annual fee per student for the simulation, so that the overall cost can be high if the simulation is used with a large cohort of students. However, perhaps, more serious than the direct financial costs are the indirect costs associated with setting up a marketing simulation game from scratch. This is a serious undertaking which needs to be approached professionally. It must be understood that the a lecturer who evaluates candidate games, selects one for implementation, arranges for any necessary software installation, and then learns the game sufficiently well to be able to administer it and to advise student participants on playing the game, has undertaken a major task. This is not a job to give to someone who is already over-loaded, and it is not a job to skimp on, since our research has shown that marketing simulation games require thorough lecturer preparation if they are to be implemented successfully.

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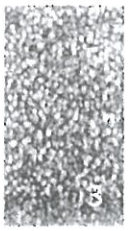

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Article

Effects of Participation in a Simulation Game on Marketing Students' Numeracy and Financial Skills

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Abstract

The need to endow marketing graduates with skills relevant to employability grows ever more important. Marketing math and elementary financial understanding are essential employability skills, particularly given the contemporary emphasis on marketing metrics, but the evidence is that marketing graduates are often relatively weak in such skills. This article suggests that one educational strategy to improve numeracy and financial skills may be through the use of a marketing simulation game. Through the simulation game, students are exposed to marketing calculations and financial data in an engaging context that simulates the real world. It is hypothesized that marketing students' numeracy and financial skills, and their self-efficacy with respect to marketing calculations, will improve following participation in a simulation game where numerical and financial analysis are necessary activities. Using a quasi-experimental research design, it is found that there are substantial and significant improvements in numerical and financial performance after participating in a simulation game, but that there is no improvement (and possibly a small decline) in self-efficacy related to these tasks. Marketing educators are advised that a marketing simulation game is a viable option to consider when seeking to improve students' numeracy and financial skills.

Keywords

simulation/gaming, undergraduate education, measuring teaching effectiveness, employer needs, skills/traits development in marketing education

There is considerable evidence that, in order to enhance their employability, marketing graduates need to be capable of handling numerical and financial concepts (Walker et al., 2009; Wellman, 2010). This is particularly important because marketers are increasingly being asked to demonstrate the return on marketing investments, and to do this they must have a facility with marketing metrics—something that involves both numerical and financial concepts (Saber & Foster, 2011). However, there is also evidence that many marketing students fail to acquire these essential skills during their undergraduate studies. For example, Ganesh, Qin, and Barat (2010, p. 48) say, "At a major public university in the southwest United States, marketing faculty experienced the same frustrations as their colleagues elsewhere—that is, undergraduate students' inability to handle even basic marketing math." A number of researchers have suggested learning approaches designed to bridge this gap (Pilling, Rigdon, & Brightman, 2012; Pirog, 2010; Saber & Foster, 2011; Schlee & Harich, 2010). However, there is no suggestion yet that the solution has been found. Indeed, it is likely that multiple strategies will be required to enhance marketing students' quantitative and financial skills. Saber and Foster (2011) suggest the use of marketing accounting spreadsheet exercises, Ganesh et al. (2010) describe the use of one-page mini-cases designed around characteristic marketing calculations, and Pilling et al. (2012) describe in detail the development and implementation of a comprehensive marketing metrics course. The suggestion of this article is that one additional fruitful strategy for enhancing analytical skills is to use a strategic marketing simulation game as a medium through which financial and numerical learning is achieved.

In an increasingly competitive global market-place for higher education, universities everywhere are coming under increasing pressure to prepare their students for employment. Not to put too fine a point on it, employers are unimpressed by business school graduates who cannot do basic business calculations or do not understand elementary

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financial concepts such as gross and net profit margin. If this was not reason enough for marketing educators to want to endow their students with numerical and financial skills, there is also the professional pride in producing graduates who can correctly apply numerical and financial analytical skills to marketing problems. Simply, this is something that marketing educators know that their students should be able to do, and as Ganesh et al. (2010) observe, it is a matter of real frustration if they cannot.

The underlying rationale for the proposition that a marketing simulation game is a good medium for learning about quantitative and financial concepts is based on the arguments, first, that a simulation game is an engaging learning experience within which students become absorbed, and second, that business and marketing students will find it easier to acquire numerical and financial concepts when these are contextualized in a simulated real-world experience. The next section expands on this rationale and provides support from the literature on marketing and business education. Subsequently, the proposition is converted into testable hypotheses, and a research study employing a quasi-experimental design conducted at a university business school in London is described. Following the presentation of the results from this study, the article concludes by summarizing the implications for marketing educators and mentioning a number of interesting areas for further research.

Employability, Skills, and Simulation Games

There is a clear consensus among marketing educators that they should strive to provide students with an educational experience that prepares them for successful careers (Ardley & Taylor, 2010; Walker et al., 2009; Wellman, 2010). Their education cannot simply involve the acquisition of a body of knowledge; it must also make them more employable by endowing them with work-relevant skills and competences (Gibson-Sweet, Brennan, Foy, Lynch, & Rudolph, 2010; Schlee & Harich, 2010). In particular, marketing graduates need adequate numeracy and financial skills because marketers are increasingly called on to be accountable for their decisions (Ganesh et al., 2010; Saber & Foster, 2011). The premise of this study is that marketing simulation games provide an excellent opportunity to improve these skills; consequently, we hypothesize that simulation games are a good medium through which to deliver numerical and financial skills on a marketing degree program.

Numeracy skills are among the most important skills needed by graduates. Studies have confirmed the commonsense belief that having better numeracy skills is associated with better employment prospects (Bynner & Parsons, 1997). For example, Parsons and Bynner (2005, p. 35) found that modern jobs to which young people are attracted "place a high premium on skills to which basic numeracy is central." Many entry-level marketing positions would fall into this category. Although there are many definitions of numeracy, perhaps the definition provided by Lockett (1974) is still the most useful: that a numerate employee is one who can make logical deductions, do basic arithmetic, and work with the relevant mathematical symbols, terms, and formula used in the profession. These may appear to be quite basic skills and yet many studies have demonstrated that students in higher education today not only exhibit a weakness in basic arithmetic but also show a general fear of numbers and anything related to them (Zanakis & Valenzi, 1997; Zeidner, 1992). This does not bode well for their ability to succeed in marketing tasks involving setting budgets, interpreting numerical information on the business environment, competitors or customers, or undertaking even basic statistical analysis.

Previous research has demonstrated the ability of simulation games to engage students in the learning process while also developing a range of key skills and attitudes (Bobot, 2010; Vos & Brennan, 2010). This study makes use of a marketing simulation game currently used in a final year undergraduate marketing strategy module to determine the degree to which participation in such a game improves marketing students' skills in numerical and financial analysis, as well as their perceived self-efficacy in those skills. Pollack and Lilly (2008) have previously found an association between self-efficacy and the enjoyment that marketing students derive from learning activities and between self-efficacy and the degree of practical application in the learning activity. They note that "the more students perceive the assignment as relevant to businesses, the higher their self-efficacy as a result of participating in or working on the assignments" (Pollack & Lilly, 2008, p. 65). Bandura (1977, p. 195) defined self-efficacy as "a self-evaluation of one's ability to successfully execute a course of action necessary to reach desired outcomes" and found that students with higher self-efficacy tend to have more motivation and greater persistence to master academic challenges.

In addition self-efficacy itself may be a valuable aspect of a student's employability: Pollack and Lilly (2008) suggest that a student with higher self-efficacy may be more employable than a similar student with equal, or even slightly superior, objective skill levels. Consequently, self-efficacy is included in this study, to explore whether participating in the engaging and practical learning environment provided by a strategic marketing simulation game enhances student self-efficacy in quantitative and financial skills.

Prior research into the educational value of simulation games suggests that they are good for developing key skills and giving participants a "valid representation of real world issues facing managers" (Wolfe & Roberts, 1993, p. 22) including enhanced skills in strategy formulation, analysis of multiple variables, integration of a range of marketing concepts and tools, manipulating financial concepts,

problem solving, communication, and team work (Faria, 2001, 2006; Gopinath & Sawyer, 1999; Jennings, 2002; Keys & Wolfe, 1990; Zantow, Knowlton, & Sharp, 2005). Many studies have demonstrated high correlations between statements such as the game "improved analytical skills," "improved problem solving," "helped learn concepts," and "taught fundamentals."

A number of studies have reported on classroom initiatives to try to improve marketing students' quantitative skills (Ganesh et al., 2010; Pirog, 2010; Saber & Foster, 2011). One of the key findings that emerges from these studies is that greater success can be achieved if the quantitative analysis is placed in an engaging and relevant context; that is to say, where marketing students do not consider themselves to be in "math class" but perceive themselves to be learning about the practice of marketing (Pollack & Lilly, 2008). Teaching quantitative skills in the abstract is less effective than teaching quantitative skills in the natural context of business decision making. Marketing simulation games provide a naturalistic setting within which to address the kind of quantitative task that is commonly expected of marketing executives, such as understanding gross profit margin, contribution, and relative market share. Little is known about the ability of simulation games to improve specific and relevant numeracy and financial skills of marketing students, and this project seeks to fill this gap. Consequently, the principal goals were to determine the degree to which participation in a marketing simulation game improves marketing students' objective skills in numerical and financial analysis and how participation affected students' subjective perceptions of their numerical and financial skills. The following hypotheses were tested in this study:

Hypothesis 1: Marketing students' scores in a standard test of numeracy skills will rise following their participation in a simulation game that requires them to engage in numerical analysis.

Hypothesis 2: Marketing students' scores in a standard test of financial skills will rise following their participation in a simulation game that requires them to engage in financial analysis.

Hypothesis 3: Marketing students' self-efficacy in handling numerical and financial issues will improve following their participation in a simulation game that requires them to engage in numerical and financial analysis.

In addition, the research design provided the opportunity to explore whether differences existed between categories of respondents in terms of their response to the simulation game. The demographic data collected on each respondent was gender, age, ethnic origin (self-described, using the classifications from the U.K. Census), and qualification route into university (U.K. academic qualifications [A-levels], U.K. vocational qualification, high school qualification from an overseas school, access course and other).

Methodology

Sample

The project was a single-institution exploratory study. The university where the study was conducted is a large, public university in London drawing many of its undergraduate students from the local population, which is socially and ethnically diverse; like most metropolitan universities in the United Kingdom this university also attracts a substantial number of overseas students. The study participants were students on a final year course in strategic marketing.

The profile of respondents shown in Table 1 is representative of a "modern university" in London or most other British metropolitan areas (a "modern university" is one that has been awarded university status since 1992). Such universities have an ethnically diverse student body and attract many students with vocational qualifications as well as those with the more traditional, academic A-level school leaving qualification.

Table 1 shows that there were 127 respondents before game participation and 88 respondents after game participation; of these, it was possible to identify 76 paired questionnaires, where the same respondent had completed both the before and the after questionnaire. In Table 1, and in the later sections where the results are discussed, it is only the results from the 76 respondents for whom a direct paired comparison is possible that is discussed. The decline in respondents between the first and second test administrations merits some comment. Students did not receive credit for participation, but were informed that participation in the study would be of direct benefit in preparing for their final assessment (see further discussion below under "procedures"). The timing of the second test administration was toward the end of the semester, since the simulation game was played throughout a semester. The end of a semester is a busy time for students who are typically preparing final reports and revising for examinations, and it is likely that this accounts for the lower participation at the second administration. Demographically, those who participated in both test administrations did not differ substantially from those who participated in only one; for students who participated in both the mean age was 21.7 and the gender ratio was 43.4% male to 56.6% female, whereas for those who participated only in one the mean age was 22.1 and the gender ratio was 42.0% male to 58.0% female.

Research Instrument

The research design aimed to capture both objective and subjective data about the changes in students' numeracy and

Table 1. Respondent Characteristics.

Characteristic	Category	N	%
Gender	Male	33	43.4
	Female	43	56.6
Ethnicity[a]	White	27	35.5
	Asian or Asian British	22	28.9
	Black or Black British	13	17.1
	Other	14	18.5
Prior qualification[b]	A levels	29	38.2
	U.K. vocational qualification	22	28.9
	High school in another country	19	25.0
	Other	6	7.9

a. The top-line classification of ethnicity from the U.K. Census was used to classify self-described ethnic groups. "Asian or Asian British" refers to those self-described as "Indian, Pakistani, Bangladeshi, or other Asian background." "Black or Black British" refers to those self-described as "African, Caribbean, or any other Black/African/Caribbean background." For further details, see http://www.ons.gov.uk/ons/guide-method/measuring-equality/equality/ethnic-nat-identity-religion/ethnic-group/index.html#8.
b. British domestic students typically apply to university with either the more academic A level qualifications or with equivalent vocational qualifications (such as the National Vocational Qualification), which are aligned with occupational standards and skills.

financial skills arising from participating in a marketing simulation game for 3 months. By objective data we mean the results of a test of analytical skills focusing on numerical and financial concepts, whereas by subjective data we mean the beliefs and perceptions of students concerning their self-efficacy in tackling numerical and financial problems.

Self-efficacy in numerical and financial tasks had to be captured by the research instrument. It has been emphasized in prior research that the measurement of self-efficacy must be domain specific (Bandura, 1977, 1997; Pajares, 1996), consequently the decision was made not to use general questions that have been previously developed to measure mathematics self-efficacy but to develop an original scale for this study. Questions previously used to measure general mathematics self-efficacy concentrate on aspects of pure mathematics (Betz & Hackett, 1983), whereas the questions developed for this study concentrated on specific quantitative and financial applications in marketing.

The questionnaire comprised four subsections. The first asked for basic demographic data: gender, age, ethnicity, and prior educational qualifications. The second subsection focused on student self-efficacy perceptions regarding quantitative and financial analysis for marketing decision making. Respondents were asked to examine a one-page sales report drawn from a case study in a strategic marketing textbook. Five calculations or tasks were described for this sales report, representing quantitative thinking activities that would commonly be associated with marketing analysis (e.g., to calculate the sales generated for every £1 of advertising spent). The respondents were asked to indicate the level of confidence they felt that they would be able to undertake these tasks correctly. An 8-point confidence scale, drawn from Pajares and Graham (1999), was used anchored by *Not confident at all* (1) and *Completely confident* (8). The five questions and 8-point scale gave a self-efficacy score of between 5 and 40 for each respondent.

The third subsection of the questionnaire comprised 10 quantitative test questions, each with a unique correct answer. Respondents had to answer these questions without the use of a calculator. These questions required mental arithmetic. The questions were calibrated to be at the level expected of a typical English school leaver; specifically, the easier questions were designed to match the foundation and higher tier levels of the English General Certificate of Secondary Education in mathematics (non-calculator paper), whereas harder questions slightly exceeded this level. The fourth subsection of the questionnaire comprised five questions concerning concepts in financial accounting, based on a simple profit and loss statement drawn from an introductory marketing textbook. Following the administration of the questionnaire, the researchers coded the quantitative and financial questions manually and gave each respondent a score between 0 and 15. The questionnaire is included as an appendix.

Procedure

The overall research design can be described as a pre- and posttest single-group quasi-experiment (Bryman, 2004; Robson, 1993). The research instrument was administered at the start of the game, and then again, 3 months later, at the end of the game. The game (SimBrand, for details see www.cesim.com) is a widely used strategic marketing simulation. In terms of the decision-making process, the data provided to students and the analysis required of students SimBrand do not differ markedly from other marketing simulation games such as The Marketing Game! (Mason & Perreault, 2001), MarkStrat, and Markops (see www.stratxsimulations.

com). However, the authors had selected SimBrand for this final year (senior level) strategic marketing module on the basis that the industry context (the mobile phone industry) is engaging for students, the academic level is appropriate, and the user interface is attractive and modern (much use is made of graphics and charts that simulate perceptual mapping and portfolio analysis). All these games involve the analysis of marketing and financial data in a simulated competitive market environment in order to make decisions about such marketing variables as target market selection, product design features, advertising spend, media mix, distribution channels, and pricing.

The fundamental reason for using a simulation game is to enable students to design and implement strategic marketing plans and see the results of their decisions. The game was incorporated into the final year marketing strategy module; this module primarily covers the conventional strategic market planning curriculum of the marketing audit, competitive analysis, objective setting, designing and selecting optimal marketing strategies, implementation, and control. Marketing data analysis and financial analysis are not a component of the curriculum for this module, since these subjects are covered earlier in the marketing program. Through the use of the simulation game, it is intended that students will learn to appreciate the link between marketing data analysis, financial analysis, and strategic marketing. To succeed in the simulation game, the students have to correctly undertake analytical tasks such as sales forecasting and analysis of market share and financial tasks such as calculation of relative product profitability and return on investment in customer service. Students made weekly decisions as part of the normal teaching and learning process (each set of decisions is 1 year in the simulated environment). Weekly 1-hour seminars were devoted to briefings about how to play SimBrand, the relationship between SimBrand and strategic marketing theory, and tutor guidance on the appropriate methods of analysis and decision making to deploy in the game. These seminars were the normal weekly small-group classes for the students to support the weekly lecture series; both the game play and the research described in this article were fully integrated into the module so that no additional teaching resources were required over and above the standard allocation. Students playing the game were organized into groups of four, which is a group size that has been recommended for experiential learning exercises (Strong & Anderson, 1990). However, the questionnaire was administered to individuals under controlled, test-like conditions.

With the aim of achieving high reliability between the two administrations of the questionnaire, exactly the same research instrument was used at the start and at the end of the game. This approach carries a small risk that, at the time of the second administration, some respondents may recollect questions from the first administration. However, the risk here was considered minimal because, first, 3 months elapsed between administrations, second, all questionnaires were collected after the first administration, and third, no feedback was provided to students until after the second questionnaire administration.

Administration of the research instrument was confidential but not anonymous. Since the students were to receive feedback on their performance in the tests incorporated into the questionnaire once the study had been completed, as a form of constructive feedback, it was necessary to record respondents' student identification numbers. In addition, since the research objectives require the comparative analysis of the results from the first (before) and second (after) measurements, it was necessary to have a mechanism for pairing-up the responses; the student identification number was used for this. The questionnaire was administered in class as a part of the normal business of running the module. The research process was integrated into the teaching and learning strategy for the module; providing feedback to students on their results on the questionnaire tests (i.e., how their self-efficacy, quantitative skills and financial skills had changed during the module) was part of the formative assessment for the module. Students did not earn credit for the results they recorded on the test questions incorporated into the research instrument. However, questions similar to those in the research instrument were included in a time-limited summative (end of course) assessment—a fact that was made known to the students at an early stage—so that those students who participated fully in the research process benefitted by being better prepared for the terminal assessment.

Results

Table 2 provides mean scores on the three measures (self-efficacy, quantitative skills, and financial skills) before and after participation in the simulation game and t values and effect sizes for the difference between the before and after scores. Since the analysis was conducted on paired data, namely, the scores of the same individuals before and after participation in the simulation game, paired t tests were used. Figure 1 provides greater detail for the quantitative skills measure. There was a substantial increase in mean scores on the quantitative and financial skills measures after participation in the game. For the quantitative measure, Figure 1 shows that before participation 22 students scored 0, 1, or 2 out of 10 on this measure, whereas after participation no student scored less than 2, and only four students scored as low as 2. The mean score on the quantitative component increased from 4.30 (before) to 7.17 (after) out of a possible 10, and the mean score on the financial component increased from 0.14 (before) to 0.78 (after) out of a possible five. On the other hand, unexpectedly, mean student self-efficacy was lower after the game than before, declining from 24.10 (before) to 22.51 (after) out of 40.

These results suggest that Hypothesis 1 and Hypothesis 2 should be accepted; marketing students' scores in standard tests of numeracy skills and of financial skills did rise

Table 2. Mean Scores Before and After Participation in the Simulation Game.

(N = 76)	Mean self-efficacy (out of 40)	Mean quantitative score (out of 10)	Mean financial score (out of 5)
Before	24.10	4.30	0.14
After	22.51	7.17	0.78
Difference	−1.50	2.87	0.64
t Value	1.898	9.757	4.729
Significance level	0.062	0.000	0.000
Effect size (Cohen's *d*)	0.20	1.17	0.73

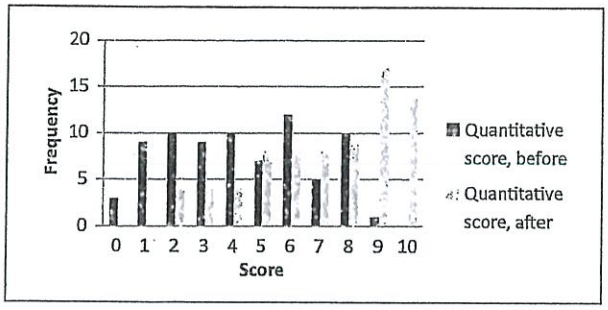

Figure 1. Score on quantitative questions before and after.

following their participation in the simulation game where they were required to engage in numerical and financial analysis. However, Hypothesis 3 is rejected; marketing students' self-efficacy in handling numerical and financial issues did not improve following their participation in the simulation game.

Discussion

Where, as here, a quasi-experiment is conducted without a control group, some care has to be taken in the interpretation of the results, since confounding factors might be responsible for observed changes. In the present case, these risks are considered to be fairly low. The students were not studying any other parallel modules that covered quantitative and financial analysis, and the average age of the respondents was 21.7 years, so that *maturation* of the respondents during the experimental period can be ruled out (maturation would be a more likely confounding factor with very young children, for example). Given that the observed changes are substantial and widely observed within the respondent group (85.5% of respondents recorded an improvement on their quantitative score), it is plausible to attribute much of the change to the experimental intervention, that is, the effect of tutor-supported participation in the simulation game.

There is some evidence that the students learned the quantitative skills more effectively than the financial skills as a result of participating in the simulation game. As the reader can see in the appendix, the five financial questions concerned elementary accounting terms of relevance to marketers, such as profit margin and ROI calculations. All the students had studied principles of accounting earlier in their program of study, and these concepts are in common use within the simulation game. Nevertheless, the results for the financial component were surprisingly low, with the mean rising from 0.14 (before) to 0.78 (after) out of 5. Clearly this is a substantial improvement, but even the higher score still represents less than an average of one correct question per student. Furthermore, the *majority* of the students did not record any improvement on the financial component at the second administration (5 scored worse, 41 scored the same, 30 scored better). On the other hand, the great majority of the students did record an improvement on the quantitative component at the second administration (7 scored worse, 4 scored the same, 69 scored better). This is consistent with the effect size results reported in Table 2, which show that the effect size for the improvement in the quantitative score was considerably greater than for the improvement in the financial score. Consequently, while the simulation game may be a good vehicle for teaching both quantitative and financial skills, the evidence from this study is stronger for quantitative skills than for financial skills. A problem here was the low base level of understanding financial concepts. It is possible that a certain base level of understanding is needed before the engaging, experiential learning process of the simulation game can be most effective.

The result for mean self-efficacy was unexpected. Mean self-efficacy for quantitative and financial tasks was expected to increase as the students learned about the application of these concepts in the practical context of the game and became more confident in their use. In fact, a decline was measured in mean self-efficacy, although it is not quite significant at the 5% level ($t = 1.898$, $df = 74$, $p = .062$). It is possible that, prior to their practical engagement with the application of quantitative and financial concepts the respondents simply assumed that, as final year undergraduates on a marketing course, they would be fairly competent in these tasks (moderately high self-efficacy). Subsequently, on finding that the interpretation of the game information was complex and often confusing, they may have revised their

Table 3. Dependent Variables: Correlation Matrix and Reliability Measurement.

	Self-efficacy before	Self-efficacy after	Quantitative score before	Quantitative score after	Financial score before	Financial score after
Self-efficacy before	α = .84					
Self-efficacy after	.60**	α = .88				
Quantitative score before	.38**	.28	α = .75			
Quantitative score after	.13	.35**	.45**	α = .78		
Financial score before	.17	.11	−.17	.14	α = .77	
Financial score after	.20	.20	.24*	.32**	.18	α = .81

Note. *statistically significant at the .05 level; **statistically significant at the .01 level.

self-efficacy beliefs downwards. In addition, Pajares and Kransler (1995) found that when asked to complete a math self-efficacy questionnaire before undertaking a test—the situation encountered in the research design of this study—most students are overconfident about their abilities. Consequently, explanations for the unexpected rejection of Hypothesis 3 suggest themselves, but these cannot be supported by data from the present study and merit further investigation.

Additional Findings

The principal goal of the study was to test for the effects of participation in the simulation game on students' self-efficacy and objective ability with respect to the kinds of elementary numerical and financial analysis typically found in marketing management. However, the study design also makes it possible to investigate whether there are significant differences between categories of student, either in terms of their performance on the tests, or in terms of the changes in performance from the first questionnaire administration to the second questionnaire administration. The demographic data collected for this purpose were sex, age, ethnicity, and university entry qualification type. No statistical association was found between age or student ethnicity and any of the dependent variables (self-efficacy, and scores on the financial and quantitative tests). While there were no significant differences between the absolute scores of men and women, there was some evidence that women achieved a larger increase in their quantitative test score than men. The improvement in mean quantitative test score for men was 2.18, and for women 3.39 ($t = 2.15$, $df = 74$, $p = .035$). This result is consistent with prior research into women learning mathematics at college level, which has found that a focus on practical applicability and a collaborative classroom environment are conducive to female success (Brew, 2001). Playing a simulation game in student teams supported by tutor guidance creates both of these conditions.

University entry qualification was not very helpful for explaining student performance on the tests used in this study. The only difference between groups that was found to be statistically significant was that students with overseas qualifications had higher average self-efficacy when the research instrument was first administered than students with U.K. domestic qualifications ($t = 2.416$, $df = 74$, $p = .018$). The levels of decline in self-efficacy and of improvement in test scores between the first and second questionnaire administrations did not vary significantly between groups with different entry qualifications.

Measure Reliability and Correlation Among Measures

Table 3 shows the internal reliability for the dependent variables—self-efficacy, quantitative score, and score on financial questions—and the correlations between them, before and after test administration. Internal reliability was measured using Cronbach's coefficient alpha. The value of alpha was in all cases greater than .7 and indicates adequate internal scale reliability (Kline, 1999). The correlation coefficient between before and after self-efficacy scores is high and statistically significant ($r = .600$, $p = .000$). High correlations between self-efficacy and performance are characteristic of self-efficacy studies (Bandura, 1997), and are found in this study (self-efficacy before with quantitative score before, $r = .377$, $p = .001$; self-efficacy after with quantitative score after, $r = .353$, $p = .002$). Self-efficacy is usually correlated with performance, both because those with greater objective competence tend to have higher self-efficacy and because greater self-efficacy leads to increased persistence with a task. In the case of the present study, it is likely that both effects were present: students with stronger quantitative skills would have above-average self-efficacy, and even students with average or below quantitative skills would persist longer with the tests if they had relatively high self-efficacy. The nature of the questions asked—elementary quantitative and financial questions—was such that greater persistence would likely bring greater success. One observation, when administering the questionnaire, was that in the case of a few students their self-efficacy concerning quantitative

and financial skills was so low that they refused even to attempt those parts of the questionnaire the first time it was administered. That is, they gave up before they started and refused to make any attempt at all. If such students had slightly greater self-efficacy then it is very likely that they would have found it possible to complete at least some of the test questions.

Limitations, Conclusions, and Insights for Marketing Educators

There are limitations on the external validity of this study. This was a single-institution study on a relatively small scale. The pre- and posttest quasi-experimental design (without control group) is convenient to administer but leaves open the possibility that confounding factors outside the researchers' control may have affected the measurements. In addition, and following considerable reflection, it was decided that students would not be allowed to use calculators in the controlled tests during which the research instrument was administered. Of course, in their everyday lives the students would commonly use calculators (often on their mobile phones) for simple arithmetic calculations. Consequently, it is possible that the students' confidence, and self-efficacy, was adversely affected by this condition. However, when designing the research instrument the authors used the "non-calculator paper" of the British school-leaving test (GCSE, normally taken at age 16) in mathematics as a guideline in calibrating the questions requiring calculation, and were concerned that the use of calculators would have rendered the task too easy and so reduced the discriminatory power of the research instrument.

In addition, this study only took two snapshots at the beginning and end of the simulation game. A very important question that remains is the durability of the learning achieved by the students. Of course, many of the skills that they used during the simulation game were skills that they had previously been taught on an elementary quantitative methods module and a financial accounting module—typically first year undergraduate modules. A question for future research is whether learning that is achieved through an engaging, experiential learning process (such as a simulation game) is more, less, or equally durable as learning achieved through more didactic approaches. Since the quantitative and financial concepts are learned in a meaningful context and are not simply learned by rote, it is plausible to suggest that deep learning may be achieved, which is likely to prove enduring (Bacon & Stewart, 2006; McIntyre & Munson, 2008).

On the first administration of the test instrument the final year students on this strategic marketing module had fairly poor skills in the quantitative analysis of marketing data and in elementary financial analysis, corroborating the pessimistic remarks of Ganesh et al. (2010) about the analytical skills of marketing students. Objective performance was positively correlated with self-efficacy in numerical and financial tasks. There was no evidence that performance in such tasks is associated with prior qualifications; university entry qualification did not prove to be a useful explanatory variable. By the time of the second administration, the average scores on the quantitative component had increased from 4.30 (out of 10) to 7.17 and the average scores on the financial analysis component had increased from 0.14 (out of 5) to 0.78, whereas the average self-efficacy score had declined from 24.01 (out of 40) to 22.51. The outcome on quantitative skills accords fairly closely to what the authors expected—final year marketing students are a little rusty in terms of elementary marketing math calculations but were able to improve quickly when faced with an engaging (and competitive) challenge requiring the use of number. The outcome on elementary financial skills came as a surprise to the authors. While the students' performance improved considerably, it did so from an unexpectedly low base, and even after the improvement the mean score achieved was less than one correct answer out of five. As readers can see in the appendix (Questions 20 to 24) these were not difficult questions. It is very unlikely that this phenomenon is unique to the university or the class investigated in this study; it is more likely that this is not unrepresentative of final year marketing undergraduates, all of whom have, at some point in their degree, taken a module in financial accounting. It seems to the authors that this finding is worthy of further investigation, and that if it is found to be generalizable, then marketing educators need to identify urgently strategies to improve the financial literacy of their graduates. If marketers are to understand and act on marketing metrics, they first need basic competence in marketing math and the interpretation of elementary financial information.

The findings from this study are perhaps of greatest use to marketing educators who are already users of simulation games, or to those who are seriously considering using a simulation game. It would probably be undesirable to undertake the considerable task of integrating a simulation game into the marketing curriculum purely because it could help in delivering elementary quantitative and financial skills. There are many good reasons to use simulation games, and the present study seems to have added one more good reason to that list. The curriculum design described in this article has considerable strengths: Students are introduced to quantitative methods and financial concepts early in their marketing degree course, and then this learning is reinforced toward the end of their studies through the highly practical medium of a simulation game. This serves to remind them of the concepts, permit them to reacquire skills, and to see how these concepts and skills are put to use in the work place. The ideas presented here may encourage those marketing educators who are already using simulation games to address more explicitly quantitative and financial analysis within the game environment.

Appendix

Marketing Student
Quantitative Skills Questionnaire

We hope that your experience on our module will help you to understand how marketing and financial data are used to make business decisions. This is the first of two questionnaires we will be administering during the module. We have two reasons for doing this. First, we want to get an idea of how comfortable you are with the sorts of analyses we will be doing in the module, and second, we want to use this opportunity to check your answers and give you feedback. That's why we ask for your student number—but don't worry; the only people who will see your questionnaire are you and ourselves as module tutors.

Please write in your student number

M								

1. Your gender (please tick one)

Male		1
Female		2

2. Your age (please write in)

	Years

3. Your ethnic background (Please tick one)

White		1	Black or Black British		4
Mixed		2	Chinese		5
Asian or Asian British		3	Other		6

4. Which type of qualification did you use to get a place on your university program? (Please tick one only)

A levels		1
Vocational qualification [e.g., BTEC]		2
Access course		3
High school in another country		4
Other		5

Please look at Table 1. This shows the sales report for a product called the CPC100 photocopier.

Suppose you were asked to do the following calculations or tasks. Please indicate how confident *you* are that you would be able to do each *correctly*.

The confidence scale runs from (1) meaning "not confident at all" to (8) meaning "completely confident." Tick the number that matches your own feeling of confidence for the task.

5. Calculate the share of marketing expenditure that was spent on market research in April

Not confident at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	Completely confident (8)

6. Prepare a *revised* forecast for *sales volume* for the period July to December, taking account of the actual data for January to June

Not confident at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	Completely confident (8)

7. Calculate the variance (in £ and in %) between forecast and actual advertising spend in July, if the actual spend was £27,650

Not confident at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	Completely confident (8)

8. Prepare, from a blank spreadsheet, a similar spreadsheet to Table 1, showing all the same components shown in Table 1, but for a different product.

Not confident at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	Completely confident (8)

9. Calculate the sales revenue generated per £1 of advertising expenditure for each month and for the year-to-date

Not confident at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	Completely confident (8)

Please answer Questions 10-19, using the information in the next two paragraphs.

You recently joined a company that markets portable DVD players, as a Graduate Marketing Trainee. Today you attended a meeting where the Sales Director discussed the most recent sales figures. Read what the Sales Director said, and then answer the questions below:

"Our sales forecast for last month was £235,000, but actual sales exceeded that figure by £26,000. Our recommended retail price is £90 per unit, but we have noticed quite a lot of price discounting. For example, the online retailer *TVs Direct* is selling our DVD player at a 20% discount on the recommended price. At the recommended price of £90 the retailer makes a gross profit margin of £30. Our market research company has suggested that we should increase the recommended retail price to £100, but I'm worried that would make us uncompetitive."

Question	Your answer	For office use	
10. At what price is *TVs Direct* selling the DVD player?		1	2
11. What percentage increase in recommended retail price is the market research company suggesting?		1	2
12. What gross profit margin (in pounds) is *TVs Direct* making on each DVD player?		1	2
13. What actual sales did your company achieve last month?		1	2
14. What percentage gross profit margin does a retailer make if they sell your DVD player at the recommended retail price of £90?		1	2

At the interview for the job of Graduate Management Trainee you were asked to sit a short test. Answer the following questions from the test.

Question	Your answer	For office use	
15. In 2010 our sales revenue was £2.4 million. This year we are forecasting sales to be 12% higher—calculate a forecast for this year's sales.		1	2
16. In 2010 our share of the total U.K. market was 17%. Provide an estimate of the overall size of the U.K. market (you do not need to calculate this exactly, we are looking for a good approximation).		1	2
17. Our gross profit per unit is £20. The overhead costs of running the business are £400,000. At what sales volume do we start to generate a net profit? (To say the same thing in different words: What is our breakeven sales volume?)		1	2
18. In 2010 our sales revenue was £2.4 million, our variable costs were £1.0 million, and our overhead costs were £400,000. Calculate our total net profit for 2010.		1	2
19. What fraction of £2.4 million is £400,000?		1	2

Please answer the following questions based on Table 2.

Question	For office use	
20. Briefly explain how you would calculate the gross profit percentage for Charles Smith Menswear	1	2
Your answer		
21. Briefly explain how you would calculate the average inventory (at cost) held by Charles Smith Menswear	1	2
Your answer		
22. Given that Charles Smith Menswear has a total investment of £150,000, explain how you would calculate the company's return on investment (ROI)?	1	2
Your answer		
23. Suppose that "purchase discounts" were £28,000 rather than £15,000, what would the figure for "gross margin" be?	1	2
Your answer		
24. What net profit percentage did Charles Smith Menswear achieve?	1	2
Your answer		

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4

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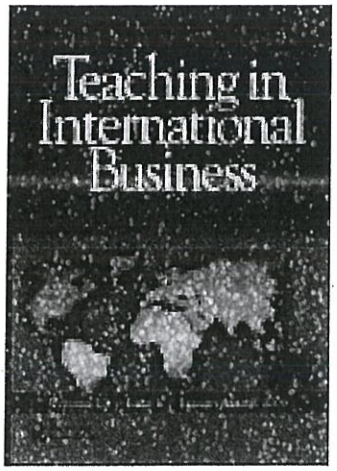

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Improving International Marketing Programs to Reflect Global Complexity and Risk: Curriculum Drivers and Constraints

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Improving International Marketing Programs to Reflect Global Complexity and Risk: Curriculum Drivers and Constraints

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This article looks at the curriculum redesign of a master's-level program in international marketing from a UK perspective. In order to ensure that the program would be more fit-for-purpose for future managers working under conditions of complexity, uncertainty, and within regimes often very different from the home market, the team began the curriculum redesign process with the view that international programs need to have a more broad and cross-disciplinary curriculum. Both drivers and constraints for the curriculum redesign are considered as well as the rationale for including a 30-week module on political and economic risk in the program.

Keywords: International marketing, International business (IB), Curriculum development, Marketing education, Cross-disciplinary education, Cross-cultural marketing, International environment, Political risk, Economic risk

1. INTRODUCTION

Curriculum designers of business programs with "international" in their title are challenged by the complexities, discipline-crossing boundaries, and ever shifting nature of this domain. What subject matter and content should be included in such a discipline-spanning context? What key skills and competencies do those graduating from an international program require? How can we ensure that what we are providing is relevant to students while also taking into account constraints facing curriculum design teams? In the recent redesign of our MA International Marketing program at Middlesex University, United Kingdom, we were challenged by these and other questions. We began with the view that international marketing is a both a subset and a sister discipline to International Business (IB), and like Aggarwal and Goodell (2011), that "IB is a field that is different and broader than the traditional functional fields normally reflected in specific departments within business schools" (p. 2). In order to ensure that we kept a broad perspective while also attempting to capture the key characteristic of the domain "international," we conceptualized a view of this domain as one that is complex, unpredictable, and involving a

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wide range of interrelated macrofactors—a conceptualization supported by both the literature and key stakeholders. Our objective was to create a curriculum that would give students the knowledge and skills to operate in this dynamic environment and to create a program that is more fit-for-purpose and more relevant to the issues faced by international managers.

