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Re-conceptualising Strategy in Design Management Education

The aim of this paper is to explain the current place of 'strategy' in design management education in the UK. The research questions concern the extent to which design management education meets the needs of future strategic roles in management and secondly the ways in which design management education is keeping abreast with current theory and practice of management strategy.

The paper draws on research from a UK research council project, The Metamorphosis of Design Management Network (MDMN).The methodology uses a qualitative approach to analyse the transcripts and activities undertaken in symposia over a five year period from 2007-2012, with a focus on four events held from 2010-12. The findings on education and strategic designer development were matched against the content analysis of strategy in conference papers presented at British Academy of Management from 2009-13.

The findings demonstrate the exposure of students to organisations and different design contexts. However other strategic management developments in strategy-as-practice, dynamic capabilities and scenario building provide new opportunities to extend design management education. The conclusion summarises the opportunities for design education and the development of students as strategic designers through new interdisciplinary approaches.

Keywords: [design, education, strategy, strategic management]

Strategy in Design Management education

Introduction

The aim of this paper is to explain the current place of 'strategy' in design management education in the UK, its relationship to strategic management, and relevance to future design leadership roles. Design Management has consistently emphasised the need to engage at the highest levels in organisations, to lead and influence strategy (Oakley, 1990). It is important for businesses, for as Liedtka (2010: 9) observes, firms need to overcome barriers between design thinking and business thinking because ''business strategy desperately needs design ... because design is all about action and business strategy too often turns out to be only about talk …..'' It is significant in a research context, Cambridge Academic Design Management Conference in (2011) concluded from an analysis of papers that strategic design remains a key concept.

However this paper is concerned with current management thinking on, and uses of, strategy, and its potential application to design management, and the relationship between design management and strategy in terms of student learning. Consequently it draws on Borja de Mozota's (1992) convergent model that takes a managerial perspective to enhance design impact in organisations by accommodating management concepts. Moreover, it is positioned to inform the development of future new business models, new tools and management frameworks to rapidly respond to emerging challenges identified by Cooper (2012).

Literature Review

The development of strategy in business and management practice and research has been characterised by four approaches, rational, processual, evolutionary and systemic (Whittington, 2000). From a dominant concern with planning and control embedded in economic theory, strategy over time

became more engaged with the processes of engagement outside the strategic centre. The role of the organisational structure in the implementation of strategy (Chandler 1962) and more generally the problem of implementing strategy has remained a significant theme (see for example, Johnson et al. 2008).

Strategy as process, a more evolutionary, political and experimental learning activity provided the opportunity for adaptation and crafting allowing for more flexibility and shorter response times to external changes. While each approach tends to reflect its economic and social zeitgeist - evolutionary, a 'survival of the fittest' approach particularly influenced by the 1980s economic climate - the systemic is notable in another respect: for the influence of sociology and the study of 'practice' arising from structuration theory (Schatzki et al.2001).

These approaches have tended to determine the focus of strategy and strategic management. One important research topic in strategic management is competitive advantage and the concept of value and the value chain at the core of Porter's (1985) work has been significant in design strategy. Underpinned by transaction cost theory (Williamson, 1975; Williamson, 1985) the value chain enables firms to analyse the structure and performance of their activities. It can be used to highlight the strategic relations of one firm with another within the framework of a "value constellation" (Normann & Ramírez, 1993). Similarly the "value network" is used by Christensen (1997) to define groups of suppliers and distributors and their value-adding activities outside the organization.

Design is frequently understood as a resource (Oakley1990) and Hafeez *et al*., (2002:87) highlight the significance of three alternative approaches to market structure analysis of competitive strategy: Resource-Based View (RBV), Competence-Based and the Dynamic Capabilities.   The RBV of the firm is one of the most widely accepted theoretical perspectives in the field of strategic management According to Ray (2004: 23) the RBV "asserts that firms gain and sustain competitive advantages by deploying valuable resources and capabilities that are inelastic in supply". The basic principle is that the firm has a bundle of resources at its disposal, but it is the correct application of these resources that can lead to competitive advantage (Barney 1991).

