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Development of an institutional framework to guide transitions into enhanced blended learning in higher education

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The rapidly changing digital landscape is having a significant influence on learning and teaching. Our study assesses the response of one higher education institution (HEI) to the changing digital landscape and its transition into enhanced blended learning, which seeks to go beyond the early implementation stage to make the most effective use of online learning technologies to enhance the student experience and student learning outcomes. Evidence from a qualitative study comprising 20 semi-structured interviews, informed by a literature review, has resulted in the development of a holistic framework to guide HEIs transitioning into enhanced blended learning. The proposed framework addresses questions relating to the why (change agents), what (institutional considerations), how (organisational preparedness) and who (stakeholders) of transitions into enhanced blended learning. The involvement of all stakeholder groups is essential to a successful institutional transition into enhanced blended learning.

Keywords: digital education; technology-enhanced learning; e-learning; higher education; change

Introduction

The changing digital landscape

The changing digital landscape (Gardiner 2015) has generated a new set of expectations in learning and teaching in higher education. New technologies offer more affordances for flexible learning (Gordon 2014), and learners' expectations are increasingly focused on a digital experience, regardless of debates surrounding variation in student and teacher digital literacies (Kennedy *et al.* 2008; Kirschner and van Merriënboer 2013; Margaryan, Littlejohn and Vojt 2011). Today's students expect an engaging educational experience where they can learn through exploration, interaction and collaboration in a way that is relevant, active, immediately useful and fun rather than the traditional model of teaching based largely on didactic face-to-face lectures (Jukes, Mccain, and Crockett 2010). This realisation has led many universities around the world to explore blended learning (Concannon, Flynn, and Campbell 2005; Popovich and Neel 2005; Stacey and Gerbic 2006).

Blended learning

This study subscribes to Garrison and Kanuka's (2004) definition of blended learning as an *optimally designed* combination of online and face-to-face learning, as well as

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Graham, Woodfield and Harrison's (2013) assertion that true blended learning is not an optional add-on, but actually results in a reduction of face-to-face contact time. Blended learning may be differentiated from e-learning in that the latter is concerned only with computer-based or online learning and does not include the on-campus experience of face-to-face learning. A blended approach can support deep and meaningful learning (Garrison and Kanuka 2004). However, many institutions are at the initial stages of blended learning adoption according to Graham, Woodfield, and Harrison (2013): awareness/exploration (Stage 1), or adoption/early implementation (Stage 2). The third stage; mature implementation/growth, is what we would refer to as enhanced blended learning.

While there is increasing awareness of blended learning, only a few studies provide direction for HEIs looking to transition into enhanced blended learning (Graham, Woodfield, and Harrison 2013; Halverson *et al.* 2012; Marshall 2011). Marshall (2011) argues that there is too little evidence of critical self-reflection needed to bring about the required organisational change for an enhanced learning environment. According to him, overreliance on early adopters is one of the reasons HEIs fail to produce the enabling environment for a wider technology uptake at an institutional level. An institutional level vision, direction and energy is required for a successful strategic transition (Taylor and Newton 2013).

Existing e-learning frameworks

Khan's (2005) octagonal framework introduced eight dimensions in relation to the design, delivery, implementation and evaluation of e-learning: pedagogical, technological, interface design, evaluation, management, resource support, ethical and institutional. In his framework, *Pedagogy* relates to teaching and the learning needs of e-learners, especially the relationship between the content of the course and appropriate methods of delivery to enable learners to achieve the learning objectives. *Technology* concerns technological infrastructure, hardware and software; the learning environment and the tools used for delivery. *Interface design* includes elements such as page and site design, content design, navigation and accessibility; however, this aspect may be considered too specific within the broader context of institutional transitions to enhanced blended learning (although accessibility is an ethical requirement). *Evaluation* is the North American term for assessment of learners, which we would place under pedagogy. *Management* relates to people, process and product, that is, the management team, management of e-learning content delivery and the e-learning environment. *Resource support* considers different types of resources (offline and online) that are available for learners. *Ethics* encompasses issues such as social and cultural diversity, the digital divide and [n]etiquette. *Institution* relates to the preparedness of the organisation in terms of administrative and academic affairs, for example, organisation and change, policy, faculty and staff support, and student services.