Curriculum design at the program level in marketing education is a topic that has been under represented in the scholarly and pedagogic literature. Articles on curriculum are often about creating new or changing existing courses to better meet the requirements of marketing practice (Harrigan & Hulbert, 2011; Schlee & Harich, 2010; Davis, Misra, & van Auken, 2002; Cunningham, 1995), embedding skill development or experiential learning approaches (Pilling, Rigdon, & Brightman, 2012; Young & Murphy, 2003; Wee, Alexandria, Kek, & Kelley, 2003), better integration of subjects within a program (Elam & Spotts, 2004; Doyle, 1995), and integrating new themes such as sustainability or social entrepreneurship (Borin & Metcalf, 2010; Schlee et al., 2009; Bacon, Pallab, Johnson, & Conley, 2008; Bridges & Wilhelm, 2008; Spiller & Scovotti, 2008). A range of articles on the need to internationalize the marketing curriculum and/or to include a more cross-disciplinary focus are also available and will be discussed later in this article. However, few articles look at the larger picture related to developing new curricula for an entire internationally focused business program and the drivers and constraints that shape this process.

On how business departments in general undertake curriculum development or redesign there is some literature. Borin, Metcalf, and Tietje (2007) note that evolution of the curriculum "typically occurs through a series of minor incremental adjustments to individual courses that cause the curriculum to lose strategic consistency and focus" and they recommend starting from scratch or using what they call a zero-based approach to curriculum development in marketing (p. 164). The authors point to a series of driving forces outlined by Sergiovanni (1998) that impact on curriculum development—including institutional/bureaucratic factors, market-based factors, and those from the faculty or learning community. Schleede and Lepisto (1984) also consider a range of factors that need to be examined prior to any curriculum change in marketing—including marketplace needs, faculty philosophy and objectives, resources, and an analysis of competitor offerings. These factors can operate as either drivers or constraints in curriculum development.

The main objective of this article is to demonstrate, through a case study, how those involved in developing IB curricula can enhance their offerings by conceiving of the subject matter as inherently more broad, complex, changeable, and multi-disciplinary than other curricula and explore how this conception is supported by the literature and by relevant stakeholders. The article will also consider why an added focus on external environments, and in particular the cultural, political, and economic environments, can enhance the analysis and problem-solving skills of students on internationally focused programs and provide them with knowledge that is relevant to many of the contexts they will face as international managers. Finally, given that curriculum design and development is itself a complex process involving many competing interests, the article presents a basic framework of the drivers and constraints that are important in the process and thus adds a dimension to the literature on curriculum development of business-related programs. The study should provide interesting information to those who are undertaking curriculum review and seeking to add a more cross-disciplinary focus to their IB or marketing programs.

Given that the article is based on a UK case study, some of the constraints, in particular, are explored from that perspective. The main constraints are the shorter time frame for master's programs in the United Kingdom and the institutionally imposed structure of those programs.

These structural constraints require curriculum designers to make difficult choices around what to include in an international marketing degree program, and can be particularly challenging when the main drivers—the scholarly and professional literature, views of stakeholders and higher education authorities—offer compelling arguments for such programmes to take a broader and more multi-disciplinary approach.

The article is divided into six sections. First, an overview of the case study and the UK context for master's programs in business and marketing are considered. Second, the article investigates the drivers for a more broadly based cross-disciplinary approach to IB and marketing programs that come from the scholarly, pedagogic, and professional literature. This literature is helpful in defining the scope of what should be covered in an international program, the rationale for a more cross-disciplinary approach, and, in particular, what key knowledge and skill aspects may be missing from current provisions. Third, is a discussion of the higher education policy drivers that call upon master's-level programs in business to have a have a more macroperspective as well as to develop skills and attributes in students for managing in complexity. Fourth, is a summary of how these drivers and constraints led to the curriculum framework for the new MA in International Marketing program and in particular for both the a more embedded approach to exploring the cultural environment and the development of a new module on the international political and economic environments. Finally, we will look at both the drivers and constraints that shaped the decision to introduce the new module as well as the content that underpinned its curriculum. The article concludes with a short discussion section that considers areas for future research.

2. CASE STUDY BACKGROUND AND THE UK CONTEXT FOR DEVELOPING POSTGRADUATE PROGRAMS

UK universities are required to review their curriculum on a 5-year cycle. All existing University courses and programs[1] in the United Kingdom must be reviewed every 5 years according to the QAA (Quality Assurance Agency), the main governmental organization that oversees University provision. This 5-year cycle requires teaching teams to consider whether the current content, resources, learning outcomes, assessment, and teaching and learning approaches in a program are meeting the needs of key stakeholders—students, employers, professional associations, institutional managers and quality assurers, and relevant higher education regulatory bodies. New programs can be added at any time, but are also guided in their development by criteria set out by the QAA.

Our Master's in International Marketing program underwent a review in 2009, but the approach was more than a review of existing content, learning outcomes, and assessment. We started by creating a framework that would drive the process and ensure that we took into account the needs, views, and requirements of all relevant stakeholders as well as developments in the field and in the literature (see Figure 1). An analysis of these aspects and viewpoints helped us to create an overall conception of the international operating environment for managers that

[1] Aspects of the terminology in UK higher education differ from that in other countries. The term "program" is used to refer to a specific degree award such as the MA International Marketing program. Courses within a program are referred to as "modules." These UK terms will be used throughout the article.

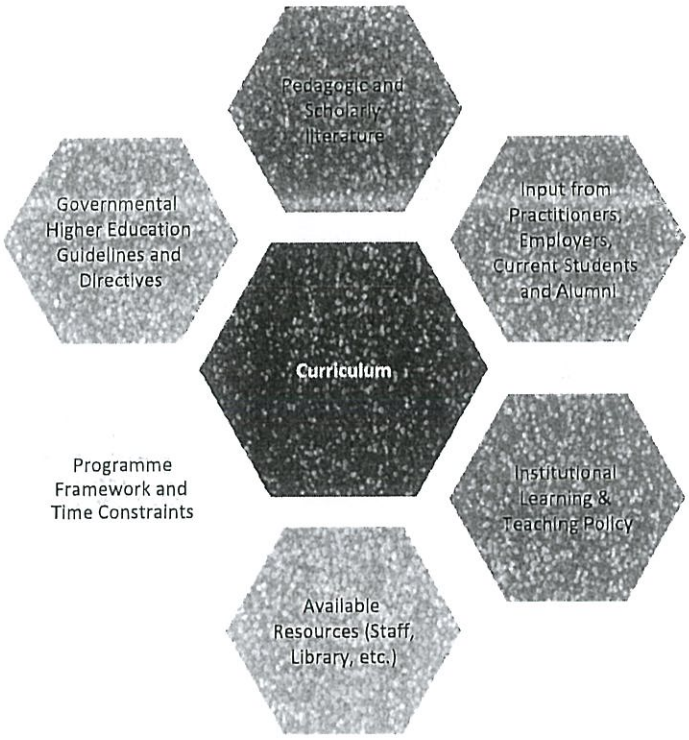

FIGURE 1 Drivers and Constraints in Curriculum Development (color figure available online).

then drove the development of the revised program's key curriculum features (learning outcomes; teaching and learning approaches; assessment methods; and learning resources).[2] Thus, we followed an iterative process in first reviewing key issues from stakeholders and the literature in order to create the conception of the international domain as one that is complex, unpredictable, and involving a wide range of interrelated macrofactors before then re-examining stakeholder views and the literature in more depth to develop the curriculum and to then add a new module on the political and economic environment.

As Delaunay and Blodgett (2005) note, "designing an international business curriculum involves conflicting goals and multiple constraints" (p. 130). Two main constraints and one mitigating factor taken into account in the redesign of our Master's in International Marketing are similar to those faced by all curriculum designers—time available, program structure, and student profiles. The first constraint relates to the length of most business related master's programs in the United Kingdom. The majority of taught master's are now only one year long, including 8 months of taught provision and 4 months of individual and tutor-supported work on a dissertation. The

[2]The term curriculum as used in this article refers to all aspects of the learning and teaching in the program—including learning outcomes, content, assessment (methods and value), teaching methods, learning resources, module titles and content, and credit and learning hours.

short time frame sets limits on the content that can be covered and the skills developed. Second, the structure of most programs in the United Kingdom is prescribed by each University's learning, teaching, and assessment strategy. In our case, this strategy calls for all master's programs to be made up of just four 30-credit modules taught over 30 weeks and a 60-credit dissertation. The rationale for longer modules is that they give more opportunities for innovative teaching, formative feedback, and a chance for students to learn a subject in some detail. However, with only four on the program, curriculum designers have to make difficult choices as to what can and should be taught. Finally, the mitigating factor is related to the student intake. Master's-level programs in business and marketing subjects in the United Kingdom have high numbers of international students (up to 80%), and both international and domestic students are accepted into many master's programs without the requirement of a prior degree or experience in marketing. Thus, our curriculum needs to include sufficient background in marketing for those who are new to the discipline and this limits the scope for more specialized content and a more in-depth study of key themes.

While institutional policies and priorities can often act as constraints to the structure, learning hours, student intake, and depth of content that can be covered in the curriculum, they need not act as barriers to innovation. In the next section, the drivers for the innovation in our Master's in International Marketing curriculum are discussed.

3. PROVIDING INTERNATIONAL MARKETING STUDENTS WITH KNOWLEDGE AND SKILLS TO MANAGE IN COMPLEXITY: A VIEW FROM THE LITERATURE

Despite constraining factors, most Universities still allow a great deal of academic freedom in developing core aspects of the curriculum—content, learning outcomes, teaching and learning methods, learning resources, and assessment. In this section we will look at one of the most important drivers in the redesign of our MA International Marketing program—the scholarly and pedagogic literature. In terms of what knowledge and skills those operating in complex international environments should have, this literature is robust and illuminating.

Arguments that support the need for students and managers to have greater global awareness and skills to manage in complex international contexts come from a variety of sources and points of view (Aggarwal, 2011; Dolby & Rahman, 2008; Martinez, Padmanabhan, & Toyne, 2007; Prestwich & Ho-Kim, 2007; Catterall, MacLaran, & Stevens, 2002; Kedia, Harveston, & Bhagat, 2001; Kedia et al., 2000; Andrus, Laughlin, & Norvell, 1995; Gibbs, 1994). Proponents of a more cross-disciplinary approach to business education have argued for the inclusion of languages, cultural dimensions, and economics to help prepare students for the international environments they will work in (Martinez et al., 2007). One rationale for including other subjects and content in business programs is the contention that "although [business] discipline-based teaching can improve the analytical skills of students they cannot easily impart the tools necessary for the students to deal with uncertainty in an environment characterized by globalization, multiculturalism, and rapid change" (Martinez et al., 2007, p. 40). Often, these themes are not covered as thoroughly in existing international marketing textbooks and resources (more on this below).

Cross-disciplinary education, researchers argue, will not only provide relevant subject matter to supplement the business curriculum but also additional methods to develop communication, analysis, and critical thinking skills—all seen as crucial for those operating in international

situations characterized by complex, often discontinuous events and situations (Martinez et al., 2007; Crittenden & Wilson, 2005; Smith, Hornsby, & Kite, 2000; Toyne, 1992; Alden, Laxton, Patzer, & Howard, 1991).

The potential benefits of exposure to the content, concepts, epistemology, and methods of other disciplines has been discussed in other business research and pedagogical studies. Management capability theorists, for example, have called for international managers to develop a "global mindset" (Witte, 2010; Nummela, Saarenketo, & Puumalainen, 2004; Gupta & Govindarajan, 2002; Fletcher, 2000; Gregersen, Morrison, & Black, 1998) Although the theoretical discussions about what constitutes a "global mindset" represent diverse perspectives; in general, a global mindset is seen to be one that has both critical knowledge elements (languages, history, politics, economics, culture, and information technology), as well as behavioral aspects that include strategic and analytical capabilities to allow managers to develop the cognitive sophistication needed to work more effectively in global environments (Boyacigiller, Kleinberg, Phillips, & Sackmann, 2004; Kedia et al., 2001). Aggarwal (2011) argued that those with a global mindset will also possess an understanding of the interrelationships, and the complexities associated with demographics, technology, and sustainability—all seen as key drivers of globalization. He adds that "a good business school education must balance job skill-building subjects taught in the business school with broader subjects that enhance the ability to think long-term, perhaps taught in liberal arts or elsewhere on campus" (p. 68). While not all theorists in this area refer directly to "liberal arts," many have nonetheless argued that managers need a broader knowledge base and set of skills that only cross-disciplinary education can offer.

Researchers of business and marketing curricula have also considered the rationale for a broader cross-disciplinary approach as well as strategies for embedding international topics and skills into the curriculum (Martinez et al., 2007; Tyagi, 2001; Andrus et al., 1995; Gibbs, 1994; Kaynak, Yucelt, & Barker, 1990). In discussing whether current business education is fit for purpose, Behrman and Levin (1984) argued that actual business problems and challenges cannot be solved from a single-discipline perspective, and thus students can benefit from exposure to subjects outside a typical business degree program. More specifically in marketing education, Alden et al. (1991) proposed the benefits of a cross-discipline approach to developing marketing curricula for the reasons that "disciplinary boundaries within organisations are becoming fuzzier" (p. 25) and those who have been educated across a range of disciplines will improve their problem-solving skills and increase their chances of a more fulfilling career with greater flexibility. Crittenden and Wilson (2005) noted that students on international marketing courses need to be developing a global knowledge base and set of skills. To assess the degree to which current American business students were achieving these ends, they provided an analysis of how 78 U.S. business schools embed relevant knowledge and skills into their international marketing courses. They found that many topics of importance to global managers are not being taught or taught in sufficient depth.

In a discussion on what postgraduate business student should be learning, Woolcock (2007) argued that exposing business students to other disciplines "helps to develop business people who can both understand the world in which they work and meet the challenges of the business world with imaginative, workable solutions . . . and who are more capable of informed and creative decision-making" (p. 57). Employers also value graduates who have critical skills honed through exposure to a range of approaches. David Kearns, Chairman and CEO of Xerox,

noted that employers are virtually unanimous in their need for candidates to have strong problem solving, communication, and learning to learn skills, and that these skills are best developed through a broad and deep curriculum (Kearns, 1989, as cited in Alden et al., 1991). In a study that asked 225 American company executives what knowledge areas they deemed most important for international marketing students to possess, economics, politics, language, and social customs were among the top four cited (McDaniel & Smith, 1987). Ackerman, Gross, and Perner (2003) reported on information gathered by The Association to Advance Collegiate Schools of Business (AACSB, 2006) from practitioners who were critical of business schools for their tendency to underemphasize critical thinking about the external environment, problem identification, and creative problem solving. They argued that business educators have gone some way to responding to these critiques, but that employers remain concerned about students' abilities in these areas.

There are of course challenges to developing a cross-disciplinary or interdisciplinary curriculum. The debate over liberal education in business studies has often been about how best to embed liberal or broad-based education into the curriculum and how to make the curriculum truly cross-disciplinary (Chew & McInnis-Bowers, 2004; Bobko & Tejeda, 2000; Smith et al., 2000). A number of models have been applied, particularly in undergraduate education—including providing all business students with a foundational year in liberal education; adding both core and optional modules from other disciplines into each year of undergraduate study; "bridging models" that include liberal arts and international subjects within business modules; and requiring students to gain hands-on experience via international internships or exchange programs (Crittenden & Wilson, 2005).

Each approach has its proponents and detractors, but the main issue is how well such additional subjects are integrated into the business curriculum. As Alden et al. (1991) note, "when we borrow from other disciplines, but do not evaluate the concepts in their proper context, [we may] misinterpret or misuse them" (p. 27). Chew and McInnis-Bowers (2004) also argue that when the curriculum is structured so that liberal arts subjects are included but not integrated into the business modules, students may find it difficult to make connections between the ideas in these disparate areas of study. They call for at least a final year course or experience that integrates the knowledge and skill learning outcomes from the different domains. In general, researchers tend to conclude that the more the liberal arts subjects are integrated within the core business curriculum, the more able students will become in understanding the interrelationships and connections between them (Witte, 2010; Chew & McInnis-Bowers, 2004).

Another field of research that calls on marketing educators to develop students' abilities to think critically about the external macroenvironment is Critical Studies. Catterall et al. (2002) note that critical management scholars see the business curriculum as "too narrow, technocratic, and managerialist in orientation" (p. 185), and fails to expose students to the actual issues and challenges faced by managers including the political, ethical, moral, and social dimensions of decision making. The authors call for marketing theory and practice to be "located within their historical, social, and cultural contexts" and for students to take a more critical perspective (p. 185). Critical marketing scholars writing in the *Journal of Macromarketing* look at how marketing interacts with politics and society, among other macroissues. Recently, more and more articles in the journal consider marketing dilemmas within the global domain, including macromarketing challenges that arise, as for example in Lewin, Strutton, and Paswan (2001), when a foreign firm faces challenges from local and national interests about fairly distributing the benefits and costs of projects among stakeholder communities.

In summary, we can say that students who have chosen to study on an international-focused degree can benefit from a broader-based curriculum, and in particular from one that includes aspects of the traditionally liberal education subjects of history, politics, economics, geography, culture, society and social issues, as well as the approaches to critical and abstract thinking skill development used in these disciplines and in critical studies in marketing. In order for students to benefit from the additional knowledge and skills of these disciplines, however, curriculum designers must ensure that students learn to identify the interrelationships between the conceptual areas in added subjects with those in their core business or marketing studies program. In identifying these interrelationships, students are more likely to see the relevance of these additional subjects, concepts and processes to their chosen field of study but also be in a better position to deal with the complex, often uncertain situations found in the global business context. The management and pedagogic literature tends generally to support the inclusion of additional subject content, particularly from other social science fields, but with caveats on how to integrate these subjects to build an effective curriculum.

4. HIGHER EDUCATION AUTHORITIES—SUPPORT FOR A MACROPERSPECTIVE AND FOR SKILL DEVELOPMENT AND EMPLOYABILITY

Drivers for the revision of our MA International Marketing program in general and the decision to develop a 30-week module on the Political and Economic Environment in particular included the literature promoting the benefits of a more cross-disciplinary education, the literature on gaps in current internationally focused programs, and the professional literature on the knowledge and skills needed by managers operating in international contexts. We were also guided by UK Quality Assurance Agency (QAA) postgraduate business education benchmark statements. Although the primary responsibility for curriculum content, assessment, and academic standards rests with Universities in the United Kingdom, the QAA sets guidelines for master's level program outcomes and periodically carries out external reviews and audits to ensure that quality standards are being met. QAA benchmark statements define what can be expected of a graduate in terms of the abilities and skills in a subject and are while not prescriptive, are "intended to assist those involved in programme design, delivery and review" (QAA, 2007). QAA benchmark statements for master's students on a business-related program note that they are expected to:

> . . . demonstrate relevant knowledge and understanding of organisations, the external context in which they operate and how they are managed. . . . 'External context' encompasses a wide range of factors including economic, environmental, ethical, legal, political, sociological and technological, together with their effects at local, national and international levels upon . . . strategy. . . . (p. 4)

These benchmark statements suggest that master's-level students in business subjects should be exposed to cross-disciplinary subjects and are able to analyze the interrelationships between them and how they impact decision making in business contexts. In addition, they call for students to develop skills that include being able to apply their "knowledge to a range of complex situations," to show "a critical awareness of current issues in business and management," "to make sound judgements in the absence of complete data," to have "sensitivity to diversity in people and different situations," and "to make decisions in complex and unpredictable situations" (QAA, 2007, pp. 6–8). See Table 1 below for QAA benchmark statements for business and management postgraduate programs in the United Kingdom.

TABLE 1
Quality Assurance Agency (QAA) Benchmark Statements for Master's Degrees in Business and Management—2007

Subject Knowledge, Understanding, and Skills Specific to Each Type of Master's Degree
Type 1: Specialist Master's Degrees

There is an expectation that these programs usually build upon prior knowledge and skills gained from a relevant first degree (or equivalent) and prior experience (where appropriate). Master's graduates will be able to demonstrate deep knowledge and understanding of the specialist subject area while placing that subject within a wider organizational and contextual framework. They will understand current issues and thinking along with techniques applicable to research in the subject area.

Graduates will have both theoretical and applied perspectives and will be able to apply a range of specialist skills to the organizations (and their context) in which they as specialists may operate. Some of these programs will act as the front end of research degrees.

Benchmark Standards

5.1 Master's degrees in the business and management field are awarded to students who have demonstrated during their program:

☐ 1 A systematic understanding of relevant knowledge about organizations, their external context, and how they are managed;
☐ 2 Application of relevant knowledge to a range of complex situations taking account of its relationship and interaction with other areas of the business or organization;
☐ 3 A critical awareness of current issues in business and management which is informed by leading edge research and practice in the field;
☐ 4 An understanding of appropriate techniques sufficient to allow detailed investigation into relevant business and management issues;
☐ 5 Creativity in the application of knowledge, together with a practical understanding of how established techniques of research and inquiry are used to develop and interpret knowledge in business and management;
☐ 6 Ability to acquire and analyze data and information, to evaluate their relevance and validity, and to synthesize a range of information in the context of new situations;
☐ 7 Conceptual understanding that enables the student to:
– evaluate the rigor and validity of published research and assess its relevance to new situations
– extrapolate from existing research and scholarship to identify new or revised approaches to practice;
☐ 8 Ability to conduct research into business and management issues that requires familiarity with a range of business data, research sources and appropriate methodologies, and for such to inform the overall learning process;
☐ 9 Ability to communicate effectively both orally and in writing, using a range of media; and
☐ 10 Operate effectively in a variety of team roles and take leadership roles, where appropriate.

5.2 Once they are in professional practice, master's graduates should be able to:

☐ 11 Consistently apply their knowledge and subject-specific and wider intellectual skills;
☐ 12 Deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to a range of audiences;
☐ 13 Be proactive in recognizing the need for change and have the ability to manage change;
☐ 14 Be adaptable, and show originality, insight, and critical and reflective abilities which can all be brought to bear upon problem situations;
☐ 15 Make decisions in complex and unpredictable situations;
☐ 16 Evaluate and integrate theory and practice in a wide range of situations;
☐ 17 Be self-directed and able to act autonomously in planning and implementing projects at professional levels; and
☐ 18 Take responsibility for continuing to develop their own knowledge and skills.

Note. Adapted from (http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/BusinessManagementMasters.pdf).

These benchmark statements appear to be largely in line with the discussion on broadening the base of business students' knowledge and skills as set out above. The authors of the UK Business and Management QAA statements have attempted to capture the nature of decision making in a globalizing context—complex, unpredictable, involving a wide range of interrelated factors—and propose that master's students develop the skills to investigate, evaluate, and manage them. Thus, the QAA benchmarks were important in creating our conceptualization of the international environment and in our curriculum development and in driving curriculum development.

Another driver for the changes to our MA International Marketing curriculum was the UK employability skills agenda. Employability skills for University students have been advocated by a number of UK parliamentary reports over the past three decades—including the Dearing Report (Dearing, 1997), the Leitch Review of Skills (Leitch, 2006), and more recently the Wilson Report (2012). Each calls for a wider debate on the nature of employability and how higher education institutions can improve graduate work skills. While the QAA statements also specify skills, we found that the Higher Education Academy (HEA)[3] "Employability Skills" document by Yorke & Knight (2004) provided a richer context and a more detailed and specific set of skill definitions (see Table 2). From this document, the curriculum designers felt that the new program should be designed to help students develop key skills for operating in a complex and often unpredictable global environment—including adaptability (6), critical analysis (16), global awareness (22), political sensitivity (25), ability to work cross-culturally (26), ethical sensitivity(27), coping with complexity (31), arguing for and/or justifying a point of view or a course of action (35,) decision making (37), negotiating (38), and teamwork (39)—all competencies that are also called for in the literature on the benefits of cross-disciplinary education, management capabilities, and gaps in the marketing curriculum.

5. FRAMEWORK FOR THE NEW CURRICULUM

Taking into account both the drivers and the constraints, we determined that the new MA in International Marketing would be founded on the following three modules: International and Cross-Cultural Marketing; Strategic Marketing; and Market Research and Research Methods (see Figure 2). The content and assessment components of these modules would take into account key QAA outcomes for the students to demonstrate "a systematic understanding of relevant knowledge" in the subject area; apply that "knowledge to a range of complex situations"; "manage the decision-making process"; and "be able to acquire, analyze, synthesize, evaluate, and critique information from a range of sources in order to address marketing questions and problems" (QAA, 2007). In addition, we could address a range of employability skills in these modules. The final dissertation would provide a capstone experience that incorporated the knowledge and skills gained as well as provide the traditional master's-level benchmark.

[3]The Higher Education Academy (HEA) is a national and independent body that is funded by UK higher education funding bodies and all UK Universities via subscription. The HEA is the key UK HE body focused on teaching and learning issues and undertakes research, provides grants to academics to conduct research, and holds events and conferences on key issues that impact teaching and learning in higher education (http://www.heacademy.ac.uk).

TABLE 2
Yorke and Knight's Conception of Employability Skills Required by UK University Graduates

Aspects of Employability, With Elaborative Comments. The Acquisition of Disciplinary Understanding and Skills Is Assumed: Note That Their Application Is Listed as Item 30.

A. PERSONAL QUALITIES
1. Malleable self-theory: belief that attributes [e.g., intelligence] are not fixed and can be developed.
2. Self-awareness: awareness of own strengths and weaknesses, aims and values.
3. Self-confidence: confidence in dealing with the challenges that employment and life throw up.
4. Independence: ability to work without supervision.
5. Emotional intelligence: sensitivity to others' emotions and the effects that they can have.
6. Adaptability: ability to respond positively to changing circumstances and new challenges.
7. Stress tolerance: ability to retain effectiveness under pressure.
8. Initiative: ability to take action unprompted.
9. Willingness to learn: commitment to ongoing learning to meet the needs of employment and life.
10. Reflectiveness: the disposition to reflect evaluatively on the performance of oneself and others.

B. CORE SKILLS
11. Reading effectiveness: the recognition and retention of key points.
12. Numeracy: ability to use numbers at an appropriate level of accuracy.
13. Information retrieval: ability to access different sources.
14. Language skills: possession of more than a single language.
15. Self-management: ability to work in an efficient and structured manner.
16. Critical analysis: ability to 'deconstruct' a problem or situation.
17. Creativity: ability to be original or inventive and to apply lateral thinking.
18. Listening: focused attention in which key points are recognized.
19. Written communication: clear reports, letters, etc., written specifically for the reader.
20. Oral presentations: clear and confident presentation of information to a group [also 21, 35].
21. Explaining: orally and in writing [see also 20, 35].
22. Global awareness: in terms of both cultures and economics.

C. PROCESS SKILLS
23. Computer literacy: ability to use a range of software.
24. Commercial awareness: operating with an understanding of business issues and priorities.
25. Political sensitivity: appreciates how organisations actually work and acts accordingly.
26. Ability to work cross-culturally: both within and beyond the United Kingdom.
27. Ethical sensitivity: appreciates ethical aspects of employment and acts accordingly.
28. Prioritising: ability to rank tasks according to importance.
29. Planning: setting of achievable goals and structuring action.
30. Applying subject understanding: use of disciplinary understanding from the HE program.
31. Acting morally: has a moral code and acts accordingly.
32. Coping with complexity: ability to handle ambiguous and complex situations.
33. Problem solving: selection and use of appropriate methods to find solutions.
34. Influencing: convincing others of the validity of one's point of view
35. Arguing for and/or justifying a point of view or a course of action [see also 20, 21, 34].
36. Resolving conflict: both intra-personally and in relationships with others.
37. Decision making: choice of the best option from a range of alternatives.
38. Negotiating: discussion to achieve mutually satisfactory resolution of contentious issues.
39. Team work: can work constructively with others on a common task.

Source: Yorke and Knight (2004).

FIGURE 2 Framework for the New MA Program in International Marketing (color figure available online).

The decision to embed cross-cultural theory and decision-making skills into the International Marketing module was made in order to address concerns expressed by those such as Alden et al. (1991) and Chew and McInnis-Bowers (2004) who, as noted above, argue for a better integration of concepts from different disciplines to allow students to make the right connections and to see their relevance and more is said on this below.

Strategic marketing was redesigned to build in skill development in critical thinking and problem solving in complex situations through scenario and case study analysis while also providing a foundation in key marketing content and decision-making models for those MA students without previous marketing education. Market research and research methods would serve a number of learning outcome aims—developing students' skills in acquiring, analyzing, synthesizing, evaluating, and critiquing information to address international marketing questions and problems; introducing students to the relevant academic literature so they could generate a research problem for their dissertations; and developing their knowledge and skills in academic research.

This left us with one additional module to expose students to what scholars and practitioners deem critical for a "global mindset"—understanding the nature and impact of international political, economic, and social risks on business and marketing decision making in a global context. More will be said on the drivers and constraints for the development of this module in the next section.

In summary, in redesigning our MA International Marketing program, we were inspired by the pedagogic and managerial discussions around the need for students and practitioners to have a broader base of knowledge and skills to operate in complex international environments that are unpredictable and changeable. The importance of the skills in particular is also highlighted by key UK quality and learning and teaching bodies (QAA and HEA). Given the emphasis on political, economic, social, and cultural considerations in the literature on cross-disciplinary and broad-based business education for international program students, as well as from higher education bodies, we felt it was important to add additional content, teaching, and learning in these areas and to enhance the way in which they were embedded across the curriculum. The next section will provide a brief overview of how we enhanced the focus on cross-cultural issues in the program and the following section will provide a more detailed discussion of content and focus for the last module on the political and economic environment.

6. EMBEDDING CULTURE AND CROSS-CULTURAL UNDERSTANDING INTO THE CURRICULUM

Day (2006) reminds readers that most of the problems and mistakes made in international marketing occur in areas related to the the social/cultural, political, legal and economic environments. In addition Day (2006) notes that "[c]ulture is a major driving force underlying the other environments, which are both largely constituted by it and in turn help to constitute it" (p. 64). A country's political, legal, and to some degree economic environments, are themselves "indirect expressions" (p. 68), he notes, of a nation's culture. The relationships between cultural factors and other environments adds to the complexity of operating in global markets, not to mention in the multi-cultural markets that make up national and regional areas. Consequently, it is important to not only introduce students to aspects of culture that create differences in the ways that international communities respond to key marketing outputs and processes (e.g., product characteristics, promotional messages, and purchase locations and structures), but also in how cultural factors shape the other environments—including the ways in which people interact with the traditions, structures, processes, meanings, and symbols that make up these environments. In practical terms, international managers will need to have a solid understanding of cultural attributes before potentially adapting aspects of the marketing mix for different international communities. All of the discussions and negotiations that are undertaken to arrive at marketing decisions and outputs will themselves be affected by culture, as will organizational and operational effectiveness.

The past three decades have seen an expansion in the research into and the literature on cross-cultural issues, sensitivities, and capabilities for those in IB. The field is well-grounded in theoretical literature. Authors such as Hall (1959, 1966), Hall and Hall, (1990), Hofstede (1980, 1991), Trompenaars (1993, with Hampden-Turner, 2000), Holden (2004), and Spencer-Oatey and Franklin (2009), among others, have developed considerably our understanding of cross-cultural issues in international marketing and business as has the Globe study by House et al., 2004.

Research and findings from these and other authors have been synthesized in articles on how to enhance the IB/marketing curriculum and in international marketing textbooks and classroom resources (Witte, 2010; Clark, Flaherty, Wright, & McMillen, 2009; Prestwich & Ho-Kim, 2007; Ramburuth & Welch, 2005; Cant, 2004; Jones, 2003; Laughton & Ottewill, 2000; Moran, Braaten, & Walsh, 1994; Serrie, 1992). Consequently, unlike the political environment as we will see below, there is a rich source of material for both curriculum designers and for students on international marketing and business programs to draw from (e.g., Penaloza, Toulouse & Visconti, 2011; de Mooij, 2009; Nakata, 2009; Usunier & Lee, 2009; Burton, 2008; Trompenaars & Woolliams; Gesteland, 2002; Rugimbana & Nwanko, 2002). The key concern in the redesign of our MA in International Marketing, however, was to follow the recommendations of those such as Alden et al. (1991) and Chew and McInnis-Bowers (2004) who, as noted above, argue for a better integration of concepts from different disciplines to allow students to make the right connections and to see their relevance. In order to embed key cross-cultural issues within the program and to highlight their critical importance, the first core module was named "International and Cross-Cultural Marketing" and both the learning outcomes (knowledge and skills) as well as the assessments were structured to include aspects of culture. All international marketing key concepts, decision-making contexts, and operational discussions would include elements of cross-cultural theory and practice. To ensure a good range of culture-rich readings and of the

more experiential case-studies, role-play, and other activities, we reviewed and selected both theoretical and practical texts on cross-cultural marketing for the library and placed two of these texts on the required reading list, along with a core international marketing text. Through the syllabus, activities, and assessment, students could draw insights into how cross-cultural issues affect different stages in the international marketing planning, implementation and evaluation stages, how to manage them, and how culture impacts upon other environmental dimensions. Since the acquisition of cultural competencies is, as noted by Ramburuth and Welch (2005), highly tacit, developed through experience and over time, we were careful to select activities that would draw upon the cultural diversity already present in the classroom (as noted above, up to 80% of master's students are from outside the United Kingdom), but also engage the students in experiential activities. Ideas for these activities were drawn in part from work done by Ramburuth and Welch (2005), Alon (2003), and Goodman, Phillips, and Boyacigiller (2003), among others.

7. BODY OF KNOWLEDGE FOR THE NEW MODULE ON THE POLITICAL AND ECONOMIC ENVIRONMENT

Since both the literature and the regulating bodies tended to support the need for students on IB and marketing programs to develop knowledge related to the external environment and the skills for operating in this complex, often changing realm, the next stage in the curriculum development was to carefully examine the content or body of knowledge that would underpin the students' knowledge and skill development in this fourth module. This section addresses the literature on the complexity and importance of understanding the macrofactors in the international environment when operating globally; the limitations of current teaching resources in dealing with international environmental factors; and, the particular importance as well as impact of political and economic factors in international decision making.

7.1. The International Environment and the Impact of Political and Economic Factors

Doz, Bartlett, and Prahalad (1981), Bartlett and Ghosal (1987) and Miller and Friesen (2006) have argued that the macroenvironment for decision making in international contexts is characterized by greater complexity and variability than that of domestic markets and calls for managers to have a broader and deeper base of macroenvironmental knowledge. International marketers are likely to operate in markets dissimilar to the home context or across a number of markets simultaneously. They may encounter a variety of political, economic, social, and cultural environments, many of which will be more volatile than the home market, have a greater potential impact on marketing decisions and outcomes, and may be more difficult to assess because of a dearth of relevant or up to date information.

The challenges associated with the international environment have been a strong theme in IB and marketing scholarship for the past four decades and, as noted above, we have seen a burgeoning of the literature on cross-cultural issues in particular. In addition, a number of scholars have argued for the particular challenges associated with the political environment (Bremmer & Keat, 2010; Kapstein, 2007; Howell, 1998; Kennedy, 1987; Fitzpatrick, 1983; Kobrin, 1982). Kapstein (2007) observed that:

> . . . perhaps the greatest threats to the operations of global corporations, and those that are most difficult to manage, arise out of the political environment in which they conduct their business" and yet "[e]xecutives generally have a difficult time conceptualizing political risk . . . [as] they have never taken a course in politics or been much exposed to the issues that students of politics ask about multinational operations. (p. 1)

Thus, the problems for international practitioners are twofold: first, there is the complex nature of political risks; and second, the lack of training for practitioners in how to understand and manage those risks. Bremmer (2005) also notes that more than any other macroenvironmental factor, companies need to understand and be prepared to manage political risks. He argues that these risks are not confined to specific countries but, in our interdependent world, can have reverberations, or what he terms "shocks" across other national markets. For example, a politically inspired reduction in the supply of oil by a few key oil producing nations will have immediate effects on the price of oil in world markets and, within a short period, the costs of production for firms and consumers around the world. The politics of oil and energy involve a wide range of stakeholder groups with diverse interests—including local communities and governments, producers and distributors, business and consumer groups, and society at large—each affected by different stages in the process from extraction to retailing and each concerned with the impacts of these processes on their livelihoods and environments. Firms involved at all stages of the process will need to take these political, economic, and social considerations into account in all areas of decision making.

Political risks are not only an academic area of interest but an area of increasing concern to business decision makers. A World Bank Multilateral Insurance Guarantee Agency (MIGA) survey in 2009 found that political risk remains the risk of greatest concern to companies who are planning to or have already invested in emerging markets. In addition, other macrolevel risks such as corruption, macroeconomic instability, and government intervention were also considered to be key threats to doing business abroad.

There is a substantial academic research base on political and economic risk assessment and forecasting in the fields of IB, international political economy, and finance. The late 1970s through to the early 1990s saw considerable scholarship devoted to political risk and although this tended to slow down in the mid-1990s, there has been resurgence of interest during the past decade. In the earlier period of scholarship (mid-1970s to mid-1990s), political risk was mainly conceived of as actions taken by the host government that could lead to sudden and unexpected changes in the rules of the game under which businesses operated (Butler & Joaquin, 1998). Scholars attempted to develop categories of political risk, to conceptualize political risk assessment, and to make recommendations on how to manage those risks (Howell & Chaddick, 1994; Akhter & Choudhry, 1993; Rice & Mahmoud, 1990; Torre & Neckar, 1988; Kennedy, 1987; Sethi & Luther, 1986; Coplin & O'Leary, 1983; Fitzpatrick, 1983; Kobrin, 1982; Bunn & Mustafaoglu, 1978; Simon, 1982). Scholars across both economic- and business-related disciplines argued for international managers to have a greater critical awareness of political issues, how these issues become risk, and how to manage these risks.

In the more recent phase of scholarship, we have seen a broadening of the conception of political risk to include other environmental factors. Alon and Herbert (2009) developed an extended conception of political risk as a broader construct made up of other macroenvironmental factors. They argued that Simon's (1982) original definition of political risk as "governmental or

societal actions and policies, originating either within or outside the host country, and negatively affecting either a select group of, or the majority of, foreign business operations and investments" (p. 68) was too narrow. Alon and Martin (1998) then delineated the specific economic, societal, and both home and host governmental risks that make up the broader construct of political risk.