The 1990s also witnessed the development of knowledge management as a distinct discourse (Nonaka and Takeuchi, 1995). This is closely related to the RBV view because the ongoing creation of new knowledge is seen as fundamental to the inimitability of resources and competences. A further internally focused area of enquiry in strategy has been organisational culture. Dominant strands of the cultural strategy literature are summarised by Mintzberg et al. (1998) as examining values and beliefs in organisations, power, organisational learning, complexity, decision-making styles, and culture as a driver or barrier to change.

The competence-based perspective contends that it is the core competencies of a firm that leads to competitive advantage. This contrasts with the resource-based view that argues that competitive advantage derives from discrete, individual assets (Araujo, Dubois and Gadde 2003). Hafeez *et al.*, (2002) stated that core competencies are the result of a firms' collective learning processes and are manifested in business activities and procedures. This perspective focuses on the improvement of the chosen core competencies of a firm to gain long-term success and ultimately sustained competitive advantage (Hamel, 1991).

The dynamic capabilities approach asserts that resources and capabilities are recurrently adapted, integrated and/or reconfigured into other resources and capabilities, i.e. the resources available constantly evolve to meet the changing environments of the firm (Teece et al. 1997). Eisenhardt and Martin (2000) explain that the main difference between the resource based view and the dynamic capability approach is the attention given to the relationship between the resources and capabilities and the implementation of the business strategy.

These approaches are concerned with the use of resources to create competitive advantage. Design and its strategic management, as both an intangible and intangible resource clearly has a capability to determine the direction of an organization. Turner (2013) concisely summarises its contribution as a critical business resource, that can manifest a strategic idea which if managed properly (sic) make strategy tangible. As an intangible resource it leads into design thinking and leadership, organization and implementation.

These approaches underpin the place of design through four modes: design as strategy, design in strategy, design strategy, design facilitating strategy (Cooper and Evans 2011), and in a sectoral specific form: Design FOR and Design IN strategy (Pitsaki and Rieple 2013). Junginger (2009) reinforces an emergent perspective for design's role in strategy development and the influence of Borja de Mozota (2011) in explaining the value of design. Design in the organization adds one of two competitive advantages: as "differentiator" with a focus on external products, processes and markets or as "coordinator or integrator" which uses organization specific processes and resources to build distinctive advantage. Value is the essence of what organisations are for and also because it is the aim of design activity, bringing value to society and to human beings, focuses on strategic design discourse grounded in strategic theories. For Borja de Mozota, there are four value roles for design, each linked to a different system level. In a variation of this value approach, Cooper et al. (2011) sees it delivered through three levels of design management: design vision, design function and design action.

The system of levels are articulated in strategic design management by Lockwood and Walton (2008), and that "many strategy theorists" (p. 27) agree on 3 levels of strategy within corporations. Strangely they only cite Johnson and Scholes (1993) for this assertion, and the adoption of their corporate strategy, business strategy, and operational strategy levels. They argue that for Design Management to be more fundamentally aligned with corporate strategy it must have an effect on all three levels. And at the highest level, influence at the 'top table' that has for long concerned design strategists, Lockwood and Walton propose that Design Managers adopt a new "the perceptive approach" towards the management of corporate strategy. From a consultancy perspective, Topalian (2013) proposes that design professionals contribute to strategy in business at six levels of formal planning, from thinkers, challengers and interpreters to champions and facilitators.

The dominant theoretical bases for strategic design management lies in values, resources and organizational levels. However, Kimbell (2009) notably engages with the systemic approach to strategy, drawing on Strategy as Practice (SaP) and developing a practice based theoretical framework for design. SaP calls for examination of how practitioners act, what work they do, with whom they interact, and what practical reasoning they apply in

their own localized experience of strategy' (Jarzabkowsky, 2005, p. 9). Johnson et al. (2007, p. 3) write of a concern with what 'the people engaged in strategizing actually do and how do they influence strategic outcomes' with implications for researchers and their methods (Watson 2011).