The e-Learning Planning Framework (eLPF) is an alternative online tool that enables schools and teachers to evaluate their e-learning capability and consider community engagement with digital learning (Te Kete Ipurangi n.d.). The framework identifies five dimensions that must work hand-in-hand for an institution to sustain its e-capability development over time. *Leadership and strategic direction* includes the school's vision, leadership of e-learning and strategic planning. *Learning and teaching*

includes curriculum, learning areas, digital citizenship, pedagogy and assessment. *Professional learning* encompasses learning communities and e-learning inquiry. *Technologies and infrastructure* includes tools and technologies, technical support and procurement. The fifth dimension, *beyond the classroom,* looks at how schools can engage with the local community in promoting digital learning.

Using a case studies approach to consider blended learning in the United States, Graham, Woodfield, and Harrison (2013) developed a Blended Learning Adoption Framework. The framework offered a tripartite model for the institutional adoption and implementation of blended learning in higher education; looking first at *Strategy* (purpose, advocacy, implementation, definition and policy) then *Structure* (governance, models, scheduling and evaluation) and finally *Support* (technical, pedagogical and incentives). Growing clarity, collaboration and investment in all dimensions were associated with effective transitions towards mature implementation and growth, or enhanced blended learning dimensions were associated with effective transitions.

These overlapping frameworks provide useful guidance for institutions moving to enhance their e-learning or blended learning provision; however, Khan's framework fails to address the infrastructure needs of a distributed campus and, like Te Kete Ipurangi's framework, concentrates exclusively on e-learning. The Blended Learning Adoption Framework was based on interviews with senior administrators but did not incorporate the views of teachers or student representatives. It has been argued elsewhere (Marshall 2011) that for educational strategy to be effective and efficient it ought to include all stakeholders.

Aim of this study

Given the limitations of existing frameworks, the study provided an opportunity to develop a holistic framework to guide institutional transitions into enhanced blended learning, in the context of UK higher education, informed by the views and experiences of a range of stakeholders.

Methodology

Research context

The University of Glasgow's (UofG) (2015) institutional strategy outlines the centrality of new technologies in enhancing learning and teaching. Substantial investment has been made in the institution's provision for blended learning, through its digital learning spaces and accompanying physical infrastructure including technology-enabled active learning (TEAL) spaces. Strategic, institutionally funded projects are expanding the provision of online distance and blended offerings, supported by the targeted recruitment of learning technologists and staff development provision. Within Graham, Woodfield, and Harrison's (2013) blended learning adoption framework, the university can be said to be at the early implementation level. In 2014, the authors received funding by the Quality Assurance Agency (QAA) Scotland, to explore the current enhancement theme of 'student transitions'. This provided the opportunity to use UofG as a case study to investigate student, staff and institutional transitions into enhanced blended learning. This article focuses on the institution's transition. Student experiences of transitions to blended learning are explored in a separate article (Adekola *et al.* 2017).

Research questions

In its broadest sense, this study was underpinned by research questions designed to investigate institutional motivations, benefits, challenges and barriers to enhanced blended learning, support required to overcome the challenges and barriers, and the perceived role of stakeholders in blended learning. The detailed motivations, benefits, challenges/barriers and enablers will be reported in a separate article. However, as will be explained in the findings, what emerged from the study, in terms of overall themes, was a deeper understanding of key considerations for HEIs looking to transition into enhanced blended learning.

Research methods

Semi-structured interviews were conducted and recorded by researcher JA with 20 participants from across the institution. A list of representative questions are included as Appendix 1. Participants were identified through purposive sampling based on their engagement with, and experience of, blended learning. Members of senior management and heads of services, teachers, learning technologists and a member of the Student Representatives Council were directly invited to take part. The student representative was the formal representative for learning and teaching across the institution and attended all relevant education committees; therefore, they were considered well placed to comment on student needs with regard to blended learning. Appendix 2 serves as a key to the numbers accompanying each quote in the results section, according to role. Participants were asked to reflect on their individual views and experiences of transitions to enhanced blended learning. Semi-structured interviews were chosen as they enable a degree of conformity with regard to data collection from all participants while allowing for specific issues to be raised by individual participants (Cohen and Crabtree 2006). The interview recordings were sent to a professional transcription company and the resulting transcripts reviewed by researcher JA for accuracy. The study was reviewed and approved by the University's College of Social Sciences Research Ethics Committee.

