

Taking management education online

A 4T developmental model for education designers and developers

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management education, management development, online learning, distance learning, the 4T model, digital disappointment, metaphors

Introduction

Here, I present a simple model for understanding and designing new learning and development interventions in the field of management education and development in the context of online and blended learning. The 4T model has arisen out of my reflections on experience as a trainer and senior lecturer during the Coronavirus (Covid-19) outbreak. I wrote it in my garden office ([garden shed](#)), during "[Lockdown](#)" in the UK. Just three months ago, I was teaching undergraduates in a physical room at the University of Brighton. Barely eight weeks later, my teaching is close to 100% online. This sudden change triggered some inductive research that has resulted in this article.



(Image: The author's garden shed/office during Lockdown. Source: Paul Levy)

Context

Hazari (2008) was already examining the potential of emerging digital technology in management education well over a decade ago. Models for implementing these technologies into distance learning programs were offered by Hollenbeck (2015) and there are over 200 practical guides published in the form of books in the last ten years. Before then, distance learning in management education was fairly piecemeal and formed part of hybrid education where the majority of programs still involved significant physical attendance and contact with tutors, either face to face or via telephone calls and even through the paper postal system.

The ongoing Covid-19 outbreak has created a sudden urgency in education designers and providers to transition to digitally-based models of teaching and learning as quickly as possible. In management education (as in most, if not all, spheres of society), working and studying from home has occurred with startling immediacy, with this style of working and studying [becoming more the default in the future](#). Many educational institutions are now attempting to replicate current provision, with varying degrees of success (Weiss 2020). The model presented in this paper offers a fourfold framework for designing and delivering online education, personal and professional development.

Background to the development of the 4T model

Early forms of distance learning

The very [first forms of mass distance learning appeared](#) in the 18th and 19th centuries. In some parts of the world distance learning via the postal system survives to this day, though the vast majority of it is now online. Distance learning at that time improved accessibility, and also brought the cost of education down for many people.

Pitman courses in shorthand were an example of distance learning that reached a wider number of people. Courses in a range of subject areas were classroom based or delivered via the physical post.

With the rise of the internet from the 1980s, distance and face-to-face learning have not been mutually exclusive and blended learning has arisen as a combination of the two (Bonk and Graham 2006).

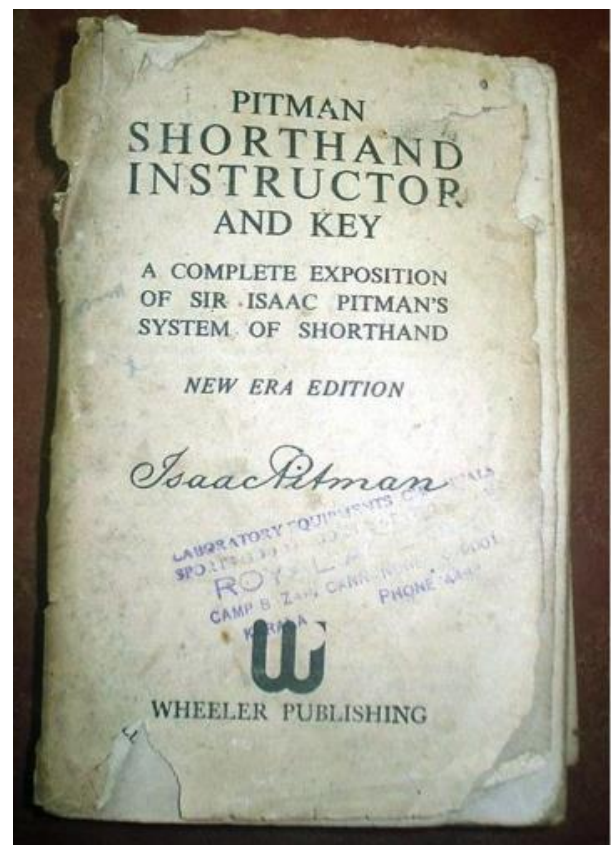


Image: Pitman's shorthand booklet: An early example of correspondence course materials. Source: Wikimedia

The onset of publicly accessible computing

Online distance learning began with the rise of publicly accessible computing connected to the Internet. There is a considerable amount of literature in the fields of online learning and blended learning, including best practice models and research into its impact (For example Mitchell O'Toole and Absalom 2003). Some of this research essentially compares the online learning experience to the physical class room learning experience, suggesting that some fundamental experiences of students in the physical classroom are necessary also for effective online learning.