Other management and organization scholars have also developed strong arguments for including research into political risk into international decision-making models and thinking. Henisz and Zelner (2003), for example, provide a review of a number of articles that demonstrate the importance of political risk analysis and political lobbying for multinational managers, particularly when entering emerging markets. Among the key concerns of managers as summarized and discussed by these authors are corruption, a weak judicial system, crony capitalism, opaque governance, and the need to carefully manage government relations. In their study of the international expansions of 665 Japanese firms, Delios and Henisz (2003) identify the particular importance of political institutions in enabling or constraining expansion and call for a greater focus on political issues in internationalization research given the uncertainty that these issues can create for firms.

Similar to the work of Kostova and Zaheer (1999), Henisz and Zelner (2003) also consider the importance of an organization's legitimacy in the eyes of host constituents and how this legitimacy can be undermined when a company is deemed to have caused damage to the local environment (e.g., Coca Cola and the groundwater issue in India); exploited local workers (e.g., Nike child labor case in Asia); or is linked with corrupt practices of local officials (e.g., Enron in India). These occurrences are often of a political nature or become so as media and when policy makers become involved. They also generally have significant negative impacts on a firms corporate and brand images, particularly today where information can be transmitted across the globe via social media within hours if not minutes. Kostova and Zaheer (1999) also note that these risks are enhanced by the number of countries that an organization is operating in as well as by how great the difference is between the host country's "regulatory, cognitive and normative institutional environments" (p. 68).

Political risk as more recently defined, can therefore include both economic risks and other broad societal trends and issues that might influence an organization's operations. A conception of political risk as a multifaceted cross-discipline construct is provided by Howell (2010) for the Political Risk Services Group (see Table 3 below). Political risk is made up of 22 potential variables in three subcategories: political, financial, and economic risks.

7.2. Political Risk and the Political Environment in Current Teaching Resources

While scholars and practitioners alike have developed ever more complex models for conceptualizing political risk, and have theorized about the most appropriate means for managing its many forms (Jakobsen, 2010; Alon & Herbert, 2009; Keillor, Wilkinson, & Owens, 2005; Brink, 2004; Rodriguez, Uhlenbruck, & Eden, 2005; Bouchet, Clark, & Groslambert, 2003), students of IB and marketing—either at undergraduate or postgraduate—may only receive a broad overview of the political and economic environment at the beginning stages of the module if the tutor follows the framework provided by a core textbook. This is likely to be insufficient in terms of allowing students to:

TABLE 3
PRS Country Risks by the Political Risk Services Group (PRS)

Risk Factors—International Country Risk Guide (ICRG): Main Risks and Subcomponents

Government Stability—the government's ability to carry out its declared program(s), and its ability to stay in office. The subcomponents of this variable are government unity, legislative strength, and popular support.

Internal Conflict—an assessment of political violence in the country and its actual or potential impact on governance. The highest rating is given to those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an ongoing civil war. The subcomponents are: Civil War/Coup Threat, Terrorism/Political Violence, and Civil Disorder.

Socioeconomic Conditions—an assessment of the socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. The risk rating assigned is a sum of three components: unemployment, consumer confidence, and poverty.

Investment Profile—assessment of factors affecting the risk to investment that are not covered by other political, economic and financial risk components. The risk rating is the sum of three components: such as contract viability (including expropriation), profits repatriation, and payment delays.

External Conflict—an assessment both of the risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc.) to violent external pressure (cross-border conflicts to all-out war). The subcomponents are: War, Cross-Border Conflict, and Foreign Pressures.

Corruption—an assessment of corruption within the political system. The most common form of corruption met directly by business is financial corruption in the form of demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans. Although the measure takes such corruption into account, it is more concerned with actual or potential corruption in the form of excessive patronage, nepotism, job reservations, "favor-for-favors," secret party funding, and suspiciously close ties between politics and business. In our view these insidious sorts of corruption are potentially of much greater risk to foreign business in that they can lead to popular discontent, unrealistic and inefficient controls on the state economy, and encourage the development of the black market.

Military in Government—the military is not elected by anyone. Therefore, its involvement in politics, even at a peripheral level, is a diminution of democratic accountability. It also has other significant implications. It could signal that the government is unable to function effectively and that, therefore, the country might have an unfavorable environment for business. The military might, for example, become involved in government because of an actual or created internal or external threat. Such a situation would imply the distortion of government policy in order to meet this threat; for example, by increasing the defense budget at the expense of other budget allocations.

In some countries, the threat of military take-over can force an elected government to change policy or cause its replacement by another government more amenable to the military's wishes. A full-scale military regime poses the greatest risk. In the short term a military regime may provide a new stability and thus reduce business risks. However, in the longer term the risk will almost certainly rise, partly because the system of governance will be become corrupt and partly because the continuation of such a government is likely to create an armed opposition.

Religious Tensions—Religious tensions may stem from the domination of society and/or governance by a single religious group that seeks to replace civil law by religious law and to exclude other religions from the political and/or social process; the desire of a single religious group to dominate governance; the suppression of religious freedom; the desire of a religious group to express its own identity, separate from the country as a whole.

Law and Order—each are assessed separately, with each subcomponent comprising zero to three points. The Law sub-component is an assessment of the strength and impartiality of the legal system, while the Order subcomponent is an assessment of popular observance of the law.

(*Continued*)

TABLE 3
(Continued)

Risk Factors—International Country Risk Guide (ICRG): Main Risks and Subcomponents
Ethnic Tension—an assessment of the degree of tension within a country attributable to racial, nationality, or language divisions. Lower ratings are given to countries where racial and nationality tensions are high because opposing groups are intolerant and unwilling to compromise. Higher ratings are given to countries where tensions are minimal, even though such differences may still exist.
Democratic Accountability—a measure of how responsive government is to its people, on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a democratic society, but possibly violently in a non-democratic one. Points are awarded depending on the type of government in power: alternated democracy, dominated democracy, de facto one party state, de jure one party state, autarky.
Bureaucratic Quality—the institutional strength and quality of the bureaucracy is another shock absorber that tends to minimize revisions of policy when governments change. Therefore, high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services.
Economic Risk Rating—The overall aim of the Economic Risk Rating is to provide a means of assessing a country's current economic strengths and weaknesses. The economic risk components include: GDP per head, real GDP growth, annual inflation rate, budget balance as a percentage of GDP, and current account as a percentage of GDP. Economic risk also considers economic development levels; government role and/or interference in the economy, forms of economic policy; direction of economic and industrial policy (trade liberalisation or closed markets); and the development of critical infrastructure.
Financial Risk Rating—The overall aim of the Financial Risk Rating is to provide a means of assessing a country's ability to pay its way. In essence, this requires a system of measuring a country's ability to finance its official, commercial, and trade debt obligations. The financial risk components include foreign debt as a percentage of GDP, Foreign Debt Service as a percentage of exports, Current Account as a percentage of exports, Net international liquidity as a month of import cover, and exchange rate stability.

Nōte. Adapted from Howell (2010).

- understand the complexity and often interconnectedness of these issues;
- gain sufficient understanding of the issues to be able to assess their impact on international marketing decisions and outcomes; and,
- appreciate the often unpredictable and discontinuous nature of political and economic risks and how to deal with them once they occur.

In looking at learning resources for the module, we investigated current international marketing textbooks as an initial source of knowledge and information and reviewed research conducted on these textbooks. In attempting to answer the questions of what aspects of the political environment should be taught in an international marketing course and how they should be taught, Priovolos (1998) conducted a content analysis of seven (at the time) popular international marketing textbooks. He found that coverage of the political environment ranged from sections of one chapter in these textbooks to coverage across two chapters (political and legal chapters). While four of the seven texts discussed political risk, he found that their definitions of the concept differed substantially, ranging from political risk as government policies that would adversely affect a business, government confiscation of assets, to political risk as political instability (Proviolos,

1998, p. 134). He argued that a broader definition of political risk should be included in any discussion of the political environment and that it should "take up the bulk of the coverage of the political dimension in international marketing" (p. 135) as it provides both the broadest range of politically motivated issues and can be used as a tool for analysis.

Leonidou, Kaminarides, and Panayides (2007) undertook a content analysis of 18 international marketing academic textbooks in order to assess the relative emphasis placed on various environmental factors and then compared these with the views of 71 academics who were teaching the subject. They found that 25.4% of all the material devoted to the international marketing environment was given to issues in the political-legal environment, particularly issues associated with government controls and protectionism. The researchers also found that 89.6% of the educators surveyed were keen to emphasize the importance of political factors on international marketing, in particular those issues related to political risk and political stability. However, the authors noted that these factors were either not covered or not covered very well in the main international marketing textbooks. Educators also sought to teach their students key macroeconomic factors but again, the factors that they felt were most important in this area were not the ones that the textbooks focused on. "In general, significant gaps between textbook coverage and educator's emphasis existed for the great majority of the individual environmental items examined" (Leonidou et al., 2007, p. 123).

In addition to the different conceptual emphasis that textbooks provide over what educators would prefer to focus on, the textbooks tend not to integrate political and economic issues with core decision areas in international marketing but rather are presented as separate conceptual areas. This contrasts with the emphasis that practitioners and researchers have placed on the need for these subjects and issues to be integrated with other learning outcomes (see above), and the QAA benchmark guidelines suggesting that students be able to integrate this knowledge of the external environment into decision making under complex and unpredictable situations. While many textbooks address a number of political and economic issues of importance to global marketers, they do not tend to address the complexity of these issues, nor how one is to determine the relevance or significance of these factors on decision making or outcomes for the international venture.

Another limitation of the approach to political and economic issues taken in most international marketing textbooks bears discussion. Given that most textbooks structure information around the development of international marketing strategy, international political and economic issues are presented as falling within the early stages of that development—often called a "situational" or "environmental analysis." The limitations of the systematic arrangement of international marketing as a set of stages are significant, not the least of which is the impression given that political and economic issues exist in an "external" environment that can be objectively viewed and concisely assessed for their current and potential impact on both the decision-making stages of IB implementation and its operation. Little attempt is made to show how these issues can become deeply integrated with day-to-day operations of the business and why their evolution and change should be tracked, assessed, and managed along the way. What is needed is the ability to see behind the issues, to ask how they came about and how they have evolved as well as to examine their ongoing, often insidious effect, on international operations. Again, what is needed is the integration called for by those who want an effective approach to cross-disciplinary education and what the ability for students to assess what the QAA benchmarks call the interrelationships among and the interconnectedness between the external environment and the organization (QAA, 2007).

7.3. The Fourth Module—The International Political and Economic Environment and its Broad Dimensions

In summary, a review of QAA benchmark statements showed the curriculum designers that the newly designed program needed to provide opportunities for students to build their abilities in making "decisions in complex and unpredictable situations" where there may be an absence of complete or up-to-date information. Clearly, the international political and economic environments present managers with complex, unpredictable, and often information-poor scenarios in which they will be required to make decisions. Furthermore, a review of scholarship demonstrated that political risk, when conceived of as a multifaceted cross-disciplinary construct, not only represents that complexity and unpredictability but is viewed as "perhaps the greatest threat to modern corporations" (Kapstein, 2007, p. 1) and one that is least well understood or managed. Finally, the coverage of these issues in traditional international marketing courses was deemed to be insufficient.

The decision was made, therefore, to develop a fourth core module on the MA in International Marketing that would provide students with the knowledge and skills needed to investigate, assess, plan for, and manage the range of political risks studied by business and marketing scholars and experienced by international practitioners. In order to remove the limitations of the "checklist" approach to international environmental factors, students would now have considerably more time to develop their understanding and to develop skills in managing what can be ongoing, changeable, and complex risk factors. Finally, to provide a greater depth of understanding, and to expose them, as Kapstein (2007) noted, to issues that students of politics ask about multinational operations, the curriculum designers felt that the cohort would benefit from a more cross-disciplinary approach.

The module would introduce students to theories from a broad range of perspectives in international relations, international political economy, and to the literature on globalization to provide a deeper understanding of the foundations of and how to conceptualize political and economic risks. Through discussions, readings, and seminar activities students would be able to really unpack what is meant by "complexity" in the international environment, how changeable conditions are, and why risks are often difficult to predict and manage. We could demonstrate how these risks tend to involve multiple stakeholders with different agendas (a form of complexity); what kinds of impacts they can have on international marketing; how to plan for them, where possible; and how to manage them once they begin to impact on decision making and operations. The activities would be designed to integrate theories and issues in international politics and economics with international marketing scenarios and we would use Political Risk Group's risk factor framework as the organizing tool.

8. DISCUSSION

Curriculum design and development is a complex process involving competing interests and objectives, institutional priorities, and constraints. Ultimately, however, the primary objectives of the curriculum are to assist students in developing the mind sets, critical skills, and knowledge that will allow them to find and progress in rewarding careers, and also to continue to develop intellectually and personally over time. In order to meet these objectives while managing

the constraints of curriculum development, we need to employ an evidence-based approach to selecting both the content and the approaches to teaching and learning that will make up the curriculum in our discipline areas.

Although there is a robust literature on the reasons for and the ways to enhance individual modules with these perspectives, there is limited research into approaches to overall program enhancement and development. This article has used an example of how we approached the redesign of our MA International Marketing program. Our starting point was a conception of the environment in which international marketing takes place as one that offers greater challenges due to complexity resulting from multiple stakeholders as well as challenging and changeable macroenvironments. The curriculum needed to address the factors that underpinned this complexity while also offering skill development opportunities in how to manage in these conditions. We then outlined potential drivers and constraints that would impact curriculum coverage and framework.

Among the main drivers are the pedagogic and management literature and this article has demonstrated how a broad and deep review of the literature can help to identify and support the development of a curriculum that extends into themes and approaches from other disciplines and subjects. Interestingly, there are more drivers for enhancing the curriculum with content and perspectives from other disciplines rather than constraints, and these include the literature, higher education bodies, and practitioners. There are also drivers for a more macroperspective in IB programs and greater emphasis on both skill development and integration of themes.

The article has addressed the first phase of development only, leaving out our specification of program outcomes, individual module outcomes, and teaching and learning strategies. The main aim of the article, however, was to emphasize the need to begin curriculum design and planning from the program level if we are to move away from how Borin et al. (2007) conceived of most curriculum reviews as "a series of minor incremental adjustments to individual courses that cause the curriculum to lose strategic consistency and focus" (p. 164). To achieve an integrated, forward thinking and consistent curriculum relevant to international marketing students, we need to be prepared to challenge the current approach against the realities of operating in international markets today, particularly as firms move into emerging and developing markets where infrastructure, government policy, and economic conditions are weak, often suffused with corruption or are generally in flux.

The article is limited as it takes a broad overview of the curriculum design process and does not address specifics of the final curriculum, nor attempt to measure the learning gains or skill development outcomes of the final product. The program has run for 2 years now, and student feedback has been strongly positive for the new module in particular, but empirical research is needed to determine whether the new curriculum has enhanced students' career prospects or addressed some of the concerns about graduates' critical thinking and decision-making skills as reported by managers. Further research is also needed on what specific teaching and learning approaches best integrate content, ideas, and epistemology from political and economic studies with IB subjects.

Our program redesign was an attempt to begin this process of integration and anecdotal comments from and surveys with students have indicated at least a high degree of student engagement. It was our aspiration that in redesigning the master's program and adding a 30-week module on political and economic risks, our students might develop the skills and characteristics that an early scholar of IB called for in 1977: "a new type of international manager—a manager who not

only can recognize these [environmental] forces and their impact on corporations but can deal with them in day-to-day decision making" (Thunell, 1977, p. 11).

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Abstract

Dissertations at postgraduate level in Marketing are a significant component of the overall programme and a measure that a 'Master's level' of education has been achieved. Succeeding at the dissertation requires students to integrate a wide range of skills, processes, information and knowledge acquired from diverse contexts and sources, including prior learning, more recent study, and the academic literature. In most UK based Master's programmes in Marketing, the students need to complete work associated with their subjects of study as well as their dissertation within one year and with numbers on marketing programmes growing, the pressures are significant for both students and supervisors. However, very little research has been conducted on the challenges that Marketing supervisors and students face in the dissertation process and how these challenges could be resolved or mitigated. This report begins to fill the gap in our undertanding of the issues and challenges arising in dissertation study through an extensive investigation into the existing literature on dissertations (or theses) at postgraduate, and in some cases undergradute level from across a range of disciplines.The key obejectives are to identify the main challenges faced and to provide recommendations for improving the experience and outcomes for both supervisors and students.

The report identifies and investigates five main themes associated with dissertation study that the review of the literature has demonstrated to be of research interest: Challenges in the student-supervisor relationship; issues in teaching and learning research methods; helping students through various stages of the process including ways to improve student motivation; the challenges of student diversity, cultural background and prior preparation for undertaking a dissertation; and issues related to plagiarism and academic dishonesty. The report considers how these issues arise and evolve and provides recommendations for how they can be managed. Recommendations are provided around these five themes and the 25 sub-themes that the literature indicates many students and supervisors face during the dissertation process. It is hoped that Marketing supervisors in particular can use the report and recommendations to begin a dialogue with colleagues both within and across insitututions to help with their own challenges and problems in helping students to succeed with the Master's dissertation in Marketing.

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1. Introduction

Post graduate students on UK Master's programmes in business-related subjects increased by just over 300% in the period from 2000 to 2012 (HESA, 2000-2012). In recent years, up to 80% of these students have come from overseas, the major markets being China and India. Also occurring within this decade has been a move by most UK institutions to reduce the length of the Master's programme from 18 to 12 months, and this shift alone is probably one of the major reasons for the increase in student numbers. In addition, many UK Universities have set up partnerships, joint ventures or their own campuses in overseas locations to deliver both undergraduate and postgraduate programmes. Whatever the contractual arrangement, the UK partner is generally responsible for assuring the quality of the programme. This can mean sending academics abroad to teach and sit on exam boards, and calling upon UK academics to first or second mark some if not all of the work from students on overseas campuses. At present, however, the growing number of students is not generally followed by additional resources for teaching.

In the vast majority of UK home and overseas universities, Master's students in business still complete a traditional dissertation. The increase in student numbers, the rise in students who are non-native English speakers, the reduction in time to complete the degree, and the strain on resources have placed growing pressures on academics who are involved with preparing students for and supervising them through the dissertation. And yet, despite the rising pressures and concerns, research into dissertation challenges and potential solutions for those who supervise Master's level business students is limited.

In spite of the limited research into business-related dissertations, however, the literature on dissertations in general has depth and breadth. It covers the management and processes associated with Undergraduate, Masters and PhD dissertations in a range of disciplines and across a broad range of themes. They key themes emerging from the review are:

- The student-supervisor relationship;
- Teaching and learning research methods;
- Helping students through various stages of the process, and ways to improve student motivation;
- The challenges of student diversity, cultural background and prior preparation for undertaking a dissertation; and
- Issues related to plagiarism and academic dishonesty.

Following, is a review of the literature on these themes drawn from journals and other publications related to dissertation issues in higher education, and where available, those related specifically to business disciplines. The report considers dissertation and thesis-related research from master's and doctoral level, although where useful insights are provided from undergraduate dissertation research, these ideas are also included. The objectives of the report are to provide wide coverage of the available literature in order to identify key issues, themes and sub-themes that resonate with both supervisors and students, to report on the findings and recommendations associated with key challenges, and to lay a foundation for future research.

1.1 The student-supervisor relationship

A number of studies have focussed on the student-supervisor relationship (Lamm, Clerehan & Pinder, 2007; Armitage, 2006; Dysthe, 2002; Woolhouse, 2002; Holbrook & Johnston, 1999; Cargill, 1998; Taylor & Dawson, 1998; Hetrick & Trafford, 1995). The key themes within this body of work are the differences in student-supervisor expectations; approaches to managing the relationship; different approaches to supervision in general; issues related to communication and understanding; and differences in student-supervisor perceptions of the overall experience.

McCormack (2004) conducted a longitudinal study of a small cohort of postgraduate research students and found that there was a considerable gap between students' understanding about research and what was expected of them against what supervisors believed students were able to do. In some cases this gap was so considerable that ontime completion was affected. Armitage (2006) conducted research into supervisors' roles and expectations of the dissertation supervision process with the aim of informing policy, practitioner-based knowledge and practice. The study focuses mainly on the relationships of students and supervisors and the management of the dissertation. His work highlights some interesting insights regarding ther relationship aspects of the process and the need to manage expectations and build trust.

The need to develop a plan when undertaking the dissertation process is a common theme in the literature. Woolhouse (2002), Phillips and Pugh (2000) and Exley and O'Malley (1999) also emphasise the need for supervisors to have a very clear understanding of students' expectations of the supervisory process from the outset and to provide explicit guidelines as to what the supervisor will and will not be able to provide. Students should be encouraged to discuss and record their expectations and for these documents to be reviewed periodically during the study period.

Anderson, Day and McLaughlin (2006) considered how supervisors view their role and found a duality of interests, one that focuses on the wider academic community and the need to ensure that students adhere to accepted academic standards, and their concomitant desire to develop student's self-confidence, independence and agency through the dissertation process.

They note that in order to "support students' capacity to act with initiative, supervisors needed to align students' activities appropriately with the established values and practices of the research community"(p.165) and that there is a balance to be struck between the potentially constraining effects of imposing standards and developing student agency and autonomy. Grant (1999, 2003) has written extensively on the power relationship between supervisor and student and the means to best manage this relationship in order for students to develop autonomy and skill. She notes that "supervision differs from other forms of teaching and learning in higher education in its peculiarly intense and negotiated character, as well as in its requirements for a blend of pedagogical and personal relationship skills" (2003, p175).

Acker, Hill and Black (1994) suggest that supervision can be viewed under a technical rationality model or a negotiated order model. Dissertation guideline documents tend to present the supervisor as one who will follow a *technical rationality model* focusing on issues of technique, procedure and following the rules of academic practice. Their research, however, showed that most supervisors actually follow more of a *negotiated order model,* tending to adjust the supervisory process to the needs of different students and to changing their approach over the period of supervision, as required. Vilkinas (2008) interviewed 25 academics to identify the roles they take on during supervision and found that they were similar to what her previous work into management roles had revealed. Most supervisors undertook the task-focussed roles that she labels deliverer and monitor - the *deliverer* role involves helping students to organise their work, work to a time schedule and manage competing interests while the *monitor* role involves providing feedback and analysing student performance during the process. Half of the participants also undertook an emotional and intellectual *developer* role with their students, but only two commented on their having taken the time to reflect on their own capabilities and their approaches to supervision, what Vilkinas (2008) called an *integrator* role.

A number of researchers have also pointed out that the challenges students face in dissertations are often made more difficult by the fact that supervisors have tacit knowledge of the features and approaches to dissertations that they do not communicate to students (Bitchener & Basturkmen, 2006). Burnett (1999) and Akylina (2007) discussed the benefits of using small groups or collaborative cohort supervision in helping "the students' enculturation into the particular discipline" (Alkylina, 2007, p. 115), their understanding of dissertation process and terminology, and in building support networks. Supervisors often forget how solitary students can feel during their dissertation study and, as noted below, international students, in particular, can face a strong sense of social isolation. Action sets and small group meetings can be beneficial in allowing students to share both problems and solutions and in building their confidence.

If the supervisory process is prone to problems of communication and understanding that result when not all the terms of reference are made explicit and from students not being familiar with the language and cultural assumptions inherent in what may be to them a new discipline, then it is also likely that student and supervisor will have different perceptions of the success and/or failures of the process. Dong (1998) found that students and supervisors often differ in terms of their perceptions of how much support was provided during the dissertation. In her study of science dissertation students, she found that their perceptions of the assistance provided by supervisors was less than what supervisors felt they had provided. This again points to a need to identify student expectations from the outset and to provide clear guidance on the role and input to be provided by the supervisor. In their review of the literature into what students expect from the supervisory relationship, Drennan and Clarke (2009) identified:

> *prompt feedback, providing balance between direction and independence, regular meetings, appropriate expertise of the supervisor, and ability to suggest alternative designs if problems arose (p.485).*

They noted that there is evidence that the quality of supervision does vary for students and one of the main issues is the lack of contact between supervisor and student. Lumadi (2008) also reported on differences in expectations between students and supervisors. Students expected their supervisors to provide more support with research techniques, to be more explicit about the criteria upon which their work would be judged, and to provide feedback on their work more promptly. They complained of not being able to contact supervisors and waiting long periods of time for feedback. Supervisors complained that students were poorly prepared for the dissertation, failed to take their comments and feedback into account when revising, and that poor language skills on the part of many students meant that the supervisor had to spend a great deal of time on editing and correcting the students' work. All authors (Dong, 1998; Lumadi, 2008; and Drennan & Clarke, 2009) support the need for supervisors to identify student expectations from the outset and to provide clear guidance on their role and the input they will provide.

Aspland, Edwards, O'Leary and Ryan (1999) reviewed a series of studies on problems in the student –supervisor relationship, noting Powles (1988) study on student dissatisfaction with the supervision they received at the early stages and Parry and Hayden's (1994) study on student concerns with their supervisors knowledge of procedural and practical aspects of the process. The authors also noted students' concerns about delays in receiving feedback and feelings of isolation. In addition they reviewed an earlier study by Moses (1984) that still has resonance with students and supervisors today – supervisors having too many students; the mismatch between student research interests and supervisor interests; personality mismatches; and student perceptions of inadequate support. Aspland et al. (1999) provide a useful set of guidance documents to help both students and supervisors track and manage issues that come up during the process. Ryan (1984) also provides a useful checklist for supervisors and students.

In an unpublished study for the Higher Education Academy (UK), Fan (2013) identified the following in his focus groups with international dissertaiton students:

> *My supervisor was good but she's so busy, always too late to make appointment'; 'It took me more than three weeks to make a meeting. I waited 45 minutes and the meeting ended in less than 10 minutes'; My supervisor never replied to my emails ' [and] 'We were told not to contact the supervisor directly. To make appointment via School reception, but often the reception did not know his availability. I have been trying for weeks to see him.*
> *(Comments from focus group participants in Fan, 2013, p. 9).*

Fan (2013) also surveyed dissertation supervisors of international students in the UK and reported that some students tried every excuse to avoid face-to-face meetings with them. In addition, he provided the following comments from supervisors:

> *International students do not engage in contact as often as other students'; 'They should be more active, make more frequent contact with [the] supervisor, asking for help!'; 'General lack of motivation, the feeling that they plagiarise and get away with it, getting others to do their work, copying dissertations done in their own country that are not on any anti-plagiarism site, trying to give their supervisor gifts'; [and] 'Within research methods they should cover how to think critically and implement within the dissertation, this is always lacking in international student work. (Comments from survey participants – Fan, 2013 p. 8)*

Fan (2013) found that the majority of supervisors were committed to improving the process but were concerned with the growing numbers of students they are required to supervise and the lack of time allocated to provide a really good experience for students.

The problems inherent in the student-supervisor relationship are unlikely to disappear as long as there remain considerable differences in the quantity and quality of supervision and differences in expectations and perceptions. Semeijn, Semeijn, & Gelderman (2009) note that despite the growing number of master's students in higher education, supervisors themselves are often not given training or support in how to establish effective student-supervisor relationships or on what their role requires. Drennan and Clarke (2009) argued that the development of supervisory skills should be a priority at Universities as their research demonstrated a strong relationship between good research supervision and the ability of students to develop solid research skills such as the "ability to work independently and critically, the ability to develop arguments, and awareness and use of advanced methodological designs that pertained to the student's discipline of study" (p.485). Their research on 220 master's level nursing students demonstrated that factors such as the quality of supervision and good infrastructural support were better predictors of student outcomes in relation to research skill development than were characteristics such as "age, years qualified, gender and undergraduate educational qualifications" (p.496).

The Higher Education Academy (UK) has developed and recently updated a survey tool, the Postgraduate Research Experience Survey(PRES) (HEA, 2013) to investigate a range of factors related to research degrees and provision in the UK, including the quality of supervision experienced by students, their views on the quality of supporting infrastructure and the degree to which their programme enhanced research skills. The 2007 report on results from the PRES from 58 institutions across the UK found that respondents considered "supervision to be the most important aspect in successfully completing their research degree" (HEA, p.2) and that most respondents were generally satisfied with the overall programme (81%). It is interesting to note, however, that other studies reported on above that have used qualititive research (interviews, focus groups) tend to show lower levels of satisfaction with supervision.

1.2 Teaching and Learning Research Methods

Most Universities in the UK provide some form of research training for students who will be undertaking a post-graduate dissertation. From anecdotal evidence gathered by the author at department visits and conferences, it appears that some departments offer research methods training as a stand-alone course that students are required to take; others include the training within another module such as market research; and still others provide it as additional, non-credit workshops that students can attend if they choose. In most cases, however, students are required to submit and pass a research proposal assessment before they undertake the dissertation. Many do not pass but carry on to the full dissertation anyway. It appears that there is often a mismatch between the knowledge and skills that students learn in research methods and what they are expected to do in the dissertation. This is particularly the case when the research methods module focuses on marketing research.

The challenges associated with teaching and learning research methods is a key theme in the literature. (Edwards & Thatcher, 2006; Murtonen & Lehtinen, 2005; Meyer, Shanahan & Laugksch, 2005; Montcalm, 1999; Allison, Kewkowicz & Nunan, 1998; and, Zuber-Skerritt, 1987). In their comprehensive review of the literature on teaching research methods in the social sciences, Wagner, Garner and Kawulich (2011) found that a wide range of approaches are advocated, including exercises, problem-based approaches, collaborative and group work methods, simulations, and experiential learning. However, they also found that except for studies identifying student anxiety with statistical analysis, there is limited research into the challenges of teaching and learning specific aspects of research methods as well as the role and desirable characteristics of a research methods teacher. They note that

> *[u]nless methodology is accepted as central to education in a discipline, teachers will too often be allocated to classes for reasons other than an aptitude for teaching methodology, and students are unlikely to learn how to do research well. There is a pressing need for widespread debate, informed by pedagogical research, around what makes successful research methods teachers* (p. 83).

Allison, Cooley, Lewkowicz, and Nunan (1998) also comment on the expectations that supervisors may have about the benefits of research methods courses to the dissertation process. In many cases, the research methods course allows students to apply their learning to short assignments or in exams, but that these assessments do not guarantee that students will be able to apply the knowledge and skills in their dissertation.

Edwards & Thatcher (2006) also suggest a different approach to preparing and assessing students. They make use of a student study pack written by colleagues that incorporates both ongoing assessment in the form of weekly seminar sheets and summative assessment comprising a research proposal and a statistical assignment. They note that the *ongoing-assessment* approach has led to significant improvements in students understanding of key research concepts and how to apply them.

Research methods training, as noted above, is undertaken differently across institutions, but in general, where the course is structured towards the dissertation, most students will be exposed to how to undertake a literature review; citation guidelines; different research methodologies and how to choose and apply them; and, techniques for analysing data and writing up findings. Andrews (2007) noted that despite the tacit or explicit requirement that a dissertation demonstrate a student's ability to develop an argument, evaluate and take a critical approach to knowledge, most research courses do not provide this kind of training. He makes an important point about the mis-match between training and supervisor expectations of students' capabilities when he comments that:

> *A dissertation/thesis will not be truly argumentative until it has (a) worked out its theoretical position, (b) reviewed the literature, (c) designed an appropriate empirical study (if it is that kind of study), (d) gathered the evidence, (e) arrayed the evidence into categories and (f) found its own position in relation to those categories, arranging them in a sequence that carries the argument of the piece as a whole. Many students only deal with the middle elements: they undertake a review, sort the evidence (sources, quotations, facts, hypotheses) into categories and then they write. What they write is exposition. It is not argument, and it is not critical, and it does not involve much thought: that is why it may or may not pass, according to the criteria for a pass in any particular course of study (p. 13).*

If we have expectations for "scholarship, independent critical thought...[and]... argumentative coherence from our students work (Andrews, 2007, p. 13)", then we need to provide training in how to do these things, in addition to finding ways to improve the way we teach research methods.

1.3 Particular challenges and helping students through various stages of the process

Todd, Smith and Bannister (2006) identified other key challenges, in this case to undergraduate supervision, including the intellectual challenges students face in choosing and then narrowing down a topic for research, problems with time management; and the difficulties students have in being analytical and critical in their work. Writing on post graduate dissertations, Cooley and Lewkowicz (1995), Thompson (1999), and Jenkins, Jordan and Weiland (1993) also identify these issues and explore the difficulties that students face in structuring an argument over such a large piece of work and doing so with consistency and balance. Writing on international students, Bitchener and Basturkmen (2006) looked at difficulities in writing up the discussion section, including challenges with the language, and difficulties in expressing and linking ideas, but noted that these problems sometimes go beyond what can be overcome in the short period given for the dissertation. Zuber-Skerritt and Knight (1986) identify *problem definition* as one of the main challenges that students face. They recommend a series of early workshops with group discussion, group support and reflection to help students through the early stages of problem identification and focus. Baker (2000) undertook a survey of approaches to identifying a topic for research and outlines key tips for writing an effective research proposal.

In line with failing the research proposal, Armstrong (2013) found that students seem to have a problem finding a viable topic area to research that will lead to a worthy conceptual framework. In most cases, students come to their first supervisory meeting with a topic area that is so broad, it is inappropriate for a dissertation. The literature supports the contention that students have a very difficult time choosing and narrowing down a topic for research (Todd et al., 2006; Thompson, 1999; Cooley & Lewkowicz, 1995; Jenkins et al., 1993; Zuber-Skerritt & Knight, 1986).

Sachs (2002) argues that writing a dissertation or thesis involves not only self-regulation by the student, but "goal setting, skill acquisition (such as in data analysis), motives, attitudes and one's conception of learning" (p. 100). As a result of the large number of skills that are required as well as the need to keep motivated and self-regulate, students often face anxiety in researching and writing their dissertations. Supervisors need to understand the correlates of this anxiety if they are to help students through the process.

There is quite extensive research into how to help students through various stages of the dissertation, specific interventions for specific problems faced, and how to improve student motivation. In his discussion article, Cassuto (2010) recommends creating collaborative groups to help those who are feeling isolated; be sure that from the beginning the student is working on

a topic that they are truly excited about and interested in; encouraging students to start writing on any section of the dissertation, just to get them writing; and make it clear to students that the dissertation does not have to be 'perfect' – it needs to meet a particular threshold, but that no piece of writing is ever perfect.

Writing the dissertation itself is a key challenge for most students, and skills in writing at this level are not generally included in the curriculum of most Masters programmes. Many universities have learner development units where students can go for additional help, and some put on specific classes for dissertation writing. Murray (2007) recommends holding writing clinics for dissertation students within the department where they can practice writing in small increments or "snacks" as his students came to refer to them. This process had a range of benefits for students, including getting them used to writing regularly, building confidence in their ability to write, and in making the writing process more manageable. Such clinics may be particularly helpful for international students who have limited experience with writing such a long piece of work or in writing in English (Bitchener & Basturkmen, 2006).

Students' lack of motivation with the dissertation is cited as a key challenge by supervisors interviewed for Armstrong's (2013) work and one that is hard to address. This seemingly bleak sentiment suggests that more time needs to be spent motivating students in the earlier preparation for the dissertation but that lack of motivation and comprehension of concepts may continue to be a barrier. Ahern and Manathunga (2004) suggest that motivation may be linked to other issues that a student is facing. They use cognitive theory to identify typical stages where problems and challenges are likely to occur and provide strategies for assisting students who have become stalled in the process. They refer in particular to those students who have been avoiding contact with the supervisor, may continually be changing their topic and have failed to show the supervisor any of their work. They make reference to work by Johnson, Green and Kluever (2000) who developed a procrastination inventory based on a previous tool by Muszynski and Akamatsu (1991). The inventory helps to identify students who are having trouble moving forward with their dissertation and also differentiates the reasons for their slow progress as either cognitive (lack of knowledge or skills), emotional/affective (anxiety, feelings of inadequacy, personality clash with supervisor) and/or social (social isolation, pressure of external social relationships). The authors then provide techniques to help with student motivation depending on the reason or reasons identified. Similarly, Maxwell and Smyth (2010) created a research management matrix that focusses on different stages of the research process to identify potential hurdles for students and ways to help students overcome them.

Albertyn, Kapp and Frick (2007) provide one example of a detailed evaluative framework for the dissertation that was created for markers but that could be introduced to students early in the process and referred to as students complete different stages. One way to reduce the challenges associated with each stage of the dissertation is to be explicit upfront on how each section will be evaluated and what the marker will be looking for. By creating such evaluative frameworks that are consistent across a department, supervisors can also benefit. As a group, they can come to some agreement on what they view as a threshold level of achievement for each section as well as what sections are most problematic for students and how the teaching of the concepts and expectations from each section could be better addressed. This approach may also help reduce large differences in grades arrived at by first and second markers. Furthermore, students will benefit from a more transparent and consistent marking process.

Wagner, Garner, and Kawulich (2011) note that "a well-informed approach to teaching, in whatever field, relies on a sound understanding of the processes of, and obstacles to, learning" (p. 84) and that we need to first have a better understanding of these processes and obstacles in dissertation study if we are to develop "a more carefully targeted pedagogy" (p. 84). However, Armitage (2006) noted that most supervisors tend to work within both subject and methodological silos when supervising students' and that they should exchange ideas and best practice more often at a departmental level regarding the issues they face and their approaches to supervision. Taking a department-wide approach to this understanding and potential solutions to problems is likely to be the best way to ensure that all issues are considered and that there is consistency in how students are supervised and graded.

1.4 The challenges of student diversity, cultural background and prior preparation

The problems experienced by non-native English speakers is also a key theme in the literature (Fan, 2013; Braine, 2002; Jenkins, Jordan & Weiland, 1993; Casanave & Hubbard, 1992; Canseco & Byrd, 1989; Bridgeman & Carlson, 1984; West & Byrd, 1982). Problems with the language are not the only issues non-native students face. Belcher (1994) discussed the challenges associated with being relatively new to a "discourse community" and, like Bitchener and Basturkmen (2006), the difficulties of coming to terms with the often tacit knowledge that supervisors take for granted.

Deem and Brehony (2000) and Dong (1998) have all noted that non-native speakers tend to be more socially isolated during the dissertation process and agreed with Belcher (1994) that their lack of "rhetorical and genre knowledge of the discipline" (p. 181) adds to the writing challenges of these students. Writing challenges include "the conventions of formality, objectivity, conciseness, technical details and precision" that native speakers may take for granted or have had prior experience with (p. 382).

