Enhancing learner–learner interaction using video communications in higher education: Implications from theorising about a new model

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Abstract
As visual connectivity improves, an opportunity to enrich and rethink the place of learning design in online and distance education is presenting itself. The opportunity is derived from the increasing scope for personalised synchronous interaction which has been missing in computer mediated communications (CMC) and previous generations of distance education. This paper presents a model which distinguishes between planned learner-content interaction and learner-learner interaction and suggests that a blend of planned and non-planned learner-learner interaction is worthwhile. It concentrates on technology enhanced learning using video communications which provide opportunities for more authentic online collaborative learning, formally and informally. This conceptualisation is underpinned by beliefs which promote constructivist and transformative learning in the hope of stimulating debate as universities focus more towards quality learning. The intent is to explore the implications of learning in higher education becoming enhanced in online environments as learner-learner dialogue occurs ‘face-to-face’, thus, extending the potential of online learner-content environments.

Introduction
This paper builds on the extensive work over the last decade about the use of video communications in education (Andrews & Klease, 1998; Andrews et al, 2008; Baecker, 2003; Bossu, Stein, Smyth & Shanahan, 2006; Smyth, 2005), quality online learning (such as Salmon, 2000; Salmon, 2004) and emerging video technologies (Caladine, 2008). It is premised on the stance that learner–centred learning design is essential for
deep learning (Biggs, 1999; Ramsden, 2003; Trigwell & Prosser, 1999), that technology affordances should be the servants of pedagogy rather than drive pedagogy (Domine, 2007; Herrington & Bunker, 2002; Laurillard, 2002) and that learning should be transformative (Mezirow, 1981), with the control for learning resting ultimately with the learner. However, it does not advocate unplanned learning. Rather, the teacher’s role is that of an enabler, considering how to best utilise technology as a palette of affordances supporting learning design (Herrington & Bunker, 2002) where learners are encouraged to access the learning design assuming e- and m-learning capability. The difference from previous work is the emphasis on empowering learner–learner interactivity as a core of the learning design because the advances in electronic access to knowledge objects and the rise of web-based video communications make it possible for learner–content interaction (CMC) to become subservient to more authentic learner–learner interaction using improved virtual collaboration affordances.

**Pedagogical approach**

As a constructivist approach, it is intended that the teacher does not feature prominently in the model, but remains the planner, learning designer and facilitator. In this role, the teacher uses the learning design to set outcomes for learning (Anderson *et al.*, 2001), to stimulate learning and to motivate the achievement of the learners’ learning goals. This is not a discovery approach to knowledge construction, because the teacher has the responsibility to plan for learning and to support and guide learning experiences (Mayer, 2004). Assessment should be strategic in this sense, providing the guiding parameters for learning, but not confining it. This is a result of the stance that the locus of control develops with the learner over time. The role of the teacher as facilitator requires an approach of working with learners to promote learner–learner collaboration and knowledge building rather than teaching to them in a teacher-to-learner transmission of knowledge (Biggs, 1999; Mezirow, 1981; Trigwell & Prosser, 1999). There is an assumption that the learning design is developmental in expectations for cognitive load, knowledge and skills acquisition, and growth of learner autonomy or locus of control.

In essence, this model articulates an approach for considering how to incorporate and preface newer mobile and video communications in learning design. It builds on earlier work exploring decision-making frameworks (Smyth, 2005) and critical inquiry of the broader literature related to using these (Andrews *et al.*, 2008; Caladine, 2008) and other technologies for learning. It does not extend on any one theory, but gathers together ideas from a range of literature and perspectives with the aim of exploring their synergy. The focus for this model is how to make the most of emerging opportunities for interactivity, not with content as currently available in asynchronous online learning but between learners. Thus, it seeks to provide a basis for decisions about learning design when learner-to-learner communication is desirable in online environments, particularly distance education. In doing so, the model implies a significant increase in empowerment of learners who can drive interaction according to personal and group learning needs derived from planned learning goals or the need to achieve
specified outcomes. This, of course, requires that video communications be available for much more than transmission of information (Smyth & Bossu, 2006; Smyth & Zanetis, 2007).