Data analysis

Researchers JA and VHD used thematic analysis as defined by Braun and Clarke (2006), in such as way as to make no epistemological or ontological assumptions, and mainly in an inductive manner. Transcripts were read through, coded, codes grouped into categories and emerging 'themes' identified. However, our analysis was also informed through engagement with appropriate literature (prior to and in parallel with interview data collection), including peer-reviewed journal articles, books, conference presentations and non-peer-reviewed reports. This allowed us to situate our findings in relation to the existing evidence base. Two of the researchers (JA and VHD) independently coded the interview transcripts (JA manually on paper, and VHD first manually on paper and then importing the data into NVivo) and negotiated a consensus, collaboratively verifying the codes and categories against the original interview data, our interpretation being informed by the prior and ongoing literature review. The results presented here represent key themes, around drivers for enhanced blended learning, institutional considerations, organisational readiness and stakeholders' roles.

Results

While the original study sought to address specific research questions as indicated above, out of this work emerged an understanding of key drivers or change agents, institutional considerations or support needs, processes to facilitate institutional alignment of stakeholders and an understanding of stakeholder roles in this new digital landscape of blended learning. These overall themes form the basis of the resulting framework. These are represented in Figure 1.

Key drivers

Sector-level key drivers were identified and categorised as the changing digital landscape, stakeholders' expectations of HE, internationalisation, and quality assurance and enhancement (Table 1). One of the key messages that emerged from the study was the need for HEIs to meet the demands of this evolving digital landscape. Technology is increasingly seen as part of everyday life and its enhanced use in education is expected. The internet and rise of social media have widened access to education (sometimes at no cost to the learner, e.g., through Massive Open Online Courses [MOOCs]) without needing to be based physically at an institution. For an institution to stay competitive in this globalised world, its presence in the online space is essential. There was also attention to the issue of internationalisation as institutions have become aware of the increasing importance for education to have global relevance
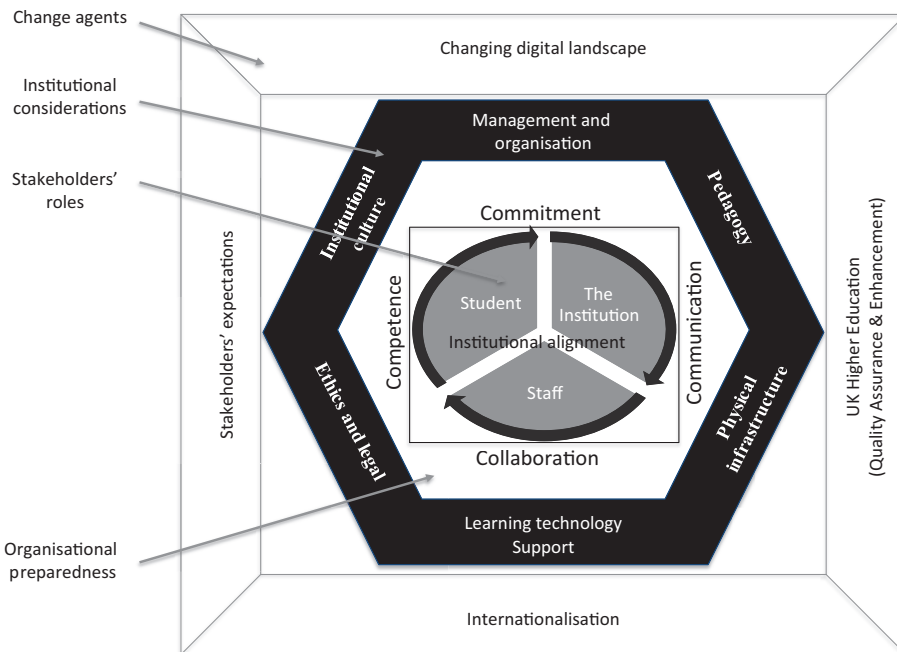

Figure 1.   Holistic framework to support effective institutional transitions into enhanced blended learning.

