

Re-visioning Learning Spaces: Evolving faculty roles and emerging learning spaces

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New build and refurbishments of educational spaces can be significant financial commitments and often represent 'flagship' investments for many universities. However, apart from their marketing brochure appeal and the contemporary feel good factor for current students of 'being there' (Crook & Mitchell, 2012) we should question whether they are really supporting effective learning. This paper advocates that truly effective spaces need to be more closely associated with the particular learning contexts one is seeking to enrich. Re-visioning our learning spaces requires universities to create and engage with a conceptual model of the learner and faculty, to develop not just new spaces but support for new roles within those spaces.

A CONCERN FOR SPACES

Distance education providers are concerned with the provision of resources, opportunity and learning support to enable students to succeed. Campus, and 'blended', institutions are concerned with much the same, along with an additional concern of physical spaces.

With a move away from simple behaviourist notions of instruction towards more nuanced design of learning experiences, blending instruction and social, peer and self-learning, universities in the developed world have seen a reconceptualization of their campus assets (Wedge & Kearns, 2005). There has been a strong desire to create teaching spaces with an emphasis on flexibility, social space and information technology rich environments.

Designs based on previous use, prior experience of what worked and what appears no longer to do so, have produced a plethora of 'flexible' meeting spaces with mutable furniture combinations, whiteboards or writable walls and ubiquitous wireless internet coverage. However, as Les Watson, lead consultant on the UK's JISC Learning Spaces InfoKit stated, 'decisions based on forensic examination of the past give us what we've always had' (JISC, 2006). These 'new' spaces are not so much 'new' as different from what universities had before; they are amalgamations of conference centres, corporate meeting spaces and 'creativity' spaces, adapted for University use.

Alongside the need to move away from the instructional model, has been a fear amongst Universities that there are generational shifts in higher education that place our learning and teaching spaces out of synch with 'where the kids are at'. The influential Diana and James Oblinger suggested that 'only by understanding the Net Generation can colleges and universities create

learning environments that optimize their strengths and minimize their weaknesses.' (Oblinger & Oblinger, 2005, p. 2.16). Subsequently, the very notion of a discernible 'generation' has been called into question (Jones, Ramanau, Cross, & Healing, 2010) and the motivation for investing heavily in enriched environments has consequently been undermined.

Logic might dictate, in the age of 'the student voice', that Universities should be listening to the students' perceptions of what they need to learn effectively, as the Oblingers again state, 'it is increasingly important that colleges and universities engage learners in a dialogue to better understand their perspective. Institutions make massive investments... for the sake of meeting students' wants and needs, basing these decisions on assumptions is risky.' (Oblinger & Oblinger, 2005, p. 2.15) Yet, the power of the 'assumption' may simply have been transferred from the institution's estates division to its 'student voice' and that risks falling into the trap noted by Watson earlier in this article, of basing their decisions on an analysis, or experience, of what has been before. Where such effort to listen to the perceived needs of students has been attempted it too risks being little more than 'surveying student preferences regarding furniture and group study space' (Bennett, 2011, p. 765). Students may also simply fail to engage in the process of identifying what works and does not work as a learning space because they do not see it as a priority for their immediate learning needs (Ramsden, 2011). Students can also display an uncanny realism about the fashion for 'social spaces' as in the suggestion that one particular social learning centre at an Australian university which, whilst being described as 'laid-back' and social, was also identified as not a place for 'serious study' (Matthews, Andrews, & Adams, 2011). Technology is changing the way students perceive their physical spaces for learning, their need to attend class, to access physical library resources, increasingly they appear to expect and anticipate a 'blending' of approaches. This changing expectation of learning with technology is not a function of age, with older adult learners also anticipating, perhaps with different concerns, the advent of social media into their blended learning experiences (Xie, Watkins, Golbeck, & Huang, 2012).