A number of studies have examined the difficulties that Chinese students in particular face in the critical evaluation of existing literature and with attributing sources (Fan, 2013; Abasi & Graves, 2008; Huang, 2008; O'Connell & Jin, 2001; Frost, 1999; Smith, 1999; Cadman, 1997). These challenges tend to be related to their prior education where respect for academics is

inculcated at an early stage and students are not encouraged to question the ideas and opinions of their superiors. The authors provide recommendations on how to help Chinese students develop the ability and willingness to question and evaluate. These recommendations are also of value to students from a range of different cultures.

Huang (2008) undertook a study on the experiences that Chinese and Indian students on post graduate tourism and hospitality programmes had with the notion of 'critical thinking'. She points out that what academics mean by "critical thinking" can vary. The concept is broad and non-specific and given that there are a lack of clear guidelines on how to teach critical thinking, it is not unreasonable to conclude that both domestic and international students will have challenges in both understanding what it means to and in learning how to think critically. She refers to work by Egege and Kutieleh (2004) who argue that

> *[o]ur understanding of what critical thinking entails is heavily influenced by the history and traditions of our academic 'institutions'. What Western academics recognise as evidence of reasoning, the tools used to reason with, the language and structure of the argument, actually represent a cultural, rather than a universal method (p.3).*

In interviews with Chinese and Indian postgraduates, Huang found they were unclear about what critical thinking is and how to undertake it and that their lack of English vocabularly made it difficult to apply critical thinking in their coursework and exams.

Fan (2013) identified issues related to language and culture. Supervisors contend that language competence is a significant issue facing UK postgraduate marketing dissertation students, in particular given that the majority do not have English as a first language. Their weak language skills make it difficult for them to comprehend the literature, to explain and argue, and to write well. Respondents also discussed cultural differences in how international students are taught prior to coming to the UK and how this impacts upon their ability to undertake a dissertation.

Fan (2013) undertook his study on international students and their supervisors to identify specific issues they have faced with dissertations and to gain insights into the experiences of both groups. His research was prompted by concerns that international students tend to score at least one grade point below home students on their dissertations. Supervisors who responded to his survey had big concerns about students' proficiency with English and the impact on their ability to complete a dissertation or get a good grade. Most supervisors showed enthusiasm to improve the experience of their international students but felt students were also hampered by the time restrictions:

> *They do not have enough time...; it is very hard for them. 1) Competing deadlines; in a nutshell there is too much to do in one year of study; 2) International students have a lot to come to terms with: language, culture, the weather, etc., which can inhibit their engagement with the course including the dissertation; 3) They also have to come to terms with a new subject area which has a lead in time of about 3 months (Comments from supervisor surveys, in Fan, 2013, p.7).*

1.5 Plagiarism and Academic Dishonesty

Much has also been written on plagiarism and academic dishonesty. More recent research into these themes points to the complexity of the phenomenon –it is not always a simple choice by students to use the work of someone else without attributing that work, but may come from their "unfamiliarly with the ways of thinking, speaking, and writing associated with the specific subject areas" (p 226) and the "cultural, educational, and professional dispositions that oriented them differently to text, knowledge, and authorship" (Abasi & Graves, 2008, pp. 226 -227). Researchers suggest that in addition to informing students about the penalties for plagiarism, they also be instructed in the nature of and core assumptions that underpin academic practice and writing, particularly if they have not been trained in English speaking Universities (Abasi & Graves, 2008; Cooper & Bikowski, 2007; McGowan, 2005; Sutherland-Smith, 2005; Pecorari, 2001; Ashworth, Bannister & Thorne, 1997).

The work of Abasi and Graves (2008) is particularly informative in helping supervisors to gain a better understanding of underlying issues that drive plagiarism for international students in particular. The authors draw upon the work of other scholars (e.g. Barton & Hamilton, 1998) to create a view of academic writing as social practice.

This conception

> *allows us to conceive of academic writing as a complex of literacy practices patterned by discipline-specific ways of reading and writing as well as the particular attitudes and beliefs that members of a given disciplinary community hold toward literate practice (p.10).*

Similar to Belcher (1994), Dong (1998) and Bitchener & Basturkmen (2006) argue that these practices and discipline-specific ways of viewing dissertation processes are not immediately evident to foreign students in particular and are often tacitly held by supervisors. Similar to Andrews (2007) (see above), they argue that one particular practice that dissertation supervisors expect of students is to develop an "argued claim to knowledge" (p.225) and that this argument should take on a critical perspective. Unlike the other researchers however, Abasi and Graves (2008) link these challenges to how students approach attribution as well as to incidences of plagiarism. In order to see how the authors make this link, it is worth quoting from their article at some length:

> *In this study we were interested in how institutional plagiarism policies interacted with ESL students' academic writing and how those policies framed the professor-student relationships. In our view, the institutional plagiarism policies that the students experienced in their course assignments and the broader institutional context reduced the complex phenomenon of plagiarism that is "centrally concerned with questions of language, identity, education, and knowledge" (Chandrasoma et al., 2004, p. 174) to the mechanics of documentation, ... While trivializing "the complex meanings of [academic] authorship attribution" (Fisk, 2006, p. 52), the institutional documents withheld important information from the international students in this study, who were in the early stages of their relationship with North American academic writing. The institutional documents were misleading to the students in that they prompted the students to think that academic attribution was more about avoiding plagiarism than responding creatively to the ideas of others (p. 229).*
>
> *The professors expected the students to write from an authorial stance while demonstrating familiarity with the research literature, and at the same time displaying an "evaluative orientation" (Maguire, 1998) that allowed them to assess the arguments put forth in published texts. ....The professors viewed students' textual appropriation and source attribution as one of those "community" practices that resides in a web of complex relations and develops over time (p. 226).*
>
> *[The dissertation documents]... conveyed virtually no information about the core assumptions that underpin professional literacy practices, namely, that knowledge is contingent, and that all published sources, regardless of their authors, are to be approached as provisional claims to truth that are always subject to rational scrutiny (Dillon, 1991; Toulmin, 1958). That professional academic writers bring a complex set of assumptions to the act of writing can be highlighted by the fact that writers use citations to achieve multiple pragmatic functions, of which crediting other authors is but one (Harwood, 2008). These omissions about academic writing were therefore not only misleading to the students, but they also diminished the professors' efforts to socialize the students into privileged literacy practices (p. 229).*

Clearly students need to go through different stages of learning in order to be able to come to terms with the skills that are required (evaluation, critical thinking) as well as the meaning behind various practices (attribution is about crediting an author's way of approaching a subject, but not accepting that it is the 'absolute truth'; attribution is a necessary convention, but should be part of an argument that is woven together with both the authors' points of view as well as my own). Abasi and Graves (2008) note that most institutional plagiarism policies are written in such a way as to focus only on the negative aspects of failing to attribute sources, thus forcing many students into a writing style that is more likely to provide a list of attributed author words and comments, rather than an evaluation of the authors' works. Students are afraid of doing the wrong thing to a much greater extent than they are driven to develop the kinds of practices that we as supervisors often tacitly expect.

> *Further conversations revealed that the students appeared to have adopted a stance that seemed to dominate their writing, a stance devoted to showing that they would not steal other people's property (p. 227).*

Fan's (2013) research into the particular challenges faced by international students undertaking post-graduate marketing dissertations in the UK provides candid comments from focus group participants that points to a particularly worrying trend – student's giving up on the dissertation process altogether and purchasing a dissertation from an essay writing service. None of the students in his focus groups revealed having done this themselves but two students agreed that more than 50% of students were taking this route. While we cannot accept this figure as anything more than conjecture on the part of students, it is clearly indicative of a growing problem and one that needs to be tackled. Megehee and Spake's (2008) study on cheating behaviour amongst marketing students found that the percentages of those who self-report cheating are very high and those who report that 'the average marketing student cheats' are even higher – so there is support in the literature for Fan's (2013) students' comments. Armstrong (2013) found that at all institutions where she conducted interviews, academics are aware of the problem and have seen it increase but in no case are vivas used for all or even many students as a way to detect cheating or plagiarism.

In their literature review of teaching research methods in the social sciences, Wagner, Garner and Kawulich (2007) found very little research into teaching and learning research ethics. Although generally concerned with the 'subjects' of research, research ethics training can be extended to cover ethical issues in general. In his review of the pedagogical literature in marketing, Brennan (2012) identified "[a] wealth of research-informed advice and teaching resources on the subject of teaching ethics ... in the marketing education literature" (p. 14) and much about cheating and plagiarism. However, until we have a better understanding of the factors that lead to this behaviour and at what point in their degree programme the triggers for cheating increase, it will be difficult to find effective, enduring solutions.

2. Summary and recommendations for further research

This review of the dissertation literature has highlighted a number of significant challenges associated with the process and most current supervisors would probably agree that many of these are representative of their own experiences. For business school academics, these problems are likely to increase given the growing numbers of students and the lack of a proportionate rise in resources to manage them.

The research reviewed in this report comes from a wide range of disciplines and covers supervision at undergraduate, postgraduate and doctoral levels. An attempt has been made to identify as many studies as possible that consider master's level dissertations, but good research and insights of relevance can be found on dissertations at other levels. Much of the literature on dissertations is published in higher education journals and also those focused on the English language. Sadly, there is relatively little research into the particular challenges and issues faced by students and supervisors on post-graduate business programmes. The work by Armstrong (2013) and Fan (2013) is beginning to fill the gap but more is needed.

The literature makes it clear that many of the challenges associated with dissertations are related to misunderstandings on the part of both students and supervisors about the difficulties faced by both groups and to underlying issues of communication and differences in expectations. If knowledge and expectations are tacitly held by supervisors (Bitchener and Basturkmen, 2006), and if becoming proficient in research and writing requires time for students to become acquainted with the "rhetorical and genre knowledge" of a "discourse community" (Belcher, 1994, p.181), then work needs to be done to first uncover the information, expectations and conventions that students are not initially party too and then on ways to make these more explicit.

Many authors make recommendations on how to develop a community of students where issues can be discussed openly; where the issues of isolation, cognitive and emotional problems on the part of students can be understood and dealt with; and, where expectations from both parties can be made more explicit and clear. Action learning sets, group discussion, clear upfront discussion of marking criteria, planning documents, weekly assignments, and working groups are all recommended as ways to improve learning and skill development and to reduce misunderstandings.

One issue that is not well covered in the literature but is often brought up by both supervisors and students as an area of concern and misunderstanding is marking criteria and how final marks are arrived at. Some departments use a more holistic approach to arriving at a final grade. Indicative criteria are provided to assess what final classification the dissertation falls within, but specific marks are not given to individual sections. At other institutions and departments, marks are given to different sections of the disseratation (eg: literature review, methodology and methods, discussion of findings) and each section is given some indicative criteria for what would be considered a fail, pass, merit or distinction on that section and the final grade is arrived at by adding the marks together.

An investigation into the rich literature on good practice in assessment would help departments create more effective marking approaches that are more consistent and that reduce misunderstandings. Seymour (2005) recommends creating a set of "first order criteria" that assess a student's overall ability to "analyse, evaluate, and to present a coherent extended argument" (Seymour, 2005, p.1) that is internally consistent – key learning outcomes of most dissertation modules. Students are given an indicative distinction, merit, pass or fail mark on the first order criteria and no matter how well they do on the different sections (what she calls second order criteria), they can never get a grade higher than what they got on the first order section. In a short paper on revising Master's level dissertation marking criteria, Seymour (2005) argued for this more holistic first order criteria section to be added because:

> *"the list of criteria[in different sections are]difficult to intepret in any consisent way.....different assessors [value]the different criteria as more or less important [thus undermining consistency] ...different sections of criteria [are] not mutually exclusive, [meaning] that some aspects of the dissertation [are] assessed under more than one heading...further, various studies have demonstrated that there are differences between experienced and non-experienced supervisors assessment grades and between those awarded by [various] subject specialists within multi-disciplinary departments"(p.1).*

Students, supervisors and external examiners want grading criteria that are consistent, transparent and can be similarly interpreted. Clear criteria can go a long way towards helping to reduce misunderstandings and miscommunication. Good criteria, provided to the students upfront can also be used as a diagnostic tool by the supervisors to show where an individual student needs to do some additional work; to see where many students are failing or getting low marks, so additional training can be organised; and, as a diagnostic tool that collaborative cohort groups can use to help each other improve. More research into effective marking criteria is therefore also recommended.

Table One provides a summary of the key themes and related sub-themes identified in this review of the dissertation literature along with the main authors who have researched them. The table also provides a summary of the recommendations from the literature on how to address these challenges. In cases where authors have not made specific recommenations, their names are also included in order to point readers to valuable additional background information and research on the themes. The practicality of implementing the recommendations suggested is not addressed here, but it is clear that given the current resource restraints faced by academics, departments and institutions in the UK, some will be far more difficult to implement than others.

Given the depth of some of these challenges, however, it may be time for institutions to seek innovative ways of dealing with the dissertation module. It may be time for more departments to consider alternatives to the traditional dissertation where the same learning outcomes can be achieved but through a different framework. Many academics would agree that the dissertation is a critical component of a Master's level programme and remains a test of the Master's degree standard. Its importance is highlighted by the fact that it generally carries a credit value of 60, equivalent to one third of the total credits on

a programme. (Appendix Two provides an example of learning outcomes for a dissertation in a postgraduate business subject in the UK).

In general, dissertations require students to demonstrate a range of higher level cognitive and communication skills (evaluation, synthesis, critical analysis, judgement, intellectual coherence) as well as personal skills (time management, prioritising tasks, contribute to building an effective relationship with a supervisor). The dissertation also allows students to develop a higher level knowledge and understanding of concepts, theories, positions, arguments and key developments in their subject area by integrating a breadth and depth of knowledge and skills gained in prior and current study. Additional research is needed to determine whether the learning outcomes of dissertation study can be developed and demonstrated using an alternative type of assessment that may also reduce the challenges and problems inherent in the current approach.

Another set of questions that should be investigated further are: the degree to which the dissertation actually contributes to the developments of this set of knowledge and skills; the underlying and more explicit challenges that students face in achieving and/or demonstrating each knowledge and skill outcome; whether we are providing the most effective means to prepare students to demonstrate these outcomes under current institutional conditions; and, if there are more effective teaching and learning approaches that could be implemented.

Clearly, the literature and comments from both academics and students points to a need to address these issues in a timely manner. Universities in the UK are not likely to change their priorities related to recruitment, to increase the time for a Master's degree to be completed, or be in a position in the near future to provide more resources for dissertation management and supervision. Consequently, programme managers, teaching and learning specialists and academics need to address the issues presented above and find solutions that help to improve the learning experiences of dissertation students and to reduce the pressure on academics who manage and supervise them.

Examples of alternative approaches to the dissertation or changes in focus can be found in the literature, and anecodotaly some UK Universities are beginning to offer student's a more practical alternative – one that focusses on addressing the needs or solving the issues of a particular organisation. This may be either an action project or an internal organisational project that require the candidate to investigate a particular issue within that organisation (perhaps one that they are working for) and to either identify specific solutions that will help to improve current practice or evaluate the implementation of a new system or approach. Archibald (2010) provides insights into how his department implemented a problem-based, decision-oriented thesis that focuses on theory and practice rather than more traditionally on theory/research. He notes that:

> *Our vision has been to connect the thesis to actual organizational improvement through the candidate's role in leadership, problem solving, and decision making (p. 100).*

Further research on the skill development potential and longer term learning and career development potential of these and other types of dissertations is needed to see if they offer a way forward and a means to overcome some of the challenges addressed in this report.

Table One: Summary of key themes and recommendations from the literature on dissertations

Key Theme	Sub-Themes	Authors	Commentary and Recommendations from the Literature
The student/ supervisor relationship	1. Student/supervisor expectations and perceptions: differences in student views of the process.	Drennan & Clarke (2009); Lumadi (2008); HEA (2007); McCormack (2004); Aspland, Edwards, O'Leary and Ryan (1999); Parry and Hayden (1994) in Aspland et al. (1999); Powles (1988) in Aspland et al. (1999); Moses (1984) in Aspland et al. (1999)	• Investigate and understand students' conceptions of research and the research process prior to undertaking the dissertation to identify differences and confusions (McCormack, 2004); • Be aware of the different types of students who present themselves to the dissertation process in terms of their individual learning styles and pastoral need (Armitage, 2006); • Supervisors within a department should exchange ideas, best practice and discuss their own approaches to supervision (Armitage, 2006); • Ask students what current challenges they are facing and then design weekly tutorials accordingly (Woolhouse, 2002); • Working with the student, develop a guideline document to first clarify and then record expectations, from both the supervisor and student's point of view (Ryan, 1984; Exley and O'Malley, 1999; Aspland, Edwards, O'Leary and Ryan, 1999; Phillips and Pugh, 2000 and Woolhouse, 2002; Lumadi, 2008;); • Willingness of supervisor to provide more guidance on different methodologies (Hetrick and Trafford, 1995); • Supervisor to self-reflect on his/her approaches to supervision and to adapt as needed (Anderson, Day and McLaughlin, 2006; Armitage, 2006); • While supervisors carry out a number of roles and functions, including keeping a student on track, providing timetables and guidelines, they also need to ensure that they are helping to develop student's independence and agency in the research process (Acker, Hill and Black, 1993; Grant, 1999, 2003; Vilkinas, 2008); • Better matching of students interests with supervisors research interests and experience (Moses, 1984); • More feedback, more regularly and provided in a more timely manner (Aspland, Edwards, O'Learly and Ryan, 1999; Powles (1988) as cited in Aspland et al, 1999; Parry and Hayden (1994) as cited in Aspland et al., 1999);
	2. Supervisors' roles and approaches to supervision.	Vilkinas (2008); Armitage (2006); Anderson, Day and McLaughlin (2006); Grant (1999; 2003); Acker, Hill and Black (1994)	
	3. Differences in student characteristics and in their approaches to the dissertation process.	Armitage (2006)	
	4. The value of planning, guidance documents and checklists.	Albertyn, Kapp and Frick (2007); Sharp and Howard (1996) as discussed in Armitage (2006); Woolhouse (2002); Phillips and Pugh (2000); Aspland et al. (1999); Exley and O'Malley (1999); Ryan (1984)	
	5. Issues in communication: tacit vs. explicit; cultural issues.	Akylina (2007); Albertan, Kapp and Frick (2007); Bitchener and Basturkmen (2006); Burnett (1999); Dong (1998)	
	6. Supervisor training and support (lack of).	Drennan and Clarke (2009); Semeijn, Semeijn and Gelderman (2009);	
	7. Tools to gain insights into student experiences.	Higher Education Academy (2013) PRES	

			• Provide training for supervisors and those teaching research methods (Drennan and Clarke, 2009; Semeijn, Semeijn and Gelderman, 2009); • Conduct research (focus groups, interviews, surveys) with dissertation students to investigate their experiences with dissertation study, both during and after the process and then make improvements as required (HEA, 2007; HEA, 2013); • Use small group or collaborative cohort supervision to provide support to students, to share ideas, and to disseminate information/ideas from the supervisor (Akylina, 2007; Burnett, 1999); and • Clarity at all levels of the organisation on the problems inherent in the current approach to dissertations (number of students per supervisor; time frame for dissertation completion; current resources and training) and innovative thinking on how to address.
Teaching and Learning Research Methods	1. Whether research methods is the most appropriate preparation.	Edwards & Thatcher, (2006)	• Review the approach to research methods training; identify specific challenges faced by students and revise curriculum, assessment, and teaching as required (Wagner, Garner and Kawulich, 2011; Edwards & Thatcher, 2006; Meyer, Shanahan & Laugksch, 2005; Murtonen & Lehtinen, 2005; Montcalm, 1999; Allison, Kewkowicz & Nunan, 1998; and, Zuber-Skerritt, 1987); • Recognise the particular challenges associated with teaching and learning research methodologies and revise curriculum, assessment and teaching as required. (Wagner, Garner and Kawulich, 2011); • Recognise the need to provide teaching in learning in critical thinking and effective argumentation in addition to research methods and revise curriculum, assessment and teaching as required (Huang, 2008; Andrews, 2007); and • Provide training and support for those who teach research methods (Wagner, Garner and Kawulich, 2011; Andrews, 2007).
	2. Challenges associated with teaching and learning research methods.	Wagner, Garner and Kawulich (2011); Murtonen and Lehtinen (2005); Meyer, Shanahan and Laugksch (2005); Montcalm (1999); Allison, Kewkowicz and Nunan (1998); Zuber-Skerritt (1987)	
	3. The need for specific research methods training for supervisors and teachers.	Wagner, Garner and Kawulich (2011); Edwards and Thatcher (2006)	
	4. Research methods training as insufficient to prepare students for all the skills needed to complete a dissertation.	Andrews (2007)	
	5. Overview of key challenges at different stages of the	Cassuto (2010);Maxwell and Symth (2010); Albertyn, Kapp and Frick (2007);	

	dissertation process and how to assist students.	Todd, Smith and Bannister (2006)	
Challenges at various stages of the process and in student motivation	1. Writing and argumentation challenges.	Murray (2007); Thompson (1999); Cooley and Lewkowicz (1995); Jenkins, Jordan and Weiland (1993)	• Provide specific training in writing for dissertations; hold writing clinics where students write in small increments regularly (Murray, 2007; Todd, Smith and Bannister, 2006; Thompson, 1999; Cooley and Lewkowicz; 1995; Jenkins, Jordan and Weiland, 1993); • Use workshops with group discussion, group support, reflection and other approaches to improve topic selection and problem definition by students (Cassuto, 2010; Todd, Smith and Bannister, 2006; Baker, 2000; Thompson, 1999; Cooley and Lewkowicz; 1995; Jenkins, Jordan and Weiland, 1993; Zuber-Skerritt and Knight, 1986); • Recognise the anxiety that students face and the correlates of this anxiety in learning such a broad range of required skills for the dissertation (Sachs, 2002); • Identify the specific challenges that students face with progress and/or motivation as either cognitive, emotional/affective and/or social and address accordingly (Ahern and Manathunga, 2004; Johnson, Green and Kluever (2000) as cited in Ahern and Manathunga, 2004; Muszynski and Akamatsu (1991) as cited in Ahern and Manathunga, 2004); • Identify the specific challenges that students face at each stage of the dissertation process and address with specially designed interventions/ approaches (Maxwell and Symth, 2010); • Clarify with students at the very early stages the criteria for marking each section of the dissertation; refer to the criteria regularly during the supervision process so students can self-reflect on whether they are achieving the criteria; use the criteria as a discussion point in group/collaborative cohort meetings (Albertyn, Kapp and Frick, 2007); • Supervisors meet regularly as a group to exchange ideas, discuss and reflect on their approaches to supervision and best practice so as to develop more targeted pedagogy and greater consistency (Wagner, Garner and Kawulich, 2011; Armitage, 2006); and • Provide students with many examples of good practice.
	2. Challenges at the topic selection and problem definition stages.	Todd, Smith and Bannister (2006); Baker (2000); Thompson (1999); Cooley and Lewkowicz (1995); Jenkins, Jordan and Weiland (1993); Zuber-Skerritt and Knight (1986)	
	3. The variety and range of skills to undertake a dissertation.	Sachs (2002)	
	4. Lack of student motivation and how to address.	Armitage (2006); Ahern and Manathunga (2004); Green and Kluever (2000) as cited in Ahern and Manathunga (2004); Muszynski and Akamatsu (1991) as cited in Ahern and Manathunga (2004)	
	5. Challenges faced by non-native English speakers in dissertation study including language competence.	Braine (2002); Jenkins, Jordan and Weiland(1993); Casanave and Hubbard (1992); Canseco and Byrd (1989); Bridgeman and Carlson (1984); West & Byrd (1982)	

Challenges of student diversity, cultural background and prior preparation	1. Being new to a discipline and discourse community.	Deem and Brehony (2000); Dong (1998); Belcher (1994)	• Provide specific training in writing for dissertations; hold writing clinics where students write in small increments regularly; provide training in argumentation and critical thinking/writing/reflection (Murray, 2007; Todd, Smith and Bannister, 2006; Thompson, 1999; Cooley and Lewkowicz; 1995; Jenkins, Jordan and Weiland, 1993); • Recognise that international students often feel more socially isolated during the dissertation process; develop collaborative cohort groups to support these and other students (Deem and Brehony, 2000; Dong,1998); • Recognise that being new to a discipline and a "discourse community" and the cultural underpinnings of a discipline creates specific challenges for international students; hold extra workshops early in the process (Huang, 2008; Bitchener and Basturkmen, 2006; Blecher, 1994); • Reconsider the IELTS requirements for the programme (Armstrong, 2013); and • Consider a pre-training period for international students prior to their undertaking the Master's to help with enculturation and the development of language skills (Fan, 2013).
	2. Issues of social isolation.	Deem and Brehony (2000); Dong (1998)	
	3. Specific challenges faced by Chinese and Indian students.	Abasi and Graves (2008); Huang (2008); O'Connell and Jin (2001); Frost (1999); Smith (1999); Dong (1998); Cadman (1997)	
	4. Plagiarism and academic dishonesty as part of a wider problem: cultural, educational and professional predispositions; unfamiliarity with the culture of the discipline.	Abasi and Graves (2008); Cooper and Bikowski (2007); McGowan (2005); Sutherland-Smith (2005); Pecorari (2001); Ashworth, Bannister and Thorne (1997)	
Plagiarism and Academic Dishonesty	1. Scope of the problem and use of academic writing services.	Megehee and Spake (2008)	• Recognise the underlying factors that can lead some students to plagiarise and to be dishonest (time pressures; lack of skills; lack of confidence; social and family pressures to succeed; confusion over expectations; institutional failings) (Abasi and Graves, 2008; Cooper and Bikowski; 2007; McGowan, 2005; Sutherland-Smith, 2005; Pecorari , 2001; Ashworth, Bannister and Thorne,1997); • Be aware of and willing to address the scope of the problem, particularly of academic writing services and the number of students who use them for their dissertation; • Work as a community of academics to address the rise of academic writing services and their constant promotion to students; • Re-introduce viva's for all students; • Create an alternative to the traditional dissertation, such as an action project for a specific organisation to help reduce the potential for cheating; and • Provide additional training in ethics (Wagner, Garner and Kawlich, 2007)

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Marketing simulation games: A review of issues in teaching and learning

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Simulation games continue to be widely used in marketing education and are also one of the most researched pedagogical tools, with perspectives and research coming from a broad range of disciplines. Based upon a review of the simulation games literature over the past four decades and from insights gained by the author, a keen user of games, this paper investigates some of the challenges that users of simulations may face, and provides recommendations for overcoming them. In particular, the paper looks at issues associated with measuring the validity of games as learning tools, selecting and implementing games, and effective assessment of student learning from simulations. The paper will be of interest to both current and future users of simulation games who may have questions about how to use them most effectively in the classroom.

Keywords Simulation games, Marketing education, Experiential learning, Assessment, Debriefing, Reflective learning, Educational validity

Introduction

Following their introduction in the mid 1950s as a pedagogic tool, simulation games have continued to be popular in both undergraduate and postgraduate business programmes. Games in management are the most commonly used, followed by marketing simulations and indeed the majority of games available for pedagogical purposes are in the areas of strategic management, business policy, marketing, and international business (Faria & Wellington, 2004). Although a recent survey of usage has not been carried out in the UK, Faria & Wellington (2004) found that 64.1% of 1,085 faculty members surveyed in American universities were using marketing simulation games.

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Interviews and surveys with faculty over the years (see, for example: Faria, Hutchinson, Wellington, & Gold, 2009; Faria & Wellington, 2004; Fripp, 1993; Mitchell, 2004; Vos & Brennan, 2010) have identified the following key reasons why instructors use games. Simulations allow students to:

- see how business functional areas are integrated;
- engage in an active and experiential learning activity that gives them decision-making experience in a dynamic and interactive environment;
- experience the competitive and uncertain landscape faced by real world businesses, but in a low risk environment;
- integrate theory learned in other contexts into simulated practice so they gain a better understanding of marketing concepts and marketing theories;
- develop skills valued in the workplace, including team working, organisational, and time management skills;
- get quick feedback on the consequences of their decisions supported with a broad assortment of market and financial performance data;
- take part in an activity that most find enjoyable, thus helping to build engagement with learning; and
- work with and interpret numeric and financial data, thus gaining a better understanding of how marketing performance is measured.

Following an overview of the nature and processes of simulation games today, this paper will review and discuss key issues surrounding their use as teaching and learning tools. The main aim of the paper is to demonstrate some of the challenges that face users of simulations and provide recommendations for overcoming them, based on a review of the simulation games literature over the past four decades. Simulation games are one of the most researched pedagogical tools, and studies on their teaching and learning issues come from many different disciplines and perspectives. The paper will synthesise and evaluate this broad literature in order to provide insights and support for those who are thinking of using simulation games in their teaching or for those who have questions about or issues with their use in the classroom.

Marketing simulation games today: An overview

In a search for marketing simulation games on the internet, the author was able to identify 17 companies that are offering 43 different games (See Appendix) for use in education. The games can be divided into three categories:

- Introductory games
- Strategic level games
- Specialist games

Introductory games are designed for introduction to, or principles of, marketing courses, either for students on specialist marketing programmes or for those who are taking marketing for the first time as part of a business

or other degree. These games are likely to have a smaller number of decision areas than strategic level games, and are more focussed on marketing concepts and operational decisions than on integrating a range of decisions across functional areas of a business. Introductory games often measure participant performance in terms of market share and profitability or contribution.

Strategic level games are designed for those in higher level marketing courses who have already received a foundation in marketing and other business subjects. Games at this level include both operational and strategic decisions; involve decisions related to other functional areas of a business such as production, finance, and human resources; and provide a much larger selection of market, financial and competitor information for students to work with. They also include more performance indicators and numerical data for students to interpret and to measure their decisions against.

Specialist games focus on aspects of marketing decision-making such as advertising, online marketing, pricing, brand management, positioning or in an alternative decision making context such as B2B, services, or international marketing. Like the strategic level games, many are more cross-functional, have a greater number of decision areas, and include additional performance indicators.

More and more games are now internet based and available in different digital formats, including tablets. With online games, students can join the simulation from any location at a time convenient to them and the instructor does not have to upload software to local machines. All technical issues are dealt with by the software provider. In addition, online games allow for much greater support documentation to be available for both students and instructors.

As noted earlier, one of the benefits of simulation games as a teaching and learning tool, particularly at the strategy level, is that they allow students to integrate such a broad range of business decision areas and to see the impacts of their decisions almost immediately after the deadline for input. Table 1 provides a summary of the operational and strategic decision areas found in most strategy level games, as well as a summary of typical game features. In designing games for the classroom, game creators attempt to imitate a relatively complex marketing decision-making environment, and as Goosen, Jensen and Wells (2001) noted:

> *The assumption is that through the manipulation of multiple decision elements, and through an analysis of how their decisions in one area interact with and affect those in other areas, students will come to have a better understanding of the totality of marketing management* (p. 26).

In most games, students are presented with a business scenario involving the marketing of a product or set of products to one or more market segments. Teams are required to analyse the current market situation and to make a number of decisions for their company or corporate division by an instructor-set deadline. The operational decisions typical of most games include segmentation, positioning, product and branding decisions, pricing, promotion, production levels, sales team management, channel choices and

Table 1 Typical decision areas and features of marketing simulation games

Operational	
Segmentation and positioning	Choose from 2-8 different customer segments who will buy the final product either directly or through channel members. Tailor aspects of the marketing mix to each segment such as product features, price, channel and promotional media. May offer perceptual positioning maps. Generally offers a range of positioning options such as broad low-cost approach, value priced products with fewer features, focus on wide distribution.
Product and product portfolio decisions	Choose to offer 1-6 products, 1 or more at the beginning with more added as the game progresses. Configure product features based on segment and cost. Can add or reduce features over time. Game generally has a product life cycle feature built in - teams need to judge when their products are reaching maturity stage as there are no specific messages to teams saying when this will occur. Allows for investment in research and development. Often allows for different after sales service packages to be added to each product (see later in table).
Brand decisions	Many games allow teams to choose brand names for their products. Some games use the term 'brand' where others use the term 'product'. Investments and decisions around a brand in one game are generally similar to investments and decisions around products in other games. Some games provide specific brand profitability reports.
Pricing decisions	Will either be final consumer price or price to channel member - either wholesale or retail depending on game. May offer promotional prices, including discounts, rebates, or other forms. Pricing decisions based on segment needs, costs, competitor offerings and/or current market conditions.
Promotional decisions	Could set different promotions for each brand. Promotional methods may include advertising, direct mail, corporate advertising, sales discounts (see earlier in table), and sales force incentives (see later in table). Could include decisions on choice of media, quality, and benefits to focus on and other ad copy decisions. Impact of promotional effectiveness may have a carry-over effect to future periods.
Channel decisions	May include 2-6 direct-to-customer, retail, and/or wholesale channels, depending on the game. Channel members use different margins depending on factors such as type of channel and level of service offered. Channel decisions linked to segment characteristics, competitor offerings and cost. Can offer channel members various types of promotions (see pricing and sales force).
Sales force	Sales force may sell direct to customer or via retailers/wholesalers. Need to select number of salespeople, compensation approach and level, and whether to provide training. Hiring and firing of salespeople both carry costs. Salespeople may offer promotional pricing and other incentives/services to channel members.

Performance indicators	Offer a range of measures of team decision-making quality and success each period. Could include from 4-45 performance indicators, some of which may only be viewed by the instructor. Generally include an income statement and/or contribution statement, a balance sheet and market share reports. Generally include a range of charts that may include team position against competitors with respect to profitability, market share, segments served, products and product features and/or portfolio analysis, pricing, production levels and efficiency, dealer ratings, R&D and other spending. Some of this information may only be available to purchase. Allow for detailed financial and decision-making analysis. More sophisticated games include conjoint, regression and shareholder value analyses.
Research and development and investments	Generally allow teams to invest in research and development to upgrade current products or introduce new ones to meet changing customer needs, address a changing product life cycle or market conditions, and to be competitive. Impact of investment in research and development occurs over a few or more periods, thus forcing students to think about the longer term. Generally give students a choice of what features to add to/remove from products. Other expenditures often seen as investments whose impact will not be seen immediately, thus encouraging teams to think about the longer term. These may include investments in technology, capacity, inventory, financial investments (investing cash, buying bonds, etc.), and marketing investments such as advertising and new product development.
Game Features	
Levels of Complexity	Most games will have different levels of complexity. Generally, the instructor sets the initial level of complexity with the opportunity to raise it over time.
Decision periods	On average there are between 1 and 10 decision periods, each decision period representing a financial year. Some are quarterly decisions.
Changes to the decision-making environment	Most games have built in changes to aspects of the operating and decision-making environment that come in over the duration of the game, such as the economic climate and the product life cycle. Most games allow instructors to make some changes to the operating environment during the game to make it more or less challenging or to demonstrate the impact of particular conditions such as a recession.
Competitive framework	Some games allow teams to either compete against other teams or compete against the computer only.
Built-in assessments	Most games will offer multiple choice tests and essay questions, some offer online objective testing. Most games provide guidance to students on how to write up business, marketing and financial plans, how to prepare a presentation for the board of directors, and what to include in each. Instructors can use these as assessments and may be given specific rubrics to look for. Some games have other forms of assessment such as leadership evaluation tools and peer evaluation tools that provide the instructor with guidelines for assessing.

support, and after sales service. As teams progress in the game, they can decide to modify or add products, and sell to a greater number of segments. Instructors can also add more decision areas over time, change aspects of the operating environment and change the level of complexity.

One of the main objectives of games at the strategic level is to move students from a decision-by-decision operational and reactive approach to decision making to a more strategic and anticipatory way of thinking. To encourage strategic thinking, games often provide marketing planning tools and guidelines, a range of market, competitor, and environmental research documents (generally for teams to purchase), and numerous financial and marketing performance reports. The depth of analysis that can be carried out in different games is quite extensive with one game offering 45 different performance indicators, although some are only available to the instructor. In addition, strategy games include algorithms that allow decisions made in a particular period to have an impact in later periods or over a series of periods, thus attempting to replicate the effect of major investment and strategic decisions on a company's medium to longer term performance.

On undergraduate modules, instructors often run the game over a semester, generally as part of a module in strategic marketing or marketing management in years 2 or 3. Those teaching on post-graduate marketing programmes may use them intensively, over three days or a weekend. Commonly on undergraduate courses, students will work in teams of 3-4 and make a set of decisions each week for up to 8 weeks. Some games allow for up to 12 decision rounds, but Vos and Brennan (2010) found that most instructors stop just before or on the 8th round. Although additional learning can be achieved by running the game for more periods, instructors agree that by the 7th or 8th round, learning gains have started to level off and students are becoming less enthusiastic. On the other hand, at postgraduate level, Redmond (1989) found that between 5 and 6 decision rounds were sufficient to maximise learning.

Game designers create algorithmic performance indicators as a way to determine which team is making the best decisions. Typical performance measures include profitability and market share, but many others are also available in different games including shareholder value, brand profitability, return on investment (assets, equity), among others. Most instructors do not assess students based upon their performance in the game, such as having achieved the highest profits or market share, as luck can play a part in initial success and focussing on performance indicators can demotivate less successful participants (Sanchez, 1980). As we will see later in the article, measuring the learning from simulation games has been both a significant strand in the research literature into games and a problem yet to be solved. Instructors, however, tend to use a variety of assessment points and types to determine the learning from games including presentations, reports, tests, and reflective assignments.

A significant learning advantage of simulation games is the built-in iterative process that allows students to refine their decision making and move towards increased complexity in thought and analysis over time. Early in the game, students are often overwhelmed by the amount of information, the number and variety of decision to be made, and what is expected of them. Given that they must complete a similar decision form each week,

however, they soon begin to gain a better understanding of what is required, how to analyse their results and the impact of their decisions. They also receive game-generated feedback after each decision round, usually almost immediately after the decision deadline. The feedback includes an array of reports showing how they performed relative to other teams plus additional market and competitor reports, some of which may be free and some of which teams must purchase. With additional instructor feedback and commentary, students are receiving formative feedback each week on their performance - an outcome that is difficult to replicate with other forms of learning in higher education. In addition, most games provide instructor-only data to help the instructor identify areas and issues on which teams may need coaching thus providing more context specific support than other teaching resources often provide. As online games become more sophisticated, they are also providing even more guidance to instructors on how to analyse team results and what recommendations to make as well as interactive performance charts that instructors can show to the class as a whole or to individual teams.