Table 1. Narratives around key drivers for change.

Theme	Illustrative quotes
Changing digital landscape	• 'We live in this technology-rich environment. It's no longer good enough just to say we'll put in technology if it enhances. You've got to think about the landscape you inhabit and make sure that you're making the appropriate tools for that landscape and you're not using last century's tools'. (#2). • 'Technology in general, is embedded into our lives, and therefore, it's now become part of our way that we learn, as well'. (#14)
Stakeholders expectations	• 'I think there's a general perception that students are becoming more and more used to doing everything online, and used to being able to do all sorts of things on their laptop or their phone or their tablet or whatever, on the move as well, and that it would be good for them or good for us, rather, if we could offer that kind of service'. (#20). • 'The students themselves, because they're obviously very used to technology now'. (#5)
Internationalisation	• 'We will have the opportunity in the future to look at connecting cohorts of students who are studying for the same degrees but in different parts of the world … we can have that cultural engagement in that learning space'. (#18) • 'The need to expand into these emerging markets, places like China and India, to deliver the education that these people want but possibly physically can't access'. (#10)
Quality assurance and enhancement	• 'I think key considerations for me are the quality of the student experience and the viability of the approach… [The] quality of the student experience is paramount'. (#18) • 'For me the whole process that the University of Glasgow is going through at the moment around blended and online learning, it's a learning experience for us as an institution. And we need to be very careful about how we measure that and what lessons we take from that as well'. (#13)

while reaching out to an international audience. Furthermore, UK HE policies and standards, such as those devised by the QAA, were seen to regulate the academic community and the standards of higher education, ensuring an optimal student learning experience.

Support needs and recommendation of good practice

The findings from the interviews, shown in Table 2, map to six dimensions of institutional considerations. These findings allow realignment of Khan's (2005) octagonal e-learning framework to the context of our present study to include a campus-based, UK HE setting. The six dimensions that our study evidenced include *physical infrastructure*, *learning technology support*, *pedagogy*, *management and organisation*, *institutional culture*, and *ethical/legal*. These are detailed in Figure 2 with representative quotes in Table 2.

Table 2.   Narratives around support requirements and institutional considerations.

Themes	Illustrative quotes
Physical infrastructure	• 'We'll be looking at the way we repurpose learning spaces, so that these learning spaces will be suitable for… the kind of learning that is now becoming pervasive through technology-enhanced learning and teaching, particularly collaborative learning spaces, we'll be building more of those. We will want students to be able to go into those spaces and have…a flipped classroom experience or a technology-enhanced learning and teaching experience in that space'. (#18) • 'Well, what's working well in terms of the library building as a whole is that we have enough space to be able to zone it, so that on the lower floors, and we're about to refurbish level two and it will become even more a flexible learning space … So on the lower floors of the library we have it coded green, which means that students can … there's no silence policy at all on these floors. So the students are allowed to talk, to work together in groups'. (#17)
Learning technology support	• 'I think it's got to continue to invest in a level of centred support but also to encourage schools and colleges to take a joined up approach and have local support which is specialised, and not just think that it's IT support'. (#2) • 'Making sure we have the resources, by which I mean the IT infrastructure, the software, the learning technology staff who support academic staff …and staff training'. (#17)
Pedagogy	• 'The research on learning and pedagogy comes from western contexts... That's very valuable research, but it doesn't seem to work as well with my Chinese students … Perhaps western students would embrace that uncertainty, because in the real world, you need to show skills that you can handle uncertainty … However, I'm wrong with Chinese students, because their real world in China and the Chinese workplace, they are being quite prescriptive. So what am I equipping them for?'. (#12) • 'I have seen many examples of the use of technology for the sake of technology, where there's been no real benefit either to the educator or to the student, and for me any evolution of technology enhanced learning has to actually be led by the pedagogy and the learning requirement rather than the technology'. (#18)
Management and organisation	• 'The leadership …. I think that's a key driver'. (#1) • 'I think that [the institution] already rewards and recognises people who are innovative within the promotions criteria and the reward and recognition sort of criteria, but probably more could be done to make it easy for people to evidence their innovation. I think probably allowing staff some protected time for scholarship, including scholarship within technology and innovation. I think that needs to be built into the workload model … It's doing a lot in that area, but it needs to do more'. (#19)
Institutional culture	• 'Senior management have to have a willingness to try and also because it is quite new, we are going into new territory with a lot of technology, there has to be a willingness to fail. There has to be a willingness to say "we'll give it a go and if it doesn't work we'll learn from that and move on." There cannot be a fear of change because if there's a fear of failure then nothing will ever change'. (#5) • 'Mindset, yes, it's culture, mindset, it's the world views that people have about teaching and learning, and that is a fundamental challenge'. (#3)