THERE IS NO SUCH THING AS BLENDED-LEARNING

'Blended', like many terms in education, has been in vogue and now risks being taken for granted and misused (Hermens & Clarke, 2009). Alternative terminology also has its supporters; 'mixed-mode' and 'hybrid' are also used synonymously. The most common conception of blended-learning is one in which there is a combination of face to face, real-time, physically present, teaching and a computer-mediated, essentially online, activity. The term blended is often used to imply something more than the evolution of digital materials 'supplementing' face-to-face instruction, rather it implies that each 'mode' can serve a student's learning in different ways, suggesting perhaps an articulated and integrated instructional strategy. In practice, this might mean that a two-hour lecture and a two-hour seminar become a web based lecture, a face-to-face seminar and several web based activities, allowing more time for contributions, more time for voices to be heard.

However, given the very poor empirical evidence to identify learners' preferences in blended-learning (Tselios, Daskalakis, & Papadopoulou, 2011), institutions would do well to stop talking about the 'blended approach' and describe instead their model of learning. Agreeing on an underpinning theoretical structure and identifying their contexts and those of their learners (culture, expectations,

destinations, prior experience, infrastructure), they should be able to describe a model of learning that differentiates themselves, however marginally, from others and provides students with choice.

What we have in the contemporary 'blended' debate is a healthy concern with what students do, and where, how and when they do it. Rather than teaching our one-hour lecture and our two hour seminar and despatching students into the dark dusty stacks or the 'short-term loan' mêlée, we now seek to engineer the 'blend' of approaches we want them to take. The scrap for the library carousel and scouring the desks of the studios for the only copy of the 'reference-only' gem has now been replaced by a broader concern for the 'design' of the students' learning. Educationalists blended twenty years ago and we blend today, only the context has changed.

The 'traditional lecture' has been much maligned in recent decades as technology promised radical transformations. The lecture itself, as a pedagogical form, has adapted itself to technology rather than been defeated by it. Good lectures are recognisably different from 'bad old lectures', as advocates of TED.com will tell you, but they still contain much that is recognisable in the form (Friesen, 2011). Nonetheless there are many reasons to reconsider the reliance on face-to-face instruction, and the opportunity for students' to contribute, is perhaps the most evident. There are also opportunities for content to be paused, reviewed, annotated, questioned, spliced and shared in ways that live synchronous face-to-face contact cannot be. Media-rich course content, video and audio, interactive resources, formative assessments, all serve to allow the student to choose not just when, but also where, to study.

The 'where' question then also gives rise to another popular theme amongst university leaders, that of mobile learning, when perhaps the emphasis should be on ubiquitous learning, open educational resources and unfettered access, not bounded by spatial considerations (Olcott, 2012). Adoption of genuinely technology rich environments to support learning have been few, largely as a result of attempts to build from what is already known, and therefore limited, by the conceptual model in play. Truly ubiquitous technology-enabled learning spaces are possible in theory but much harder to implement in practice (Scott & Benlamri, 2010).

The reason it is so difficult to establish what the right 'blend' is, is simply because the context of the learning determines the nature of the blend. The students' context establishes what can and can't be done in a specific mode, what time parameters exist, what technology restrictions and what assessment evidence is ultimately required.

Perhaps the biggest argument in favour of a blended approach (twenty years ago and today) is simply that it requires engagement from both faculty and students. Managing to access content and activities, to participate appropriately and incrementally develop a portfolio of formative assessment towards a final summative goal, all this requires self-management, discipline, at least some digital literacy, and some motivation. Bennett makes the astute observation that 'it is impossible to measure how effective non-classroom spaces are as learning spaces without defining the kind of learning one hopes to see in these spaces' (Bennett, 2011, p. 766).

CONTEXTUAL LEARNING NOT BLENDED-LEARNING

Our attempts to revise spaces is taking place, for the most part, in an environment where we are transitioning away from tutor-room based individual and small class tuition, through a massification process typified by the lecture theatre, to the fetishism of group seminars, and towards a place

where the boundaries between instructor-led teaching and student-centred learning are blurred. We should not neglect to remember that universities, through these changes, are redefining the internal spaces, our identities and roles, as well as the external physical spaces.

Terminology in education is a fascinating thing. Words are, after all, concepts. Concepts change, evolve and mutate frequently more quickly than the words associated with them. Learning once meant to go to the place of learning associated with what one wanted to know; the monastery to learn about religion, the blacksmith to learn about metals. Learning was learnt at the feet of the master. As European notions of learning evolved so did our concept of what was valuable to be learnt. The book gave rise to libraries, and libraries to Universities. Where else would one go to study the 'learning' in the books?

