

Design Thinking and Co-creation in the Business Curriculum

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Abstract

Business curriculum development is intrinsically linked to the rapidly changing business landscape. Navigating the complexities of this task demands a design thinking approach that places stakeholders at the centre, focusing on obtaining valuable insight while also openly sharing the broader implications of individual curricular decisions. This reflective paper examines the use of design thinking in developing the business curriculum. We explore the benefits of this approach for leadership of curriculum development and balancing the needs and wants of varied stakeholder groups. Key external factors, from government bodies to shifting economic climates, exert pressures that make all curriculum development a challenging endeavour. Institutions must concurrently accommodate this variety of stakeholder needs, the balancing of external pressures against internal expectations and alignment with internal and external pedagogical standards. Successfully addressing these complexities requires a shift from traditional meeting and committee methods, which often yield suboptimal outcomes. Instead, a design thinking approach prioritises open stakeholder negotiation, employing visual tools to foster clear communication and negotiation and application of a shared vision. This approach also acknowledges the importance of developing graduates' social capital, aiming not merely to secure jobs for graduates but to equip them with invaluable skills and networks for unforeseen challenges. Ultimately, a human-centric design thinking method is vital for addressing the multifaceted challenges of curriculum design in the face of a VUCA world. Institutions that embrace this philosophy position themselves to produce curricula that are both contextually relevant and future-oriented, ensuring continuous improvement and relevance in higher education.

Keywords: Curriculum Design, Design thinking, Higher Education, Business

1. Introduction

Design thinking is regularly recognised as an important soft skill in the higher education curriculum (Ojan and Lara-Navarra, 2023; Glen et al., 2015). However, the application of this same soft skill is not always deployed in the creation of higher education curriculum. In this reflective paper, we consider the value of applying design thinking to curriculum design and its usefulness for navigating the multiple priorities represented by the voices of a variety of stakeholders. The paper is intended to be an instructive and non-judgmental briefing document for academics and for business and government leaders who may find themselves acting in a consultative role for new curriculum design. Although our focus is business curricula, the design thinking approach arguably has value for all disciplines. To set out our position we follow Razzouk and Shute's (2012, p.330) view that "design thinking is generally defined as an analytic and creative process that engages a person in opportunities to experiment, create and prototype models, gather feedback, and redesign." We interpret this statement to mean that design thinking is invariably holistic, iterative, human-centered and inclusive.

The need to take more critical and measured approach in the business curriculum is necessary – and, arguably given the increasing scrutiny from external bodies such as the UK HE arms-length regulator, it is urgent. Business and Management is the largest subject area in UK HE: approximately 1 in 6 Undergraduate and 1 in 5 Postgraduate students are enrolled on a Business and Management course (British Academy, 2021). The interdisciplinary subject area encompasses a diversity of disciplines from Accounting and Finance, to Information Systems, Strategy and Organisational Behaviour, and is offered by almost all HE institutions in the UK and globally, including through partnership arrangements. The impact of the business curricula is therefore extensive, influencing not only the individual graduates but also the organisations and economies in which they will apply their knowledge and skills.

Our key argument is that successful business curriculum design is the outcome of a series of negotiated tensions built around open and honest dialog with stakeholders; in other words, the conscious application of a design thinking approach. This observation is readily found in previous literature (Bolton and Nie, 2010; Speight et al., 2013; Alexander and Hjortsø, 2018), however our contribution to this debate is acknowledgement that such openness is only possible when there is a conscious sequence of actions focused on developing a 'design solution' for the student (user) - to design a curriculum that meets their current and future needs whilst addressing the complexities of business education in a VUCA (Fletcher and Griffiths, 2020) environment. This starts with curriculum designers developing a stakeholder-informed vision, that leads to an iterative design phase with participating stakeholders, followed by consultation with a still wider set of stakeholders (in design terms, an iterative process of establishing requirements, developing potential solutions, and obtaining feedback). The outcomes are moderated through comparison with the negotiated vision that helps balance any conflicts in responses and needs. The visioning and design phases can be conducted in a range of different ways, and we highlight those techniques that have been the most engaging and productive. This human-centered approach to curriculum design supports the development of curricula in complex

Business and Management HE environments. As a starting point, we discuss the multifaceted context in which this curriculum development takes place, followed by examination of the design challenges from the perspective of the diverse range of stakeholders involved, and conclude with considerations for the utility and successful implementation of a design thinking approach to curriculum development.