The intent of this discussion is not to limit learners to the particular Internet communications currently available so should be seen as a conceptualisation for embracing emerging affordances such as social communications applications, gaming applications and others yet to be developed. This model also acknowledges the place of asynchronous affordances, such as email, online learning management systems, discussion boards, or affordances that can facilitate asynchronous and/or non-visual interaction, because these affordances will continue to have value in supporting learning, particularly when synchronicity is not yet possible or practicable or necessary for the learning design or discipline. Learner–content interaction continues to have a place where it is a useful and desirable tool in the learning design or as a tool for use at the students’ discretion during learning.

**Improved potential for video communications**

The improvement in generalised connectivity (broadband, 3G, etc) to support video communications makes this possible. Although the teacher’s role is that of facilitator it is also assumed that learners could be facilitators of each other’s learning because all come to the space with differing constructions of base knowledge, which can inform the knowledge formed by others. In this way, the learners are explicitly valued and value each other, a core requirement for construction and, hopefully, transformation to begin (Mezirow, 1981). Learners acting as teachers have guiding and motivating roles aiding the achievement of the goals and outcomes for learning set by the teacher.

The defining feature of video communications is that they facilitate two-way, synchronous, audio-visual communication via the Internet. They currently include videoconferencing, personal web conferencing, access grid and the like (Berriman, 2007; Caladine, 2006, 2008). The distinction between using dedicated hardware codecs, such as in proprietary videoconferencing and access grid technologies, and web-conferencing software codecs for computer-to-computer or m-conferencing is not emphasized, although there is little doubt that the former enables multiple site connections with superior video and audio quality. Given the improvement in bandwidths and computing/Internet in the last 5 years, and the convergence of hard and soft codecs, video communications are increasingly more accessible and mobile. Previous criticisms of video communications (Laurillard, 2002) which saw them characterised as transmissive affordances, can now be discarded in new theorising.

**Contextual influences within the model**

Underpinning the primary stance for the model are particular philosophies drawn from literature surrounding adult learning (Mezirow, 1981), distance education, learning with technology and higher education pedagogy (Dennis & Kinney, 1997; Laurillard, 2002; Mitchell & Hope, 2002; Savin-Baden, 2007; Weatherly & McDonald, 2003). This literature provides the stimulus for the areas of contextual influence in the model (see
Although these contextual influences are represented by concentric circles, the intent is that they are actually three layers lying atop one another with the influence of the inner circles being more dominant than the outer. By way of illustration, the outermost circle, the technology, always has influence, but this is least in the central area, where the learning design and curriculum predominate as the primary influences guiding learning.

These three areas of contextual influence impact on the approach to learning design, the curriculum and the outcomes of learning. Adult learning theory, particularly that which intends to be transformative (Mezirow, 1991), is the philosophical basis for decision making here. In essence the learning design is underpinned by values that acknowledge that:

Figure 1: The model
1. Learners and their prior knowledge are valued by increasingly transferring control of learning to learners within the developmental sequence and pathways of the learning design;
2. Learners should interact to build knowledge from what is known thereby raising their propensity to determine their learning paths towards intended learning outcomes;
3. Learners are supported to make decisions using reflection and critical judgement;
4. Learners should engage in problem solving, risk-taking and self-correction to build confidence and motivation for acquiring new knowledge; and
5. Learning is based on ethical and moral considerations of the individual and collective thereby fostering thoughtfulness and holistic thinking.