Our concept of learning has now reached well beyond the word itself, and so we have created prisms through which to view its process, concepts such as pedagogy and andragogy (Pew, 2007), heutagogy (Blaschke, 2012); and an array of theoretical lenses; constructivist, social-constructivist, humanist and connectivist (Freire, 1996; Kozulin, Gindis, Ageyev, & Miller, 2003; Siemens, 2009).

Nowhere is this mis-match of word and concept change more evident than in the very new domains associated with e-learning in its multitude of forms. Even a 'simple' concept such as 'online' when associated with learning in the 1980s usually meant CBT (Computer-Based Training and a dedicated PC), in the mid 1990s with home based dial-up browser based access (lots of CMC or computer-mediated-conferencing), in the mid 2000s with moderately rich multi-media VLEs (Virtual Learning Environments). In 2013, being online can mean all of the above but also encompasses access through tablets, television, game-stations and hand-held devices, in the office, at home and literally anywhere there is a wireless or data access point.

The distinctions between being online and offline are changing, the liminal spaces morphing around each new technology innovation are navigated with different levels of confidence and clarity. 'Blended' as a concept becomes fairly meaningless the more it is discussed. The addition of some online activity to a campus based programme was in the 1990s deemed 'blended', although many would suggest a blending of lecture and self-study, reading and discussion had long been a feature. As the technology environment, the 'digital ecology', evolves so the nature of the 'blended' learning experience necessarily changes. This environment or ecology is fluid, variable (by social-access and geography most notably) and so the nature of the learning opportunities associated with it are also fluid.

It is not only the contemporary nature of technology, its 'here and now-ness', it is also the contextual nature of technology. The choices I make about what I am prepared to access, and when, are not the same as someone who happens to be my age, or share my job title, or live in the same street. My context is unique to me. Hence my 'blended' opportunity, and its obstacles, are totally unique to me (Terras & Ramsay, 2012).

Learning designers who attempt to design effective 'blended' learning opportunities frequently fail to satisfy their students' expectations. Not because some are 'digital natives' and some are not (Woolgar, 2002), but simply because my notion and your notion of blended are different. What I can do as a learning designer is to design into your opportunities for study into the learning that I am able to support and believe is appropriate. I can attempt to design into your learning the flexibility for you to make the very best use of your context. I should design learning for your digital ecology

context, your prior learning context, your social context and professional context, and your physical learning spaces. Learning designers can design learning that allows you to 'blend' it into a meaningful learning pattern for you. It doesn't matter if we mean different things with the words we use. Blended should come to represent as a concept *the choices* we facilitate, not the technology we provide.

LEARNERS OF CHOICE

In search of the virtual class: education in an information society (Tiffin & Rajasingham, 1995) begins with a description of a girl climbing into her full body sensor suit and shooting off to a virtual waterfall for a geography lesson. Digital Immersion *was* the future. The description of the learning envisaged a different kind of learner, a different learning context, and a different form of learning.

As the learner changes to take a significantly more determinant role in their own learning process, in a world in which *choice* is the defining quality of the consumer and, therefore, the product, the model of our universities must look like the model of our students. Universities must accept that the very nature of the University will change as societal expectations of their function (most evident in student expectations) changes. Which Universities will be brave enough to shape the learning spaces of the future?

We need, as learning designers, to reconceptualise the physical and virtual spaces in which learning will occur in the 21st Century, based on a conceptual model of learning that provides a useful mechanism to debate and design the spaces we intend for our learning. If Universities do not ground themselves in a considered conceptual model, they will end up describing a 'what' they offer the student but not 'why'. We, as Universities, should have an answer to the question 'Give me an educational rationale for why my lecture theatre looks like this, why my VLE looks like this!'

The academic qualifications many of our students will be studying in ten years' time most likely do not exist today, students' career choices are likely to be more complex and 'portfolio' driven than today, based on evidential skills more than on qualifications. The very future of the educational spaces students encounter should also, therefore, change. Universities are responding to technology by evolving into porous knowledge mediators rather than guardians of the book-tower. The universities that used to shape our occidental epistemological universe will do so again, but as that universe changes and expands, so will our universities evolve (Baumanns, 2009).