2. The Pressure for Change

The business curriculum in many higher education institutions is a contested space represented by a series of tensions that require compromises. External factors including government policy, the “co-opetitive” (Crick and Crick, 2020) environment of higher education, as well as the ongoing polycrisis of the 2020s (Tooze, 2022) that is represented by an ever-revolving combination of economic, political and climate crises, all impose unavoidable pressures. These factors are compounded by the changing operating patterns of 21st century organisational environments brought about by ever-accelerating digital technologies and coupled with employer expectations that graduates will be able to assist organisations to navigate the challenge of operating in this culture of continuous change (influenced by these same external factors that bear down upon the curriculum) (Zhang-Zhang et al. 2022).

For a curriculum designer, recognising this complex and volatile ecosystem necessitates increasing understanding of the breadth of stakeholders who are also able to influence graduate employability (Pereira et al., 2020). As a direct outcome of the simultaneously marketised and externally regulated UK HE context, there are now myriad influences and inputs shaping curriculum design. These are captured by proxy through employer forums and advisory groups, alumni surveys and other focus groups. From the point of view of employers, the business graduate is not employed to “just” be the operator of new processes but is also expected to be the intrapreneur and futurist, bringing inspiration and new insight into the business that will help to initiate the next strategic step forward. But this demand is balanced against an internal view held by many academics that a sound foundational understanding of the underpinning concepts of business is the key to deliver these capabilities into the workplace, in, for example, comprehending the abstract notions of strategy, capital and value. This view also often tends to coalesce with a tacit resistance to marketisation and external regulation regimes. Designing curricula for employability as solely an expected component of prevailing external regulation highlights a tension between what employers say they “want”, in contrast to what a traditional academic view might suggest that they “need”. Such tensions are illustrated by employer demands for skills in the use of specific data analysis tools, in contrast to an academic approach that prioritises the understanding of underlying concepts and the ability to apply this using a range of tools.

Internally, institutions often struggle to position the applied and functionally orientated nature of business studies, in contrast to science- or arts-based disciplines. The successful business curriculum produces a practical generalist who understands how any organisation works in the contemporary world, although this is often expected to be coupled with expertise in a business specialism such as marketing or financial management. Business graduates will then bring knowledge of the multiple functions

of an organisation but not necessarily the science or art that lies behind the specific product or service being offered, and they must be able to learn and adapt to future employment contexts, which may be in any industry or field globally. In contrast to most specialist academic disciplines, the business curriculum is expected to prepare graduates to be able to contribute in any sector, and to any and every business type, from family microbusiness to global multinational, across the private, public and third sectors. The failure to recognise this value, and the importance of the underpinning role of the generalist business curriculum in relation to the employment prospects of all graduates is another curriculum design tension in many universities. The variable pace of change in core knowledge across subject areas represented by the overall label of “business studies” also produces tensions. While some subject areas (and individual practitioners) recognise the need for continuous change through, for example, updating teaching materials with every delivery, elsewhere colleagues may champion the importance of historic bodies of knowledge untainted by the changing external business context. In combination these tensions can play out across inter-personal, inter-departmental and inter-school (or inter-faculty) development collaborations.

These curriculum tensions in business are often further exacerbated by the need for a range of external recognitions and accreditations from professional institutes and other bodies. While professional recognition can be a necessity for some courses such as Accounting or Human Resource Management, competitive global market force institutions to collect additional external recognitions to remain attractive to prospective students in comparison to other offerings. For Business Schools, this is hallmarked by the “Triple Crown” of international accreditations (Jackson, 2021). At the same time, distinctive features in a programme of study are regarded as highly desirable to differentiate the curriculum from those same competitors, resulting in a need to converge and diverge around a core set of common topics and themes and, as a result, the pressure to change is constant (in this paper we use the term ‘Programme’ to refer to a named Degree Award, and ‘Module’ to denote the credit-bearing sub-units. Terminology varies across institutions – in some Universities Degree Awards are referred to as ‘Courses’, in others the sub-units may be ‘units’, ‘courses’ etc).