Table 2. (*Continued*)

| Themes	Illustrative quotes
Ethics/legal	• 'Bring your own device is quite a big hot topic at the moment and it's probably to an extent how universities are tending to be going. If I have 100 students in a lecture … and I tell them to bring their own device, there might be one student there who doesn't have their own device because they don't want to use technology or they don't have the money to buy the technology'. (#13) • 'I'm sure there are legal ones [challenges], particularly around copyright, … If you're starting to create stuff that's online, taking images from the internet is a breach of copyright, so we are really into some very thorny legal issues'. (#3)
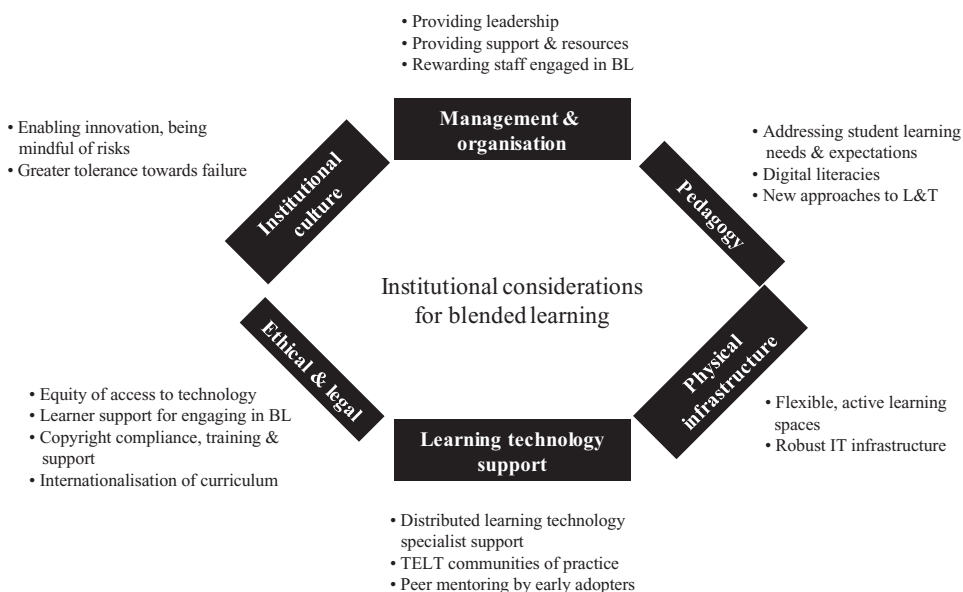
Figure 2.   Institutional considerations for enhanced blended learning.

Physical infrastructure

A key finding from the interviews was the fact that learning environments include physical aspects (flexible learning spaces and connectivity) and virtual spaces (virtual learning environment, digital libraries) and that there is a need to repurpose learning spaces to support a blended environment, with the library taking a lead in piloting flexible learning spaces.

Learning technology support

Additional learning technology support was seen as essential in order to cater for varying levels of digital literacy among staff within the changing digital landscape.

Central and distributed learning technology support, peer mentoring by early adopters, support through technology-enhanced learning and teaching (TELT) communities of practice (at school, college, institution and sector levels) and access to local equipment were all viewed as important.