Although the model requires that learning design is learner centred, with teaching subordinate, it does not advocate unstructured discovery learning as its core pedagogy (Mayer, 2004). The facilitating role of the teacher provides the primary guidance for learning even though learners may also be facilitators. Thus, learners are enabled to engage with and learn from each other as well as the facilitator, who may also assume the role of learner as needs be (Escobar, Fernandez, Guevara-Niebla & Freire, 1994). A vision such as this is proffered by Bowden and Marton in their conceptualisation of the university as a moral/ethical organisation whose primary purpose is promoting learning which enables learners to cope in the increasingly fluid knowledge world in which they live and work (Bowden & Marton, 2004, Chapter 11). The advent of video communications promotes knowledge formation through discussion and sharing of knowledge and perspectives in formal or informal face-to-face interaction spaces, thus, providing new opportunities to examine these ideals and consider whether they can be promoted using such technology.

The three circles denoting contextual influences provide the background for, but are not separated from, the set of intersecting rings that contain the core elements of the model.

**Core elements**

Three rings intersect to form the primary foci of the model: learners, knowledge and connectivity. Although they are depicted as defined rings, this is for convenience of illustration. In my mind, they are less fixed in dimension and are bounded more loosely. Each would change shape, increase or decrease in size according to the extent of the discipline knowledge available and accessible, the emphasis on synchronous communication within the learning design and the degree of student autonomy desired. The primary ring prefaces the learners while the secondary rings represent content as a knowledge repository, and connectivity as the virtual communications affordances available to the learning designer within the context of the institution, the discipline and the cohort. It is the learning designer’s role to devise-specific learning outcomes and choose affordances in a fit-to-purpose design, reducing the drive of the technology and content within the learning design and making them the supports for the design.
Learners
Because learners are the focus of the model, practice is necessarily learner-focussed and has an implicit requirement that learning how to learn be scaffolded within the learning design. Although the intent is for learners to be empowered and to gain increasing control of learning, learning should still be planned to achieve specified outcomes, albeit in more varied ways than has often been traditionally so—when the focus has been on teaching rather than learning (Bowden & Marton, 2004). Teachers, as facilitators, will require the skill to analyse the audience/s of learners who will undertake learning and to design learning interactions from the point where learning needs to begin, potentially for each learner, with outcomes that can be achieved using a variety of learning strategies that promote comfort with appropriate affordances (Salmon, 2000). Consequently, assessment could become individualised against negotiated outcomes.

Knowledge
Of the core elements, the knowledge element is a content repository where learners access and negotiate the core understandings required for new learning to be constructed according to the needs of the individuals/groups involved. Construction may occur through direct learner–content interaction planned by the teacher-facilitator or via informal learning, which occurs as learners navigate the space and engage curiosity to explore various content sources which they perceive may be relevant to their learning need. Learning may occur in a sequenced and/or just-in-time learning format, using required and additional content with some interaction and facilitation. In many ways, such flexibility requires more planning and curriculum design both within units of study and across courses of study.

Connectivity
Another core element is connectivity, defined as the space where technology supports but does not dictate the form of learning. Primarily, this element denotes access to a variety of forms of web-based technology available to link learners together in synchronous and asynchronous, formal teacher-directed and informal student-directed ways. The intent is to achieve balance between learners’ needs, learning goals, the curriculum requirements and learning design. It is the space where group work may be facilitated and where any forms or number of communications take place both synchronously via video or social communication tools and asynchronously via various two-way forms. Learners are free to connect to each other at any time or from any place, enhancing the distance and blended education traditions of disparate and/or different groups of learners joining together to aid each other. The benefit to learners is that the technology enables more relaxed and frequent communications, thus overcoming the hesitancy of communication sometimes seen in traditional settings, such as tutorials or residential schools.

Intersection spaces
The areas where the rings intersect are the spaces of most interest in the model, because they indicate shared/contested areas where the impact of various influences should be negotiated by the learners with the support of the teacher within the intent of the
learning design. For example, the shared space between the knowledge repository (content) and connectivity (online tools) represents an area where choices in the learning design fit particular technologies to various purposes for learner–content interaction compatible with the forms of knowledge that are accessible, the needs of the discipline and the intent of the teacher.