3. Our Approach

This paper is based on our experiences as critical and reflective practitioners who have led and have contributed to numerous Business curriculum design projects over a period in excess of fifteen years. Our reflection on practice incorporates observations from leading and contributing to curriculum development in our own institution, as well as others in the UK where we have contributed as external academic experts in curriculum reviews and programme approvals. These have ranged from small scale single programme development to large scale curriculum designs and periodic reviews involving tens of programmes and hundreds of modules. While the paper is necessarily candid in places, the conclusions that we draw are offered as guidance for other curriculum and learning designers who find themselves facing similar challenges.

The design challenges addressed in this paper are primarily based upon direct internal observations and experiences from several iterations of the change process for

undergraduate and postgraduate Business programmes. The focus is on the variety of tensions already described that were encountered during the process, the resolution to the tensions and the lessons learned from the processes. Our perspective is particularly influenced by the work of Papanek (1985) in “Design for the Real World” which outlines a series of methods to identifying and tackling design problems. While Papanek’s focus is as an industrial designer there are many similarities clearly seen in the problems he addresses and those of a curriculum design team. A key insight from Papanek is the varying pathways and trajectories pursued by different (but necessary) stakeholders during the design process. With this many groups participating there is also acknowledgement that the convergence of points of thinking for one set of stakeholders can also become a moment of design divergence for others. Underpinning Papanek’s perspective is a holistic systems view towards the problems being solved and reconfirming the key sentiments of Razzouk and Shute’s (2012) definition of design thinking. The systems perspective is significant for curriculum design as it embeds awareness that individually initiated and small changes can have significant consequences and repercussions across the entire curriculum. For example, the interrelationship between maths literacy, Excel skills and statistics knowledge will be a familiar tension that must be balanced in business curriculum designs. Similarly, professional ethics might be embedded as small elements across multiple modules and all levels of study or given significant prominence with a single discrete module – and even then, the design decision regarding which level to place this single module itself brings out tensions and challenges. The curriculum is a complex design space in which facilitating desirable knowledge and skills must be balanced alongside subject benchmarks, institutional regulations, professional body requirements and pedagogies.

We dissect our own experiences of designing curricula in HE and do advocate for a Theory of Change approach that consciously designs a programme for achieving defined long-term outcomes. This contrasts with more compartmentalised approaches that focus solely on creating individual modules and then rely upon default institutional processes and deadlines to define the overall programme of study. Our experience is that top-down processes, in which periodic reviews can encourage a tick-box approach, emphasise the role of individual contributions – who can teach what, or where to place existing content – and do not encourage a holistic approach – what does a graduate become. This is a significant barrier to a systems-based approach to creating a coherent programme of study. In contrast, utilising a system based perspective links the teaching of business with genuine business engagement and the value of acquiring critical and research skills as employability and lifelong learning skills.

4. The Curriculum Challenge

The curriculum challenge focuses on the question of what to include, or change. The outcomes of the curriculum, evidenced through qualitative examination, relate to specific dimensions defined by government regulatory regimes. Business studies programmes in the UK have come under scrutiny from the Office for Students (OfS), the arms-length regulator, to address its graduate outcomes metrics: the proportion of graduates in “appropriate” employment 15 months after they complete their studies. This scrutiny has included direct investigation of eight institutions by the OfS commencing in May 2022, but as of August 2023 it is yet to report its findings (Office