The fairly sudden rise of the Coronavirus outbreak around the world with the closure of higher education institutions and colleges, as well as the sudden loss of demand for trainers and development in management education, have resulted in a sudden rush to digitise physical teaching.

In my own experience of many training and development programmes, some of this almost panic-based transfer into the digital realm has been clumsy and of questionable quality and impact. The model I present in this paper attempts to categorise those experiences, and calls further urgent research.

In attempting to categorise very fast moves from physical to digital learning and development, I have identified four key categories (the 4Ts of Transfer, Transpose, Transform and Transcend) that help to explain these changes. Methodologically, this is early research based on my personal reflection on practice, informal interviews with peer practitioners, and desk research

From physical to digital in education: lecturing

Perhaps one of the more prevalent examples of transfer from the physical to the digital world has been lecturing. During lockdown in the Coronavirus outbreak, schools, colleges and universities have been closed and have had to resort to teaching almost entirely online. Their shift from physically present learning to distance learning has taken place overnight, with students and lecturers unable to access college buildings and physical classrooms. Some universities have been ready for this, having already invested in their own distance learning programs. For example, distance learning MBAs have been available since the 1970s.

In higher education, lectures form a major element of many degree programs. Attempts to transfer these online have been problematic. Even a very good one-hour lecture can be [overwhelming and tiring for students staring at screens](#). Other factors have been found to be important when comparing physical to digital lecture.

Teaching presence

Arbaugh and Hwang (2005) explore the concept of "teaching presence" in the context of online MBAs. Simply offering recorded lectures in an online context loses the quality of live presence of the lecturer and students, and even the sense of being dynamically taught. Much of the absorption of learning does not arise from the content alone, but from the dynamic interaction between student and lecturer, for example, in question and answer as well as discussion sessions.

Teaching presence can also offer reassurance to students who may lack confidence in themselves to engage in independent study. Studying from home may be undermined if teaching presence is absent or minimal. The importance of teaching presence is further underlined by Sheaa et al (2006) and Sheaa (2006).



Image: From physical to digital learning. Photo by [Scott Graham](#) on [Unsplash](#)

Passive viewing

There is also evidence that students can quickly transition into '[passive viewing](#)' mode and simply not actively absorb much of what they are seeing. If the lecturer delivers poorly in the physical world, then this poor quality is compounded when transfer takes place digitally.

Even a one-hour recorded lecture that somebody watches in fifteen-minute portions can create problems for comprehension if it was originally conceived to be watched as a whole in one hour. This can result in a broken narrative and poor-quality comprehension and retention.

Introducing the 4T model

In the sudden shift towards online education, I have identified for core activities which characterise this shift: Transfer, transpose, transform and transcend. I have summarised these processes in Figure 1.

T1 - Transfer	Replication of physical into digital process
T2 - Transpose	Innovation of physical into digital process
T3 - Transform	Revolution and reframe of physical into digital process
T4 - Transcend	Moving physical and/or digital process onto entirely new ground

Figure 1: The 4T Model for changing from physically-based to digitally-based education and development

Transfer (T1) often attempts to make use of physical world metaphors. Transfer is an attempt to literally replicate the physical world processes in a digital format. For example, a physical world (classroom or lecture theatre) lecture becomes a lecture delivered digitally. A meeting in a meeting room becomes a video conference.

Antle et al (2009), carried out experimental research and highlighted the need to go beyond metaphors that draw upon the physical world in online education (e.g. virtual classroom, online roundtable discussion, digital cafe) and to effect hybrid approaches, a blend of both digital and physical interaction. For many learners, metaphors based on the physical world are not enough to effect transfer into a digital environment. Some yearn for the visceral qualities of physical interaction.