**Content and connectivity**
This intersection space between content and connectivity is where knowledge is acquired using two-way asynchronous connectivity to serve learning needs, particularly, where real-time, audio-visual communication is not critical or where it may be impractical or unnecessary. It is a space where asynchronous interactivity supports access to content and enables mastery of content using asynchronous tools for research, discussion and perhaps reflection and feedback. Both e-learning and increasingly m-learning devices will be useful here. Knowledge clarification is the core purpose for interaction. Formative feedback or peer assessments are appropriate learning design strategies here.

Examples of engagement in this space include accessing artefacts, texts or media and posting materials onto asynchronous spaces to engage with and challenge others. Knowledge is constructed through planned activities such as threaded discussion, blogging, wiki collaboration and facilitated by learners as well as the teacher who may be a participant. Learners have the choice to interact or to lurk (always a good learning strategy for some). Skills include written communication, logical argument and synthesis of information, creation of artefacts that are uploaded or archiving of evidence of off-line interaction such as a learner capturing video whilst on practicum and uploading it for use later in assessment or for formative feedback. Interaction between learners within the learning environment is supported by the technology which has an obvious role for presentation and storage of evidence and for communication. Assessment in this space could mirror traditional forms within a learning design, providing formative and summative feedback. Tasks could be negotiated according to learners’ prior knowledge and experience. The intent is for learners use connectivity to access content to achieve agreed outcomes, individual and group goals. This space utilises traditional online pedagogy so provide a starting point for working with the model where staff which teachers should not find unfamiliar.

**Learners and knowledge**
In the space where the learners intersect with content, learners choose which knowledge elements they require to complete learning tasks and may go beyond the specified content. In effect, this is the area where learners interact with what is already known (prescribed content) regardless of the form in which it is contained or presented. Interaction here is learner-to-content rather than learner-with-learner, since the primary purpose is knowledge acquisition (Sims & Hedberg, 2006). However, these interactions may be guided or supported by learner–learner interaction. All interaction is facilitated by a learning design where the designer anticipates the essential and extension types and range of knowledge and skills that learners’ require to complete a learning
sequence and for learning to be assessed. Just-in-time learning and responses to personalised learning needs will be facilitated by the learning design and ease of information access and upload using the web.

Examples include learners linking to sites within and beyond the learning environment, depending on their needs for information or training to support their learning. It may be that a novice in geography who knows little about the weather visits Google Earth, the Bureau of Meteorology or other weather sites to access information relevant to a problem or task about drought in the Australian outback. The skills being developed may include advanced web searching, information literacy, and critical analysis as well as communication skills if the exploration is set in a group work situation and interaction is also facilitated in the connectivity spaces. Essentially, learners interact with the learning environment through the technology which has a major support role. They may use e-learning and/or m-learning affordances to scan, search, down or upload information to personal server space, perhaps into a portfolio. These activities may be stimulated and supported by collaboration with other learners or occur as part of negotiated work sharing or group tasks aimed at achieving learning goals and outcomes. Assessment of knowledge and skills acquisition would be appropriate and could utilise e-portfolio portals which store and facilitate sharing of a wide variety of evidence using multiple media. Again, facilitating learning in this space will be relatively familiar to many teachers.

Learners and connectivity
In the intersection space between learners and connectivity, the primary purpose is for synchronicity to enhance learning. Learners may be directed to or have the choice to use e- and m-learning technology including a wide range of affordances to support deeper peer-to-peer learning. The intent is more than a communication space since it is here that the teacher may promote critical dialogue rather than discussion. Dialogue supports thinking and reflection in real time which promote deeper more powerful learning. Brainstorming and debate are examples of interaction here. In this space, the development of the learners into a community is encouraged and is potentially more powerful than in text-based CMC. Through synchronous dialogue rather than asynchronous discussion, skills develop in reasoning, oral and written communication as well as reflection and interpersonal interaction. Aspects of the learning environment, class or community are more important, just as they are in traditional tutorial groups. Technology is moving further into the background as learners interact in real time as if in the same physical space. Practice intends to encourage development of learning communities and the learning design should support this. In particular, the shared space between learners and connectivity promotes learning where synchronous interaction is critical. Such interaction will be aural and visual using a variety of media according to the choice of the tools available within the learning environment.