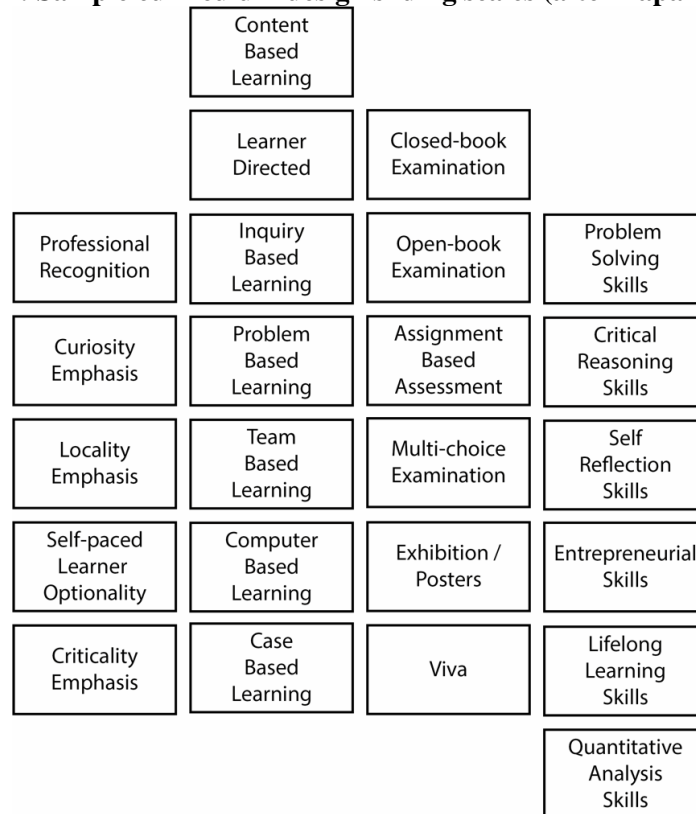
for Students, 2022). There is also evidence that responsibility for employability in UK is shifting from Government to HE institutions (Cheng et al., 2022).

The implication of these external interventions from a design perspective is to prioritise specific content and actions within the curriculum to achieve an employability outcome. While a drive for this outcome may be at tension with other outcomes, this priority will push out other actions that may not directly contribute to this specifically defined outcome. This situation leads to a convergence in curriculum design decisions between institutions and reduces variety even when increased graduate employability may only be an indirect outcome. For example, a curriculum that promotes entrepreneurial approaches may become less desirable for institutions, as the likelihood of achieving the short-term employability metric is lower, even though encouraging graduates to start their own businesses has the potential to produce even greater benefits over a longer period for the graduate, society and economy.

The challenge is made more complex by the need to balance the development of skills against the acquisition of specific bodies of knowledge. In the dynamic external environment this is a difficult challenge as some bodies of knowledge are changing rapidly and anything taught now will be out of date soon after graduation. Other subject areas are associated with a consistent body of knowledge connected to the social sciences. Having a sound understanding of the meaning of value and capital is one simple example of this stable core knowledge. Applying the concepts of value and capital within contemporary organisations during the period of the polycrisis is however a different matter, requiring examples, knowledge and skills drawn from across a contemporary business curriculum. This situation also highlights the ways that skills acquisition and obtaining knowledge and understanding are not two separate pillars of the curriculum, but rather are closely interrelated components within the design space. A core skill for any graduate is lifelong learning: the ability to continue to learn independently and critically in order to keep pace with change that will continue throughout their lifetime. The need for curiosity and willingness for discovery are important skills for business (and other) graduates that are not necessarily represented by employment metrics that focus solely on salary or role titles. But, like entrepreneurial spirit, it is curiosity that drives innovation and leads to productivity gains as well as overall economic growth.

Papanek's "paper computer" of sliding scales (1985, p. 176) is an evocative way to present these many design challenges as separate independent variables (Figure 1). Papanek says, "it is possible to insert ... different limitations of a problem in ... design on each stick with all the limitations still confined to just one general area. Sliding the sticks up or down ... yield different combination out of [many] juxtapositions." By making choices (horizontally across the sticks) from each of these scales a series of design decisions are being made. Simple visualisations of this type can be highly effective to support both design space exploration and stakeholder communication during the design process (Fletcher, 2023).

Figure 1: Sample curriculum design sliding scales (after Papanek 1985)



The curriculum challenge is a constant dilemma between adapting to the ever-evolving external environment and maintaining the core academic principle of independence and building well-rounded graduates. It is an intricate balancing act between achieving immediate practical outcomes, such as improving graduate employment metrics, and the long-term goal of developing knowledgeable individuals capable of thriving in an uncertain future.