CHANGING FACULTY ROLES IN CHANGING LEARNING SPACES

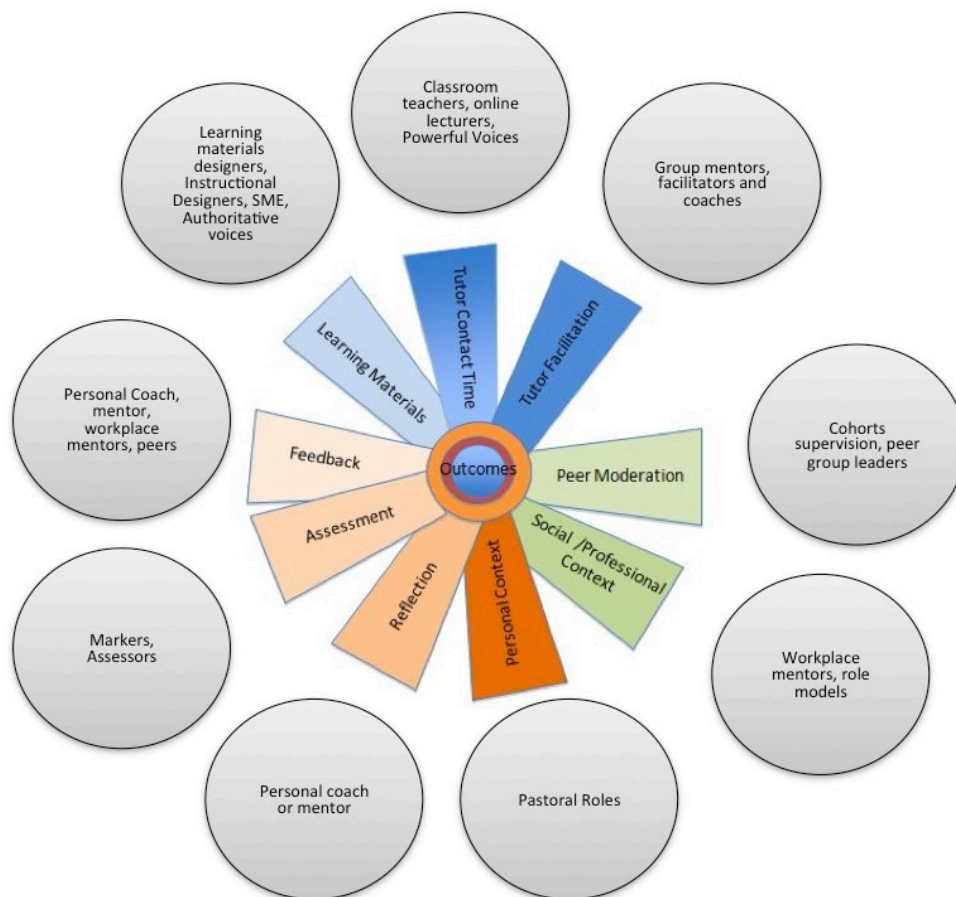
The SOLE model (Atkinson, 2011a) provides one way of interpreting and perhaps predicating this change. As we accord learners a more central role in the learning process, should we not be asking what spaces we need to engineer for students to help them fulfil the holistic experience of learning that the SOLE model aims to represent.

A model can serve as a central conceptual pattern through which institutions can challenge their own conceptions of learning, and teaching, and learning spaces. The extent to which a model of the learner's world can represent the learning process itself has been an interesting facet of the SOLE model's development. To what extent does a model designed to represent the elements of

engagement the learner is required to take ownership of, come to represent the ‘world of learning’ itself?

The relationship between space and individuals’ roles in education is complex (Gulson & Symes, 2007). Spaces, virtual and physical, are where teachers (however currently defined) support students’ learning in a variety of ways. Understanding the changing nature of faculty roles will help us understand spaces. The evolution of faculty roles, of what it means to be an ‘educational practitioner’, can be usefully interrogated by use of the SOLE model (Atkinson, 2011b). It suggests that the roles of faculty could be defined in terms of how they support that particular facet of student learning represented by each of the nine elements in the SOLE model (Figure 1), potentially becoming an instrument to structure faculty development and workforce planning.