The convergence space
As indicated earlier, the areas of convergence where the three rings intersect are the primary foci of the model. The knowledge creation space is where all three rings intersect.
above the inner circle or learning design influence and it has most potential for impact on learning. It is here that learners can be empowered in communities of critical enquiry dialoguing in synchronous video communications where they collaboratively create new personal knowledge derived from both –earner-content and learner–learner interactions.

Importantly, the central region is where all three core elements intersect and draw upon the learning design which is intended to guide the creation, individually or collectively, of new knowledge. This area denotes a space where the choice of interaction could increasingly be devolved to the learner’s discretion according to curriculum learning needs and the learner’s environment. The most powerful learning transformations can take place here, since the tools and knowledge for learning may ultimately be under the primary control of the learners who choose to engage in this space as a community. Learners may become increasingly independent and empowered (Smyth, 2005) to construct learning pathways which are individually relevant and transformative. This becomes a virtual critical thinking and dialoguing community space improving on CMC (Garrison, Anderson & Archer, 2004) where learners assist learners stimulate transformation. Regardless of the tools, learners may negotiate their path through the knowledge acquisition process, individually or in groups. Learners will increasingly use m-learning as well as e-learning affordances to achieve this. There is no assumption that all learners will engage here but it is likely that increasing numbers will do so as the sophistication of the affordances and network capacity enables greater freedom in choice of communication mode.

This space is where the learning design has the greatest potential to impact deeply on learning outcomes. If the learning design facilitates learner control and stimulates transformation then learning will be deeper and more meaningful for each student who engages here. In some ways this approach moves online learning towards the ideals of Paulo Freire (Aronowitz, 1993; Escobar et al, 1994) whose philosophy went beyond transformation to encourage emancipatory learning. This is the realm where video communications have greatest potential to make a significant impact on learning because they move the online environment much closer to face-to-face communication. It is also the realm which will most challenge traditional pedagogies, conceptions of teaching and learning and institutional policies and practices.

**Implications for pedagogy and practice**

If the potential of video communications is to enrich learning and enable greater empowerment of learners then there are significant implications for pedagogy and practice, in its broadest sense where institutional and regulatory contexts are influential. As connectivity worldwide improves, accessibility issues should diminish, providing greater opportunities for learning designers to assume less responsibility for planning person-to-person interaction since learners will have greater opportunity to initiate such communications. This will challenge long held notions of the nature of pedagogy.
Learner choice will be limited only by accessibility, time-zone and personal learning needs. The climate of the learning space becomes important since the environment for learning, formation of learning communities and interaction between learners draws its energy from the prefacing of the learners as the primary influence on learning design and therefore the approach to pedagogy (Aronowitz, 1993; Biggs, 1999). Concentrating on the learner will challenge many traditional approaches to teaching in higher education where the focus is on the teacher supplying the knowledge to the students (Bowden & Marton, 2004 Ch 1) and also in distance and online environments where active learning is often assumed through planned interaction with content rather than planned learner–learner interaction. Many staff will require support to initiate and sustain new learning designs because embedding synchronicity has implications likely to challenge conventional beliefs about teaching and will require deep thinking about appropriate practice and how lasting change may be achieved within institutional and regulatory contexts (Smyth, 2002). Fitting the needs of the curriculum to the needs of the learners using available affordances of learning will become more important. Therefore, the learning environment has a contextual undercurrent requiring a positive approach to educational change involved in reorienting teacher and learner conceptions from teacher centric to learner centric (Trigwell & Prosser, 1999).