Given the range of decision areas, the potential for adding greater levels of complexity, the great variety of performance and market reports, and the need for students to work cooperatively within teams, simulation games, particularly those at the strategy level, can potentially help students learn many marketing-related concepts and processes as well as a number of skills. Table 2 provides a summary of the learning that could be achieved through participation in a simulation game. Whether all students achieve learning in all of these areas is uncertain given that students bring different motivations, skills, and attitudes to learning, and group dynamics can have a significant impact on what and how much each member learns. Furthermore, as we will see in the following section, measuring the actual learning from simulation games has been a challenge for researchers. However, few other learning activities in marketing can allow for such a breadth of learning potential.

In the next section, we will consider some of the main issues and challenges of using simulation games that have received attention in the game literature. In particular, the paper focusses on the challenges associated

Table 2 Potential learning outcomes from simulation games

After participating in a marketing simulation game, students will understand:
• The difference between short and longer term planning strategies and perspectives.
• The difference between strategic and (operational) tactical decision making.
• The importance of focusing on customer needs, characteristics and buying behaviour in decision making and how these can change over time.
• The need to tailor marketing mix features to the needs and buying behaviour of specific market segments.
• How organisations make decisions within a context of limited resources and that trade-offs will need to be made.

- How to set objectives and their role in decision-making.
- The features of a marketing and/or business plan and how to create them.
- How to interpret research on markets, customers and competitors to improve decision making.
- The value of good, timely information to decision making.
- The impact of market, macro-environmental and competitive forces on a company's success.
- The interconnectedness of functional disciplines within an organisation, including marketing, production, finance, accounting and human resources.
- How to interpret financial statements and performance indicators to improve decision making.
- How to interpret financial and market data presented in graphs.
- How to undertake aspects of financial analysis.
- How to set up a budget.
- How to make sales, market share and profitability forecasts.
- The interconnectedness of marketing mix decisions and how to integrate them.
- How to research and analyse market, consumer and competitor data to identify marketing opportunities and develop effective marketing strategies.
- The value of a coherent positioning strategy and how to achieve a unique position in the market based on the organisation's competitive advantages.
- The differences between alternative strategy approaches such as low-cost approaches vs. differentiation strategies, among others.
- The impact of particular decisions made on a firm's current market position.
- The impact of the product life cycle on product sales and profitability.
- How competitor decisions can impact the firm's market position and strategy.
- How to design an effective product portfolio strategy.
- How pricing promotional tools can be used to stimulate sales in different channels.
- How to calculate final selling prices given different dealer margins, competitor pricing and customer expectations.
- The relationships between costs, prices, sales and contribution.
- The impact of promotional decisions on costs and sales.
- The impact of promotion and promotion objectives in developing brand awareness and on sales and market share.
- How to apply theories and concepts learned in other settings to improve decision making.
- Ways to improve team dynamics and team performance.
- The impact of good communication, negotiation and personal skills on team performance.
- The dynamic nature of marketing - that markets develop, operating conditions change, customer needs change and competitors adapt their strategies over time, and a firm's need to adapt.

with measuring the validity of games as teaching and learning tools and with implementing, running and assessing games. These two categories of issues are interrelated, principally because in order to validate learning from games, some implementation issues need to be carefully considered and managed and some form of assessment must be used. In addition to considering the literature, the author, who has used simulation games in marketing education for the past two decades, has selected these themes based on her own experience of key challenges.

Issues in teaching and learning

As noted earlier, simulation games are one of the most researched teaching and learning tools. Given the breadth of research, a number of authors have conducted meta-analyses of the literature covering the period from the 1970s to the late 2000s. (Anderson & Lawton, 1997, 2009; Bredemeier & Greenblat, 1981; Butler, Markulis, & Strang, 1988; Chin, Dukes, & Gamson, 2009; Faria, 2001; Faria et al., 2009; Feinstein & Cannon, 2002; Gentry, 1990; Gosen & Washbush, 2004; Herz & Merz, 1998; Hsu, 1989; Keys, 1997; Keys & Wolfe, 1990; Parasuraman, 1981; Randel, Morris, Wetzel, & Whitehill, 1992; Wolfe, 1990; Zantow, Knowlton, & Sharp, 2005). The majority of articles seek to examine the learning benefits of games and the challenges associated with measuring the effectiveness of games as learning tools. This section provides a review of some of the key themes in the literature. We will consider how advanced the field is in terms of validating business and marketing games as learning tools, what still needs to be done, and some recent developments that could potentially offer solutions to the problems of methodology. We will also consider what this means for the users of marketing simulation games.

The two main categories of investigation will be issues related to:

- Measurement and validity; and
- Implementation and assessment

The review and discussion will include research from different disciplines, including business, marketing, health care, and other social science subjects.

Measurement and validity issues and challenges

When selecting any pedagogical tool, instructors are seeking to optimise student learning and skill development within a subject area. The choice of tools is based on a combination of factors including instructor preference and experience, instructor preference for a particular educational theory perspective, the academic level of the students, the knowledge and skills to be learned, and resource constraints. In addition, instructors may be concerned with comparative research into the ability of different teaching and learning tools to deliver the desired learning.

Part of the reason why many instructors choose to use simulation games is their potential to deliver a breadth and depth of learning related

to key concepts and processes in marketing. Most instructors express the learning expectations of their module in terms of learning outcomes. These state what the students should be able to do after having engaged with the module learning processes and completed the assessment. Whether or not one believes that using outcomes is an appropriate way to structure and measure the learning on a module, they are nevertheless widely used as a means for course designers to align learning processes and assessment and as a guide to the selection of tools and approaches to steer the learning. Table 2 outlines potential learning outcomes that simulation games could deliver. But to what degree does the research indicate that such learning outcomes can be achieved with games?

Of all the research into simulation games, the research into validity is the most prevalent. Three studies have demonstrated a relationship between simulation games and achievement on numeracy tests (Brennan & Vos, 2013; Faria & Whiteley, 1990; Whiteley & Faria, 1990). Regarding other skills, Faria (2001) reviewed the simulation and gaming literature from the 1970s to the late 1990s and found a broad assortment of studies demonstrating that simulation games contributed to the learning of specific employability skills, including communication, entrepreneurship, research and data analysis, interpersonal skills, financial analysis, economic forecasting, problem solving, leadership, and conflict management.

Despite these positive results, many researchers have questioned the validity and quality of the research undertaken to arrive at these conclusions, (Cronan, Leger, Robert, Babin, & Charland, 2012; Faria, 2001; Gosen & Washbush, 2004; Greenlaw & Wyman, 1973; Hsu, 1989; Keys & Wolfe, 1990; Randel, et.al, 1992; Wolfe, 1985, 1997), in particular, those studies that have based their findings on student and lecturer perceptions rather than on objective measures of learning. A key discussion point in these studies, many of which are meta-analyses, is the difficulty of conducting pedagogical validity studies in general, because, as Gosen and Washbush (2004) note "*learning is a complex construct, hard to pin down and therefore difficult to measure*" (p. 271), and there is such a great deal of variation in simulation games, potential learning gains, and in how instructors use them that it is extremely difficult to design a study that would not only take all the variables into account but also allow for replication. This has not stopped researchers from undertaking studies to measure the learning from simulation games and to make suggestions for how to carry out this kind of research (see for example, Cannon & Burns, 1999; Feinstein & Cannon, 2002; Gosen, Washbush, & Scott, 2000; Stainton, Johnson, & Borodzicz, 2010; Washbush & Gosen; 2002).

While some studies have attempted to measure whether particular business knowledge and skill outcomes have been learned/developed through simulations, most have looked at learning outcomes as defined by Bloom's taxonomy. Anderson and Lawton (2009) reviewed this literature noting that "[i]*n many respects, Bloom's taxonomy has been the anchor for assessing whether learning occurs in business simulations*" (p. 196). Bloom's taxonomy divides educational outcomes into three domains: cognitive, affective, and psychomotor. Each domain is presented as a hierarchy of learning such that learning at the higher levels is dependent on having attained knowledge and skills at lower levels.

With respect to affective learning, like Faria (2001), Anderson and Lawton (2009) demonstrated in their review of the literature that business game participants generally have positive feelings about the simulation game experience and perceive that they have learned a great deal from the game. A great many other researchers have also drawn similar conclusions (Comer & Nicholls, 1996; Gentry & Burns, 1981; Gosen & Washbush, 1997; Gosenpud, 1990; Herz & Merz, 1998; Klassen & Willoughby, 2003; McHaney, White, & Heilman, 2002; Tompson & Dass, 2000; Vos & Brennan; 2010, Washbush & Gosenpud, 1991; White & Von Riesen, 1992; Zalatan & Mayer,1999). Furthermore, a number of researchers have demonstrated that positive feelings lead to greater student engagement and increased motivation to learn (Garris, Ahlers, & Driskell, 2002; Gee, 2003; Krishen, 2013; Squire, 2003). In other words, through the mediating influence of motivation, learning occurs (Bransford, Brown, & Cocking, 2000).

With respect to Bloom's cognitive learning domain, however, Anderson and Lawton (2009) concluded that most studies on simulation games demonstrate learning only at the lower levels of Bloom's taxonomy (basic knowledge and comprehension) and very few demonstrate learning at higher levels (application, analysis, synthesis and evaluation):

> ... *the sad fact is that we really have very little objective versus attitudinal knowledge of the relative educational merits of case studies versus lecture versus simulations. And what little knowledge we do have concerning the relative merits tends to be based on assessing educational objectives that fall far down the educational food chain, at the knowledge and comprehension levels of Bloom's taxonomy* (p. 200).

Of the learning outcomes provided in Table 2, most could be considered higher level skills in Bloom's taxonomy as they require students to apply concepts and theories learned from other contexts; analyse results, performance measures and market and competitor data to improve decision making; synthesise a number of ideas and concepts (creating marketing plans, integrating marketing mix elements); and evaluate their overall performance from a range of indicators. Researchers who have sought to measure the learning from simulation games have often used other terms to refer to these outcomes. Keys and Wolfe (1990) called them 'competency-based' outcomes, referring to what they viewed as the key knowledge and skills needed by marketing professionals. Hsu (1989) noted that simulation games have the potential to teach what he called 'procedural knowledge' (gaining information or knowledge and acquiring practical skills in business) and what we today might call employability skills and attributes.

More recent research into simulation games has reported on objective and positive measures of learning on one or a few specified learning outcomes (e.g., see the Cronan & Douglas 2012 study), but the overall field still provides mixed conclusions on the ability of games to deliver a breadth of learning outcomes, particularly at the higher level. This is not particular to simulation games, however, as there remain methodological difficulties in measuring the effectiveness of any teaching tool.

Anderson, Cannon, Malik and Thavikulwat (1998) argued that researchers who seek to measure the effectiveness of any learning tool,

including simulations, first need to determine what they are measuring. They note that "*the developers of the instrument* [e.g., simulation game] *cannot validate the instrument, per se; rather, they must validate the constructs that the instrument is hypothesised to measure*" (p. 22).

In other words, they call first for clarification of what is to be taught, followed by an evaluation of potential assessment measures to determine if the knowledge and/or skills were learned, independent of which teaching process was used. They go on to say that "...[i]*f simulation games can be demonstrated to measure these outcome constructs, then it becomes irrelevant whether students learned them from business simulations*" (Anderson et al., 1998, p. 23).

If most studies are unable to demonstrate that simulation games teach anything more than the lower level learning outcomes, perhaps it is the problem of using learning outcomes as the constructs to be measured. For instance, a learning outcomes approach to measurement may underestimate learning, particularly at the higher levels. Learning outcomes tend to encapsulate the expected learning on a module into bite-sized chunks of knowledge or skills that can then be assessed. As Ferudi (2012) noted, learning is a multi-faceted process where much more may be going on than can be measured with assessment that looks only at specific outcomes. He notes that the focus of learning outcomes

> [as] *the end product devalues the actual experience of education. When the end acquires such significance the means become subordinated to it* [in reality] ... *students often develop their insight in ways that cannot be communicated to a predetermined formula ... The attempt to clarify and render explicit the different dimensions of academic learning represents a futile attempt to gain certainty by relying on process and by flatten*[ing] *out complexity* (p. 34).

While using learning outcomes as the constructs to measure learning may offer researchers some methodological benefits, they do not necessarily take into account the complexity of learning that is going on. Those who use simulation games speak with excitement about the visible energy and enthusiasm they see in the classroom when decisions are being made, and of the amount of time students devote to the simulation both inside and outside the classroom. They more often than not receive very positive feedback from students who have participated in the game and while these instructor observations and student opinions may not provide reliable evidence that specific outcomes have been learned, they do demonstrate time and again that engagement with learning is taking place. As Gibbs (2010) noted when discussing the large scale studies done in the US on educational gain as a measure of quality,

> *the crucial variable is 'student engagement' and it has proved possible to identify the ... variables involved in engaging students, such as the level of academic challenge, the extent of active and collaborative learning ... the extent and quality of student-faculty interaction ...* (p. 33)

and the time students spend on a task. These variables can be found in modules that use simulation games.

An alternative means of determining whether students have learning gains from participating in simulations is the external validity study, linking participation in simulations during study years with career mobility and salary level. These studies seek to assess whether learning from games can be transferred into the world of work.

Teach and Govahi (1988) conducted a study of business executives who participated in a business simulation game while at university. Most considered that their experience had improved their on-the-job communication, team working, decision making, adaptability, and organisational abilities. Wolfe and Roberts (1993) undertook a five year longitudinal study of previous game participants and found significant relationships between particular types of players and their later career success. They found that players who had taken leadership roles during the simulation game and who had been highly valued by their team members went on to have higher income levels, more promotions, and higher positions at work than other participants. Cronan and Douglas (2012) arrived at similar conclusions with those who had participated in an enterprise resource planning (ERP) simulation. These authors note that ERP simulations, like other simulation games, are good at integrating the whole business curriculum and the integrative skills gained are increasingly important in the workplace. Using pre- and post-game tests on three cohorts of students (total 281) over a three-year period, they found significant learning gains across the three areas measured: enterprise systems management, business processes, and SAP (the software used) skills. Furthermore, those who had undertaken the simulation had higher average starting salaries in ERP positions than those who had not participated.

The conclusions reached by Wolfe and Roberts (1993) and Cronan and Douglas (2012) tend to imply a causal link between simulation participation and future career success, however, a number of additional factors could have contributed to their greater salaries and quicker career advancement. These might include the possibility that those who chose the simulation module (if it was not a requirement of the programme) may be more able, had higher self-efficacy, and were already natural leaders who took these qualities with them to the workplace. With much of the research that looks at student characteristics and learning from simulation games, the problem of inferred causality can be found.

Faria and Wellington (2005) carried out a different kind of external validity study. They sought to identify whether games themselves represented the contexts and success factors of real world companies. They considered whether strategies that led to strong performance in marketing simulation games mirrored successful strategies used by firms in the marketplace. To identify what leads to a strong competitive position by firms, the authors made use of databases provided by the Profit Impact of Marketing Strategy (PIMS). PIMS is a long term research project undertaken by the Strategic Planning Institute (SPI) that is designed to identify and validate strategies used by real companies to achieve sustained market share and growth (http://pimsonline.com/about_pims_db.htm). SPI found that key factors influencing performance include aspects of a firm's market environment, its competitive position, stage of lifecycle, and capital operating conditions. Each year, over 3000 companies submit data on these strategic factors to SPI who then analyse the data to determine what leads to higher market share

and growth for some firms. Faria and Wellington (2005) selected three PIMS principles to see if what contributes to success in a simulation game is similar to what contributes to success in the real world of business. The authors conducted the research over several years using two different marketing simulation games, 440 teams and 96 competing industries. They were able to find support for the following three hypotheses based on performance indicators in PIMS: successful strategies in the simulation game will continue to be successful given a similar marketplace environment; successful game strategies demonstrate a strong relationship between market share and earnings; and relative product quality and return on investment (ROI) are strongly related.

This study lends confidence to the idea that marketing simulation games do mirror real world decision-making environments and outcomes, thus giving students the opportunity to learn valued practitioner skills that are transferable. However, the researchers did not actually question the game designers of these two simulations to identify what existing knowledge on successful marketing decision making was used in creating the game algorithms, so the assumption could be made that the game designers did investigate studies such as that undertaken by the SPI.

As Anderson and Lawton (2009) commented, researchers may continue to encounter challenges in measuring learning gains with any pedagogy, let alone simulation games. While objective tests can determine what a student remembers and perhaps their understanding of key concepts, it is quite another thing to measure problem solving and creative thinking, and

> [w]*hen viewed in the context of a student's lifetime spent as a problem-solver, can we reasonably expect any instrument to be so sensitive as to be able to detect the impact of a single experience such as a simulation, or even an entire course?* (p. 206).

On the other hand, new learning technologies may offer at least part of the solution to whether simulations contribute to learning gains at higher levels and to the achievement of specific learning outcomes. In 2007, Wideman et al. reported on an exploratory study of a software programme called VULab that allows instructors to collect data from game users as they are making decisions. The data collected was made up of pre and post session questionnaires, screen activity, and synchronised audio of player discussions over eight game sessions, and were analysed using qualitative software tools. While the VULab software is not yet at the stage where it can assess whether a student is demonstrating more sophisticated decision making, applying theory more accurately, or achieving higher level learning outcomes, the possibilities exist for more sophisticated tracking and analysis of learning.

VULab is an example of an emerging set of technology tools and processes known as *learning analytics* that allow student learning to be tracked and recorded and also allow instructors to make interventions when they feel that additional support for learning is required. For simulation games, these tools can also be used to

> ... *deliver supplementary learning materials of any type before, during, or after game play,* [provide] *a channel for scaffolding and support at key points during the game ... and* [encourage students] *to externalize their*

> *reasoning and problem solving steps at critical decision points in the game by having them respond to pop-up game journal questions* (Wideman et al., 2007, p. 26).

Currently a number of universities in both the US and the UK are trialling learning analytics platforms to track and intervene to assist student learning (see for example the RISE project at www.jisc.ac.uk). While a number of technical, operational and ethical issues are yet to be ironed out, the educational research potential of learning analytics is high. Both quantitative and qualitative data can be gathered, but as Wolfe (2004) notes, given that the

> *objective of most business education is to generate better active practitioners than passive theoreticians ... the observational techniques associated with qualitative research may be more appropriate than the more traditional quantitative evaluation approach* (p. 176).

as it gives the opportunity to observe and interpret whether desired behaviours are being exhibited by players.

Implementation and assessment issues with simulation games

While assessment of simulation game performance is at the heart of measuring the validity of games in delivering learning benefits, it is also an issue that instructors face when selecting assessments for their simulation module. In this section, we will discuss issues related to assessment and implementation of simulation games in the classroom. In terms of implementation issues, the focus will be on challenges associated with selecting games, using active and experiential learning activities, team work in simulations and the role of the tutor. Finally, we will discuss aspects of the literature on assessment.

Selecting games

Limited research has been conducted into how instructors select games for use in their classes. Vos and Brennan (2010) conducted interviews with marketing simulation game users in the UK and found that of the eight interviewed most commented on how difficult it is to find and evaluate games because they feel there are few "*reliable sources of information about the objective merits of different games*" (p. 892). This may support the reasons why Faria and Wellington (2004) found that, of current game users who had been using games, on average for nine years (study of n = 328), 50% had never changed games. Just over 31% of respondents to this study used the internet to gather information on available games. Similar to the much smaller Vos and Brennan (2010) study, respondents in the 2004 study did not view game marketing representatives as a particularly important source of game information.

A clear additional challenge is game cost. Today, most major games providers charge a fee per participant, and, while this is often negotiable based on student numbers, total fees can be high (average of 25-49 Euros

per participant). Given that instructors tend not have their own budgets and finances are tight in most institutions, this can be a real barrier to more games being adopted in marketing education. On the other hand, Lean, Moizer, Towler and Abbey (2006) found that increasing resources for supporting simulation use may not lead to greater simulation game uptake. Rather, their study suggested that the decision to use games is based more upon academics' judgement of the benefit and risk of using simulations, and to many, the risks outweigh the costs. These risks include a number of perceptual assessments on the part of the instructor. In deciding to use a simulation game, instructors may be concerned whether:

- they can master the game sufficiently to feel confident with the students;
- the time it will take to achieve this level of knowledge is available, given other responsibilities;
- they feel able to assess the benefits of different games, given the perception that limited objective information is available and of not knowing what to look for;
- using a game instead of more traditional methods such as lectures and case studies will provide similar or improved learning outcomes, given the ambiguity of the research literature.

Vos and Brennan (2010) found that simulation game users are often 'lone enthusiasts' in their departments and the lack of wider adoption of games may be a result of both the perceived risks and the difficulties of gaining approval for the additional cost. More research is warranted into the barriers to wider simulation use and to the perceived risks of adoption.

Challenges associated with active and experiential learning

Simulation games are a form of active learning in which students engage directly with the material to be learned, determine how to make sense of the information available and also how to best make use of it in order to achieve performance goals.

One of the challenges associated with active learning, and indeed with the learning of any new ideas, concepts or processes is the early stages when students are relatively new to the material or process to be learned. Instructors who use games are well aware of the difficulties students face at the early stages of game playing and it can take considerable confidence and experience on the part of the tutor not to simply 'tell' the students what to do. Given the range of decisions that need to be made (see Table 1), the breadth of information available about the simulated market, company and products, and the time pressures involved, students generally feel overwhelmed at first and often very confused (Petranek, 2000). At the core, these characteristics of simulations are features of many forms of experiential learning where students are expected to engage directly with an activity or process and to bring prior learning, theories and concepts to make sense of the activity and its demands, before their understanding and/or decision making improves.

In discussing experiential learning with simulation games, researchers generally refer to the Kolb learning cycle or learning spiral (Kolb, 1984; Kolb & Kolb, 2005). For example, Herz and Mertz (1998) noted that "*the four stage cycle of experiential learning is very similar to the organisational structure of typical simulation games*" (p. 241), as the game allows the student to act and make decisions (Concrete Experience), reflect on and observe these actions from a range of perspectives (Reflective Observation), create a conceptual understanding of their actions by integrating observations with theories and concepts (Abstract Conceptualisation) and use these conceptual understandings to make new and possibly improved decisions (Active Experimentation). For students to move successfully through this cycle, they need a number of skills - the ability to link theory and practice, the power to reflect successfully, and the capacity to learn from this combination of reflection and integration to make better decisions.

Researchers have provided insights and strategies for how simulation game instructors can help develop these skills in students and thus enhance the experiential learning benefits of simulations. In particular, a number of writers have provided guidance on how to enhance students' reflective, conceptualisation and experimental skills through the use of effective debriefing principles (Crookall, 2010; Dieckmann, Molin Friis, Lippert, & Ostergaard, 2009; Fanning & Gaba, 2007; Kriz, 2010; Lederman, 1992; Peters & Vissers, 2004; Petranak, 2000; Rudolph, Simon, Dufresne, & Raemer, 2006). More concrete than feedback and discussion, debriefing assumes that although most students will get something out of the learning experience, they will probably miss many important lessons if the instructor does not provide some kind of conceptual framework to enhance their understanding (Bowen, 1987). This conceptual framework can in part be created by having the students explore connections between experiences they have while playing the game with real life experiences - either their own or those presented through cases - and between the game and theories in marketing (Kriz, 2010). The key is to create an active discussion that is guided by the instructor so that students become more self-reflective not only of their game decisions but also of how they learn and the barriers to their learning (also known as meta-cognition). While debriefing can be conducted asynchronously in an online discussion board, Oertig (2010) found that the quality of the debriefing conversations were more in-depth, substantial, and included more participants when they were done face-to-face.

Debriefing can occur weekly during seminar activities or when teams meet with the instructor for feedback. However, Kriz (2010) recommends that the process should include all game participants, as multiple perspectives can be shared and similar challenges discussed, leading to common, shared knowledge and the ability of students to help each other. In addition, directed debriefing conversations can help students develop critical thinking skills.

Crookall (2010) argues strongly for debriefing when he notes that the actual learning from simulations comes from the debriefing and not from the game. He supports the potential for learning analytics to be built into games so that data can be collected and then processed to provide material for feedback during the game, and also made available for debriefing at the end of each decision round and of the game, thus allowing participants to "*debrief in a richer and more accurate way*" (p. 906). New technologies and

online games can allow for live chats, discussion forums, and supportive and structured content sessions to provide guidance and to identify issues which students are struggling with.

Team issues and simulation games

Faria et al. (2009) note that issues related to teamwork are one of the five most commonly discussed themes in the simulation literature. Research into locus of team control, ethnic origin of team members, team organisational structure, and method of team formation has been undertaken (Anderson, 2005; Gentry, 1980; Hsu, 1984; Wolfe, Bowen, & Roberts, 1989) as has research into ideal team size. Wolfe and Chacko (1983) found that groups with three or four members had the greatest learning whereas single member teams went bankrupt 14% of the time.

Anderson (2005) found that students' enjoyment of the game increased if they worked in a team with high cohesion and a willingness among members to work interdependently. He also found that team performance was enhanced when there was greater team opportunistic practices and hypothesis-driven thinking. Anderson (2005) defined 'opportunistic practices' as the ability to identify opportunities coupled with the willingness to exploit them. Interestingly, when he looked at heterogeneity of ideas within teams he found that his original hypothesis that a team made up of members who have different ideas will "force the group to consider a variety of ideas, which in turn will encourage more thorough decision making and improve team performance" (p. 87) was incorrect. Instead, he found that students perceived that their performance in the game was negatively affected by such heterogeneity of ideas. Whether students' actual performance was affected by the variety of different ideas presented by team members was not measured in the study, however. Other factors may have contributed to a team's success or failure to achieve expected outcomes, and the perception of heterogeneity of ideas as a factor contributing to poor performance may simply be a cover for a group's inability to manage conflict.

The lessons for game users from the literature examining team issues is the importance of monitoring team cohesion and of keeping team sizes relatively small. However, team related problems with simulations may be greater than other group work when a game runs over an entire semester. As part of the activity, team members will need to meet up at least weekly to review their results and to discuss their next set of decisions and it helps if members of the team are learning about the game at approximately the same rate. Given that more and more games are now delivered via the internet, face-to-face meetings can be replaced or supplemented with online team meetings. However, participation and on-going learning can be improved if instructors provide dedicated class time each week where they not only provide feedback to teams but also allow for discussion on problematic or challenging team related issues. Having an attendance requirement at seminars, and/or having students post what they have contributed each week on a dedicated wiki-space can also encourage participation by all and help the instructor to identify group problems early.

Kayes, Kayes and Kolb (2005) argued that teams can increase their effectiveness when they are encouraged to intentionally focus on team processes, in addition to focusing on the game itself. This is good advice for any activity that requires students to work together in teams. As we will see with reflective thinking, the ability of students to work effectively in groups may not come naturally and therefore some specific training on group learning and group processes is important. Kayes et al. (2005) recommend learning processes for teams to get members motivated and activated; to help them learn to create a safe atmosphere so each member feels able to fully participate; to discover how to turn conflict into a learning experience; and to know how to deal with uncertainties - all needed in the fast-paced, competitive environment of a simulation game, not to mention as key employability skills.

Role of the instructor

In addition to debriefing and teaching teams how to work more effectively, instructors have important roles to play in other aspects of the simulation experience. As Wolfe (1997) noted "*games do not teach automatically. Hands on instructor involvement, coaching and debriefing* [are] *needed*" (p. 369) to enhance student learning. Like Wolfe (1997), Taylor, Backlund and Niklasson (2012) also recommend a coaching role for the instructor. They differentiate between the role of instructor and coach in that a coach takes a more active part in the simulation by playing the game along with the students and by encouraging them to stretch outside of their comfort zones while not telling them the 'right' way to do things. To carry out these functions, the instructor must be very well-versed in the game decision areas and dynamics and be confident of their knowledge and ability to handle team questions.

Whether the tutor actually plays the game along with students or not, he or she needs to have played the game in advance, at the very least, in order to determine whether the game and the game's objectives align with the specific course content and learning outcomes (Cotton, Ahmadi, & Esselborn, 1997; Kebritchi, 2010). Issenberg, McGaghie, Petrusa, Gordon and Scalese (2005) carried out a review of the literature to identify the essential roles that the instructors should undertake in order to increase student learning in simulations. These roles include providing regular feedback, integrating the simulation into the broader curriculum, and, during the course of the game, increasing the levels of difficulty to keep students engaged and challenged. In addition, the instructor needs to take on roles associated with enhancing affective learning states such as providing a safe learning environment where emotions are encouraged, but stress and conflict is mitigated and managed. As Hofstede, de Caluwé and Peters (2010) note, "*Simulation games are ... well suited as tools to acquire cognitive skills that in real life have to be performed under stress and with great risk and as tools to integrate cognition, emotion, and action in social settings*" (p. 829). However, too much stress and emotion can have detrimental effects on learning so the instructor needs to be able to sense when the pressure on individuals or teams is too great or when the competitive aspects of the game have taken over from the learning. Hofstede et al. (2010) note that "[f]*acilitating simulation games*

is a complicated, multifaceted skill and very hard to teach in any way other than by experience" (p. 837). With experience, and over time, however, an instructor should be able to undertake and switch between the roles of motivator, coach, mediator of disputes, administrator and when called upon, teacher.

Assessing simulation learning

An additional key role of the instructor is to determine how to assess student learning from the simulation game. As we have seen in the first section, whether simulation games are better at teaching business concepts and skills over other methods remains inconclusive, although there is a great deal of support for their use from perceptual and external validity studies. Nonetheless, games are modes of instruction, the purpose of which is to teach concepts, processes and skills that have generally been outlined in advance as course learning outcomes. In order to determine what learning has taken place and at what levels, some form or forms of assessment need to be implemented.

In a review of experiential learning exercises and assessment, including simulations, Gosen and Washbush (2004) found that instructors use objective learning tests (e.g., multiple choice tests), performance tests (e.g., essay exams) and perceptions of learning activities. Perceptions of learning activities may include reflective essays, where students discuss what they believe they have learned from the simulation and the ways in which they could have improved their decision making. Michael and Chen (2005) suggest that assessment should occur throughout the game and not just at the end. They and others recommend using pre and post-tests (Chin, et al., 2009; Klassen & Willoughby, 2003; Vos & Brennan, 2010); presentations at various stages of the game by teams on their business or marketing plan (Mawdesley, Long, Al-jibouri, & Scott, 2011); 'executive briefings' made to the instructor on the effectiveness of their strategy; in-game peer assessments to focus on team issues and team effectiveness; post-game presentations to the 'Board', with an analysis of performance and effectiveness of decision making (Keys & Bell, 1977); peer assessments on individual contribution and team effectiveness; course evaluations (Wilson et al., 2009); and maintaining logs during the game with commentary on decision making (Low, 1980), among others. Most recommend that multiple assessments be given over the course of the game - either as formative or summative assessments - as a means to identify particular challenges that students may be facing and to assess different knowledge and skills.

As Wilson et al. (2009) noted, in order for game participants to improve performance and even enhance learning, it is critical that they see the connection between their actions and their outcomes/results. This connection is also, as discussed earlier, a critical part of effective experiential learning. In order to help students to make these connections and see the relationships, many tutors employ debriefing during the game, but also reflective assessments either during or at the end of the module. However, for reflective assessment to be most effective, the tutor needs to take two

things into account: reflection is a learned skill; and barriers to reflective practice need to be recognised and overcome.

Boud and Walker (1993) noted a number of potential barriers to reflection, or what they call barriers to learning from experience. Among them are: not being in touch with ones assumptions and what one is able to do or not do; inadequate preparation and/or skills in reflection; obstructive feelings such as lack of self-confidence; and, fear of failure or the response of others. In order to overcome these barriers and to help students get the most from their simulation experience, they need to be given instruction, examples and practice in how to undertake academic reflection (Moon, 2004; Peltier, Hay, & Drago, 2005), as, perhaps, do the tutors.

If the game runs over a semester, then, assessments might include an early multiple choice test to determine whether students have understood the basics of game decision areas and performance indicators. They might then be asked to present their first or early marketing plans to the instructor or group as a whole and receive both instructor and peer feedback. Executive debriefing discussions between team and instructor may be required of each team at points during the game where they are asked to explain the rationale behind their decisions and to analyse their performance. Peer assessments on team effectiveness, team leadership and team performance can be undertaken, both in the early stages of the game and as the game progresses, in order to help the teams identify and improve team dynamics. They might also be asked to keep logs/a journal/or contribute to a wiki-space each week on aspects of their decision making and on team dynamics. A final assessment might include a presentation to the 'board of directors' and a reflective piece on their learning during the game, an analysis of their performance and what they might have done differently. Some forms of assessment can be summative, but it is critical to provide instruction and practice in aspects of assessment that will be graded.

Conclusions

Simulation games allow participants to engage in active decision-making in a low risk environment and thus, through practice, reflection on results, adjustments to operational and strategic decisions, and to team dynamics, disciplinary knowledge and skills are gained. A number of studies reviewing the research into simulation games over the past 40 years, including that of Chin et al. (2009), have shown that the evidence for positive attitudinal effects on participants is huge. Conclusive evidence of actual learning gains remains elusive, however. As Hofstede et al. (2010) noted

> [p]*roving that simulation games work reminds us of high school math in which one had to build a complicated argument to prove that two triangles had the same shape when one glance at the figure sufficed to confirm that they did* (p. 825).

Like others, they agree that "*the effectiveness of simulation games is* [at least] *evident to those who work with them*" (Hofstede et al., 2010, p. 825) and yet pedagogical research does ask for evidence beyond what we 'feel' or perceive.

We have considered that research into the validity of games as learning tools may be hampered by using learning outcomes - whether those from Bloom's taxonomy or other types and classifications - as the dependent variables in studies such as these may lead to an underestimation of the learning that is actually taking place. Learning analytics technology could allow for more observational and other qualitative data to be gathered as participants engage with games, and for researchers to investigate in more detail the kinds of behaviours that indicate when participants are learning effectively (or not) and where instructors can apply learning interventions. This article has investigated many ways in which instructors can improve the likelihood that learning will take place in simulation games by focusing on improvements in the processes associated with game implementation, assessment and operation. In particular, we have considered the literature into team dynamics and development; ways to enhance how experiential learning theory is applied; the multiple roles that instructors can and should take on during the game module; the benefits of multiple forms of and points of assessment; and the benefits of effective debriefing and of teaching students how to undertake reflective practice. While some of the literature is more descriptive and prescriptive than empirical, many of the insights provided can help instructors to improve one or more aspects of the multifarious learning experience that is a simulation game, and thus enhance the learning of their students.

Appendix: Marketing simulation games

The following represents an alphabetical list of companies offering marketing and marketing-related simulation games. The list was created from an internet search undertaken in 2013.

Parent companies and available simulations as of 2013
Cesim • Simbrand • International Business and Strategy Management http://www.cesim.com
Harvard Edu • Marketing Simulation: Managing Segments and Customers V2 • Pricing Simulation: Universal Rental Car V2 http://hbsp.harvard.edu/list/simulations
IIBD Ltd. • SABRE (Strategic Allocation of Business Resources) http://www.iibd.com/sabre

Cont'd...

Interpretive Simulations

- Introduction to Marketing: (NewShoes)
- Marketing Principles: (MarketShare)
- Marketing Management/Brand Management: (PharmaSim)
- International Marketing: (CountryManager)
- Marketing Strategy (StratSimMarketing)

http://www.interpretive.com/rd6/index.php

LINKS Simulation Series for Marketing

- Links Marketing Tactics simulation (Intro)
- Links Marketing Principles Simulation (Intro)
- Links Marketing Simulation (Intro)
- Links Services Marketing Simulation (Intro)
- Links Multi Channel Management Simulation (Elective)
- Links Multi Channel Management Essentials Simulation (Elective)
- Links Positioning Strategy Simulation (Elective)
- Links B2B Marketing Simulation (Elective)
- Links Marketing Strategy Simulation (Strategy or Capstone)
- xLinks Marketing Strategy Simulation: Extreme Edition (Strategy or Capstone)

http://www.links-simulations.com

Market2win

http://Market2win.com

Marketplace Live

- Introduction to marketing
- Strategic marketing simulation
- Advanced strategic marketing simulation

http://www.marketplace-live.com

Marketingsimulations.net

- BancSim
- Marketing TurnaroundSim
- RedMeatExpress
- Marketing Management Simulator
- Pricing Championship

http://marketingsimulations.net/MMS_Instructions.html

McGraw-Hill Education

- Practice Marketing

http://www.mhpractice.com/products/Practice_Marketing

OaktreeSims

- Maven: A Marketing Simulation Game

http://oaktreesim.com

Shootformars

- MARS Simulation
- Marketing Management Simulation

http://www.shootformars.com

Simbound • Simbound e-Marketing Simulation http://www.simbound.com
Simventure http://simventure.co.uk
SmartSims • Music2Go Marketing • Adsim http://www.smartsims.com
Strategy Dynamics • Brand Management • IGLU.Com (Vacation marketing) • Mobile Phone Subscribers http://strategydynamics.com
StratexSimulations • Markops - Operational (Intro and UG) • Markstrat – Strategic (Masters) -B2B simulation -B2C Durable Goods -B2C Consumer Goods http://www.stratxsimulations.com/home.aspx
Wise Cells • Marketing Simulation http://wisecells.com

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Simulation games in business and marketing education: How educators assess student learning from simulations

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ABSTRACT

Considerable research findings have demonstrated the value of simulations in motivating and engaging students and in developing their skills and competencies. Almost no research, however, has investigated how educators assess student learning from simulations. Drawing upon the literature into authentic assessment – a body of work that provides evidence-based principles to enhance assessment practice and outcomes – this paper attempts to provide a foundation for research in this area. From the 35 surveys and 8 interviews conducted with educators who use business-related simulations, it is apparent that the majority are applying creative assessment practices and that most follow authentic assessment principles – whether they use this terminology or not – including offering students developmental (formative) assessment opportunities over the course of the simulation, explaining assessment criteria and ways that students can improve their performance, requiring students to undertake reflection on their learning and outcomes, and ensuring that higher order thinking skills are engaged. Findings also show considerable similarities in where students are performing less well and in tutor perceptions of the reasons why. The research provides ideas for simulation educators to develop their assessment as well as a basis for future research into simulation assessment and ways to improve student outcomes.