Reflecting both strategic management and developments in design strategy, design management educationalists have focused on appropriate course and curriculum design, and the teaching and learning to be derived from it.

An important objective is to create design leaders, facilitators and producers and that designers in industry need to form and re-form learning activities and interactions in an emergent way in response to the dynamic context in which they operate. (Murphy and Baldwin 2012). The balance between generalisation and specialisation , the development of 'T- shaped' skills and knowledge (Peters 2012; Trummer & Lleras 2012) remains a contentious issue. More broadly Bencuya (2012) summarises the range of educational issues, juxtaposing the problematic relationships between design and business, specialisation and generalisation, collaboration and independence, adjustment to current economic trends and entrepreneurialism.

Methodology

The literature review demonstrates a well established engagement by Design Management researchers with strategic values, resources, levels of strategic planning and management and points of intervention in the organisation. However, the prevalent concern with levels and by implication, hierarchies in Design Management strategy requires some qualification in the context of post-economic recession organisation. Therefore the research questions that arise from the literature are in what ways can current theory and practice of management strategy defined by Management researchers be applied to design, and secondly, in what ways might these be applied to design management education for future strategic roles in management.

The paper draws on research from a UK research council project, The Metamorphosis of Design Management Network (MDMN). The project demonstrated that in the complex rapidly changing field of Design

Management there are critical knowledge relationships between practice, education and research.

The methodology used a qualitative approach to analyse the transcripts and activities undertaken in symposia from four AHRC funded four events, 2010-12. Over sixty participants in these event comprised of researchers, practitioners and educators and postgraduate students. The analysis was undertaken in two stages, the first providing an overview of key themes and subsequently a second one focusing on a symposium about the role of design management education. This was particularly informative about the place of strategy in course design, aims and experiences, and transcripts from presentations from six UK universities and the symposium discussions were coded and analysed for key themes (Miles and Huberman 1994, Coffey and Atkinson 1996).

To contexualise these events, an analysis of research papers from the Cambridge Academic Design Management Conferences in 2011 and 2013 demonstrated the relatively limited range of theoretical frameworks applied to research problems in Design Management.The literatures and platforms of knowledge that inform contemporary design management courses are varied. Whilst there is clearly a core literature on branding, product development, strategy and the key texts written on design management, other readings, for example service design, sustainability and organizational change were particular to specific courses.

The findings on education and strategic designer development were matched against the theoretical content of conference papers advanced by researchers in strategy at the British Academy of Management (BAM) from 2009-13. BAM was purposively selected for its involvement, by definition, in strategic management, its size, over 800 delegates, and support for research in all areas of management. 190 full, developmental and round table proposals were coded and analysed at Abstract level using Nvivo 10 for each year and for the full content in 2012-3, due to problems with the archived materials in 2011. The Academy did not hold records for papers delivered at the 2010 conference, so these could not be included.

Findings

The findings from the MDMN symposia demonstrate the exposure of students to organisations and different design contexts. The types of context were typified by their variety and included large and SME organisations in both the public and private sectors. More broadly there was a focus on the importance of environmental and organisational change and specifically external environmental changes, the global scale of contexts and rate of change.

There was evidence that students were engaged in the strategic level of design, and that this relates to leadership, strategic direction and implementation of design through the organisation. Another significant group were motivated to develop entrepreneurial skills. These findings have a resonance with current theoretical advances in strategic management, in scenario development and organisational change.

The location of strategy in design management courses is explicit in the course design and in various degrees implicit in their aims reflecting Master's level descriptors: Global strategies and Project planning, Brand strategy, Business, marketing & design strategy, strategic design and innovation, and Design Futures. These appear in first or second semesters (or stages) where each course leads to a third stage individual project. More broadly strategy can infuse the course, an aim can be to "articulate the strategic value of design, and to 'speak' the language of business" It's implicit in projects undertaken as consultancy, "we always get our students to use a business model canvas….. service (design) is totally predicated on the business model".