The implications of external scrutiny, particularly from professional or regulatory bodies such as the OfS, cannot be understated. These forms of oversight encourage a compliance-oriented approach to curriculum design, where institutions are driven to prioritise content that directly impacts specific performance metrics. Or, in the terms of Goodhart’s eponymous law, “when a measure becomes a target, it ceases to be a good measure.” While this approach has its merits in addressing immediate employment needs in the national economy, it can inadvertently sideline other equally important aspects of education, including developing critical thinking and creativity, which themselves are important for encouraging innovators and innovation. These "softer" skills and abilities, which do not directly contribute to short-term employability metrics, are nonetheless critical for long-term individual and societal success.

5. The Stakeholder Challenge

The stakeholder challenge describes the complexities associated with the varying needs and expectations of diverse stakeholder groups involved in the curriculum design process. These stakeholders include academics (in various roles), university

professional services, students, industry partners, and professional bodies. Each group brings its own perspective to the table, with sometimes conflicting and contradictory needs that complicate the design process.

5.1 Motivations for Change

Unlike the pressure for change in the business curriculum, the motivation for change is not always constant among all the stakeholders. Curriculum change is disruptive for everyone involved but the burden inevitably falls heavily on academic staff. In the undergraduate context in particular, the phasing in of new curriculum and phasing out of old approaches requires a long-term commitment from staff; the timeline from design initiation, through institutional approval, to the full implementation of a 3 year curriculum regularly takes over 5 years. The risk is that without support from this stakeholder group, change is introduced ‘in name only’ with underlying practices, content and assessment strategies from previous versions of the curricula remaining persistently embedded. If curriculum change is irregular, there are also wider cultural challenges amongst academic stakeholders as a sense of “ownership” may have developed around existing modules (and other features of a programme). The notion of a burning platform for academic staff to change is generally absent for the very reason that the pressure to change is constant and ever present. In contrast, the composition of employer groups will shift between curriculum changes, as will the perspectives of current and prospective students. The variability of input coming from these stakeholders into the design process can represent a significant tension in the entire process. Academic staffs are arguably the most persistent stakeholder group in the curriculum change process, yet they may resist the changes that are being sought by more transient stakeholder groups.

In the absence of established culture or processes supporting continuous change, the need is to build a grassroots desire among internal stakeholders for change that is compatible with the external and imposed top-down pressures to change. One tension that needs to be resolved in this equation is the respective privilege given to stakeholder voices. Business and other external stakeholders are often valued for their scarcity in stakeholder events whilst academic staffs frequently convey a sense of being disempowered by the change process, that change is “happening to them”.

To resolve this tension, it is crucial to foster a culture of open dialogue and collaboration, where all stakeholders can feel heard, valued, and empowered (albeit this hearing may have to occur in different and separate forums). This includes creating spaces for discussion amongst internal stakeholders, encouraging feedback, and making transparent decisions regarding the vision and the design rules being applied. It also involves developing processes for ongoing curriculum review and revision that involve all stakeholders and that can be responsive to their input. The regular cycles of periodic review utilised by UK institutions and encouraged by accreditors may not be regarded as the optimal solution to this specific challenge, as it is a top-down driven process initiated by a single set of stakeholders, with the unspoken inference that a change cycle must be imposed, without which improvement would be lacking. Grassroots change from direct academic stakeholders who possess specific motivations and design intention may be more effective.

5.2 *The Stakeholders*

Academics represent a critical set of stakeholders who are always navigating the tension between the teaching practices they have become comfortable with and those required by an evolving pedagogical and technical landscape. They will bear the responsibility of translating somewhat abstract curriculum design into practical classroom experiences. With other pressures within their day-to-day workload, their familiarity and preferences for past practices might, at times, hinder the adoption of innovative approaches, leading to a conflict between well-trodden tradition and more innovative, but riskier and time-consuming approaches. Innovation in curricula and pedagogies are further mitigated against by internal and external metrics for student achievement where anything “new” represents high risk to existing high-performing activities and unproven benefits to other under-performing activities.