1. Introduction

Over the past 35 years, a good deal of research has been undertaken into the validity of simulation games as tools to deliver learning outcomes (Anderson & Lawton, 2009; Faria, 2001; Faria, Hutchinson, Wellington, & Gold, 2009; Hofstede, de Caluwe, & Peters, 2010; Hsu, 1989; Parasuraman, 1981). Within this research stream, the term 'assessment' often refers to assessing the validity of simulations as teaching and learning tools.

The issue of how student learning from simulations is assessed has received very little attention, however. This is interesting given that a well formulated assessment strategy is an important means of determining whether the learning approach is valid – results on the assessment show that students have achieved what they were meant to achieve in terms of knowledge, skill development and other learning outcomes.

Assessment is a major research area within higher education and most recently the focus of this research has been the role of assessment in developing the learner rather than on simply judging student knowledge at a particular point, usually

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through an exam (Sambell, McDowell, & Montgomery, 2013). Work by researchers such as Cohen (1987), Steffe and Gale (1995), and Biggs (1996) have demonstrated that when assessment is aligned to both the teaching activities and to the learning outcomes that the tutor seeks (e.g. demonstrating higher level thinking skills), students tend to engage more, at a deeper level, and perform better. This work on constructive alignment, as Biggs' (1996) termed it, has underpinned another stream of assessment research that seeks to conceptualise and develop frameworks of practice that tutors can follow to engage and motivate students, while also enhancing performance and outcomes. One such conceptualisation is that of *authentic assessment*, the main tenets of which are based on a constructive alignment of teaching, learning and assessment where the activities involve developing skills and competencies students will need in the work environment, offering them a number of practice opportunities prior to the graded assessment all with a great deal of tutor feedback along the way (Ashford-Rowe, Herrington, & Brown, 2014; Schell, 2000; Wiggins, 1993).

Simulation games tend to have many features of authentic assessment. Their generic name alone indicates the importance that game designers place on replicating a real world decision making situation set within a dynamic operating environment that requires progressively higher levels of decision making competency in order for students to improve performance (Feinstein & Cannon, 2002; Jacobs & Dempsey, 1993). Better performance on business-related simulations comes from students' learning how to interpret and make more effective use of information on markets, competitors, financial data, and customers; understanding and using tutor feedback; bringing in and integrating theories and concepts from prior studies; thinking critically about past decisions; progressively using more elaborate thinking processes in order to integrate the range of decision areas more effectively; working better as a team; and managing the time needed for the simulation more effectively (Vos, 2014).

All of these are learning processes, the progress of which can be roughly measured by the team's improvements on simulation performance indicators such as profitability and market share. The tutor also plays a critical part in supporting students with these learning processes. Essentially, the tutor has three roles in this regard: planning appropriate learning and teaching strategies, supporting student learning over time, and designing appropriate assessment tasks (Alklind-Taylor, Backlund, & Niklasson, 2012; Fanning & Gaba, 2007; Fripp, 1993; Sanchez, 1980; Vos & Brennan, 2010). How tutors undertake these roles with respect to simulation learning is another issue that has received limited attention in the research. And finally, little is known about how students perform on simulation assessment, and in particular the kinds of challenges both they and tutors find difficult to overcome.

This study is mainly exploratory and has the following main purposes:

- To address a gap in the literature on assessment strategies related to simulation games in general and by those using business simulation games in particular;
- To gain insights into what teaching, learning, and assessment principles and practices tutors make use of in designing assessment and supporting student learning from simulations and whether simulation assessment and pedagogy follows an authentic assessment model; and
- To consider what tutors perceive as the key weaknesses in student performance on simulation assessment and how they are attempting to redress these.

The paper begins with a review of the literature on authentic assessment and its main characteristics followed by a discussion of aspects of simulation game use that appear to fit these characteristics. This section is then followed by the framework for and the findings from an exploratory study on assessment practices taken from a sample of UK business and marketing who use simulation games. Consideration will be given to whether these practices fit with the main characteristics of authentic assessment and to the kinds of weaknesses tutors see in their students' performance. It is hoped that the findings from the study will provide simulation tutors with ideas for their own assessment strategies, as well as possible benchmarks for good practice. In addition, the research will provide a basis for future simulation assessment research and potentially add to the literature on authentic assessment.

2. Literature review

2.1. Trends in assessment research

Over the past three decades, research into assessment in higher education has tended to fall within three main themes: design, measurement and validity of assessment instruments; evaluating and providing feedback on student performance; and alternative forms of assessment to develop the learner (Sambell et al., 2013; Taras, 2002). The rise of alternative forms of assessment emerged out of the debates in the 1980s and 1990s over the educational value of standardised testing (also known as traditional assessment). Frederiksen (1984), for one, argued that large scale testing forces teachers to narrow what is taught in order to meet test requirements and Boud (1990) noted that too often "assessment tasks are set which encourage a narrow, instrumental approach to learning that emphasises the reproduction of what is presented, at the expense of critical thinking, deep understanding and independent activity" (p. 104).

Debate and criticism of assessment practices have come from within and outside of academia. In 1995, for example, the UK Higher Education Quality Council "opened up for public discussion the kinds of qualities and abilities which university graduates ought to possess and promoted scrutiny of the effectiveness of assessment in ensuring these outcome standards" (Sambell, McDowell, & Brown, 1997, p. 353). In both the US and the UK, parents, employers, and other external parties also questioned higher education practice for evidence that traditional assessments were really contributing to student knowledge and skill development (Banta, Lund, Black, & Oblander, 1996). A contingent debate emerged about the role of higher educational institutions in preparing students for employment, leading ultimately to a major emphasis on instructional and assessment practices that embed employability skill development (Azevdo, Apfelthaler, & Hurst, 2012; Ortenblad, Koris, Farquarsen, & Shih-wei, 2013).

One consequence of the testing debate was a shift into the foreground of alternative philosophies of education and assessment (Schell, 2000). Traditional assessment practices based on objectivist theories of learning gave way to assessment research based on cognitive/constructivist and sociocultural theories (James, 2005). The objectivist tradition generally views knowledge as existing independently of or outside the knower and it is the teacher who conveys meaning. Constructivists see learning as a process of active engagement through which learners construct meaning and new ideas, taking into account their current and previous knowledge. Learning is not, therefore, seen to be imposed or transmitted by direct instruction. As Schell (2000) notes:

> The teacher provides the roadmap ... while allowing students to construct their understanding of the topic. Learners assume increasingly more control over ... learning and are free to explore the various ... details of the topic. They can build their own mental frameworks in ways natural to them. (p. 10)

Socio-cultural theories of learning, many of which are also constructivist in orientation, have been informed by the work of Dewey (1916), Vygotsky (1978), and more recently by Lave and Wenger (1991). They argue for the importance of context in learning. Vygotsky (1978) and Lave and Wenger (1991) situate learning within interactive groups, or as Wenger (1998) called them, 'communities of practice'. This research has implications for how learners transfer knowledge learned in other contexts, as well as for the value of realistic or 'real world' learning situations.

While constructivism does not dictate specific approaches to teaching and assessment, many of its advocates have used constructivist ideas and tenets to inform an approach to curriculum design that calls for a closer integration of teaching, learning and assessment. Biggs' (1996) theory of constructive alignment is an example. According to Biggs (1996), "students construct meaning through relevant learning activities" (p. 2), including assessment. The teacher creates alignment by establishing intended learning outcomes, and by determining the most appropriate teaching, learning and assessment activities to assist students in achieving the outcomes. If these aspects are not aligned, students are likely to spend much of their time preparing for what they believe will be on the test rather than learning the syllabus and teachers may be inclined to teach *to* the test, rather than to the full range of learning outcomes.

The rise of constructivist thinking and practice and of Biggs' (1996) now widely adopted approach to curriculum design has led to a proliferation of forms of assessment alternative to traditional testing. Among the most widely discussed in the literature are competency based, performance-based, direct and authentic forms of assessment. While each of these has unique aspects they share a number of characteristics. All require students to actively engage with concepts, ideas and projects, involve 'real world' or professional contexts, involve clear assessment criteria, are challenging and include higher level thinking skills, and assess not only knowledge, but competencies and skills (Custer, 2000).

2.2. Authentic assessment

The alternative approach that has received the most attention in the literature is *authentic assessment*. Over the past two decades a number of conceptualisations of authentic assessment have been developed, all with the main objective of setting out processes and practices that are meant to better prepare students for future occupations than traditional assessment can do and to develop not only knowledge but higher level skills and competencies. While a consensus on its characteristics is yet to occur, the following eight themes incorporate most frameworks or discussions of authentic assessment:

1. The real world value of the assessment task;
2. Students perform or create a product as the output;
3. Challenge and complexity of tasks and issues of transfer;
4. Known criteria and assessment literacy;
5. Developmental opportunities with formative assessment and regular feedback;
6. Sufficient and varied activities to make up the whole;
7. Opportunities for reflection; and
8. Interaction and collaboration.

A brief overview of each theme and its characteristics is presented below followed by a further analysis of the scholarly research on authentic assessment.

2.2.1. The real world value of the task

For many authors, the real world value of the assessment task or tasks is the main determinant for authenticity (Ashford-Rowe et al., 2014; Cumming & Maxwell, 1999; Keyser & Howell, 2008; Lebow & Wager, 1994; Lund, 1997; Maina, 2004; Mueller, 2005; Reeves, Herrington, & Oliver, 2002; Reeves & Okey, 1996; Renzulli, Gentry, & Reis, 2004; Savery & Duffy, 1995; Tanner, 1997; Wiggins, 1993). Building on both constructivist and 'assessment for learning' theories (e.g. Sambell et al., 1997), authentic assessment calls for learning activities that mirror how performance would be undertaken in professional settings or in the 'real-world', particularly where the learning intention is for students to demonstrate a skill or the application of knowledge (Black, Harrison, Lee, Marshal, & Wiliam, 2003; Wiggins, 1993). The real world requirement emerged out of the original definition of authenticity presented by Archbald and Newmann (1988) in their counterpoint to the perceived failures of traditional assessment in preparing students for future work or learning. The authors, who first coined the term authenticity, wrote:

> What counts for success in school is often considered trivial, meaningless, and contrived by students and adults alike. Ultimately then, the quality and utility of assessment rest upon the extent to which the outcomes measured represent appropriate, meaningful, significant and worthwhile forms of human accomplishment. We synthesize these qualities into one idea: authenticity. (Archbald & Newmann, 1988, p. 71)

Initially, therefore, the call was for more meaningful and significant assessment tasks, and not specifically for those representing real world or professional tasks. Over time, the greater focus in higher education on preparing students for employment has strengthened the importance of assessment that is work-oriented. Brown (2004), for example, notes:

> If we want our students to demonstrate employability when they graduate, our assessments need to be designed to be *practice-orientated* [and apply] to professional contexts .... Rather than assessing a learner's ability to write about good practice, an effective assessment strategy [seeks] to measure how the student can put into practice the learning achieved. (pp. 83–84)

According to Sambell et al. (2013), the focus on real world activities also makes the assessment meaningful to students, and this, in turn, supports higher levels of motivation which can translate into better outcomes. Rust (2002) found that students are also more likely to take a deep approach to learning if they are intrinsically motivated and see the relevance and importance to their future.

2.2.2. Performance or product as output

The constructivist perspective that underlies authentic assessment views learning as the active creation of knowledge and a process "that ... changes the students' perspectives on the world so they behave differently" (Biggs, 2003, p. 36). Therefore, assessment should require student to provide an active demonstration of that learning either through a performance, a variety of performances or the creation of a product as output (Resnick, 1987; Torrance, 1995). In demonstrating the behaviours or practices required, students show that they have acquired not only knowledge but requisite skills and competencies. This does not limit assessment to active demonstrations of knowledge in the form of, say, presentations or carrying out specific tasks, but can also include written examples, as long as it reflects the kinds of understanding required in the discipline (see for example, Darling-Hammond & Snyder, 2000). Examples include: portfolios, open book exams, take away exams, projects and investigations, varied writing assignments, oral assessment, problem solving tasks, simulations, self, peer and co-assessment (Sambell et al., 1997). For some authors, the performance requirement *is* the basis for authenticity, over and above the requirement of a real world task (Biggs, 2003; Darling-Hammond & Snyder, 2000; Schell, 2000; Torrance, 1995).

2.2.3. Challenge, complexity and transfer

Authentic assessment should be challenging and represent the complexities and ambiguities of real world decision making as well as the potential for multiple solutions/perspectives (Gulikers, Bastiaens, & Kirschner, 2004; Kirschner, 2002; Newmann, Marks, & Gamoran, 1996; Petraglia, 1998; Reeves et al., 2002; Wiggins, 1993). Complex problems require higher order thinking skills such as analysis, evaluation and critical thinking and thus assessment should allow students to practice and develop these skills (Wiggins, 1993). Gulikers et al. (2004) argue that authentic tasks can vary in the degree of complexity depending upon the professional context to be simulated and the current level of the students' knowledge and skill development.

Another aspect of learning that has confounded teachers and researchers is how to get students to transfer learning from one context to another. Constructivists have argued that the transfer of knowledge from one domain to another is difficult, particularly given the fact that learning is context-based (Schell, 2000). For example, students who learn math in a math class may not be able to use those skills in completing a personal budget (see for example Lave & Wenger, 1988). Successful transfer of knowledge requires scaffolding, discussion with others, and opportunities for reflection, all themselves characteristics of authentic assessment (see below).

2.2.4. Known criteria and assessment literacy

In authentic assessment, teachers will expose students in advance to the main criteria upon which they will be evaluated and offer opportunities for students to become more 'assessment literate' through the use of exemplars or a dialogue to create

a shared understanding of what is expected (O'Donovan, Price, & Rust, 2004; Price, Carroll, O'Donovan, & Rust, 2011; Rust, Price, & O'Donovan, 2003) A social constructivist perspective posits that "meaningful understanding of assessment requires some kind of active engagement with the criteria by both tutors and students" (Rust, O'Donovan, & Price, 2005, p. 234), because "to truly understand ... the criteria and standards being applied requires tacit as well as explicit knowledge" (p. 231). Gulikers et al. (2004) further note that in professional situations employees are generally aware of the criteria on which their work will be judged, so it should also be transparent in the learning context. Their study on the benefits of authentic instruction did point out, however, that too many criteria can actually reduce motivation and learning (Gulikers, Bastiaens, & Kirschner, 2006).

2.2.5. Developmental opportunities with formative assessment and regular feedback

Where assessment seeks to measure competency of a range of knowledge and skills, students should be given formative developmental or practice opportunities and be provided with regular feedback on their progress during completion (Ashford-Rowe et al., 2014; Crisp, 2012; Myers & Nulty, 2009). Giving students the opportunity to practice a skill or a set of actions is one of the main opportunities that formal education should provide. For each stage of practice, tutors can give feedback that will help students to understand where they need improvement and how they might move forward. Also, given that authentic assessments may involve a series of stages or steps, and that the success of future stages may depend upon earlier successes, practice and feedback are extremely important. Furthermore, practice, followed by feedback – either from the tutor or peers – allows students to demonstrate, over time, greater levels of competence and the application of higher levels of thinking (Darling-Hammond & Snyder, 2000).

2.2.6. Sufficient and varied activities make up the whole

Authentic assessment should require students to engage in sufficient and varied activities to ensure that they cover all the associated learning outcomes or intentions rather than allowing them a choice of what to be assessed on (e.g. final exam with a choice of questions) (Rust et al., 2003). According to the principles of constructive alignment, assessment should cover all intended learning outcomes (Biggs, 1996). Furthermore, complex tasks require students to demonstrate a range of competencies that cannot be judged in a single test or activity so assessment "should involve a full array of tasks and multiple indicators of learning in order to come to fair conclusions" (Gulikers et al., 2004, p. 80).

In addition, as noted above, assessment should involve scaffolding, such that students are exposed to incrementally more challenging problems requiring progressive application of higher order thinking skills, and therefore more than one task is generally required.

2.2.7. Opportunities for reflection

Reflection is a critical aspect of an authentic learning environment (Herrington, 2012; Herrington, Reeves, & Oliver, 2010; Lombardi, 2007; McAlister, 2000) and one that should be encouraged and guided. Boud, Keogh, and Walker (1985) see reflection as a natural process of having engaged in meaningful experiences. During reflection, students are exploring what they have done or learned in order to make new connections, form new understandings, but also to identify weak or missing links in knowledge or skills. In addition to the cognitive-structuring benefits of reflection, it allows students to consider their own approaches to learning. The latter, 'thinking about one's thinking', is termed metacognition and is important in assessments involving an array of tasks, complexity and formative feedback. It is also considered by many advocates to be essential to improving critical thinking processes (Ashford-Rowe et al., 2014; McAlister, 2000; Rule, 2006). Rule (2006) cautions that metacognitive skills do not come naturally to all, however, and reports on a study by Kramarski, Mevarech, and Arami (2002) showing that those who received instruction in reflection and metacognition within a cooperative learning project outperformed those who had no such guidance. Although not writing on authentic assessment, Jennifer Moon (1999, 2004) has also written extensively on the importance of helping students to develop these skills prior to asking them to undertake reflective activities.

2.2.8. Interaction and collaboration

A number of researchers include collaboration as a necessary requirement of authentic assessment (e.g. Herrington & Herrington, 1998; Reeves et al., 2002) and base this requirement on social constructivist theories such as that of Vygotsky (1978). Vygotsky argued for the importance of social and cultural influences on learning and of social interactions as the means by which individuals make sense of the world. Interaction and discussion with more experienced peers and with tutors help students move towards greater levels of understanding and performance than could be achieved independently – particularly if those peers/tutors can scaffold the learning appropriately for the level of the student. Vygotsky (1978) termed the gap between current levels of understanding and what is possible with effective collaborative instruction as the *zone of proximal development*. Not all advocates of authentic assessment see collaboration with peers as a necessary requirement, however. For example, Gulikers et al. (2004) argue that students should only be working with others if the real world scenario upon which the assessment is based also calls for team working. On the other hand, they do agree that the tutor has an important role in scaffolding information and in providing feedback.

These eight themes summarise the main characteristics of authentic assessment as it has developed in the literature over the past twenty plus years and provide a framework for the tutor. Most themes represent good stand-alone practices but when interlinked with the others can provide greater learning benefits. Biggs (2003), who considered authentic assessment

to be a good example of constructive alignment, also noted that its effectiveness is enhanced when it is aligned with authentic instruction and in fact the two are often combined into authentic instruction or pedagogy or termed an 'authentic learning environment' (Newmann et al., 1996; Sambell et al., 2013). The underlying premise is that instruction and assessment are interdependent and for assessment to be effective it needs to be grounded within an instructional pedagogy.

2.3. Authentic assessment research

Empirical research into the effectiveness of authentic assessment in terms of student learning gains as compared with other forms is somewhat limited. Some studies have attempted to demonstrate the value of authentic assessment in motivating and engaging students (Fook & Sidhu, 2010; Gulikers et al., 2004; O'Donovan et al., 2004; Wellington, Thomas, Powell, & Clark, 2002) while others have investigated student perceptions of the value of authentic assessment over other forms (Sambell et al., 1997; Saunders, Saunders, & Batson, 2001), generally with positive results. Studies demonstrating a measurable and positive impact on student performance have been less frequent but include that by Newmann et al. (1996) who found authentic pedagogy to be a strong predictor of achievement in school children, and that of Jackson, Draugalis, Slack, and Zachry (2002) who found measurable improvements in student achievement on a pharmacy programme. Saunders et al. (2001), however, found that authentic assessment improved cognitive skill development only slightly over other forms of assessment and Guilikers, Bastiaens, and Martens (2005) did not show that authentic learning environments resulted in higher student performance than those considered less authentic.

More studies are needed into whether authentic assessment contributes to greater learning gains than other forms of assessment as it has not yet been demonstrated convincingly. McAlister (2000) notes that one of the key challenges in measuring the performance-related benefits of authentic assessment is the existence of so many small but noteworthy differences in how it is conceptualised. Studies are also needed that consider how other factors may affect the success of these kinds of assessments. For example, only a few studies have looked at the role of the student. In their research, Fook and Sidhu (2010) found that most students valued authentic assessment as they felt it helped them to develop more skills than traditional tests and was more beneficial to their future work, but many students also admitted that they did not really put in much effort to get the best out of these assessments. Others found that assessments of this kind 'were a sheer waste of time' and that with portfolio type assessments, for example, 'they did not know what to write … [and] were most of the time repeating the same thing' (p. 158). Tutors also found that many students remained quite passive and resistant to the active involvement required, that plagiarism was an issue, and not all members of a group assignment did their part. In summary, additional studies on how best to implement authentic assessment and on ways to overcome barriers to its effective use are also needed.

The much more prolific non-empirical studies on authentic assessment – many of which have been investigated to generate the eight themes above – have sought to conceptualise the concept, link it to learning theories, develop models, build upon previous theoretical frameworks, and to bring in empirical research from other studies to show where various characteristics have demonstrated a contribution to student learning gains (Ashford-Rowe et al., 2014; Cumming & Maxwell, 1999; Custer, 2000; Keyser & Howell, 2008; Myers & Nulty, 2009; Newmann, Secada, & Wehlage, 1995; Newmann & Wehlage, 1993; Petraglia, 1998; Reeves et al., 2002; Rennert-Ariev, 2005; Rule, 2006; Saunders et al., 2001; Schell, 2000; Swaffield, 2011). Many of these studies are of the benchmark or best practice kind that tutors can use to compare their own assessment values and practices against (Price et al., 2011), while others are meant to stimulate debate and discussion (Boud & Falchikov, 1999) or to identify appropriate methods to use (Darling-Hammond & Snyder, 2000; Galarneau, 2005; Herrington & Herrington, 2006; Lebow & Wager, 1994), among them simulation games, the characteristics of which and the relationships to authentic assessment are described below.

2.4. Simulation games, authentic assessment and student performance

As noted above, one characteristic of authentic assessment is the underlying notion that for learning to occur, it should be demonstrated through a performance or the creation of a product as output. In other words, learners must demonstrate their knowledge through action and gain that knowledge through experience (Siemens, 2004). Simulation games, particularly in business and marketing, are designed to represent as much as possible the real world decision making context. In marketing simulations, for example, student teams compete to launch and/or tailor products for different target segments in order to maximise profits. In addition to attempting to match product features to target market needs, teams are generally required to set prices, both at retail and channel level, allocate money for promotion, set production levels, invest in research and development and purchase market research reports, among other tasks. Teams will make these decisions regularly (e.g. weekly) for six or more game rounds and receive feedback in the form of financial reports, market and customer data, and competitor information, all of which must to be interpreted and analysed for the next decision round. This active form of learning based on a 'simulated' real world decision making environment can be seen to have many features of authentic assessment. In addition to the real world aspects, there is complexity with uncertain outcomes, the need for students to use higher level decision making skills such as problem solving, analysis and synthesis of a range of current and previous information/learning, all made within a collaborative team. Add to this the role of the tutor in providing feedback, room for dialogue, conditions for reflection, and specific assessment tasks, the simulation experience, can, when properly managed, be seen as a good example of authentic pedagogy (see for example, Galarneau, 2005).

On the other hand, playing a simulation game, or undertaking an alternative form of assessment, does not itself guarantee that the learner will be able to enact or demonstrate the kinds of behaviours and outcomes envisaged from a well-designed authentic assessment regime as Fook and Sidhu (2010) demonstrated in their research. Student engagement and the activities undertaken by the tutor are also critical. The tutor needs to set an appropriate set of cues, conditions and activities. Aldrich (2005), for example, stated that one of the most critical components of the simulation experience is the pedagogy that underpins it – a point of view similar to that of Biggs (1996, 2003). Simulations are most effective, Aldrich (2005) argues, when the tutor provides additional background material (including case studies), scaffolding (breaking the learning into parts/chunks and providing support or resources to help the student understand), debriefing/feedback opportunities, coaching, and periods for student reflection and analysis. In addition, the simulation itself needs to provide effective diagnostic tools (such as financial and market reports). Clearly, many of Aldrich's (2005) criteria for an effective simulation learning experience are similar to those of authentic instruction.

Aldrich (2005) is suggesting that the type of assessment used and the simulation itself will not guarantee that students who play them will demonstrate more or more complex learning outcomes than from other forms of assessment. Astin (1996, 2012) also argues for the important role of the tutor and other environmental factors in determining the effectiveness of any kind of assessment, but emphasises the important role played by the student. Astin (1996) developed the IEO (inputs, environment, outputs) model to help improve how we measure the effectiveness of one form of assessment over another. He argued that without considering both what the students (inputs) bring to the process and the environment/context in which they engage in assessment and learning, we cannot make valid judgements about why students achieve certain outputs (e.g. grades).

Applying the idea of the 'student factor' to authentic assessments such as simulations, for students to benefit, they must also bring something to the table. Astin (2012) categorises student inputs as either fixed, such as demographic and educational background characteristics, and those that can vary over time such as 'cognitive functioning, aspirations and expectations, self-ratings, values [and] behavioural patterns (Astin, 2012, p. 76)'. These factors can influence the amount of time a student spends on the simulation; motivation to engage in the game; perceptions of the value of the simulation and related assessment; ability and willingness to make use of feedback; capabilities for higher order thinking, and the ability to transfer knowledge and skills learned elsewhere such as numerical and financial skills.

In addition, the environment of the simulation – including the game itself and the tutor's behaviour/actions – can affect students' performance. Prior research has shown that a poorly prepared tutor or teaching team is a threat to student learning on simulations. If the tutor does not know the game well, has not spent time to understand the likely outcomes of various types of decisions, does not manage student stress and emotion well, and provides poor or inaccurate feedback, then students are unlikely to either engage with the game, learn much or get good grades (Hofstede et al., 2010; Pearson & Smith, 1986; Taylor, Backlund, & Niklasson, 2012; Tiwan, Nafees, & Omkumar, 2014; Vos & Brennan, 2010; Wolfe, 1997).

In summary, authentic assessment – a concept built upon a number of principles of effective assessment, and one that is grounded in a 'real-world' learning situation – reflects many features of the simulation game experience. At the very least, the literature on authentic assessment offers evidence-based principles upon which tutors can benchmark their assessment strategies. However, no matter how well designed the assessment is, other factors such as student characteristics and environmental factors can also affect the assessment structure and outcomes. An authentic learning experience or an authentic assessment will not create itself. The willingness of the student to engage with the simulation and their prior skills, and the role of the tutor in structuring the experience plus the assessment tasks is critical to participants gaining the maximum learning benefits.

The research undertaken for this paper involved a small empirical study meant to provide some insights into the kinds of assessments tutors use on simulation modules and to gauge whether the characteristics of authentic assessment can be found within the game environment itself as well as in the strategies tutors use to support and assess student learning. In addition, through an interpretation of the findings from the surveys and interviews undertaken, the study will also highlight factors, particularly those related to student characteristics, that might challenge the ability of simulation tutors as well as others who use authentic assessment to gain the purported benefits in terms of preparing students for future employment, and in increasing knowledge and skill development. The study will demonstrate that while authentic assessment is deemed by many as a highly effective way to structure the teaching and assessment in a discipline area, how students respond to these activities as well as what they bring to them can have an impact and should be considered when researching its benefits.

3. Method

This exploratory study into assessment practices and outcomes on simulation based modules used both quantitative and qualitative research methods. Thirty-five university tutors in the UK known to use or have used simulations within the past five years completed a survey and eight of the survey respondents were then contacted for further depth interviews. The sample is not representative of the population of those using marketing and business simulations in the UK as no sample frame exists and no census of simulation use in the UK has been carried out since Burgess's (1991) study found that 92% of UK Universities used or had used simulations in business courses. The findings from this study will therefore be used to draw some preliminary conclusions about simulation assessment practices, the impact of student factors on assessment outcomes, and areas where tutors may find it challenging to get the most out of authentic assessment regimes.

3.1. Survey instrument

Research by Vos and Brennan (2010) identified that those using simulation games tend to be lone enthusiasts working either by themselves or with small teams. Therefore, it was felt that a survey would be the best means by which to access a sample of these game users and to gather a breadth of information. The surveys were sent online via the survey tool Smartsurvey© to 70 simulation users in the UK known by the author. Seventy one percent of those who responded use marketing simulations, however those using other business simulations were also included. Emails were individually addressed, but the results were anonymised. Characteristics of the thirty five people who completed the survey can be found in Table 1.

The survey was composed of three sections. The first included 9 background questions related to length of time using simulations, simulation game(s) used, number of students taking the simulation annually, size of the teaching team and size of student teams, among others. The rationale for the background questions was to draw out any key differences in assessment strategies of those who had been using simulations for a greater length of time, with larger groups, or with different types of simulations. No major differences were subsequently found except that those who had smaller groups tended to use about one more formative assessment than those with smaller groups. The next section included questions about the types of formative and summative assessments students undertook and whether the summative assessments were group-based or individual. While these questions included a range of options to choose from, respondents could also add additional information in an open-ended section. Five other open-ended questions were included to allow respondents to comment on why they use simulations, to reflect on what aspects of the assessment students tend to struggle with, what types of students or student behaviour may account for weaker performance, and what aspects of their assessment tutors felt were most effective.

An important purpose of the study was to investigate whether simulation tutors tend to apply principles of authentic assessment and pedagogy when designing their teaching and assessment approaches. While this was considered in more detail in the interviews, the third section of the survey asked tutors to rate their level of agreement with statements related to using reflective assignments, using group/collaborative work, the importance of regular feedback to student success, and whether students were given developmental opportunities – all tenets of authentic assessment. When the findings from this section were combined with an evaluation of the number of formative and summative opportunities given to students and their reasons for using simulations, as well as findings from the depth interviews, some conclusions could be drawn about the degree to which tutors use authentic assessment.

Table 1
Survey respondent characteristics $n = 35$.

	Frequency	Percentage
Gender ($n = 35$)		
Male	30	86%
Female	5	14%
University sector ($n = 35$)		
Russell Group	5	14%
Post '92	30	86%
Faculty position ($n = 35$)		
Full time	34	97%
Adjunct faculty	1	3%
Main discipline ($n = 35$)		
Marketing	25	71%
Business/strategy	8	23%
Accounting	2	6%
Games used ($n = 57$)[a]		
Markstrat	11	
Simventure	9	
Cesim Simbrand	7	
The Marketing Game	6	
Other:		
Marketing based	14	
Business/strategy	3	
Accounting	1	
Not specified	6	

[a] Respondents were asked to state which games they use or have used in the past, so $n > 35$.

3.2. Interviews

The interviews were conducted to gain a more in-depth understanding of tutors approach to assessment design, how they describe their own pedagogical strategies and approach, their perceptions of why some students perform less well, and to gauge the degree of alignment between their approaches and that of authentic assessment principles. Eight semi-structured interviews were conducted amongst survey respondents who agreed to participate. Characteristics of those interviewed can be found in Table 2.

An interview guide document was used and each lasted between 40 and 60 min. Following some background questions related to game use, the questions asked for details of assessment used, various aspects of their assessment practice that could be viewed as evidence of authentic pedagogy, and further discussion of student strengths and weaknesses in performance.

4. Findings

In the discussion of findings, highlights from the survey background information are first presented to give a feel for where simulations fit in the curriculum, how the simulation is structured and who uses them. This is followed by a summary of both survey and interview findings that relate to each of the eight characteristics of authentic assessment. Given that neither the survey nor the interviews asked specifically about authentic assessment and given that aspects of authentic assessment tend to overlap in their descriptions, some assumptions have been made as to which characteristic the tutor could be seen to be referring to. The section concludes with survey and interview findings related to weaker student performance.

4.1. Background questions (survey)

Table 3 provides highlights from the background questions. The majority of respondents (80%) have been using simulations for more than 8 years, predominantly with students in their final undergraduate year or on a postgraduate programme, but all years are represented. In 71% of cases, students work in team of 4–5 people. There is a great deal of variation in the number of simulation students that tutors are responsible for, with some managing over 500 students annually (and up to 900 in one case) and others leading much smaller cohorts. Given that tutors often have colleagues supporting their simulation modules, this survey showed that the median group size that tutors are responsible for is 35 and the average is 45.

4.2. Aspects of authentic assessment

In neither the survey nor the interviews was the term 'authentic assessment' used. Since one of the main objectives of the study was to gain insights into the degree to which simulation tutors use authentic assessment principles, whether or not they are familiar with the concept, it was deemed important not to introduce the concept or discuss any particular approach to assessment design. Only seven of the eight characteristics described above are discussed below as the second characteristic

Table 2
Interview respondents characteristics ($n = 8$).

Characteristic	Frequency	Level
Gender		
Male	6	
Female	2	
Faculty position		
Full time faculty	8	
University type		
Russell Group	2	(Both using Markstrat at postgraduate level)
Post '92	6	
Main discipline		
Marketing	8	
Types of simulations used		
Marketing		
• Cesim Simbrand	3	(1 at Postgraduate, 2 at final year undergraduate)
• Markstrat	3	(2 at Postgraduate, 1 at final year undergraduate)
• Market2Win	1	(1 at Final year undergraduate)
• Kam2Win	1	(1 at Final year undergraduate)
Average number of years using Simulations	7.6	
Median years using simulations	6.5	

Table 3
Highlights from survey background questions.

	Frequency	Comment
Years working in higher education	8+ years (80%)	17% (5) Who have been working in higher education for more than 8 years have just begun using simulations
Number of times using a simulation game	3–7 times (33%) 8 or more times (44%)	
Year/level at which simulations are used:		*Simventure* is used mainly at level 1.
Year 1 (level 4)	12.8%	*Markstrat* is mainly used in final year undergraduate, in postgraduate and executive education
Year 2 (level 5)	14%	
Year 3 (level 6)	31%	
Master's (level 7)	27%	
Executive education	12.8%	Cesim *Simbrand is used at levels* 5, 6, and postgraduate.
Size of team for simulation (on average)	4–5 Students (71%)	
Amount of time simulation runs		All 3 tutors who used the game over a block of 2–3 days did so at postgraduate or executive education
6–7 weeks	23%	
8–9 weeks	23%	
More than 12 weeks	17%	
Over a block of 2–3 days	9%	
Number of students taking simulation annually		
Median size of group per tutor	35	Number of students each tutor was responsible for varied from 9 to 900 annually
Average size of group per tutor	45	

– 'students perform or create a product as the output' was assumed to be an inherent characteristic of playing simulation games.

4.2.1. The 'real world' aspect

The findings in this section come either from the open-ended comments on the survey or from the interviews. Comments tend to coalesce around two main themes: the benefits to student learning of the 'real world' aspects of the simulation itself and ways in which the tutor sought to further enhance the realistic or real world aspects of the simulation through other teaching activities.

Three interview participants commented on the value of the simulation's realistic view of business:

> *'Simulations are better at giving students a comprehensive view of a business, business functions (management, finance) and how things fit together ... few things can do this ... '*

> *'I use [simulations] to teach students to think at the strategic level of business decision making – something difficult to learn in other settings'*

> 'It brings selling to life for them. *[The simulation] allows students to perform [sales management] ... tasks ... it's hard to get this form of hands on learning in any other way'.*

Although the simulation is representative of real world decision making, some tutors go to great lengths to include even more 'reality' by finding examples for the lecture or by placing students in business related roles as part of their assessment.

> *'In every lecture, I spend time talking about how [a] particular aspect of [the simulation] relates to real world examples.'*

> *'[Students] are told to present to potential investors and to ask for [business] funding ... The class votes on whether or not to invest – a bit like Dragons' Den'*

> *The group presentation is an executive brief to an advertising agency for one of their team's products. They then have to create an advertisement to their brief.*

Some tutors also required students to do extra research on actual companies similar to those in the simulation:

> *'I [also] bring in the real world – I ask them to have a look and see what the actual mobile phone companies are doing ... What are their strategies? See if the conditions they are facing or have faced are similar to what their team is facing'*

> *'As part of their written report, students need to conduct research into how the actual industry is performing and if there are similarities to the company they ran in the simulation.'*

> *In the [summative] assignment, they link what is learned in the game to another, real, company*

Interestingly, however, one tutor teaching on a third year module received complaints from students that the simulation was not 'sufficiently realistic'. However, his point of view was that

> '... *more realism leads to more complexity and I believe less [student] understanding. I think it is important that any simulation game is not too complicated so that students can understand some general principles*'.

This comment reflects the point of view of those authentic assessment advocates who believe that the 'real world' aspect should represent the level of the students and be tailored for their learning abilities and needs (Gulikers et al., 2004; McAlister, 2000).

4.2.2. Complexity, challenge and transfer

Many tutors commented on the value of simulations for teaching higher level thinking skills such as analysis, problem solving and critical thinking, all seen by them as important for students future work. One interviewee noted: 'I design my assessment specifically for the development of higher order thinking skills'.

The simulation itself was seen as a good vehicle for allowing students to practice and develop more advanced skills:

> '*games are good for developing problem solving and analysis skills and for critically reflecting on decision makin*'

> '*marketers need to be able to undertake analyses of large amounts of quite complex data sets – simulations help prepare them for that*'

> '*simulations allow students to engage with some of the more complex concepts and processes in marketing such as sales forecasting and price setting*'

In order to achieve good results, games are designed to encourage teams to take a strategic approach and to integrate a number of decision areas (e.g. pricing, promotion, product features, R&D spending) to help achieve strategic objectives. One tutor commented:

> '*I require students to come up with a strategy then stick with it for up to three decision periods. I want them to see how challenging this can be ... it is hard after all, not just for students but for managers. So simulations allow them to practice these skills*'.

With respect to the uncertainly that attends decision-making, simulations provide a valuable perspective:

> '*they learn that no matter how well they have thought out their strategy or decisions, you cannot guarantee good results – other factors such as the market environment and competitors' strategies affect team position and success ... and this is a key [business] lesson*'

Many tutors are aware of the value of simulations for allowing students opportunities to link theory to practice and for allowing tutors opportunities to teach related but perhaps more challenging concepts. In one MBA class, for example, the tutor used the simulation, in part, to demonstrate the value of more complex analytical tools such as conjoint and factor analysis.