One presenter explained that students are encouraged to understand everything about the system and have to start with the vision and the mission of an organisation. They critically scrutinisewhat the current vision and mission of the organisation to provide a 'vision to strategy' opportunity to create an innovation space within which students come up with new products.

The role of theory

A generally espoused aim is to engage with advanced design management theory and its relationship to current design management practice. However the Design management is a discipline of "fragments and islands" defined by different foci, theoretical perspectives, and disciplinary contexts. Both externally and within the organisation, competition and collaboration form an important element of strategy formulation and also its implementation. Very few strategic management theorists were evident in the analysis, but in this context Kim and Maubourne's (2005) Blue Ocean Strategy was used to demonstrate the move from competitive, 'red oceans', to competitor-free markets, 'blue oceans' and the designer's role in collaborating to create niche strategies:

…Obviously we're operating globally now so the global aspect to underpin it is very important. We're integrating creative ideas and insights to establish knowledge. And also, if you look at the changing nature of design, also consequently changing the nature of design management in the way it first started, where design management is going into broader global contexts.

In terms of design and its contribution to the internal management of strategy, a three-level model is commonly adopted, evidence that Borja de Mozota's role in determining the integration of design management. The strategic level concerns long term decisions and organisational vision; the tactical or functional level ris understood to relate to mid-term decisions for strategy implementation and the operational level deals with immediate impact and short-term decisions for the completion of day-to-day projects.

The three stage model of strategic implementation effectively relates to the organisation of design and its organisational context. Junginger argues for a systemic view of organisations and that designers consistently act and work with these kinds of systems: "…..unless you get to this fundamental assumptions and values, beliefs and norms and all that in an organisations you will merely manifest current beliefs and existing manuals so your innovation capabilities are quite limited". Drawing in and strategically involving members of the organisation in projects enables both students and organisational participants to learn. The students experience in the

organisation themselves what the obstacles are, what the opportunities are then can use this product development approach as a vehicle for changes.

Discussion of leadership and strategic decision-making (who makes or influences the strategy) is contiguously located with implementation, and therefore, the organisation of teams and tasks. Some students are interested in both design and strategy, with designers moving from a very practical operational level towards a strategic level, which brings into focus issues of leadership and authority. A common feature of Design Management courses is that they reflect operational-project level design activity to strategic management of design portfolios, arguably with less attention paid to the intermediate tactical, functional level.

A second dimension of strategic management is the need to create strong foundations in key subject areas for students arriving from diverse disciplinary backgrounds. Design Futures described as "a vast, broad module, sort of embracing many diverse, emerging aspects of design and design management practice, like Corporate Social Responsibility (CSR), service design, design against crime, so in a way we are large box you know sort of there're lots of issues can be explored".

The place of strategy as a specific element in Design Management education reflects the tension between theory and practice: "the ethos of the course is informed by practice, and the role of the design management practitioner in organisations". As strategy is always concerned with analysis of the external environment, typically at macro, industry and micro levels, helping students to contextualise their professional work must form some element of Design Management education.

Collaborations provide an important means to contextualise strategy, and collaborations and partnerships can be formed between different courses, design and management specialisations. Some courses demonstrate a specific business school relationship because in "many cases design management education and research reinvents, explores and develops concepts such as innovation, strategy, and brand and even project and project management without taking into consideration what is happening in the business school."

Collaborations also serve a broader purpose, encouraging further exploration into design for a better world, in sustainability, ethics and other emerging fields. A universal feature of curriculum design and course implementation is collaboration with industry practitioners and "real world" problems. "Live" projects with design consultancies and their clients have been a defining feature of design courses at a project or operational level. A more strategic intent concerns engagement with other agencies, partners and industries with a national and international scope.

Management research findings

The second part of the analysis was directed at current directions in research in management strategy. An initial assessment of the conference organisation demonstrates an interest in three themes, each large enough to support its own conference track: Strategy, Foresight and Strategy as Practice.