Pedagogy

Participants viewed pedagogical considerations as essential, especially around the need to conceptualise new models of learning and teaching, addressing student learning needs and expectations including those of diverse cohorts, and constructive alignment of assessment with intended learning outcomes and learning activities. However, the data suggest that the institution needs to be cautious in applying 'Western' pedagogies to international student cohorts with different cultural expectations around learning and teaching and different workplace cultures; student transitions need to be supported. Providing evidence for the increased use of blended learning was also considered important; there was a sense that technology is often viewed as the solution to an undefined 'problem' and so concentrating on student learning remains paramount.

Management and organisation

Participants emphasised the role of senior management in articulating vision to provide leadership by informing strategy, providing support and resources, allowing staff autonomy while encouraging buy-in, and recognising and rewarding staff for engaging in blended learning. The study revealed the need for clear linkage between high-level strategy and operational delivery at a local level, requiring communication across the institution. A tension between research and teaching in relation to promotion criteria and staff workload was seen to require a reassessment of how staff effort is recognised and rewarded, as well as creating time in the staff workload for teaching innovation.

Institutional culture

Despite the clear support from senior management for innovation in learning and teaching, it was suggested by some participants that the institutional culture needs to evolve to embrace a greater tolerance to failure as part of this transition to greater blended learning, although this approach needs to be carefully managed. Developments in relation to all dimensions of blended learning were seen to be enabled within a responsive and progressive institutional culture regarding the adoption of new technologies for learning and teaching.

Ethical/legal

Data relating to the ethical aspects suggested the need to consider the accessibility of learning technology for students with disabilities, equity of access to devices among learners, internationalisation of the curriculum, and ensuring adequate learner support. From a legal perspective, copyright compliance, training and support was regarded as a requirement to overcome risks around breaching copyright, and to set a good example to students with regards to attributing ownership.

Organisational preparedness for change

This aspect of our study is largely derived from the literature review, in particular Reasons (1993), cited by Fischbacher-Smith (2016), who notes that in order to ensure effective organisational change management, there must organisational commitment, competence and awareness. Based on the outcomes of our study, we divided 'awareness' into communication and collaboration, to reflect the need for ongoing dialogue and partnership working between stakeholders (Table 3).

Stakeholder roles

Table 4 details participant narratives around stakeholder roles, derived from the interview data. Teachers involved in blended learning were largely regarded as facilitators of student learning, encouraging critical thinking and problem-solving. Students were considered as co-producers of knowledge, expected to take responsibility for their own learning. Senior management were regarded to have an enabling role in terms of providing resources and opportunities for blended learning and staff development.

Table 3.   Narratives around effective institutional change management process.

Themes	Illustrative quotes
Competence	• 'It's all about competence, yes, competence and confidence … those two should go hand in hand … I know for myself I'm very confident using, for example, video software, but there's also the competence about understanding copyright, so for example, I've made up videos that were put onto iTunes U, but I have to be aware of the copyright issues and make sure I have permission for all the different photographs and so on, and sometimes that gets lost in the circle'. (#5) • '[There is] lack of technical competence of staff so we would need to be trained'. (#3)
Commitment	• 'Senior management have to have a commitment to encouraging change but also having robust policies in place to say, okay, well, for us to do that what are the issues that may come up and how can we solve them?'. (#5) • 'How can they show commitment? Well, just by enabling the people that teach to do the best that they can towards blended learning, to provide the right support, training, the right tools for people that are providing this material, so that students can engage with it. And also to take on board what students think because, ultimately, they're the consumer'. (#4)
Communication	• 'My experience at Glasgow is that there is quite strong dialogue, evidenced by the learning and teaching strategic consultation, the e-learning strategic consultation, the e-learning and teaching hub consultation … there's a lot of consultation going on'. (#2) • 'We need to set that direction, but we do it in consultation with our colleagues, and we make sure that again developing the vision, is a vision that our colleagues can buy into'. (#18)
Collaboration	• 'I think we might also need to be much more collaborative in terms of teaching and learning'. (#3) • 'Being open to working collaboratively, generally, as an institution, and also encouraging staff in the institution to work across disciplines, within disciplines with one another, sharing information, going down the open resources route, possibly, is going to be beneficial to the institution'. (#4)

Table 4. Narratives around stakeholder roles.