Some of this refocusing will generate sources of contestation for learners, particularly where existing conceptions of teaching and/or learning are challenged (Trigwell & Prosser, 1999). For example, learning interactions which are being designed for non-native English speakers whose tradition of learning has been didactic will need to be carefully designed to support a transition into successful learning in a more empowered learner centred environment (Kember, 2007). Such an approach shifts the focus of learning into a more holistic view which intends to stimulate learners to interact to achieve more than content knowledge but this also creates uncertainty. When learning is then about collaborating to generate new knowledge and learning how to learn within particular contexts instead of learning what to learn (Ramsden, 2003) students’ pre-existing conceptions of the teachers role become mismatched to their reality. Similarly, generating shared knowledge as well as creating new knowledge, collaboratively; developing a wide range of learning skills within disciplinary communities; and developing refined skills of critical inquiry may also challenge cultural and educational norms. Teachers, as facilitators, will need to pay attention to the potential barriers in such situations and so institutions may need to provide them with professional development and also provide their students with additional learning support.

Emerging video communications technologies have potential to enable learners’ freedom to interact with each other and their facilitator according to their needs for learning and the plans negotiated for achieving learning goals and outcomes. As seen with e-learning and m-learning technology (Prensky, 2005) more frequent contact between learners reduces their isolation when they are disparately located. The video medium can empower successful learning because the richness of ‘face-to-face’ communication promotes the development of trust within learning communities, enabling learners to support one another in a variety of ways along their learning journey.
(Smyth, 2005). In addition, the variety of forms is increasingly enabling individual personalities and learning styles to manifest and be accommodated. Increasing opportunities for learner–learner interaction will require planning if they are to engage the changing cohorts of learners; fit the intended purposes for learning and accommodate serendipitous learning opportunities.

Thus, staff may need more time to prepare learning experiences than previously. This will challenge institutional norms and perspectives of efficiency but these may be offset by increasing numbers of learners in courses. Having more learners is often problematic for assessment so practices here will require a balance between creative freedom and curriculum requirements particularly if assessment in a wider range of media is planned. If assessment becomes less rigid and more student specific, it supports more learner-centred pedagogies such as problem-based and collaborative pedagogies where skills and attitudes are developed (Savin-Baden, 2007). A paradigm shift may be required in institutional thinking to accommodate this refocus (Bowden & Marton, 1999; Bromage, 2006). The challenge will be to develop effective assessment which is also learner focussed without excessive staff workload. Peer, collaborative and teams-based options may be applicable. Much work lies ahead.

Similarly, much work is needed to evaluate and trial new affordances and the time frames available for such tasks are becoming shorter as affordances proliferate. Unlike the crushing of pedagogy which occurred during the early adoption of some CMC technology, we now appreciate that the influence of affordances should be subordinate to pedagogy. The learners, the learning design and pedagogy dominate the learning environment which contains the tools of learning (Laurillard, 2002). Nevertheless, there should be no constriction on the nature of the tools available in the learning environment. However, it is preferable that all are Internet based and that some will support two-way synchronous interaction in audio-visual environments such as videoconferencing, personal web conferencing, or access grids. Two-way asynchronous tools such as email, blogs, wikis etc would remain part of the affordance mix provided by an institution or planned for use within the learning design. Here too there is a change management issue. For pedagogical innovation based on video communications to impact positively on student learning outcomes, implementation should allow time for staff to explore the potential of emerging technologies. Thus, evolutionary planning (Fullan, 1991, 2007) will be required to support change activities. Successful change is more likely when it is holistic and multi-disciplinary and when planners are cognisant of a wide range of issues including staff readiness and development needs; approaches to pedagogy and assessment; workloads and time required for effective change. In addition, the allocation of sufficient funding over lengthy time periods will be critical to ensuring deep change (Moodie, 2006; Vibert & Place, 2006).