Table 1 British Academy of Management conference papers by track

Year	Strategy	Strategic Foresight	Strategy as Practice
2013	25	0	21
2012	28	11	19
2011	22	6	13
2010	NA	NA	NA
2009	28	7	10
Total	103	24	63

The emergence of Strategy as Practice (SAP) research presents a number of new research directions. Firstly interest in SaP is stimulated by the strategy discipline's growing engagement with activity and secondly, its fit with a wider 'practice turn' in contemporary social theory since the 1980s (Schatzki et al. 2001). From this perspective, strategy has been defined as 'a situated socially accomplished activity, while strategizing comprises those

actions, interactions and negotiations of multiple actors and the situated practices that they draw upon in accomplishing that activity' (Jarzabkowski et al, 2007:7-8). By recognising the critical roles that both individuals and society play in determining strategy, it returns research to its original purpose of understanding and improving the work of practitioners (those who do the work of strategy).

As well as the broad parameter of *practitioners*, the Strategy as Practice perspective studies *practices* the social, symbolic and material tools through which strategy work is done. Strategic praxis, strategic practice and strategic practitioners and subsequently, professions combine into a theoretical framework that integrates organisational strategic activities with the actors on whom activity depends. In contrast to a view of organisations implementing strategy through levels and hierarchies, and strategy explicitly stated upfront, it sees the organic emergence of strategy, that takes shape and infuses itself into the everyday actions of individuals and institutions (Chia & Holt, 2009). Moreover it recognises that organizations and strategic processes are understood as dynamic phenomena. Larsen et al. (2013) discuss wayfinding through the meshwork to enact strategy in sensible ways: strategic processes can be understood as actors' ability to handle unpredictable, dynamic and non-linear processes. These elements are missing currently from the hierarchies approach commonly adopted in Design Management education.

The second major research theme arising from the strategy papers, picks up the interest in dynamic and unpredictable environments, processes and above all, "capabilities". CADMC conferences have briefly touched on dynamic capabilities. Rosensweig (2011) sees design as a dynamic capability to create competitive advantage through ''difficult to replicate'' expertise within the organization, formed by its intricate blend of personalized imagination and highly interactive activities. The theme has formed a significant body of research in strategy and provides a number of perspectives for DM research.

The constraints imposed by the external environment oblige an organisation to extend and modify its existing resource base to generate a new set of valuable resources, which can then be used to retain or improve its competitive position. This requires the development and deployment of

dynamic capabilities throughout the organisation. There is a need for more understanding of the dynamic capabilities of proactive environmental strategy which can lead to opportunities for the assessment of emerging fields of interest (Wong et al. 2013), for example in green issues, and identifying dynamic capabilities which enables the development of green service delivery practices.

'Dynamic' refers to a process. The problem of dynamic environments is reflected in the organisational context by the need to change and adapt to the external environment. Managers routinely encounter the "conundrum" of strategic agility – the seemingly contradictory goals of remaining strategic whilst acting quickly and adapting to a fast- changing environment (Rhisiart et al. 2013). There is also another flaw in the existing dynamic capability models, namely, they are especially relevant to large, multinational enterprises while the European business is dominated by the small and medium-sized enterprises (SME) sector.

To processualize the resource-based view, time needs to be added to the research agenda. This can be done by building on the concept of 'routines' and practices, which in turn resonates with the SaP focus on agency and micro-environments. These tensions between the short and long term appear in the concept of strategic ambidexterity where short-term profit and longer-term investment have to be managed at the same time (Bednarek et al. 2012).. The use of explorative and exploitative knowledge in ambidextrous relationships provide a hitherto unexplored positioning opportunities for design in the organisation.

A third element of strategic management research arising from the analysis concerns the middle layer and the middle managers themselves. Recent strategic management research demonstrates that middle managers roles have changed and they are affected by many factors that were not considered earlier (Christodoulou et al. 2012). Middle managers can be strategic actors in strategizing, the manager's work,encompassing the continuous practices and processes through which strategy is conceived, maintained, renewed and executed. Social processes can be particularly relevant to a micro-level understanding of how middle managers act and interact in the strategy making sequence.