Figure 1 - Disaggregating the faculty role using the SOLE model



Many of the faculty roles identified in exist already and are simply being described through the lens of the SOLE model. Extending this use of a conceptual model of the learning experience to identify roles takes on a particular application when we differentiate between ‘traditional’ face to face roles and those emerging as a result of greater institutional adoption of online learning environments.

Illustrating the various faculty roles alongside the element of the SOLE model that defines the nature of the student engagement illustrates clearly that face-to-face and virtual roles differ, are likely to require different skills of faculty and engage students in different ways of working (Table 1). One of

the biggest challenges facing institutions is in supporting staff to develop the new skills that these emerging roles require. Much of the move towards greater integration of digital resources is seen as burdensome by staff who may lack the digital literacies to be effective.

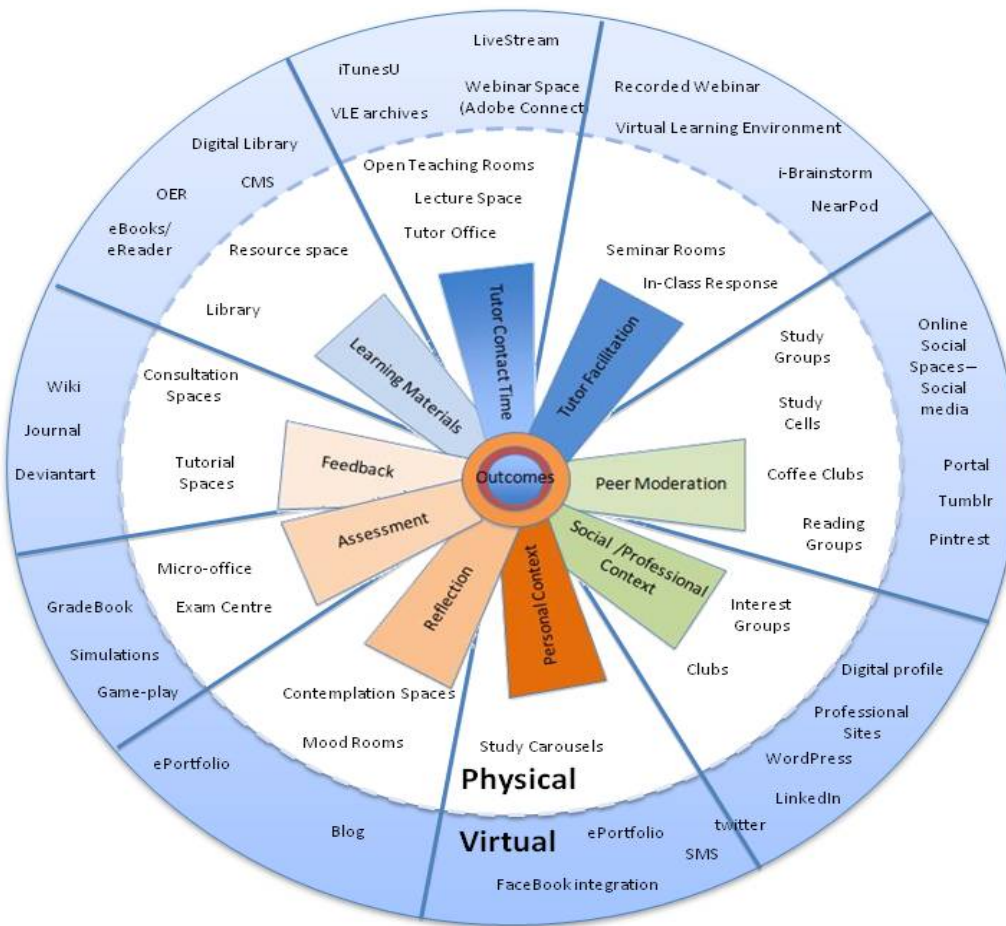
Table 1 - Faculty roles through the SOLE model lens