In other cases, respondents commented that simulations act as a 'live' context where students can see both the value and the weaknesses of theoretical models they had been taught and in two assessment cases, students were asked to reflect on the value of particular theories they used in the game and to critique their value.

Most tutors do not simply tell students to use theories to help them make better decisions in the game. Rather, they take time in lectures and seminars to demonstrate how theories are at work in the simulation, how they could be applied, and how they can be used to improve decision making.

> '*I use a number of different approaches to try to get students to link theory with the simulation ... in each debriefing session, I show them the type of strategy they are using ... I might say, this looks like a follower strategy ... I then point them to articles on this strategy ... whenever I introduce a new concept in the lecture, such as positioning or product portfolio, I discuss its role in the game ...*'

Despite the additional sessions on linking theories to the game and despite the expectation that students will be able to transfer in knowledge and skills gained elsewhere in the curriculum (e.g. finance and numeracy skills to interpret team results), most tutors noted in either open-ended survey comments or in the interviews that students continued to struggle with these processes. More will be said on this later in the paper, but it became clear from the findings that designing authentic learning environments with embedded complexity, challenge and the requirements for knowledge transfer as well as additional teaching support does not guarantee that students will be able to manage them.

4.2.3. Known criteria and assessment literacy

One survey question asked respondents if they expose students in advance to the criteria on which they would be assessed – a recommendation found in almost all discussions of authentic assessment. Thirty three out of 35 or 94% said they did.

All interview respondents discussed practices they use to ensure that students know how they will be graded and on what criteria. These included setting time aside in lectures to go over the assessment brief; providing and explaining rubric sheets;

showing examples of good and weaker assignments from previous years, and setting specific tutorials to answer questions about the assessment. Commenting on the value of these practices, two tutors noted:

> *'I think it is very important to explain to them how to do it as it is new to them. And of course I give feedback on their drafts in order to show them if they are on the right track'.*

> *'I think the presentation briefing that I use ensures that students deliver very high quality presentations'.*

4.2.4. Developmental opportunities with formative assessment and regular feedback

To construct knowledge and develop meaning, students need practice opportunities (Schell, 2000). Formative assessment provides such opportunities, particularly where the tutor then gives feedback. From the survey findings, it is clear that the vast majority of respondents are committed to using formative assessment. From the question asking respondents to choose the types of formative assessment provided to students and add further comments, 115 responses were gathered and the responses summarised in Chart 1. The most common type of formative assessment reported is regular feedback from the tutor on team decision results (77%). It appears that an additional five (14%) respondents do provide some form of regular feedback to teams as they responded positively to a later question about the importance of tutor feedback to team performance or as part of the question on what they deemed as particularly effective about their assessment strategies. Overall, 91% of tutors either agreed or strongly agreed that the regular feedback they provide to teams is fundamental to improving students' knowledge and performance in the game.

Whether it is through dialogue with teams, reflective online logs/essays, presented or written marketing/business plans, or reading students' draft reports, tutors provide students with developmental opportunities as recommended in authentic assessment. Students are exposed to, on average two formative assessments, with 37% of tutors using three or more forms. Given the additional feedback given each week by the game software itself, students have many occasions to practice, develop their knowledge, and to engage in more complex thinking. A summary of comments on formative assessment is provided in Table 4.

4.2.5. Sufficient and varied activities make up the whole

As noted above, authentic assessment should allow students to engage in sufficient and varied activities to ensure that they cover all the associated learning outcomes. Clearly, making regular decisions, whether over a short intensive period or over 6–10+ weeks, and then having the opportunity to interpret results are examples of the regular activity provided by simulation's themselves, as are the formative assessment tasks provided by tutors. However, it is the summative assessments that allow the tutor to judge the student's learning outcomes. As with the question on formative assessment, respondents could select from a list of different types of summative assessment but were able to describe other forms used in an open-ended section. The results are summarised in Chart 2.

Interestingly, only three respondents use game performance indicators (e.g. profit or market share) as part of the summative assessment, giving 5, 10, and 20% respectively for this component, one commenting that this added to the 'real world' aspect of the assessment. During the interviews many tutors noted that they do not grade students on game performance as early success by some teams can demotivate others and luck rather than skill can play a part.

In terms of the number of summative assessments used, results need to be interpreted with caution. First, the survey did not ask for the length or number of words required per assignment and second, it was not always clear whether the simulation formed part of a module (with additional assessment) or was a stand-alone module. From the results, it appears that 46% of tutors used two assessments to grade student learning from the simulation, the most common forms being a final

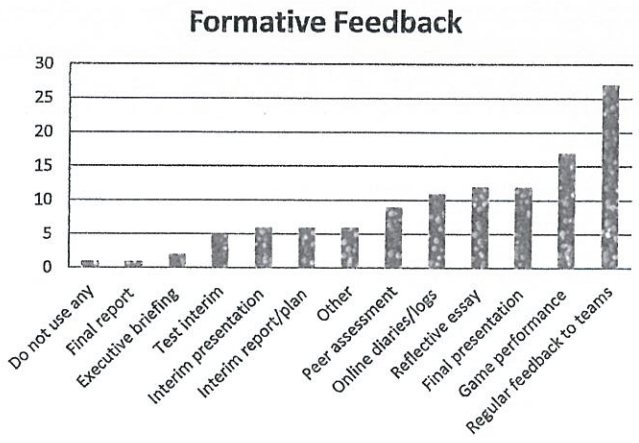

Chart 1. Types of formative assessment used, $n = 115$.

Table 4
Respondent comments on how they provide developmental opportunities.

- "They get 7 feedback opportunities on written work and feedback each week on their results".
- "I think getting formative feedback after each round of decisions in the simulation is useful, and adds a sense of realism to the simulation. The students can also analyse their own performance using the simulation software – and look at financial and market data to assess if they are in the right opportunities or not".
- "[I give students a] series of critical journals and critical reports that allow for critical steps to be repeated and comparisons to be made throughout the simulation".
- "What helped the students most was the regular advice they would get from the course lecturer and instructor to student teams on their performance and ways to improve, which was provided via informal conversations during the seminar".
- "Week-by-week tutor feedback to each team is essential and highly effective".
- "Series of three presentations over a whole semester, with immediate face-to-face and written feedback; groups have the opportunity to consolidate and practise new learning gained as a result of feedback".
- "I think we have the balance right. Where the performance in the simulation game is not assessed it allows students to make and learn from their mistakes, and take risks without it affecting their grades. The formative assessment works well as a reflective essay, allowing the students to individually reflect on what they have learnt".
- "... the formative feedback is very useful to help them with reflecting on their decision-making".

"Each week, students must answer three questions via their online team log: what results did you achieve last round and why; what lessons are to be learned about marketing concepts".

group report (56%); a reflective individual assignment (56%), and/or a final group presentation (25%). Three respondents included questions about the simulation in a final exam, and four required students to conduct extra research as part of their final report.

Six of the 9 who used three or more forms of summative assessment also graded interim presentations or reports. Of these six, five were able to provide feedback to students on the first assessment before the next assignment was due, thus allowing additional developmental opportunities. In total, 82% required all of the summative assessment to come in after the simulation game was completed. Whether this was due to institutional, time, cohort size or other reasons is not known. However, as we have seen, in all cases but one, students were also getting formative assessment opportunities.

If we consider together the regular, often weekly decision making, the range of formative assessment opportunities (from 2 to 4+) and the summative assessments (from 1 to 3+), students appear to have many opportunities to test their level of skills or knowledge and to do so in a variety of ways. In only one case were students given just a single summative assessment in addition to the practice rounds of decision making.

4.2.6. Opportunities for reflection

The study provided four ways in which tutors could comment on their use of reflective practice. The questions on the types of formative and summative assessment used each included 'reflective essay' as a choice. A survey scale question also asked respondents to comment on their attitudes towards reflective assignments and finally, interview participants were asked directly about use of reflective assessments.

From the data on types of assessment, 71% of tutors explicitly asked for a reflective assignment (either formative or summative), and an additional 4 (11%) asked for reflective online diaries or logs. The scale question that sought to gauge tutors' attitudes towards the value of reflective assignments (*'reflective assignments are good at getting students to analyse their simulation performance and decision making'*) produced agreement from 89% of respondents, with the majority (53%) feeling very strongly about their benefits. It is important to note that the surveys may have under-reported tutors use of or positive

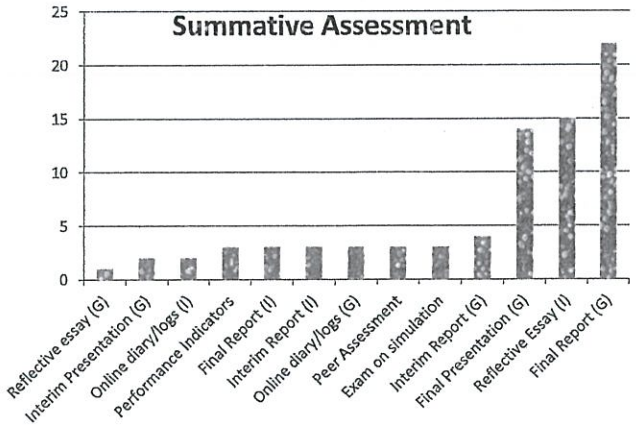

Chart 2. Types of summative assessment used.

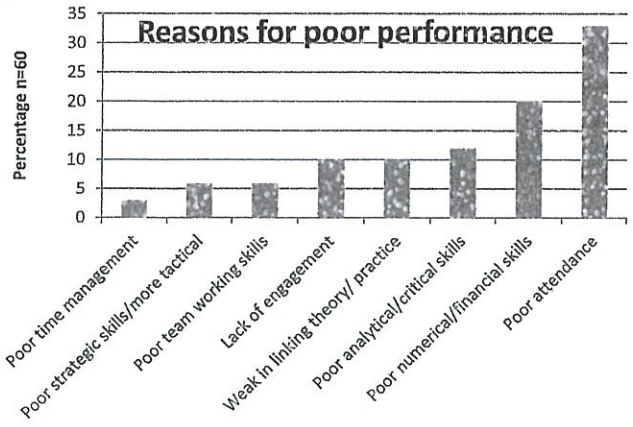

Chart 3. Reasons given for poorer student performance.

feelings about reflective assignments because of differences in terminology used. For example, one tutor noted that he did not like reflective assignments, but he used critical journals but then described these in terms others would see as reflection.

The interviews provided opportunities for tutors to comment on both how they interpret 'reflective' assignments and how they use them:

> *'Reflective essays provide freedom to students to assess their own learning'.*
>
> *'[I am] keen to have them reflect. Reflection is about looking at what you did right and what you did wrong and about explaining what you would have done ... It is about reflecting on one's own performance ... could I have worked harder? And about the group dynamics'.*
>
> *'[Individual] reflective assignments are better than group assignments ... I want them to reflect'.*

As noted above, reflection on academic work does not necessarily come easily to students (Moon, 1999; Rule, 2006) and yet only one tutor commented on the importance of preparing students:

> *'We spend time in the seminar talking about Gibbs reflective cycle and how you do a reflective piece of work. I think this helps as most students say they have not had to do this kind of assessment before and don't know how to do it'.*

As will be shown below, not all students are able to write effective reflective assignments, however.

4.2.7. Interaction and collaboration

The findings related to the value of collaborative work and interaction with peers are somewhat mixed. While all those interviewed saw the benefits of collaboration between students, most have, at one time or another, struggled with issues related to group work. The problems discussed relate mainly to complaints about particular members not contributing. For this and other reasons, five of the eight interviewed participants feel that while the students benefit greatly from working in teams on the simulation, they should be assessed individually on their learning. Responses to a survey scale question about group work (the biggest problem with simulations is group work) also brought a mixed response with 40% agreeing with the statement, 28.5 disagreeing, and 34% opting for a neutral response.

It appears that collaboration as a concept is widely supported as beneficial to student learning, but many have challenges putting the benefits into practice for all students. For example, one tutor spoke about the benefits of giving students different roles within the team, similar to what they would experience in a work setting, but felt that when it came to assessment, individual assignments were fairer. Another tutor who has been using simulations for over 20 years had an even stronger response:

> *'I got fed up with the group problems – free riders, complaints about who was not contributing – so I changed the assessment such that each person could decide on which area or two areas they wanted to research and write and then I give individual marks for their sections'.*

However, despite the considerable literature on how student teams can increase their effectiveness if they are first encouraged to intentionally focus on team processes (see for example, Kayes, Kayes, & Kolb, 2005), only one tutor interviewed provides training in how to enhance group effectiveness.

4.3. On what students do well and not so well

From the findings discussed above, it is clear that the vast majority of those involved in this study use terminology related to all aspects of authentic assessment in designing their teaching and assessment strategies for simulation games. As noted

above, however, the literature on authentic assessment is rather limited about the challenges that may occur when using authentic assessment in the classroom. Both the survey and interviews asked respondents to comment on areas where students performed less well and what student characteristics might contribute to lower performance.

From the open, ended survey questions about performance, thirty three respondents provided 60 comments with the remaining two noting that their students performed well on all aspects of assessment. These comments were condensed into eight main themes as shown in Chart 3. The main reason given for lower performance was poor attendance, however, skill weaknesses, when added together, represent a greater problem. Weak numerical and financial skills (20%), poor analytical or critical thinking skills (12%), challenges in linking theory to practice (10%), problems thinking strategically (6%) and poor team working skills (6%) all contribute to weaker performance on simulation assessment.

These and the findings from the interviews have implications for those who are using authentic assessments. First, it appears that despite the desire to find assignments that engage and develop higher level thinking skills, students often struggle. Interviewees provided further detail on student performance. Many commented on the fact that student s tend to be more descriptive than analytical in their reports, presentations and reflective assignments, even when they are given exemplars from previous years and coaching by the tutor. In addition they said more on how students struggle with linking theory to practice and in transferring skills learned elsewhere. The problem with numeracy skills was made stark in responses to a related survey question: 71% either agreed or strongly agreed that weak numeracy skills held students back from getting the full benefits of the simulation and from performing really well in assessments.

With respect to developmental opportunities offered through formative feedback or in preparing students for assessment, tutors complained that many students did not come to the relevant sessions, read the feedback provided, or knew how to make use of it. For some, this appeared more as a result of poor motivation on the part of students rather than lack of ability. Poor attendance at decision making sessions was often cited as a reason for poor. Student's unwillingness to read the simulation documents in sufficient detail or any additional readings was also cited. As noted above, motivation and engagement issues also caused tension within teams and with group based assignments. So despite the efforts of tutors to create a real world experience with significant potential for developing knowledge and skills and in providing a lot of learning support, if students choose not to engage, the benefits of many authentic assessment tenets are lost.

It must be noted that not all tutors commented on poor performance and even those who did also have much to say about how students who did engage benefited. One tutor found that the addition of a simulation to a module helped to increase overall performance and another noted that she usually had some very good students:

> *'... stronger students are able to discuss the difference between challenges, decisions and outcomes and are further able to see the appropriateness and relevance of applying theories to practice'.*

Furthermore, almost all respondents gave examples of students who struggle with the game for some or many weeks and then suddenly have that moment of understanding:

> *'One of my students struggled all the way through and just copied the strategies of other teams until one day she just 'got it' ... it was amazing to see her confidence grow and the improvement in her work'*

> *'We had a group who didn't take the game very seriously ... then suddenly they leapfrogged it, they got it and you could see that a huge amount of learning was taking place'*

> *'If someone [in the group] presses the button and then they get it, it's very powerful'.*

Such learning 'eureka' moments provide a great deal of satisfaction for both tutors and students and it could be argued that without the significant opportunities for practice and feedback that authentic assessments simulation environments provide, they may not occur so starkly or so often.

5. Discussion

The research findings provide strong support for the contention that tutors who use simulations employ many if not all of the characteristics of authentic pedagogy when designing their teaching and assessment activities even though no respondent mentioned this terminology. Most use simulations to provide a real world experience that allows students to develop the kinds of skills and competencies they will need in their working lives. Tutors are particularly committed to using formative assessment and providing even more developmental opportunities than the simulation itself offers, and to ensuring that students know how they will be assessed. Although most summative assessments are limited to two or three, possibly due to institutional constraints, tutors do provide variety and, for the most part, a full range of tasks to capture a breadth of student learning preferences and to allow for knowledge and skill development. In addition, the majority see reflective activities of as a means for students to really interrogate their own learning and to make connections between theory and practice. Although group problems often emerge (generally because one or more members does not contribute), all see the benefits of team work and collaboration in helping students to learn and fill the gaps in their learning (Vygotsky, 1978).

The research has also added insights into the challenges of implementing authentic assessment practices, a theme that is rather limited in the literature. Student skill weaknesses and levels of motivation to really engage with the simulation and assignments are key issues that those using authentic assessment really need to grapple with. Similar to Fook and Sidhu (2010), this study found that tutors often struggled with group problems and students resistance to engage. Although

students were not interviewed for this study, comments from tutors confirmed what Astin, 2012 said about the impact of student characteristics on performance, including those related to 'cognitive functioning, aspirations and expectations ... and behavioural patterns' (Astin, 2012, p. 76).

Diversity of learner groups is a characteristic of higher education today, particularly given the government agenda for widening access and participation (see, for example, hefce.ac.uk) Students within programmes are therefore likely come with a range of different learning characteristics and backgrounds. Like Astin (1996), Biggs (1989) also researched the impact of student factors on learning performance. He called these characteristics presage and process factors. *Presage* factors include differences in prior knowledge, abilities, personality and home background, language competence, motivation, expectations towards achievement, preferred ways of learning, willingness to engage in collaboration, and current levels of understanding (Biggs, 1989; Freeth & Reeves, 2004). Students also approach learning differently. According to Biggs (1989), student *process* factors influence whether they take a surface or deep approach to learning. In the context of a simulation, for example, students might have quite different levels of knowledge and understanding of the concepts that underlie the game and international students may struggle with language and terminology. Other students may have less prior training or skill in the financial and numerical concepts that could help them interpret results (see for example Brennan & Vos, 2013). And, all of these factors could also affect collaboration and group work. As Freeth and Reeves (2004) note:

> *'to share effectively learners need some knowledge and skills to bring to the collaborative effort. This can inhibit the involvement of [some] students who may not yet feel much confidence in their grasp of [the] knowledge base* (p. 49)'.

Tutors have limited control over differences in student characteristics – particularly those related to differences in motivation, engagement and skill levels – as the decisions on student intake represents are an institutional factor (Astin, 1996). Perhaps tutors may underestimate the impact that such diversity may have on group functioning in particular. Which student related factors have the greatest impact on engagement and performance with authentic tasks such as simulations would be a useful direction for future research. The fact that many students struggle with particular aspects of the simulation and assessment should not, however, obscure the considerable benefits that simulations provide and that authentic pedagogies bring to student learning and development.

6. Conclusions

This study has attempted to fill some gaps in the literature with respect to how tutors assess student learning from simulations and what are the often encountered student weaknesses in assessment performance. Furthermore the study attempted to investigate whether simulation tutors tended to employ authentic assessment principles in designing their simulation assessment and teaching. Simulations –themselves and when structured by tutors – appear to be good examples of authentic pedagogic practices and these practices can allow for the development of more and higher levels skills, knowledge and understanding than traditional approaches. While many, although not all, proponents of authentic assessment claim that it can lead to improved learning (McAlister, 2000), this study has shown that student factors such as low motivation to engage and prior skill weaknesses can undermine the ability of authentic assessment regimes to achieve the purported learning benefits.

The study is limited by the small convenience sample of 35 surveys and eight interviews. Future research with a broader cross-section of simulation users from both business-related and other disciplines could provide greater insights into the relationship between weaker performance and student characteristics as well as that between teaching strategies and student performance. Prior studies have considered how the tutor's actions and behaviour can impact student engagement and success with simulations (Hofstede et al., 2010; Pearson & Smith, 1986; Taylor et al., 2012; Wolfe, 1997) so additional research into the simulation tutor's role could also add to our understanding of factors that affect the outcomes of authentic assessment. In addition, more research is needed into how tutors can best present or prepare students for some of the activities called for in authentic assessment, such as using higher level thinking skills, learning from feedback, engaging in reflection, and working more effectively in groups.

For tutors who are planning to use active learning techniques such as simulations as a means to develop work related competencies, this paper has provided some guidelines for how to structure and enhance the teaching and assessment. If the goal of assessment is to promote and enhance learning, as well as to develop future work and learning competencies, then authentic assessment does appear to offer ideas and practices to help students move towards these outcomes. While challenges remain in terms of student inputs, institutional constraints affecting assessment and potentially tutor actions, there are clear benefits to structuring assessment such that students can develop higher level skills, have many opportunities to practice, get a lot of feedback, and have a number of ways to demonstrate their learning and competence.

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Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UK

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Abstract

This article reports the findings of a study into the challenges that UK marketing academics face in supervising Master's level dissertations. Findings from semi-structured interviews with supervisors from 10 UK Universities are categorised using elements of Biggs' (1993) 3P and Astin's (1970) I-E-O conceptual frameworks of teaching and learning. In particular, the study looks at the challenges that supervisors perceive with the dissertation process and whether they are *context* dependent (related to student characteristics or situational/institutional factors) or *process* dependent (related to dissertation procedural, factors and supervisor-student transactional and relational factors). The main objective is to assess which challenges are more amenable to solutions or mitigation, at least in the short term. In addition, the findings are compared with the literature to identify if there are commonalities or unique differences between those who supervise marketing dissertations and those from other disciplines. While institutional factors such as the drive to recruit more high-fee paying international students and the policy of keeping the master's degree to one year may be difficult to change for marketing educators in the short run, there are many other opportunities to improve the dissertation experience, both for supervisors and students.

Keywords: Master's education, marketing dissertations, supervision

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Perceptions of the challenges associated with supervising postgraduate marketing dissertations in the UKs

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Abstract

This article reports the findings of a study into the challenges that U.K. marketing academics face in supervising postgraduate dissertations. Findings from semi-structured interviews with supervisors from 10 U.K Universities are categorised using elements of Biggs' (1993) 3P and Astin's (1970) I-E-O conceptual frameworks of teaching and learning. In particular, the study looks at the challenges that supervisors perceive with the dissertation process and whether they are *context* dependent (related to student characteristics or situational/institutional factors) or *process* dependent -- related to dissertation procedural factors and supervisor-student transactional and relational factors. The main objective is to assess which challenges are more amenable to solutions or mitigation, at least in the short term. In addition, the findings are compared with the literature to identify if there are commonalities or unique differences between those who supervise marketing dissertations and those from other disciplines and to seek evidence- based ideas for managing the challenges. While institutional factors such as the drive to recruit more high-fee paying international students and the policy of keeping the Masters degree to one year may be difficult to change in the short run, there are many other opportunities to improve the dissertation experience for both supervisors and students.

Keywords: Masters education, marketing dissertations, supervision

Introduction

The market oriented model of UK higher education (Molesworth, Nixon & Scullion, 2009) has led to both an increase in the numbers of students taking undergraduate and postgraduate programmes and the search for higher fee paying candidates. For UK Masters' programmes in business and marketing, for example, Vos (2013) noted that the student numbers increased by just over 300% during the period from 2000 to 2010. Two other trends are notable: first, in the past decade, the time to complete most Masters degrees has decreased from 18 months to one year and second, the vast majority of students on marketing related Masters

degrees typically come from countries where English is not the first language. Currently, Chinese students make up the majority of non-UK students on these programmes and along with other foreign students, pay 30-80% more than domestic students for their degrees (UKCISA.org.uk). The growing student numbers, the rise in non-native English speaking candidates, and the shorter time frame in which students complete today's postgraduate degrees are just some of the challenges faced by academics who teach on these programmes. For both academics and students, many of these challenges coalesce around and become magnified in one of the major teaching and learning experiences on a UK Masters programme, the dissertation[1].

For most taught UK Masters degrees in marketing the traditional dissertation remains the culminating capstone project. Students tend to finish their core taught modules within 8 months and then use the remaining 4 months to complete and submit the dissertation. How students are prepared for the task of researching a particular topic varies by institution, but for the most part students are provided with a supervisor early in the academic year, take a course or set of lectures in research methods, and write a research proposal prior to working on their dissertation. In marketing, most students will undertake some form of empirical research and produce a 12-18,000 word document that includes a literature review, a methodology section, data analysis/findings, and conclusions, recommendations and limitations. While some institutions are replacing the dissertation with other capstone experiences such as consultancy projects and action research reports, the majority of UK-based Masters in marketing programmes still include a dissertation.

The literature on dissertations at all levels – undergraduate, masters and doctorate is robust and covers a wide range of issues and challenges related to the supervision process, to student achievement, and to contextual and institutional factors. However, there has only been very meagre research into the issues associated with the Masters level marketing dissertation in particular. This paper presents a small exploratory study of Masters level marketing supervisors at ten UK institutions in order to identify their perceptions of the key challenges associated with dissertation supervision in the context of a changing higher education environment. The main objectives are to:

[1] In the United States and Canada, the Masters dissertation is called a 'thesis'. The term 'dissertation' is used for the work of doctoral students.

- determine whether there is evidence of issues unique to Masters level marketing dissertations and/or whether they face common challenges and experiences to other disciplines;
- differentiate the supervisor perceptions of those issues that are contextual such as situational and student related factors or those that occur within the process of dissertation study;
- identify those issues and challenges that are more amenable to change or improvement in the short term, and
- establish a foundation for future research into effective longer term solutions.

The paper uses elements of Biggs' (1989) and Astin's (1970) conceptual frameworks on learning and teaching that consider how different factors affect student learning outcomes and their overall learning experience. These factors include those that are contextual and may pre-exist when the student begins the learning experience as well as those that vary and interact during their learning. The study does not seek to operationalise or measure the impact of all these factors but to use them as an aid in understanding and categorising the challenges that dissertation supervisors perceive as being of concern and in need of solutions. To provide some validation of the findings, comparisons are made with the general literature on dissertations from a range of disciplines and academic levels in order to determine if the challenges identified in this study are unique or are representative of broader concerns across supervisors of dissertations.

Background: Masters degrees in marketing in the UK

The website mastersportal.eu was used as a proxy to identify Masters in marketing programmes in the UK given that no higher education body provides such a listing (mastersportal.eu, 2015). The website lists 221 Masters in marketing programmes at both private and public UK higher education institutions, 68% of which award a Master of Science (M.Sc) degree, and 27% a Master of Arts (MA). A sample of 30 MSc and 20 MA programmes was chosen from this website to see how MSc and MA marketing programmes differ. The review revealed little difference in their offerings, although some MSc programmes include more statistics training. Six of the 221 programmes are MBAs with a marketing focus, 5 are M. Phil or M. Res, and except for one European Masters, two part time degrees and four online Masters, all are one year in length. Table 1 provides a classification of the courses based on their titles. Thirty-eight (38%) percent are general marketing degrees with marketing communications and international -related programmes

making up a further 27%. There are 6 programmes that cross two subjects (e.g. Marketing and English; Marketing and Finance), 10 digital and/or social media programmes, and 9 programmes that combine management or business with marketing. These and the variety of other marketing specialty programmes comprise the remaining 35%.

Table 1: Masters of marketing degree types in the UK (2015)

Number	Degree types
85	Marketing, Marketing Management, Strategic Marketing, Marketing Online
30	Marketing Communications, Promotion, Advertising and/or Public Relations
29	International, Global, Cross-Cultural Communications and International
10	Digital Marketing and/or Social Media
9	Management/Business with Marketing
9	International Fashion, Fashion Marketing
8	Brand related
6	MBA – Marketing focus
6	Tourism and Events with Marketing
6	Combination (e.g. Marketing with English; Marketing and Finance)
5	M.Phil or M. Res
4	Sports Marketing
3	Marketing/Business Analytics
3	CIM Top Up (Chartered Institute of Marketing postgraduate diploma + Dissertation)
2	Marketing and Innovation
2	Retailing
2	Marketing, Consumption and Society
1	Charity Marketing and Fundraising
1	Marketing and Financial Services

Total = 221

The programmes were reviewed to determine if they require students to complete a traditional dissertation or other capstone projects. Eight-one (81%) percent of the programmes sampled require students to do a dissertation, 8% give students a choice of a dissertation, an internship project or a major project, and 10% or 22 institutions offer only a major project. The dissertation is clearly still the most common way in which a UK based Masters level programme in marketing is assessed as a measure of 'postgraduateness', although other learning experiences such as 'consultancy projects', 'work-based projects', 'action research reports', or 'integrated communications plans' are currently offered on 18% of programmes.

The dissertation is typically an extended piece of writing based on an in-depth reading and analysis of scholarly work on a topic chosen, discussed with and approved by an academic supervisor. Although literature reviews or dissertations based on secondary research are accepted at most institutions, anecdotal evidence from wide discussion with colleagues across the sector indicates that most students are encouraged to do primary data collection framed around a chosen and justified method. A review of the guidelines for UK Masters' programmes in marketing provided online from 50 Universities show the following similarities in their structure and requirements:

- the dissertation carries at least double the credit value of individual modules[2];
- the word count ranges from approximately 12,000-18,000 words (although length varies from 8000 to 20,000 words);
- it is generally described as a 'major' or 'significant' piece of work;
- students concentrated work on the dissertation begins after two semesters of taught modules, thus allowing about four months for its completion;
- preparation for the dissertation tends to consist of a dedicated research methods module taught during the year or a series of lectures in research methods; and
- students are often required to submit and pass a research proposal before undertaking their work.

The dissertation is a multifaceted project that requires students to integrate an array of skills, processes and capabilities and to demonstrate considerable depth of knowledge on a focussed topic. Hart (2004) notes that the purpose of the Masters dissertation "*is to give [students'] the opportunity to demonstrate…that*

[2] The term 'module' is used in the UK to refer to a course or subject taken within the degree. For a taught Masters degree in the UK, students need to successfully complete 180 credits, 60 of which make up the dissertation/major project and 120 from taught modules. Modules may be worth 15, 20 or 30 credits each, depending on the institution.

[they] have acquired the 'ability to do capable and competent research [and to show] ... 'mastery' of the skills of analysis, synthesis, evaluation, argumentation and data collection and handling ....." (pp. 5-6). He also suggests a range of capabilities and attitudes that students need to bring to the dissertation process including self-management, determination, objectivity, adaptability and reflection.

Most students are assigned a supervisor early in the academic year and they agree terms for meetings, deadlines and expectations. Supervision is largely constituted in face to face meetings, but email is also very important as are voice-over-internet protocol services such as Skype, particularly when students choose to complete the dissertation in their home countries. Researching UK Masters supervisors in an education department, Anderson, Day and McLaughlin (2006) found that supervisors feel their most important tasks are to help students arrive at a well-defined focus for their dissertation, assist them in developing a realistic and manageable research design, help them to fine tune their research instrument, and act as a 'critical reader' and commentator on student drafts. They feel a great sense of responsibility to ensure that the final product meets established academic standards, and for many there is a dilemma in determining how much input, feedback and/or editing to provide before the work becomes less that of the student's and more of their own. Supervisors also take different approaches to developing student agency with the dissertation, some preferring from the beginning for students to take responsibility for managing their time and contacting the supervisor while others provide more structured, rule-driven and timetabled support (Anderson, Day, McLaughlin, 2006).

Factors affecting the dissertation learning experience: A conceptual framework

Learning experiences and their outcomes are context dependent and affected by many factors (Biggs, 1993). Both Biggs (1993) and Astin (1970) have conceived models of learning that delineate the influences and process that affect student experiences and outcomes. Biggs' (1993) 3P model (presage, process, and product) sets out a range of factors that are contextual to the learning situation and exist prior to it. *Presage* factors are of two main types –*student characteristics* such as prior education and knowledge, beliefs about learning, and attitudes towards learning; and *situational factors* such as regulations, policies, the learning environment, and teaching methods. Presage factors influence the approaches that students take to learning (the model's *process*); for example, whether they will be highly motivated and take a deep approach, a more surface approach or a more strategic approach based on their

assessment of what they need to do to pass (Biggs, 1993). Both presage and process factors will affect students' cognitive, behavioural and affective outcomes (the *products*).

Astin's (1970) Inputs-Environment-Outputs (I-E-O) model was first proposed as a means to improve educational research into why some students do better than others on assessment. He argued that unless educational researchers control for what he terms *input* differences (student characteristics), they cannot draw accurate or unbiased estimates of how other factors affect student outcomes. Unlike Biggs, Astin (1970) does not characterise all student characteristics as pre-existing but views input differences as both fixed, such as demographic and educational background characteristics, and those that can vary over time such as " *cognitive functioning, aspirations, [motivation] and expectations, self-ratings, values [and] behavioural patterns"* (p. 76). Many researchers into teaching and learning have found support for Astin's view that how students approach learning will be affected by prior teaching and learning experiences as well as by their self-confidence, motivations, and attitudes (Prosser & Trigwell, 1999; Ramsden, 1992; Entwistle & Ramsden, 1983).

Environment in Astin's (2012) I-E-O model is contextual and *"[refers] to the student's actual experiences during the educational program"* (p. 18). The environment or context for learning includes University regulations and policies, such as recruitment policies; the programme students follow, including content and teaching and learning methods, processes and assessments; the learning environment; organisation and management; and teacher approaches and styles. *Outputs* are student outcome variables that can be cognitive (e.g. grades), behavioural, and affective (e.g. programme satisfaction). Biggs and Astin's frameworks have considerable similarities. However, while Biggs (1989) was initially concerned with the approaches students would take to their learning (deep, surface, and/or strategic), Astin (1970) was seeking to improve the way assessments and their outcomes are compared. Nonetheless, both models provide insights into a range of factors that should be taken into account when attempting to understand and categorise the challenges associated with particular educational experiences and how they might be improved.

Both Biggs (1993) and Astin (2012) added dimensionality and interactions to their models over time and a reading of their research reveals that within both Biggs and Astin's models procedural, transactional and

relational factors are embedded. *Procedural* factors refer to the established guidelines and requirements and how students interpret, work with and understand these requirements and manage their time (Armitage, 2006). Although Biggs does not use the term procedural, he argues that there is an interaction between situational factors such as guidelines/requirements and how students approach learning tasks. This interaction can be positive or fraught with challenges. In terms of the dissertation, procedural factors for students include requirements for students to establish a clearly focussed topic, set aims and objectives, undertake a deep review and analysis of the literature, and justify their methodology. These stages generally take place after or near the completion of research methods training and students' may be required to pass the research proposal stage before moving onto the dissertation.

In Biggs' (1993) learning process, students and teachers are also interacting in a *transactional and relational* manner (Armitage, 2006). Transactional factors refer to how supervisors and students negotiate and work out their expectations of each other and involve supervisors providing information, guidelines and setting work to be completed with students taking in the information and undertaking the work (or not). *Relational factors* are about building trust, managing communication issues and breakdowns, and dealing with emotional and affective issues. As Armitage (2006) notes in his research on dissertation supervision in a UK business school, supervisors will take different approaches to their role, some following a more structured approach requiring students to meet deadlines, follow set protocols and attend set meetings while others will be more ad hoc, preferring to let students develop agency from an early stage. This might involve allowing students to contact them when necessary and set the agenda for meetings. Some supervisors may change their practices over the course of the dissertation. Acker, Hill and Black (1994) found that while many supervisors will start with a more structured approach – what they term a *technical rationality model*, over time they move towards a more *negotiated order model,* tending to be open to adjusting the supervisory process to the needs of different students and to changing their approach over the period of supervision, as required.

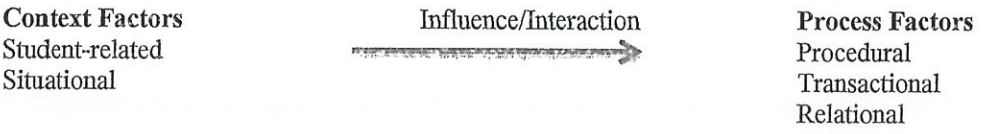
In a learning experience where academics and students work together one on one, such as in the Masters dissertation, *relational factors* often come to the forefront (Anderson, Day & McLaughlin, 2006; Armitage, 2006; Vilkinas, 2008). Over the many stages of and student challenges with the dissertation, supervisors will be called on not only to provide intellectual advice but also emotional support (Vilkinas,

2008). They will be seeking to develop the student's personal skills of self-confidence, independence and agency through the process (Anderson, Day & McLaughlin, 2006). As Grant (2003) notes *"supervision differs from other forms of teaching and learning in higher education in its peculiarly intense and negotiated character, as well as in its requirements for a blend of pedagogical and personal relationship skills"* (p175).

Using the interview transcripts of the 10 current UK Masters in marketing dissertation supervisors, this study will apply Biggs' (1993) and Astin's (1970) concepts in order to identify and categorise the factors and challenges that, from their perspective, most influence and affect the dissertation learning experience. We consider both *context factors* – student related and situational (including Astin's (1970) environmental factors and Biggs' (1993) institutional factors), and process factors, that is, those that can vary with or within the student-supervisor relationship: procedural, transactional and relational (*process factors*). We will also consider the interaction between context factors and process factors (See Figure One).

Figure One:

Factors affecting the dissertation supervision and learning experience



The findings will be compared with the broader literature on dissertations to determine if the issues faced by marketing supervisors' are similar to that faced by supervisors in other disciplines or to determine whether there are some unique issues. Recommendations will also be made and an agenda set for future research.

Methodology

A qualitative research design with in-depth, semi-structured interviews was used to explore perceptions and experiences of academics involved in supervising U.K. based postgraduate marketing dissertations. Given that research into marketing dissertations is very limited, an exploratory approach was deemed most appropriate as a means to lay foundations for future research.

The sample for the study included those at different academic levels - professors, senior lecturers and lecturers - from ten Universities across the U.K., all of whom are also active in research and are widely published. Six male and four female academics took part. The degrees that the respondents work on include five Masters level marketing/strategic marketing programmes, three MA marketing communications programmes and one MA in digital marketing. The selection of degree programmes was partly based upon data from mastersportal.eu that showed general marketing degrees as being most popular (36% of 214 programmes and 50% in this study) with marketing communications being second and digital marketing programmes representing the specialist programmes. Respondents were recruited in the first instance via email, either because they were known to the authors of the study or were recommended. As the respondents wished for their University to remain anonymous, we are unable to give details on the ten institutions that took part.