University professional services also play a crucial role and bring along institutional drivers and constraints. Their efforts to streamline operations, maintain regulatory compliance, and ensure financial sustainability may impose structural limitations on the curriculum design process. These institutional constraints are often immutable, but even when there is opportunity to change and flex around these constraints there can be a tendency to present these as rules rather than guidelines, treated as a mechanism for managing complexity. These limitations may sometimes collide with the pedagogical objectives of the curriculum and can create potential sources of friction. For example, well intentioned regulations seek to achieve ‘parity’ of the assessment burden across units of credits, but at the same time can reduce the ability to innovate or reflect discipline and pedagogical best practice, by rigidly specifying the number, type or length of assessments (see Figure 1). Moreover, regulation change does not always occur at the same time as curriculum design with the result that an initial programme approach to design becomes distorted to align with the changing regulations.

Students, as the direct beneficiaries of the current curriculum, bring a further set of wants and needs to the discussion. Although hailed as co-creators (Bovill et al. 2011, McDonald et al., 2021), in the majority of cases they will not personally see the benefits of changes they suggest, and their goodwill is being strongly leaned upon for future scholars (some of whom will not have completed their secondary education at this point). Their desires might be oriented towards specific vocational goals or personal interests, which may not always align with what they academically need to develop the wide-ranging competencies for their long-term individual and career success. The stakeholder challenge here lies in harmonising students' aspirations with the design objectives of the curriculum. There is also the need to ensure that any quick wins identified by the student stakeholders are acted upon rapidly to ensure they themselves may, at least partially, benefit from their contribution.

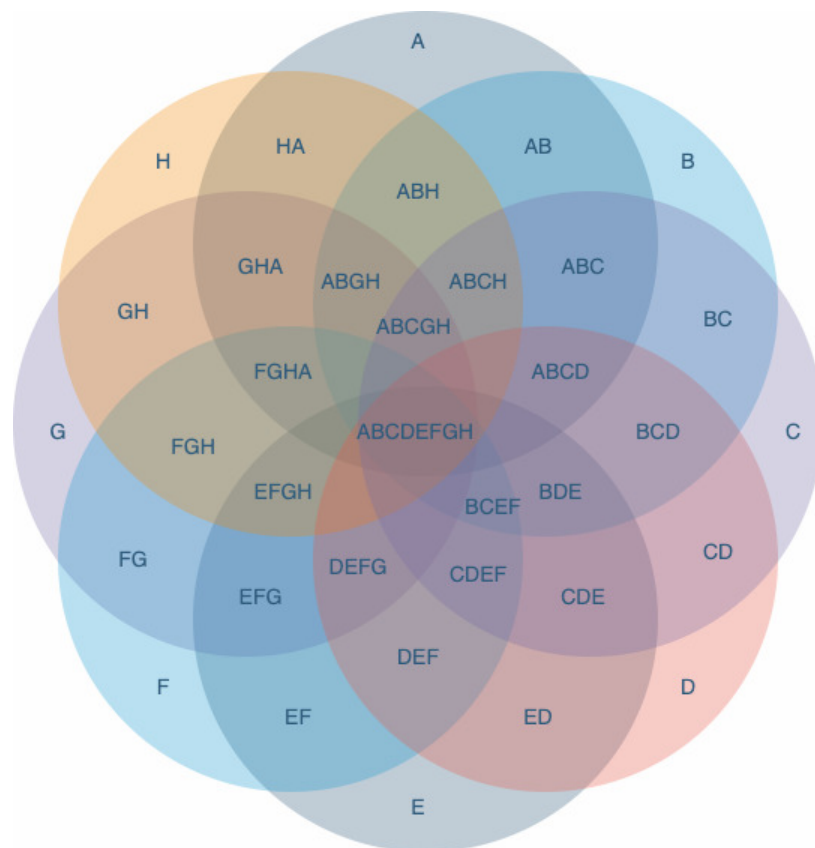
Employers, as the notional and actual future employers of the graduates, have their own expectations. They seek certain attributes in a graduate that they believe are essential for their current industry practices. However, these desired attributes may not always align with the broader and future skillsets that graduates need to thrive in the increasingly complex and uncertain world of the polycrisis. A crucial attribute often overlooked by employers in their feedback is the place of critical thinking, a skill essential for adaptive and innovative performance in any business environment.