In some senses middle managers can be understood to be 'performing the conversation' and 'setting the scene'. However these activities are more associated with making sense of and selling existing strategies, rather than validating those strategies and/or proposing new ones. Micro-practices such as 'preparing and orientating', 'generating and working with strategic content', and 'reflecting and validating', appear to correspond with strategy development (rather than strategy selling) activities (Meadows & O'Brien2013). How they do this with design would form an interesting new line of enquiry for researchers and students.

The final area of strategic management that offers interesting insights for Design Management is the development of strategic scenarios. Strategic Foresight was run as a separate track at the BAM conferences until 2013, and provides opportunities to explore uncertainty in the business environment. Intuitive logic methods create scenarios as plausible images of the future in order to engage participants in strategic conversations. Sensemaking remains an important area for research with opportunities for visualisation of contextual scenarios.

Conclusion

The findings demonstrate the exposure of students to organisations and different design contexts. The types of context were typified by their variety and included large and SME organisations in both the public and private sectors. More broadly there was a focus on the importance of environmental and organisational change and specifically external environmental changes, the global scale of contexts and rate of change. There was evidence too that students were engaged in the strategic level of design, and how they can set the direction for design in an organisation. Another significant group were motivated to develop entrepreneurial skills.

Returning to the research questions, the findings demonstrate a range of opportunities for Design Management educators and students to use relevant theory and practice of management strategy.

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- SaP opens up new lines of enquiry into understanding the intermediate, middle management level of design, which was shown to be problematic on Design Management courses. Its focus on practitioners, practices and praxis, at meso and micro organisational levels and engagement with both internal and external actors, provide a new framework to examine the integration of design into organisations. Research questions can be framed around activities of strategists, and their links with tactical and operational level processes to gain acceptance of design in any of its strategic forms. Design thinking that opens up new perspectives in knowledge - ways of thinking and acting - ties in with practice based approaches to strategy.

- The findings demonstrate that SaP, but other strategic approaches too can be applied to the relatively neglected area of middle management. There is a need to explore theoretical frameworks that assist in understanding changes that have taken place in organisations, particularly during the economic recession from 2008. These have led to reductions in workforces, declining middle management numbers and their changing role. An assessment of design roles and organisational relationships for this group of managers is relatively unexplored. Bucolo et al.'s (2012) proposal that design leaders are advocates contributes to this field of enquiry by observing that the role requires a deep understanding of operational requirements, business needs, and strategy.

- Innovative capabilities are dynamic capabilities because they are directed at the creation of future valuable resources. To what extent is Design Management part of this resource base? Design Management can be an innovative capability, to create valuable future resources. How can it be understood as part of the process of creating, extending and modifying an existing resource base?

- The visualization of uncertain business environments and the envisioning of future states offer a new theoretical basis for design-led activities.

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The second question asked in what ways might these be applied to Design Management education for future strategic roles in management. The answers to the first question answer this in part: strategic management theories derived from the study of activities and procedures provide accessible points in the organisation, from which to access problems of leadership and the implementation of strategy. Above all, they provide an alternative perspective to the assumed hierarchical structures between corporate and operational levels. The approach is particularly suited to studies of SME organisations, and the messy strategy making and implementation of small businesses. On the other hand it should also be noted that the findings demonstrated very limited research into corporate strategy.

Related to these issues, is the need for research into networks and alliances outside the organisation, the location of design in these extra-firm activities and their application to student learning. Finally, and almost completely ignored in the strategic management literature, big data, and physical and virtual world convergence have rapidly become important strategic issues. This applies too to Design Management education and the strategic implications of convergence on design strategy, the distribution of design management and its integration, at organisational and project levels.