Themes	Illustrative quotes
Teacher as facilitators of learning	• 'The teacher's role in blended learning is the same as in fully online or fully face-to-face learning; it's about scaffolding and building that environment where the students will actually learn … what I do see overall is an increasing co-creation type activity'. (#3) • 'In my particular experience, I don't necessarily see myself as a teacher. I'm a facilitator. It's the students who are doing the learning. I'm just facilitating that'. (#5)
Student as co-creators of knowledge	• 'The same role that they play if they're in the classroom, which is to some extent a co-producer of knowledge, because the dialogue, whether it's electronically mediated or face to face, it's still about how we understand, how we shape knowledge, how we interpret it, how we apply it'. (#7) • 'Students have a really important role to play, and I'm not sure they appreciate what that role is … It's our responsibility to make this role very explicit to them. So we're working on the assumption of knowledge co-creation'. (#12)
Senior management as enablers	• 'I think it's to build the institutional capability, is the key one. So it's to lead and build it, and to make sure that the key enablers and the key decision makers are aware of what's happening in the sector, what's happening in this whole area, and to foster a general feeling within the university that this is something which is worth doing and that we want to do, and that resources are pushed towards it'. (#2) • 'The main reason why blended learning is taking off in the institution is because senior management … are starting to take notice of the benefits of e-learning, and technology enhanced learning, but also giving us resource to do so … It does take time to create good e-learning … Just making the place an environment that's more conducive to developing that type of learning is going to be useful'. (#4)

Discussion: An institutional framework for transitioning into enhanced blended learning

The literature review revealed the absence of a UK-focused framework to guide a large, long established and complex HEI with a distributed physical campus in making an effective transition to enhanced blended learning. This study has led to the development of a framework comprising four layers: change agents, institutional considerations, organisational preparedness for change and stakeholders' roles (Figure 1).

Change agents

These key drivers for enhanced blended learning include the changing digital landscape (Jukes, Mccain, and Crockett 2010), internationalisation (Barber, Donnelly, and Rizvi 2013), quality assurance and enhancement (Varlamis and Apostolakis 2010), and stakeholder expectations including those of increasingly digitally fluent students and staff (Frand 2000; Garrison and Kanuka 2004). Understanding these is essential in strategically positioning an institution considering the transition into enhanced

blended learning. These key drivers also secure the commitment of stakeholders, especially senior management, in leading the desired change.

Institutional considerations

The institutional considerations are derived from the findings on support needs and recommendations of good practice, and reuse elements of Khan's (2005) octagonal e-learning framework, reframing it for a UK HE context and focusing on campus-based blended learning. These dimensions overlap with considerations identified in the frameworks proposed by Te Kete Ipurangi (n.d.) and Graham, Woodfield, and Harrison (2013). Figure 2 summarises individual considerations within the six dimensions.

A supportive *institutional culture* is recognised as essential for successful educational change (Garrison and Kanuka 2004; Kezar and Eckel 2002). *Management and organisation* is seen as pivotal in providing institutional commitment and leadership (Garrison and Vaughan 2013) and strategic seed funding (Garrison and Kanuka 2004, Porter *et al.* 2014), incentivising staff through recognition and reward (Moskal, Dziuban and Hartman 2013; Porter *et al.* 2014), providing time for blended learning in the workload model (Garrison and Vaughan 2013; Porter *et al.* 2014), and continuing to evaluate the benefits of blended learning (Garrison and Kanuka 2004; Moskal, Dziuban and Hartman 2013; Porter *et al.* 2014).

The need for technological and pedagogical support is highlighted by Garrison and Kanuka (2004), Graham, Woodfield, and Harrison (2013), Moskal, Dziuban, and Hartman (2013) and Porter *et al*. (2014). Effective *Pedagogy* underpinning the use of technology to enhance student learning outcomes is essential (Porter *et al.* 2014). According to Taylor and Newton (2013), this requires upskilling staff and students in relation to digital literacies. The importance of having clear communication with students to manage expectations around blended learning is also emphasised, including clarity around the roles of learners and teachers (Garrison and Vaughan 2013; Porter *et al.* 2014; Quinn *et al.* 2012). In relation to *learning technology support*, Moskal, Dziuban, and Hartman (2013) highlighted the need for mid-level organisational capacity enabled by the recruitment of staff with expertise in learning technology and academic staff development, including instructional designers. Taylor and Newton (2013) advise clarity around the complementary roles of support staff to avoid confusion. Our study additionally identifies the need for distributed support within a coordinated hub-and-spoke model.