The research instrument was developed following the review of current literature into existing issues, themes and opportunities across the dissertation literature in general and as identified by Vos (2013). No indication was given to respondents of the significance of these themes in the literature as we were seeking to identify challenges that resonated with marketing dissertation supervisors in particular in order to encourage them to draw conclusions of their own. Additional questions were asked to ensure that respondents had an opportunity to discuss what they felt to be the main challenges of dissertation supervision. Some background questions provided insights into each academic's tenure as a dissertation supervisor, their core research and teaching interests and their role at the institution. Information was also sought on the general characteristics of their postgraduate marketing dissertation project, whether students were offered alternatives to the traditional dissertation, how many students, on average, they supervise annually, and the typical backgrounds of their students. Pilot interviews were carried out with two current supervisors exclusively as a check for validity, thereafter, ten other supervisors were each interviewed for approximately 90 minutes each at their respective institution.

Findings

This section presents the key findings of the research. The interviews were recorded and transcribed and then analysed for common themes and issues as well as for unique perspectives, challenges and

approaches. The results reveal six significant challenges faced by those supervising MA marketing dissertations in the UK: 1) Mismatched supervisors and the supervisory relationship; 2) Student motivation, comprehension and knowledge; 3) Research methods training and failing the research proposal; 4) Choosing a viable topic and conceptual framework; 5) Language and cultural barriers; and 6) Plagiarism and academic dishonesty. The themes are evidenced in some cases by direct quotes from the respondents' narratives. The terms used to refer to the interviewees are 'respondents' and 'supervisors' and both are used interchangeably throughout. For clarity, each respondent has been given a code so they are identifiable and so that the data remains rich and meaningful, while still remaining anonymous. See Table 2 for an explanation of the coding.

Table 2: Interview codes

Codes: Gender, Academic Level, University Type		
Gender	Male or Female	N = 10: 6 male and 4 female
Academic Level	Lecturer, Senior Lecturer, Principal Lecturer, Reader, Professor	Most U.K. Universities use these titles to show the teaching and/or research level of staff. Career progression generally begins at the Lecturer Level, however a lecturer at an old University would potentially have more research experience that one from a Post 1992 University. N = 10: 2 Lecturers; 4 Senior Lecturers, 1 Principal Lecturer, 1 Reader, 2 Professors
University Type	Old University or Post 1992	'Old University' refers to the more established institutions that are often more research focussed and 'Post-92' refers to institutions that became Universities after 1992 and tend to be more teaching focussed. N = 10: 4 Old University and 6 Post '92 respondents.

As background, all supervisors noted that 80% or more of their students are from overseas, and have generally entered from an undergraduate programme of study, from employment, and/or from another

international institute. An average programme has 30-60 students (although one Old University has 160 students on just one of its MA marketing programmes, and this has brought it significant problems with dissertation supervision). The range of dissertation supervision experience ranged from 4 years to over 20 years. Except in the case mentioned above where numbers per supervisor are larger, each respondent supervises anywhere from six to 15 students per academic year. The respondent with 15 students complained that this is too many to manage effectively, especially where students have skills deficits or language issues. All respondents except one stated that their students undertake a 'traditional' dissertation, meaning that they are required to write approximately 15,000 words on a topic of their choice relating to the marketing discipline, the vast majority involving primary research and data gathering. Students at one Old University undertake a consultancy project but the respondent noted that it includes many of the components of a traditional dissertation. In all cases, students complete their Masters in one year, with taught courses running over two semesters and about four months dedicated to the dissertation.

Challenge 1: Mismatched supervisors and the supervisory relationship.

A key challenge identified by respondents is the mismatching of supervisors to students. With more post graduate marketing students and more students on other general business-related Masters' programmes (e.g. MBA) who are choosing to do dissertations on marketing topics, respondents remarked that there is just not enough teaching staff in their subject area to supervise all the dissertations, nor sufficient expertise in other departments. Many commented on the fact that they supervise Masters dissertations on subjects of which they have no in-depth knowledge of or are unrelated to their own areas of research. In terms of the supervisory relationship, all respondents identified problems with students failing to contact them, failing to turn up to scheduled meetings and not appearing to understand their recommendations.

In terms of how they structure and proceed with the supervisory relationship, each respondent tended to have their own approach for calling and conducting meetings. Most generally see their students six to a maximum of ten times during the dissertation journey and meetings tend to last from 15 to 30 minutes. Those supervising dissertations tend to fall into one of two camps in their approach: structured and ad hoc. Those supervisors who favour the structured style often have an initial group meeting with all students and then follow this with individual one to one meetings. Common to those with a 'structured' style is developing a set of rules that the supervisor explains to students and to which they are expected to adhere:

> *I have a strict set of rules that I have developed over my years as a supervisor in order primarily to get the most out of my students and encourage them to progress and secondly, to manage my time effectively so that I'm not constantly being sent work or questions via email. (Female, Senior Lecturer, post-1992)*

Likewise, another male respondent has developed a list of rules to establish expectations early that he sends out to all students. It is one of the more extreme examples of a structured approach being used to manage time and progression with the dissertation process and to manage expectations. The list largely includes behavioural expectations related to time management (coming to meetings on time; submitting various components on time; having a work plan and sticking to it) and codes of conduct (coming to meetings with paper and pen; informing the supervisor if the student cannot make a scheduled meeting; demonstrating evidence of wider reading and asking informative questions rather than asking the supervisor 'what should I do'; seeking the supervisor's help when difficulties arise; treating the process as a professional relationship; not expecting the supervisor to do editing). He noted, however, that many students ignore this set of guidelines. (Senior Lecturer; post 1992 University);

Another male respondent also explains that despite setting out clear guidelines, many students ignore them, thus resulting in a rush near the end of the process when serious problems cannot be rectified:

> *I make it very clear that when I see my students for the first time, what I expect from them and I lay out certain ground rules that they should follow. Such as, they must update me regularly with their progress on how they are doing and I would expect to see them about 5 or 6 times, which is a usual number...many of the students say that they will keep me informed but they don't so then you have to chase them...Some students just make excuses and then send you their whole draft just before the deadline. Of course, certain mistakes made by this time can't be rectified and this is a disaster for these...of students. I'm not sure what else we can do as supervisors to address this student apathy and disorganisation" (Male, Reader, post-1992).*

A few of those interviewed followed a more ad-hoc approach to meetings, but one respondent discussed the weaknesses inherent in his approach:

> *I don't really have any protocols, which is unwise, as you can then be pestered by students all over the summer. I have colleagues who say I will see you at this time only and I will read a full draft at the end of the summer. I find that hard ... if a student gets in touch with me, I have to get back to them (Male, Professor, Old University).*

In general, a common complaint was that many students do not turn up to scheduled meetings and that many international students return to their home countries to carry out their primary research and write the dissertation. Supervisors saw these behaviours as having a detrimental effect on the quality of the end product. Some also saw it as making it more difficult to ascertain whether the end product was the student's own work. With students not coming to the University for meetings and going overseas to do their dissertations, some supervisors have come up with other ways to interact with them. Innovative examples from amongst the respondents include: providing support in the form of online discussion groups, blogs, Skype meetings and through e-learning platforms. For example:

> *I don't mind using Skype to have my meetings with students as in my view this is the same as face to face and is a great alternative – so long as their connection is decent enough it's no problem. (Male, Lecturer, Old University).*

Challenge 2: Student Motivation, Comprehension and Knowledge

Students' lack of motivation and advanced conceptual skills needed to grasp research methods or the literature review are also cited as key challenges for supervisors. They are also deemed particularly hard to address:

> *The problem is you can give them as many research methods classes as you like with innovative teaching methods, creative approaches, course conferences and so on but if a student is lacking in motivation and doesn't really want to be here then you have a problem that is difficult to overcome (Male, Professor, post-1992).*

While all those interviewed expressed positive experiences with dissertation students over the years and with watching students develop, learn, and gain confidence, all complained that many of their students - and often a majority - are not very motivated or enthusiastic about the dissertation. Planned supervisory meetings often did not allow for in-depth, on-task or significant discussion as students came with few questions, little preparation, and did not seem to have taken prior feedback into account.

> *It is very frustrating when you set a research meeting and the student doesn't turn up and hasn't let you know in advance. A lot of my students don't really seem to understand what it is that we want from them and they seem very confused by journal articles and the idea of synthesis of ideas, let alone critique (Female, Lecturer, Old University).*

These seemingly rather bleak sentiments are echoed by the other supervisors and suggest that more time needs to be spent motivating students in the earlier preparation for the dissertation and considering alternative ways to develop their cognitive skills but many felt that there were too many barriers currently in the system to allow for this to happen.

Other common concerns were about the challenges students faced with really getting to grips with the academic literature and then being able to synthesise, analyse and critique the work of others.

> *I really struggle with getting my students to do a thorough literature review. They usually find it hard at first to find relevant literature and then to pull the work of many authors together and to find common themes. They find it difficult to find a theoretical or conceptual framework to base their work on as well. These are hard things for all researchers, but I don't know if we give our students enough preparation in how to do them even at a fairly basic level (Female, Senior Lecturer, post 1992)*

Further discussion of skills and knowledge weaknesses follows in a later section.

Challenge 3: Research methods preparation and failing the Research Proposal.

Commonality exists regarding the preparation of dissertation students across all of the respondents' Universities. They each expect their students to complete a research proposal that generally includes a focused topic, aim, objectives and/or set of research questions, a brief literature review showing evidence of a conceptual framework, justification for the chosen research design, clarity on how primary research participants will be sampled and accessed, ethical considerations and a timeline for completion of each section of the dissertation.

In the majority of cases, students are prepared for the dissertation via a research methods module or set of lectures. Most respondents also agree that the way research method are taught and assessed is not an ideal way to prepare students for the dissertation, nor does it help them write a good initial research proposal. One lecturer commented on the weaknesses in current training and assessment:

> *"We have four assessment points for research methods. One to generate a bibliography, something on a literature review, a presentation on the methodology they want to use and how they want to employ it. There was another part where they had to do a piece of writing in relation to – well it's a bit of textual analysis. These make up a kind of research proposal for*

their dissertation, and they then do an oral presentation to us and we give feedback. It's a bit disjointed and doesn't seem to help them much when it comes to the dissertation. Our processes really need some work ... (Male, Lecturer, Old University).

All remarked that each year some students start their dissertations even when they have failed the research proposal. Underlying the problem of failures in the proposal is the difficulty students' face in research methods training. Fail rates on the module average 25% and most respondents feel that it remains an especially challenging course for students. Common problems include: lack of resources to create additional classes; lack of student attendance; student apathy and students not grasping or understanding research approaches, philosophies and concepts. In order to help more students through the module, one department removed the more challenging concepts, but this did not, in the end, solve the problem of failure or weaknesses in the dissertations:

The problems with our research methods classes are that they are too general and lacking in depth and nuances of research that our students need.....there are no philosophical discussions at all.....but because this had proven difficult for students in the past, we took them out. (Male, Lecturer, Old University).

Similarly, another respondent indicated that their research methods curriculum is too limited and too generic:

At as at the moment our students take classes along with all the other Masters students – accounting, HR, the whole lot. They don't have seminars, they just have lectures, which perhaps isn't the best option for learning about research (Male, Professor, Old University).

Some academics are trying out ways to overcome the problems students face with the research proposal and research methods:

When I first meet with my students, I tell them all to resubmit their research proposal to me, so I get an idea of what they want to do. I then ask them to re-write their proposal based on the feedback they were given and to incorporate any further advice I may have given them since we have met. This means that any of the students who have failed are brought up to standard more quickly than if they just got started on the dissertation proper. (Female, Senior Lecturer, post-1992).

Another academic has turned the poor student engagement with research methods she has faced into a positive learning experience by using a mini research conference:

"I ran research methods for several years and found that student attendance and enthusiasm starts off well but seems to wane...I wanted to create something that addresses this and inspires them, so I organised a research methods conference and invited some key speakers who are

colleagues I know from other institutes and are leaders in their field in their own areas of interest .... The students seem to get a lot out of it and get focussed. Attendance is high too and our fail rate is about 15% which is much lower than other places I've worked where we haven't done this" (Female, Senior Lecturer, post-1992).

In general, however, the conversations revealed that the supervisors wish they had more time to engage their students during the preparation for the dissertation in the research methods classes, had more time to try different approaches, and to find ways to share good practices amongst the teaching and supervisory team.

"There is a significant gap between the supervisors' knowledge and what is really going on in the research methods classes...most of us aren't really clear on what preparations the students go through before they come to us to be supervised. I think there is a real issue with this and perhaps the process would be better if we had more of a collaboration between everyone and we share knowledge and expectations" (Female, Senior Lecturer, post-1992)

Many noted that a key reason why students find research methods difficult, fail their proposals and have limited knowledge of good research practice when it comes to writing their dissertation is that a one year Masters programme with all the other content students are expected to learn is just too short for them to develop the knowledge and skills.

Challenge 4: Choosing a Viable Topic & Conceptual Framework

In line with failing the research proposal, students generally have problems finding a viable topic area to research that will lead to a worthy conceptual framework. The majority of supervisors agreed that they experience this difficulty each year and noted that most students come to their first meeting with a topic area that is far too broad.

Some students come to me saying that they want to research 'branding and trainers' or 'consumer behaviour and decisions making' or 'why people buy ...whatever' – it's incredibly frustrating as we try to prepare them through our intensive and advanced research methods module, yet we still have these problems once the student comes to the supervisor relationship, they just don't grasp the methodological issues sufficiently enough to proceed. (Female, Senior Lecturer, Post-1992).

In many cases, students approach the dissertation as if it were a company project or report:

Most of my students tend to want to do a case study of Starbucks! [laughs]...lots of students want to do almost consultancy type projects – a student yesterday for example wanted to do something on competitive strategy of iPad in China. Then you ask them two questions. Firstly, you ask them can you get access to proprietary information into the strategy and secondly, what

sort of literature review will they base it around. 'Err-um' is usually the response, 'Hadn't thought of that' they say. (Male, Professor, Old University).

Some respondents see the challenges students face with establishing a focussed research topic as a problem of skills - in particular, weaknesses in students' abilities to be analytical and critical - while others see it as a challenging task that takes considerable time – even years - to learn to do well.

Challenge 5: Language and Cultural Barriers

The ten respondents to this study maintained that language competence is a significant issue facing U.K. postgraduate marketing dissertation students given that, in all cases, 80% or more of their students do not have English as a first language. The narratives point to the frustration that supervisors feel at the drive by their institutions to recruit more and more overseas students whose level of English is low to very poor. These students necessarily find writing a 12- 18,000 word dissertation very difficult.

There is also a concern by some respondents that the English language qualification used to recruit students, the IELTS[3], is a flawed measure of language competency. Two respondents noted that there are big differences in being able to speak coherently, understand written materials and write clearly in another language and most international students are weak in both comprehension and writing.

I think our IELTS is 7 but there are lots of issues, for one thing, the IELTS is quite flawed and cheating does happen. It offers a very weak understanding of conversational English, which is associated with the test. I think Universities don't want to face this as of course then numbers would reduce and therefore funding (Male, Professor, Old University).

Given how critical these skills are for writing a dissertation, respondents argued that students need more time to learn how to comprehend academic articles written in English and to write effectively, but as noted above, they feel that a one year Masters programme is just too short for these purposes.

Respondents also discussed cultural differences in how international students are taught prior to coming to the U.K. and how this might impact upon their ability to undertake a dissertation. One respondent perceives that language and culture are inextricably linked with how a student is potentially able to cope:

[3] IELTS stands for International English Language testing system that is used across the world to test standards of English. All U.K. Universities use the IELTS as a measure of English language competence when choosing to admit non-native English speakers. Most Universities take students with a 6.5 IELTS score and many feel this is just too low for Masters level comprehension and writing.

> *North American, Europe, British and Russian students are more independent learners, they go off and read more and come back and say OK I have read this and this is what I think, but my Asian students, they are more dependent due to what are probably cultural differences in how they have been taught in the past... so linguistically and conceptually, they struggle with the process of the dissertation (Female, Senior Lecturer, Old University).*

Similarly, one professor at a post-1992 University explains that language and culture in higher education institutions will always present problems for students undertaking their dissertations:

> *We have a range of students from a variety of cultural backgrounds and that brings diversity and range to our programmes, however, as our Masters' programmes are only one year long, it's a lot for them to take in. The challenges presented by the dissertation and research methods are already difficult for English speaking students so we tend to have real problems with the level of English. We try to address it with more stringent measures during recruitment, but with direct entry and alternatives routes onto courses, it's not always possible. (Male, Professor, post-1992)*

These findings lend support to the idea that language competency is only one of the challenges associated with large cohorts of non-native English speakers who only have 12 months to complete their degree. Many respondents also noted that students on their programmes do not have marketing as a first degree and thus also need time to learn the core concepts. Prior educational experiences may not include writing or even reading long essays or research papers or critiquing others work and thus they come to the UK Masters dissertation with an incomplete set of skills for a marketing dissertation.

Challenge 6: Plagiarism: Disillusionment and a Desire to Raise the Academic Standard.

There seemed to be a real sense of disillusionment amongst the supervisors regarding plagiarism and the limited use of vivas at their institutions. Orally examining students work is generally not an option for most respondents in this study unless the student has been accused of plagiarism and yet all respondents felt it should be a natural part of the process. However, for situational reasons, such as high student numbers and the short time frame supervisors realise this is not likely to happen, even though they believe it would raise the overall academic standard.

> *I think it's a mistake that we don't have vivas, it's a useful idea as it would give us an understanding of whether it's the student's work or not. However, from what I have seen at this University, it doesn't seem like we can do much even if we do know that the work isn't the student's own (Male, Reader, post-1992).*

Respondents are also concerned about that idea that more and more students may be buying their dissertations. Online businesses which make this an option for students are flourishing. At least one respondent to this study had experienced this problem:

> *There is a real issue with students buying dissertations. I had two cases in particular, a student, she kept failing her dissertation, twice in fact. It's written in American English and she is from Iran and the stats were beyond her capability, ...we knew that but it's so hard to prove, so she slipped through the system and she got her degree. Another one was a Thai National whose work was suspect but she also got her degree in the end... ...These are the issues that no one wants to face and there is no real system to deal with it here in the U.K., it's awful, it's so difficult to prove (Female, Lecturer, Old University).*

One supervisor points to the need for the institution to do more:

> *The future seems bleak with the amount of students that seem to be buying dissertations – they even get text messages almost from the first week they are here from companies offering to write their dissertations as well as other coursework– with new technology it is harder and harder to track whether a student is guilty of plagiarism....The problem ... is that we need to be supported by our Universities and have stringent, appropriate and effective plagiarism protocols in place so that these students do not go on to receive their degrees (Male, Professor, post-1992).*

Discussion

Marketing academics face clear and increasing challenges with preparing students for and supervising them through their postgraduate dissertations. The findings here are based on supervisor perceptions, but do lend themselves to categorisation using the factors outlined in Figure One as being either *contextual*: (student and situational) or *process* related: (procedural, transactional and relational). Table 3 provides an overview of the supervisor perceptions of key challenges they face with Masters marketing dissertations. What follows is a discussion of these factors and support from the literature that demonstrates where marketing related challenges are also found in other disciplines.

Table 3: Marketing dissertation supervisor perceptions of contextual and process challenges with the dissertation

Context Factors	• **Situational**	1. University policies on recruitment – more higher fee paying candidates; up to 80% are international students 2. IELTS a flawed measure of English language competency 3. Length of Masters has decreased to 12 months 4. Increasing number of dissertation students per supervisor 5. Increasing numbers of marketing dissertations – supervisors not always working in their area of specialism 6. Lack of resources to provide additional support for supervisors, students, and for vivas 7. Research methods module/lectures may not be the best way to prepare students for the dissertation 8. Lack of collaboration and sharing of good practice amongst dissertation supervisors
	• **Student –related**	1. Many international students have weak linguistic skills 2. Large percentage of students who have not previously studies marketing 3. Prior educational backgrounds of many international students does not prepare them for writing long research essays or for critical analysis 4. Weak conceptual skills 5. Weak research –related skills (literature review, methodology, analysis) 6. Poor motivation and attendance in research methods and at supervisory meetings

Process Factors	• **Procedural factors**	1. Student challenges with choosing a viable topic for the dissertation 2. Student challenges narrowing down and focussing their topic for research 3. Problems with all aspects of literature review 4. Weak primary research gathering and analysis
	• Transactional and relational factors	1. Supervisor using more approach structured hoc does not always meet its objectives – many students tend not to follow the rules/ guidelines 2. Supervisor approach may not be appropriate for the type of student 3. Student behaviour – not coming to meetings, lack of preparation, leaving the country to complete dissertation

Context factors represent a considerable set of challenges for supervisors. In terms of situational factors, respondents referred often to their institutions' recruitment policies highest priority as attracting as many high fee paying candidates as possible, especially non-UK and non-EU students who can pay up to 80% more than domestic students. The resulting challenges are higher staff-student ratios for dissertation supervision, mismatches between student interests and supervisor expertise and often a large number of students with linguistic problems that are difficult to overcome in a one year Masters. Many respondents to this study also feel that their institution sets the English language proficiency requirement (IELTS minimum score of 6.0 to 6.5) too low and the test does not really measure students ability to work with scholarly texts and write effectively. Even according to IELTS, students falling within the band between 6.0 and 6.5 are merely 'competent users' of English (Paton, 2012) and a large study undertaken by the University of Western Ontario found that tests of English used are generally poor predictors of academic performance and students writing ability (Simner & Mitchell, 2007). In addition to the linguistic challenges that overseas students face, many have come from a different educational background that may not prepare them for writing a long research document like the dissertation, an issue that will be discussed further under student-related factors.

Another situational factor that is not so much institutional as representing what could be called a tradition in UK marketing departments is the requirement that students take a research methods module as preparation for the dissertation. Findings suggest that many students' struggle with research methods training and that the content and assessment does not prepare them well for the dissertation. Some respondents have taken it upon themselves to add additional training to help improve students' knowledge and understanding of academic research, but this is not resource effective and departments need to work together to find better approaches.

The literature is also rich in terms of challenges that students from a range of disciplines face in learning research methods. (Edwards & Thatcher, 2006, Muronen & Lehtinen, 2005, Meyer, Shanahan & Laugksch, 2005) For example, Allison, Kewkowicz and Nunan (1998) argue that the typical way that research methods are taught and assessed is not appropriate for dissertations. For the most part, these classes are more applied than research-oriented and are assessed with short applied projects or exams. This approach does not guarantee that students will be able to apply the knowledge and skills learned to dissertations.

At most, a fifteen week first or second semester course in research methods is provided as the core foundation for the dissertation at UK Universities. This very likely means that topics such as how to undertake a literature review and how to select an appropriate research method are covered in just one or two weeks, arguably not enough time for the complexity of these topics. Considerable research has also pointed out difficulties that all students have with transferring knowledge acquired in one domain to that of another (see for example McKeough, Lupart & Marini, 1995, Bransford, Brown & Cocking, 2000) and that for successful transfer, students must be given multiple opportunities to apply knowledge learned to the new context (Maranville, 2015) and have mastered the earlier material (Bransford, Brown & Cixking, 2000). These may be difficult to achieve in the short time available for the dissertation. Interestingly, there is little research on the impacts on learning or the differences in outcomes from a one year versus a two year Masters degree.

A significant category of context-related challenges for both supervisors and students relates to *student characteristics*. Astin (2012) describes these as either fixed (demographic and educational background

characteristics) or those that can vary over time such as cognitive functioning, motivation, aspirations, expectations, learning beliefs, values and behaviour. Three key student- related factors that present challenges for marketing supervisors and students have emerged from the findings: language issues, prior education, and skill deficits. Language issues and competency have been considered briefly in the section above, but, supervisors report that international students evince other types of skill weaknesses. In particular, Chinese students, who make up the largest cohort in most MA Marketing programmes, are considered to have limited training in critique and analysis. Bitchener and Basturkmen (2006), Abasi and Graves, 2008 and Huang (2008) have examined the linguistic challenges that Chinese dissertation students in particular face in understanding scholarly work written in English and in writing a literature review section that requires criticality and attributing sources. In their study on Chinese student's critical thinking performance, Ku and Ho (2010) note that while the Confucian-collectivist culture of the Chinese places a high value on academic pursuit it does not actively encourage the kind of critical thinking that is advocated in the West. They note that "in this cultural context where higher values are placed on respect for authority, tradition and social harmony, diversity in opinion may not be well appreciated" (p.57). This point should not be overstated, however, as Chinese educators are acknowledging the importance of critical thinking and students who now come to study in Western Universities may be arriving with greater experience of this type of thinking than we give them credit for (Ku & Ho, 2010). Their challenges may lie just as much with language difficulties as with thinking and prior learning styles.

Skill deficits or weaknesses in analysis, evaluation, clear and coherent writing, methodology and statistical analysis are also cited by marketing dissertation supervisors. These problems are enhanced by the fact that a dissertation requires students to integrate such a wide range of knowledge and skills -some of which may be partially learned in research methods and others which, it is often assumed, students have learned elsewhere As Andrews (2007) has noted, educators tend to teach content over skill development despite the employability skills agenda, and supervisors are wrong in making the assumption that these key dissertation skills have been taught elsewhere, in depth, or have been sufficiently mastered.

Procedural challenges are related to how students interpret, work with and understand the requirements of the dissertation and managing their time. As noted in the conceptual framework *procedural challenges* are influenced by situational factors and are associated with prior learning and skill deficits. Situational factors

include the type of preparation marketing faculty choose to give students for the dissertation (e.g. research methods module) and the short time frame to inculcate the knowledge and skills needed for each part of the dissertation in a one year programme. These issues may help explain why students are often confounded or at least initially perplexed by how to undertake different stages of the dissertation. Respondents to this study focused particularly on the difficulties students have with problem definition and narrowing down a topic for research, problems that have also been identified in the literature (Todd, Bannister & Smith; 2006; Thompson, 1999; Cooley & Lewkowicz, 199, 1997; Jenkins, Jordan & Weiland, 1993).

Procedural and *student-related challenges* are often compounded by the fact that students and supervisors have different expectations about what their counterpart will provide or be able to do and what exactly is meant by 'plagiarism' or attribution and justification of knowledge, a point we will return to later. In addition, supervisors may have become habituated to aspects of the process over such a long period that these aspects have become tacit and taken for granted, and are thus never overtly communicated to students (Bitchener & Basturkmen, 2006). Furthermore, it appears that supervisors do not often share ideas with each other so as to identify and agree on good practices.

Transactional factors are those related to how supervisors and students work out the expectations and requirements of their relationship over the dissertation process and *relational factors* refer to how each deals with building trust, managing communication issues and breakdowns, and working towards each parties expectations (Armitage, 2006). *Transactional and relational challenges* emerge when supervisors have expectations and understandings of their students' prior knowledge and capabilities that do not match the students' abilities (e.g. Drennan & Clarke, 2009; McCormack, 2004). McCormack (2004) conducted interviews with a small group of dissertation students and supervisors over the duration of their study and found that there was a considerable gap in students' understanding about research and what was expected of them against what supervisors believed students were able to do. In some student/supervisor relationships this gap was so wide that student's either did not finish or did not finish on time. Armitage (2006) notes that both supervisors and students will take different approaches to dissertation study and, indeed, our study demonstrated that some supervisors follow a very structured, rule-based approach while others are more ad-hoc. Differences in approach may lead to mismatches between supervisors and

students, in particular when a more ad-hoc supervisory approach is used with a student who is quite dependent and needs more structure and 'hand-holding'. In our study, however, it appears that regardless of whether the supervisor used a highly structured, rule- based approach or a more ad hoc one, many students still failed to turn up to scheduled meetings, make use of feedback or meet deadlines.

Marketing supervisors also felt that many students showed low levels of motivation to work on and complete the dissertation. The literature is rich in terms of why students may lack motivation for their dissertation and in recommendations on how to improve motivation and student agency (e.g. Maxwell & Smyth, 2010; Akylina, 2006; Grant, 2003; Woolhouse, 2002; Taylor & Dawson, 1998; Hetrick & Trafford, 1995; Phillips, 1994; Powles, 1988). Ahern & Manathunga (2004) caution that what appears to be low motivation may in fact conceal other reasons such as lack of confidence or skill weaknesses and they recommend approaches to identifying the underlying reasons and for dealing with them.

A final set of challenges are those that are in part contextual and in part procedural - plagiarism, attribution of sources and academic dishonesty. Plagiarism, the potential to purchase a dissertation, and misunderstandings about what and how to reference are major concerns for our supervisors. Most feel that at one time or another they may have or their institution has allowed a student to pass based on work that was either all or in large part not their own and this is a great worry to them. Some feel that the short time frame for the dissertation, cultural factors and the prior education of international students, the increasing number of online sources offering to write the dissertation, and general student skills weaknesses contribute to the problems of academic dishonesty. Supervisors, programme leaders and University managers need to view it as a multifaceted problem that a few extra training hours on what plagiarism is and how to avoid it will not solve.

Recommendations

A major objective of this study was to identify key challenges faced by marketing dissertation supervisors. Although a small sample was used, we can argue that the literature supports most of these challenges as common to dissertation supervision from a range of disciplines. A second objective was to categorise these challenges as a first step in identifying potential solutions. We argue that supervisors, programme leaders, and University managers would benefit from a discussion of the factors that affect and influence the

dissertation learning experience and student outcomes. Through a structured evaluation of these factors those involved can identify which are within their control to change or influence in the short term and which as Freeth and Reeves (2004) note, *"must be accommodated' because of 'genuine constraints"* (p.43).

In drawing some tentative conclusions about which of these sets of challenges are most amenable to change, we can consider the following:

Situational Factors: Given the change in UK higher education to a more market oriented model where it is incumbent upon Universities to increase their income to make up for the decreases in government funding, it is not likely that changes will be made in the near future to student recruitment to UK Masters in marketing programmes. As long as overseas students are willing to come to the UK for their postgraduate education and pay the higher fees, Universities are likely to continue taking them. As more is reported in the media about the poor language skills of international students, perhaps, some pressure may come to bear on some institutions to seek ways to enhance student language skills either within the programme (e.g. Kingston University's Masters of Marketing with English programme) or to link with overseas institutions as feeder schools where more concentrated and discipline specific language training is provided before students come to the UK. To date, little research has been done on the impact on learning or outcomes by the reduction in UK Masters in marketing degrees to one year.

In terms of research methods training as ineffective preparation for the dissertation, there is much support in the literature for how to improve the training or to provide training in different ways (Wagner, Garner & Kawulich, 2011; Edwards & Thatcher, 2006; Meyer, Shanahan & Laugksch, 2005; Murtonen & Lehtinen, 2003, 2005). For example, Andrews (2007) provides a framework for teaching students how to frame an argument and to think critically in preparation for their dissertations. Wagner, Garner and Kawulick (2011) provide recommendations on how to restructure the research methods courses and use different forms of assessment to better prepare students. Edwards and Thatcher (2006) suggest that supervisors should get refresher training in how to teach research methods particularly for the dissertation and be provided with more appropriate materials than the traditional methods textbook. They suggest that students should have a longer period of training in how to do academic research during their Masters and also be given ongoing assessments. Their study found that this approach led to significant improvements in

students understanding of key research concepts and how to apply them. A final point is that supervisors both within and across institutions should be encouraged (and given the means to) share ideas and good practice in order to identify ways to improve research methods training. In this study at least two supervisors have found interesting solutions or additional support for their students that others could benefit from.

Student characteristics: The literature on the challenges that non-native English speakers' face and how to support them is considerable. In fact, a great deal of the research into dissertation supervision and processes can be found within English as a Second Language journals (e.g. Melles, 2009; Bitchener & Basturkmen, 2006; Braine, 2002; Dong, 1998; Cadman, 1997; Jenkins, Jordan & Weiland, 1993). Among the most important findings are that supervisors often fail to realise how isolated their international students feel during the dissertation process (Alkylina, 2006) and that since many of these students face similar linguistic and skill related issues, collaborative cohort groups are useful in providing peer group support and sharing of ideas and practice. Ahern and Manathunga (2004) also note that the issues of low motivation and attendance may have more to do with other problems that a student is facing. Johnson, Green and Kluever (2000) developed and refined a procrastination inventory tool to identify reasons why students may be showing low levels of motivation and failing to move on with their dissertation. The tool differentiates between categories of factors: cognitive (lack of knowledge or skills) emotional/affective (anxiety, feelings of inadequacy, personality clash with supervisor) and/or social (social isolation, pressure of external social relationships). The authors provide techniques to help with student motivation depending on the reason or reasons identified.

Procedural Factors: Much research has been undertaken into how to help students through various stages of the dissertation process. (Cassuto, 2010; Maxwell & Smyth, 2010; Ahern & Manathunga, 2004; Swales & Lindemann, 2002; Johnson, Green & Kleuver, 2000; Ryan, 1999). For example, Zuber-Skerritt and Knight (2010) suggest a series of early workshops with group discussion, group support and reflection to help students with problem identification and focus. Having group versus individual discussions allows students to see that they are not alone in their challenges and that there are a number of ways to (for example) narrow down a topic. This also helps save time for the supervisor. Andrews (2007) provides detailed advice on how to help students build critical thinking and argumentation skills for the dissertation.

As noted above, greater sharing of ideas across departments and disciplines would very likely help to propagate good practices that others could benefit from.

While the present study only looked at supervisor's perspectives, the literature demonstrates that students often view the problems in the relationship quite differently (De Kleijn, et al., 2012; Drennan & Clarke, 2009; Dong, 1998; McCormack, 2004) Aspland, Edwards, O'Leary and Ryan (1999) reviewed a series of studies on student perspectives versus supervisor perspectives of supervision and found that while supervisors often complained of students not attending meetings and not making use of their feedback, students complained that supervisors took too long to provide feedback and did not provide them with enough guidance at the beginning. An unpublished study by Fan (2013) for the Higher Education Academy (UK) also found variation in the perspectives of supervisors versus those of non-native-English-speaking dissertation students in particular. Student comments included the fact that it was often hard to make an appointment with their supervisor, that the supervisor never replied to emails, and that they took a long time to provide feedback. Fan's supervisors complained that many international students are not active in contacting them and generally lack motivation. Clearly, this study pointed to considerable differences in expectations and understanding which very likely affect both student experiences and outcomes negatively.

Transactional and relational factors: Two key messages emerge from the review of transactional and relational factors: students and supervisors often have different expectations and different understandings of challenges each are facing, and, as noted above, lack of attendance and failure to adhere to supervisor guidelines may have more to do with cognitive and emotional factors than motivation. There is a clear need for supervisors to identify or at least attempt to clarify student expectations, skill weaknesses, and – after the fact - their experiences with the supervisory process in order to take student perspectives more into account when designing their approaches to supervision (Armitage, 2007). They also need to be more reflective on what has worked, what has not and why and to share ideas with colleagues. As noted above, supervisors should also identify the reasons why students are showing low motivation, as these may have to do with lack of confidence, skills deficits or emotional factors rather than disinterest.

Plagiarism: The literature is rich on the issues of plagiarism and academic dishonesty (Joyce, 2009; Gu & Brookes, 2008; Cooper & Bikowski, 2007; Duff, Rogers, & Harris, 2006; Leask, 2006; McGowan, 2005). Abasi and Graves (2008) argue that students need to go through different stages of learning in order to be able to come to terms with the skills that are required (evaluation, critical thinking) as well as the meaning behind various practices. They note that more and more studies are pointing to the increasing complexity of the behaviour and their review of the research into plagiarism and international students showed *"that inappropriate source attributions might have to do with students' culturally shaped life trajectories and their outsider status relative to their prospective discourse communities"(Abasi & Graves, 2008, p.222).* They argue that somewhere in their current programme students need to be shown that attribution is a vitally necessary convention, is about crediting an author's way of approaching a subject, but not accepting that it is the 'absolute truth' and that the student's point of view is also important and valued. They also argue that most institutional plagiarism policies are written in ways that focus only on the negative, "punishable" aspects of failing to attribute sources, and thus students are afraid of doing the wrong thing to a much greater extent than they are encouraged to develop the kinds of scholarly attitudes and practices that supervisors expect.

Future research

This study is limited by the small sample of respondents who agreed to be interviewed. However it is evident that many of the problems faced by marketing dissertation supervisors are very similar to those across a wide range of other disciplines. The study used elements of the conceptual frameworks on the learning experience proposed by Biggs (1989) and Astin (1970), but it was not fully operationalised to identify how these factors actually affect student outcomes and this would be a useful research project to better understand the impact of different factors. In addition the study only investigated challenges as experienced by supervisors and it is clear from the literature that students often describe their experiences very differently and also face challenges that supervisors do not fully understand or appreciate (e.g. Drennan & Clarke, 2009). Future research should therefore include those students who are actively supervised. In addition given the growing numbers of international students on marketing Masters' programmes, research should investigate their specific challenges and potential solutions.

Furthermore, more research should be undertaken in how to manage the other challenges associated with marketing dissertations. Given the problems that students have with research methods training and the research proposal, additional investigations should be made into alternative pedagogic approaches to learning the skills and knowledge needed to complete a dissertation. We also need to have a better understanding of whether sufficient time is allotted to research training and to the entire dissertation process. Some of the issues raised bring into question the academic standards of Masters' programmes that are much shorter today that in times past when students were given an additional six months to a year just to concentrate on the dissertation. Perhaps it is time to reconsider the traditional dissertation in favour of other forms of study that fit better within today's shorter time frame and the applied nature of many MA marketing programmes; research that compares the challenges and the learning achievements from applied projects versus marketing dissertations would be of value. Researchers should re-examine what aims that educators are trying to achieve with the Masters level dissertation in marketing, whether we are indeed achieving them, and if not, what other ways there may be to allow students to develop the skills and achieve the learning outcomes that we *assume* are being achieved by the traditional dissertation approach.

From a practical point of view, Armitage (2007) found that supervisors tend to manifest the 'functional silo' syndrome (Ensor, 1988) when supervising their students and not share ideas or collaborate. This study has identified areas of good practice that could benefit others and also that supervisors share many similar concerns. Managers, programme leaders and supervisors should set aside time to fully investigate and discuss these challenges and to work collaboratively to solve them and to share good practices.

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