Professional bodies also feature, acting as both partners in co-creation and arbiters of constraining requirements. On the one hand, their participation brings credibility and industry relevance to the curriculum. On the other hand, their sometimes stringent requirements may impose constraints that limit pedagogical innovation, for example by requiring examination based assessment practices. There is an imperative in the design process to clearly articulate how a curriculum meets their specific standards and maps to their expected curriculum. In Business Schools, interrelated curricula which support the economies of scale required to deliver multiple specialties with limited resources, may be faced with numerous and possibly conflicting demands from different professional bodies. For example, the same shared introductory or ‘skills’ modules might appear on various specialist programmes that are mapped to different professional bodies, such as Accounting, Marketing, Human Resources or Management. Thus, tensions can arise within this stakeholder group as well as across them.

5.3 The Stakeholder Design Challenge

In essence, the stakeholder challenge can be conceptualized as a series of negotiations with diverse stakeholders, each carrying their unique, sometimes conflicting, and contradictory needs. The challenge could be represented as a complex Venn diagram, with each set of stakeholders' demands and interests being represented by individual circles (Figure 2).

Figure 2: Conceptual representation of intersecting demands and interests of stakeholders requiring compromise (author-generated from draw.io stock designs)



Invariably the interests of any one stakeholder will not be fully realised, and the weight of demands incorporated from any individual stakeholder needs to be carefully considered (and communicated). Navigating this complex stakeholder landscape necessitates a careful balancing act to harmonize the range of expectations, while preserving the fundamental objective of providing an enriching, relevant, and future-oriented education. Using a design thinking approach can help to achieve this.

6. The Design Response

A design thinking approach can support business curriculum development for a number of reasons. Curriculum design requires a consciously contextualised perspective to address the complexities, and to develop a viable solution suited to the institution. We have identified the range of externalities amongst the pressures to change; when considered alongside the specificities of the institution, it is possible to draw together the full range of relevant information that enables development of a design vision.

A central argument of this paper is that successful curriculum design involves understanding the often diverse wants and needs of a broad range of stakeholders, and openly negotiating an agreed solution that can meet the contextualised design vision. In contrast to the time-constrained meeting-oriented 'design-by-committee' approach that internal University processes often encourage and with the proverbial camel solution the all-too-frequent output, a design approach supports the identification and acknowledgement of diverse and complex stakeholder needs and takes time to produce an agreed (and agreeable) outcome.

Elements of the design thinking toolkit, such as simple visualisations, are an important element in achieving a successful outcome, providing people-centered methods that support effective communication and common understanding. This is important both to support stakeholder groups as they explore the design space, and to translate the agreed vision into a visual roadmap of the design process. A visual reference point is valuable as a reminder of what has been previously agreed, helping groups understand the specific contextual constraints against which their needs and wants must be balanced, as well as an aide-memoir to ensure that solutions support the vision. Visual tools designed for the business world have application in the business curriculum design process. For example, the Business Model Canvas (Osterwalder and Pigneur 2010) provides a visual layout that brings specific aspects of the offering to the forefront including intended audiences and key partners. As a tool that has some familiarity in business it is also a recognisable tool for this stakeholder group. Furthermore, curriculum design in practice is ultimately a document-based approval process. It is of course important that the final solution is correctly documented to ensure clarity and to meet internal and external regulatory approval, but such documentation rarely supports effective communication. In our experience the use of visualisations which communicate the overall vision is a powerful supporting mechanism, notwithstanding its rarity as a formal part of the approval processes.

Ultimately, successful curriculum design is not just about managing the process, but also about nurturing the people involved. It requires a deep understanding of the

motivations, concerns, and aspirations of all stakeholders, and a commitment to fostering a culture of continuous change that is built through high levels of reciprocity, trust and shared values – as a form of social capital (Putnam, 1993). This use of social capital also reflects upon the importance of the specific change process that curriculum designers are entrusted with. The long-term outcomes of the higher education process are not to ‘simply’ to ensure that graduates get a job measured by annual income at a specific point in time, it is to facilitate the further acquisition of social capital during and beyond a student’s time at university. This social capital is not just about gaining automatic access to a wider network of those from a similar generation, it is about the provisioning of higher-level skills, facilities and knowledge that enables the individual to function effectively in unforeseen and unimagined situations. Richer social capital among graduates produces entrepreneurial success – not just startups, leaders – not just managers, and economic growth – not just efficiency gains.