Physical infrastructure conveys an institutional philosophy or statement about its approaches to teaching and learning (Skill and Young 2002). The importance of a robust and reliable technical infrastructure is recognised to be critical in transitioning to enhanced blended learning (Garrison and Kanuka 2004; Moskal, Dziuba, and Hartman 2013; Quinn *et al.* 2012). Our study also highlighted the importance of TEAL spaces, seen to enhance student experience, engagement, collaboration and flexibility (Neill and Etheridge 2008). Finally, the *ethical/legal* dimension in our study verifies the findings of others. Ethical issues around learner diversity, geographic diversity and the digital divide were identified by Khan (2005), as well as legal or regulatory aspects such as privacy, plagiarism and copyright. The need for staff development about copyright and accessibility is also highlighted by Moskal, Dziuban, and Hartman (2013).

All these developments require careful change management, which requires examining the institution's preparedness for blended learning.

Organisational preparedness for change

Organisational preparedness requires the institution to reflect on its capability and readiness for change. Informed by the literature review and the interview findings, four key elements were identified: competence, commitment, communication and collaboration. Staff and students require competence to undertake the relevant tasks; digital literacies are critical. Stakeholder commitment is essential; commitment of staff may be secured by senior management effectively recognising and rewarding staff for engaging in educational innovation. Communication (to raise awareness of the possibilities of blended learning) and collaboration (e.g. peer learning and sharing of good practice between teachers, and staff–student partnership working) are also essential, and help secure student and staff commitment. The organisational readiness aspect of the framework overlaps to some extent with the change management framework by Quinn *et al.* (2012), which incorporates and cites Kotter's (2007) directional change framework.

Stakeholder roles

At the heart of the framework are key stakeholders. Institutional alignment and regular dialogue between these stakeholders is critical in effecting institutional change towards enhanced blended learning (Moskal, Dziuban, and Hartman 2013).

Conclusions and implications

Our study assesses one HEI's response to the changing digital landscape and its transition into enhanced blended learning, and argues that a holistic approach is required to enable a successful institutional transition into enhanced blended learning. A framework has been developed to guide HEIs, comprising four overall themes: an overview of change agents driving the move towards enhanced blended learning (the *why*), institutional considerations to address support needs (the *what*), processes that facilitate enhanced blended learning (the *how*) and stakeholder groups that should be involved in the transition (the *who*). Our findings echo and validate those of other studies in blended learning.

In terms of implementing this framework, discussions with the institutional team (which overlap with but do not exclusively represent the participants of this study) has led to the identification of 'anchor points' to help move the university forward to the enhanced blended learning stage. Proposed interventions, based on the framework, include more explicit guidelines for staff on blended learning design, a networking event for stakeholders to share experiences and expertise, and staff–student partnership working around blended course development.

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Appendix 1. Representative interview questions

- Tell us about your background/experience in relation to blended learning
- What do you understand by the term 'blended learning'?
- What are the factors driving blended learning in the sector and the institution?
- What are the benefits of blended learning? What has worked well at UofG in relation to blended learning?
- What are the challenges and/or barriers encountered in relation to blended learning?
- How do you perceive the available support for blended learning? What additional support is needed?
- What are the roles of students/staff/management in blended learning?
- What key considerations must be put in place as we move towards more investment in BL?

Appendix 2. Participant roles

Role	Participant number
Educators (university teachers, lecturers, professors)	3, 5, 8, 12, 13, 14, 15, 16, 20
Senior management including deans of learning & teaching	7, 11, 15, 18, 19
Learning technologists	1, 4, 10
Heads of services with remit to support learning and teaching	2, 9, 17
Formal student representative for learning and teaching across the institution	6