References

Araujo, L., Dubois, A., & Gadde, L.E. (2003). The multiple boundaries of the firm. *Journal of Management Studies,* 40 (5)1255-1277.
Barney J. (1991). Firm resources and sustained competitive advantage. *Journal of Management* (17) 99-120.
Bencuya, S. (2012). From the Editor. *Design Management Review*, 23 (2) 3.
Bednarek, R., Burke, G., Jarzabkowski, P., & Smets, M. (2012). *Leveraging Client Relationships To Support Knowledge Generation: An Organizational Ambidexterity Perspective*. Paper presented at the Proceedings of the British Academy of Management Conference, University of Cardiff.
Borja de Mozota, B. (2011) Design Strategic Value Revisited: a Dynamic Theory for Design as Organizational Function. In R. Cooper, S. Junginger, & T. Lockwood, (Eds.), *The Handbook of Design Management* (pp. 276-293). Oxford: Berg.

Bucolo S., Wrigley C., & Matthews J. (2012) Gaps in organizational leadership: linking strategic and operational activities through design-led propositions. *Design Management Journal*, 7 (1) 18-28.

Chandler, A.D. (1962). *Strategy and Structure: Chapters in the History of the American Industrial Enterprise*. Cambridge, MA: MIT Press.

Chia, R., & R. Holt (2009). *Strategy Without Design. The Silent Efficacy of Indirect Action*. Cambridge: Cambridge University Press

Christensen, C. M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms To Fail.* Boston: Harvard Business School Press.

Christodoulou , I.P., Poulis, K., & Poulis, E. (2012). *Middle Managers as facilitators in the Development of Dynamic Capabilities. Paper presented at the Proceedings of the British Academy of Management Conference*, University of Cardiff.

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data : complementary research strategies.* London : Sage Publications.

Colla, E. & Besson, M. (2011). *Capturing value by improving consumer experience: the case of Apple, Presented at the Proceedings of European Association for Education Research and Consumer Distribution Conference*, University of Padua.

Cooper, R. D. (2012). Design leadership in a vortex of change. *Design Management Journal*, 7 (1) 3-5.

Cooper R., & Evans M. (2011). Revisiting strategy: the role of design in strategy. *Paper presented at the Proceedings of the Cambridge Academic Design Management Conference,* University of Cambridge.

Eisenhardt, K.M., & Martin, J.A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal,* 21 (10-11) 1105-1121.

Hafeez, K., Zhang, Y.B. & Malak, N. (2002). Determining key capabilities of a firm using analytic hierarchy process. *International Journal of Production Economics,* 76(1) 39-51.

Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S. G. (2007). *Dynamic Capabilities: Understanding Strategic Change in Organizations.* Oxford: Blackwell Publishing.

Jarzabkowski, P. (2005). *Strategy as Practice – an Activity-Based Approach*. London: Sage Publications.

Jarzabkowski, P., Balogun, J., & Seidl, D. (2007). Strategizing: the challenges of a practice perspective. *Human Relations*, 60(1) 5-27.

Johnson, G., Langley, A., L. Melin, L., & R. Whittington. (2007). *Strategy as Practice. Research Directions and Resources*. Cambridge: Cambridge University Press.

Johnson, G., Scholes, K., & Whittington, R. (2008). *Exploring Corporate Strategy* (8th edn.). Harlow: FT Prentice Hall.

Junginger, S. (2009). Design in the organization. *Design Research Journal*, Swedish Design Council (SVID) (2) 23-29.

Kim, W.C., & Mauborgne, R. (2005). *Blue Ocean Strategy: How to Create Uncontested Market Space and Make Competition Irrelevant*. Boston, Mass.: Harvard Business School Press.

Kimbell, L. (2009). Design practices in design thinking. *Paper presented at the 9th European Academy of Management Conference*, University of Liverpool.

Larsen, M.V., Madsen, C.O., & Rasmussen, J.G. (2013). S*trategizing In Multiple Ways*. Presented at the Proceedings of British Academy of Management Conference, University of Liverpool.