Managing the change will be crucial if long term benefits for student learning are to be achieved from implementing models such as the one proposed (Gijswelaers & Harendza, 2006; Smyth, 2002). One implication for practice is that learning designs will enable learners to have more freedom within the required outcomes to negotiate which
outcomes they wish to achieve, how and why. Teachers will then have more freedom from the need to tightly prescribe content. Potentially, assessing learning could also be negotiable given the availability of multiple media forms and ease of capturing evidence in richer formats and this will challenge current practice for many disciplines reliant on traditional written forms. These ideals acknowledge that the desired learning outcomes, translated for students through an active learning design should include support for students’ development as learners with effective strategies which enable learning how to learn as well as opportunities for expert–novice teaching. Balancing competing demands within a learning context to create an ideal learning climate is rarely an easy task but in the model presented here, the intent is that learner needs will generally be most prominent since ‘what the student does’ (Biggs, 1999) has the greater impact on learning.

Fundamentally, teachers and institutions will have to become authentically student centred not simply pay lip service to this approach. We know from the history of change management over the last 30+ years (Fullan, 1998; Sergiovanni, 1998) and Laurillard’s seminal work on rethinking learning (2002) that this is critical to achieving the ideal of universities being for learning (Bowden & Marton, 1999). To achieve this requires significant paradigm shifts in values and policies, particularly in regard to staffing and course design. A team approach to evaluating how video communications technologies might best be used in various disciplines and at various stages in a program of study will support change but this requires time to be allocated to collaboration and development. The potential of these technologies to significantly enhance learning, community and society will be unlikely to be realised without effective policy supporting new holistic approaches to considering and adopting affordances. Interoperability and seamless movement from one affordance to another is essential so there is much room for software development and possibly minimum standards for education purposes. How this could be achieved in the rapidly developing web technology environment is beyond the scope of this paper but it is worth raising the point that universities are about learning and teaching and therefore to question whether the existence of a particular affordance is reason enough to rush to adopt/adapt it to these purposes.

A movement for developing new engaging pedagogies that move learning beyond environments where outdated pedagogies are modified to fit new technologies becomes essential. This is a limitation of the model since new pedagogies have not been advocated here and so this is where research is required.

Conclusion
This paper has presented a model which distinguishes between learner–content and learner–learner interactivity in learning design. In so doing, it analyses the implications for teachers, learners and institutions wishing to use video communications technologies to enable more authentic learner–learner interaction in virtual environments. The model deliberately prefaces the learner and the learning design with a view to refocusing the emphasis of online and distance pedagogy away from the affordances and on to the learners. While acknowledging the benefits of using technology enhanced learning
the model seeks to move conceptualisations of learning design into a more interactive learner–learner space less constricted by the technology used to support it. In this sense, the model is consistent with emerging trends in higher education where the emphasis on learning and learners is increasing, a transformative constructivist paradigm of guided learning.

The model extends existing practice by emphasising learning design for video communications embedded in high speed networking which enables interaction to move beyond learner-to-content and towards learner-to-learner interaction. These would become virtual environments where interaction is more akin to a face-to-face environment and where ‘community’ becomes embedded as pedagogy. In a transformative model this should include negotiation of both learning goals and learning outcomes, which would naturally occur as learners engage with each other and the teacher in the synchronous space. As much as possible, design should empower learners to engage in collaborative exchanges within the parameters of its fit-to-purpose for learning, given the environment/community engaging in learning and the technology affordances available.

Ultimately, the intent of presenting these ideas is to stimulate creative thinking and debate about pedagogy; to provide stimulus for creativity and for new learning designs to be explored, trialled and tested as video communications become embedded in higher education and the community more generally. As new technologies emerge and connectivity improves, there will be more research needed here, particularly into how deep change is managed successfully.

References