SOLE model element	Face-to-Face Faculty Role	Virtual Faculty Role
Peer-Moderation	cohort supervision, peer group mentor	forum moderator
Social/Professional Context	workplace mentors, role models	virtual coach, virtual mentor
Personal Context	pastoral roles	pastoral roles (Skype VOIP support)
Reflection	personal coach, workplace mentors, peers	journal commentator, portfolio moderator
Assessment	markers, assessors, invigilators	e-marking, 'e-vigilators'
Feedback	personal coach, workplace mentors, peers	virtual coach, virtual mentor, commenter
Learning Materials	learning material designer, instructional designer, subject matter expert, authoritative voice	video/podcaster, learning blogger
Tutor Contact Time	lecturers, teachers, facilitators	presenters, broadcasters, narrators, illustrators
Tutor Facilitation	group mentors, facilitators, coaches	webinar leader, email correspondent, 'Skyper'

, the faculty roles described, face to face, or online, are rarely all carried out by a single individual and there is no suggestion here that they should be. Indeed, it is suggested that these different roles are likely to require new combinations of function and responsibility that do not currently exist to support students.

A conceptual model of learning allows for an analysis of the spaces in which these emerging roles are to be carried out. As universities redefine the nature of the future learning spaces needed for students to fulfil their holistic learning experience, attention is focussed on exploring what the student does in any given learning space. A conceptual model is a mechanism for defining the nature of spaces. For each of the elements of the SOLE model we can define the nature of the space, physical (face to face (F2F)) and virtual (Online), that might be inhabited by the student to realise their learning opportunities and reflect on the emerging roles that might occupy that space.

Figure 2 - Learning Spaces seen through the SOLE lens



In considering our use of space we need to give primacy to ‘use’ and less the notion of a ‘cool space’. As we witness multiple convergences of technology, and a greater degree of colloquial usage, universities should recognize that adoption is rarely uniform, seldom segmented solely by age and culturally determined. There is a significant occidental bias in the research in e-learning which should be taken into account.

The ‘blended’ debate amplifies many of the misnomers regarding the concept of ‘digital literacy’, a contentious point of professional discourse for educators. Employers lament the apparent inability of Universities to provide students with adequate ‘skills’, of which ‘digital skills’ are frequently cited and grossly misunderstood (Atkinson & Burden, 2011). There is a pressing need for institutions to understand better the nature of the digital space and the skills required to operate within it, to provide flexible and appropriate support to learners in well configured, personalised, and flexible learning spaces. This is true whether the student is operating in the ‘real-world’ and using the virtual tools to access an alternative experience, or operating in the virtual world and seeking a role that they understand as comparable to a face-to-face experience.

The learning spaces identified in Table 2 are not intended to be exclusive or severely delineated. Nor are the various proprietary products that enable those virtual spaces identified as preferred options but merely as examples. The issue is whether in thinking about what the student is doing,

alone or with others, in any given space we choose to provide for them, we have optimised that space, whether we give priority to ‘use’.

Table 2 - Learning spaces through the SOLE model lens

SOLE model element	Face-to-Face Spaces	Virtual Spaces
Peer-Moderation	multi-person study cells (smart board surfaces, interactive whiteboards, micro-teaching spaces), coffee lounges, study stations	Café Forum, open Webinars, reading groups
Social/Professional Context	interest groups, notice boards, clubs rooms, book clubs	club forums, community wikis/blogs
Personal Context	study carousels (individual or pair) spaces, some quiet (library space), some ‘open’ in café. Suitable for awkward spaces	personal journal, blog site, Pinterest, Tumblr
Reflection	meditation and contemplation spaces	e-portfolio/blog site, art folio, video-log
Assessment	WiFi, networked PCs, workstations, micro-office	e-assessment, timed spaces, simulations
Feedback	one-on-one consultation spaces, various levels of formality	Skype style one-to-one video-communications, Nearpod
Learning Materials	resource space, library space, media room, sharing resource panels	embedded e-library, leveraging Zotero, Ref-Manager, Mendeley integrations
Tutor Contact Time	open teaching rooms, lecture theatres, seminar spaces	virtual access to F2F, live and recorded, iTunesU, LiveStream
Tutor Facilitation	seminar spaces, office hours	Webinar space (Connect, Wimba), email, Skype

Each institution, in developing their conceptual model of the learner and of learning, may identify that it does not teach in a particular way and that it, therefore, does not need to offer students ‘that’ particular space. Space has a purpose and we must define what the purpose is in order to define the nature of the space we seek to create.