The real challenge lies in guiding diverse interests and motivations towards a single common goal - creating a dynamic, relevant, and impactful curriculum that prepares students for the complex realities of the contemporary business world. This requires leadership to garner the stakeholder input effectively at each stage of the design process, to develop a vision that supports shared goals and understanding, and to use the agreed vision to as a mechanism to balance conflicting needs in reaching agreement for the final curriculum. It is the human centricity of design thinking that is arguably the most important basis for its effectiveness in business curriculum design.

7. Design for Change

Business curriculum design exists in a complex space. The externalities include the constant pressure to update curricula, in response to an ever-changing business environment. In the same way that organisations face the need to demonstrate continuous improvement in the face of a VUCA environment, the business curriculum is faced with constant demands to change to ensure that it provides graduates with the knowledge and skills required by current and future employers. Students looking at the business courses on offer seek assurance that they will learn all that is needed to succeed in their future careers. Government agencies and professional bodies expect graduates to have the knowledge and skills to support employability outcomes and future organisational needs, even though these are not yet understood. Internally, institutions place regulatory and bureaucratic demands on colleagues to devise curricula whilst addressing complex and ever-changing quality and pedagogical standards. The result is a broad range of stakeholders, with overlapping but not always intersecting wants and needs, and the curriculum design challenge is to lead the development of a curriculum appropriate to the institutional context that can deliver on an agreed vision that meets needs and delivers an academically sound and future facing curriculum.

Applying design thinking to curriculum development and viewing the curriculum as a single complex system supports an approach that is contextual and human-centred. The contextual element is essential to long term success, as it can help to ensure successful delivery of the agreed design by aligning to the institutional context. Design thinking also encourages the use of tools such as visualisations, an important supplement to the

document-based processes that are used to specify and document HE curriculum design.

We believe that institutions can support more design orientated approaches through examination of their own processes, timelines, requirements, and ambitions. Many of these changes could be supported by embedding a Theory of Change approach that encourages longer term examination of the success (or otherwise) of curriculum change. Theory of Change approaches produce better alignment with long-term graduate outcomes (rather than those imposed by regulatory bodies), encouraging data-driven decision making that is drawn from a sound evidence base and deeper understanding of the impact of change. All of these elements are the building blocks for a successful environment of continuous improvement in higher education. A practical example which encourages this approach is the Changebusters Advance HE project developed at Sheffield Hallam University (Austen and Pickering, 2022). This game puts the challenge of design within the wider scope of long-term outcomes, in an interface that does not present any “right” answers but instead places the curriculum within the wider external environment and one that is in a state of continuous change.

8. Conclusions and Reflections

The ambition of vision generated utilising a design thinking approach can help to counterbalance the pragmatic constraints arising from the reality of curriculum development in lived HE environments. The challenge is to utilize available time to maximum effect, and as we argue, this is not usually done through conventional committee meetings and formal documentation. Instead, design thinking leads us to more visual approaches and tools that encourage design thinking and exploration.

Our lived and observed experiences tell us that the design thinking approach is both desirable and difficult. As a curriculum developer it is all too easy to slip into a default mode that encourages building a curriculum based on the reuse of learning designs, assessments and experiences. The imperative, as committee deadlines loom, is to focus on hitting a date rather than achieving an ambition. With such an approach, every stakeholder suffers. The academics have designed themselves into an endless cycle of repetition, external stakeholders do not recognise in graduates the attributes that they want, and students do not gain the up to date experience, skills and knowledge they need to ensure they are capable of continuously learning in an uncertain future. Based on our reflections, we advocate for the use of design thinking and visual approaches, as enablers for the development of a shared vision and the management of diverse stakeholder needs that are necessary for successful curriculum development. A design thinking approach which is holistic, iterative, human-centered and inclusive can support development of a curriculum aligned to the institutional context and which supports the Business graduate to thrive in their future career.

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