Liedtka, J. (2010). Business strategy and design: can this marriage be saved?' *Design Management International Review*, 21 (2) 6-11.

Lockwood, T., & Walton, T. (2008). *Building Design Strategy*. New York NY: Allworth Press.

Meadow, M., & O'Brien, F. (2013). *Exploring micro-practices during strategy development. Paper presented at the Proceedings of British Academy of Management Conference*, University of Liverpool.

Miles, M.B. & Huberman, A. (1994). *Qualitative Data Analysis: an Expanded Sourcebook* (2nd ed.). London: Sage Publications.

Mintzberg, H., Ahstrand B.W., & Lampel, J. (1998). *Strategy Safari: a Guided Tour Through the Wilds of Strategy*. New York NY: The Free Press.

Murphy, E., & Baldwin, J. (2012). Learning to practice: nurturing client business in design education. *Design Management Review*, *23*(4), 90-103.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford: Oxford University Press.

Normann, R., & Ramírez, R. (1993). From value chain to value constellation: designing Iinteractive strategy. *Harvard Business Review*, 71(4), 65-77. doi:

Oakley M. (Ed.) (1990). *Design Management : a Handbook of Issues and Methods*. Oxford : Basil Blackwell.

Peters, J. (2012). Educating designers to a T. *Design Management Review*, 23(4) 62–70.

Pitsaki, I., & Rieple, P.A., (2013). Design in strategy : the case of cultural organisations. *Paper presented at the Proceedings of the Cambridge Academic Design Management Conference*, University of Cambridge.

Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance.* New York, NY: The Free Press.

Ray, G., Barney, J.B., & Muhanna, M.A. (2004). Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view. *Strategic Management Journal*, 25(1) 23-37.

Rhisiart, M. G., Miller, R., & Brooks, S. (2013). Thinking and Acting Through the Conundrum: Futures Literacy for Strategic Agility. *Paper presented at the Proceedings of the British Academy of Management Conference*, University of Liverpool.

Rosensweig, R. R. (2011). More than heroics: building design as a dynamic capability. *Design Management Journal*, *6,* (1)16-26.

Schtazki, T. R., Knorr-Certina, K., & E. von Savigny (Eds.) (2001). *The Practice Turn in Contemporary Theory*. London: Routledge.

Springdal, K., Maljugin, A., & Mador, M. (2013). Evolution of dynamic capabilities in low velocity industries – A case study of European shipbuilding industry. *Presented at the Proceedings of British Academy of Management Conference*, University of Liverpool.

Teece D.J., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal,* (18) 509-533.

Topalian, A. (2013). Leading through design : how design professionals enhance their strategic role. *Paper presented at the Proceedings of the Cambridge Academic Design Management Conference*, University of Cambridge.

Trummer, J., & Lleras, S. (2012). Reflections on design education in a changing world. *Design Management Review*, 23(4), 14-22.

Tsoukas, H., & Chia, R. (2002). On organizational becoming: rethinking organizational change. *Organization Science*, 13(5), 567 – 582.

Turner, R. (2013) *Design Leadership: Securing the Strategic value of Design*. Aldershot: Gower.

Watson, T.J. (2011). Ethnography, reality, and truth: the vital need for studies of "how things work" in organizations and management. *Journal of Management Studies*, 48(1) 202–217.

Whittington, R. (2000). *What is Strategy and Does it Matter?* (2nd ed.). Andover : Cengage Learning EMEA.

Whittington, R. (2006). Completing the practice turn in strategy research. *Organization Studies*, 27, 613–34.

Williamson, O.E. (1975). *Markets and Hierarchies*. New York: NY The Free Press.

Williamson, O. E. (1985). *The Economic Institutions of Capitalism*. New York NY: The Free Press.

Wong, C.W.Y., Wong, Y.W., Boon-itt, S. (2013). Capabilities for making green service delivery: the roles of environmental adaptability and innovativeness. *Paper presented at the Proceedings of the British Academy of Management Conference*, University of Liverpool.