If we are teaching professional health staff a range of programmes that require a good deal of small group reflection and contemplation on difficult ethical decisions, but no large group teaching and very few physical materials, we might create a very supportive space rich with contemplation spaces, comfortable work group stations with the emphasis on discretion, silence and wireless connectivity. A design focussed around an arts and design programme might decide instead to create open unrestricted sightlines across a large open space with large wooden workbenches for ‘wet’ work all around the outside using available light and a small ‘coffee-pit’ in the middle. These two spaces are clearly not interchangeable.

One of the reasons why so many of the recent ‘new’ learning spaces begin to resemble each other, and are frequently reconfigured by students, is that they have not been designed with particular student communities in mind. Rather, they have been designed for ‘today’s student’ on the assumption that there is some largely homogeneous group that fits that description.

CONCLUSION

By using a conceptual model, such as the SOLE model, we can suggest a range of roles that faculty ‘supporting learning’ might be expected to undertake, and a wide range of physical spaces in which they might be expected to undertake them. These roles and spaces are summarised in Table 3.

Table 3 - Faculty roles and spaces differentiated according to mode.

	Face to face		Virtual / Online	
SOLE element	Faculty	Spaces	Faculty	Spaces
Peer Moderation	cohort supervision, peer group mentor	multi-person study cells , coffee lounges, study stations	forum moderator	Café Forum, open Webinars, reading groups
Social / Professional Context	workplace mentors, role models	Interest groups, notice boards, clubs rooms, book clubs	virtual coach, virtual mentor	club forums, community wikis/blogs
Personal Context	pastoral roles	study carousels (individual or pair) spaces, some quiet (library space), some ‘open’ in café.	pastoral roles (Skype VOIP support)	personal journal, blog site.
Reflection	personal coach, mentor	meditation and contemplation spaces	journal commentator, portfolio moderator	e-portfolio/blog site, art folio, video-log
Assessment	markers, assessors, invigilators	WiFi, networked PCs, workstations, micro-office	e-marking, ‘e-vigilators’	e-assessment, timed spaces, simulations
Feedback	personal coach, workplace mentors, peers	one-on-one consultation spaces, various levels of formality	virtual coach, virtual mentor, commenter	Skype style one-to-one video-communications
Learning Materials	learning material designer, instructional designer, subject matter expert, authoritative voice	resource space, library space, media room, sharing resource panels	video/podcaster, learning blogger	embedded e-library, leveraging app integrations
Tutor Contact Time	lecturers, teachers, facilitators	open teaching rooms, lecture theatres, seminar spaces	presenters, broadcasters, narrators, illustrators	virtual access to F2F, live and recorded, iTunesU, LiveStream
Tutor Facilitation	group mentors, facilitators, coaches	seminar spaces, office hours	Webinar leader, email correspondent, ‘Skyper’	Webinar space (Connect, Wimba), email, Skype

Each institution will need to decide whether it seeks to design 'generically useful' spaces, in which case the examples and generic advice emerging from the UK's JISC 'Designing spaces for effective learning' (JISC, 2006) project and those recommendations from the USA's EDUCAUSE 'Learning Spaces' (Oblinger, 2007) are helpful. The costs of new buildings and refurbishments of educational spaces can be significant and represent 'flagship' investments for many universities. However, apart from their marketing brochure appeal and the contemporary feel good factor for current students of 'being there' (Crook & Mitchell, 2012) we should question whether they are really supporting effective learning. Truly effective spaces need to be more closely associated with the particular learning contexts one is seeking to enrich. The universities that will shape the learning spaces of the future are those that are able to conceptualise, visualise, the world in which discernible communities of future learners live, and develop faculty to take on alternative roles to support learners in these emerging spaces. Re-visioning our learning spaces requires universities to create and engage with their conceptual model of the learner and faculty, not simply sniff the new paint.

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