Thus a 'blended approach' becomes key. Means (2014) suggests *"the use of online learning in conjunction with traditional teacher-led forms of instruction"*, concluding that *"student outcomes arise from the joint influence of implementation, context, and learner characteristics interacting with technology--not from technology alone."* This has not been possible during the restrictions of lockdown imposed during the Covid-19 outbreak. Opting for 100% transfer has created *"digital disappointment"* both for teachers and learners. *"It isn't the same."*

Dinnen (2013) suggests metaphors have a crucial role to play in the design of digital learning experiences. We need to critique them, test their validity and identify where they break down. This points usefully to where transfer breaks down and "fails" in the attempt to replicate the physical world, digitally:

"Technology is always both imagined and built: this seems obvious, but it justifies reiteration because the material operations of technology are always metaphorically considered just as they are concretely manifest.... Perhaps then what is called for is an explosion of the metaphors that pervade contemporary digital culture. To, so to speak, push metaphors until they give way; to generate critical discourse that tests the limits of metaphors, in an effort to see what pretext they may yield for our daily digital interactions. "

(Dinnen 2013).

From replication to innovation through transposition (T2)

Transposition

What is needed when transfer breaks down is not literal transfer, but **transposition**. One example of transposition would be that a one-hour lecture is broken into manageable chunks which are created with that viewing in mind. For example, the first part of the lecture may be 15 minutes long and there may be some reflection questions and links made to the second part. This has always been a fundamental part of distance learning where large amounts of delivered content are broken down with linking narrative. When transferred online, an hour is too much and therefore chunking requires linking flow. The metaphor also changes. Instead of a lecture as a *whole story*, the metaphorical underpinning is one of the story being delivered in *episodes*.

Transposition takes the original objective and doesn't change it but innovates and adapts the original content and method for the digital format. One example is team or group working. Kim et al (2005), in their research claim that virtual team behaviour was a major factor that influenced the students' online learning experience. Here successful online learning attempts to transpose team working processes into a digital environment.

Beyond the ability to meet online digitally, there are also tools for instant document sharing, co-editing and communication. These are enhancements. Teams can invite lecturers in real time to seek assistance at the press of a few keys on a keyboard. Other examples of transposition are effective tools for scheduling team meetings and to effect team project management. Transposition allows for more agile and efficient team working.

Transposition can also be more radical. Sometimes education in our current digital age makes regular reference to the [TED talk](#). Maxing out at 10 or 20 minutes in length, an original - perhaps longer - lecture is transposed into a more compact and impactful one of shorter length. Even more radical is the [Pecha Kucha](#) format.

To be successful, transposition requires innovation. The possibilities of the digital format enhance the potential experience in ways that transfer cannot achieve successfully.

Clay (2019) offers a practical guide to a digital example of a transposed physically-based learning activity, namely, the seminar. His guide to [webinars](#) (web-based seminars) highlights the need to transpose them. In webinars, visual content becomes important as a key element of successful engagement with students. Content management is key in order to enhance audience engagement. Interaction must be managed differently with decisions made, via the technology available as to the level and type of engagement. There is a danger online that webinars can turn into static lectures and also the challenges posted by camera technology raise questions of how physical-visual presence can be managed to a high quality.

Simple transfer does not easily work. For example, simply sitting in front of a camera does not allow for the use of body language. And, when slides are shown, at best (on most video conferencing platforms), the speaker can hardly, if at all, be seen by students!

Transformation (T3)

This is where transformation can potentially come in. Transformation is radical change. Moving beyond transposition, the possibilities offered by the digital format can us help to reframe even our original objectives and intentions. This can lead to a complete change in the way that learning is experienced, delivered, and taken in. Instead of replicating physical lectures into online ones, or transposing them into something better (but still essentially based on delivered content), transformation can result in dropping lectures entirely and coming up with something radically different, while still achieving the original educational objectives, or reframing them entirely.

For example, instead of receiving a lecture, we now have the possibility of actually going live to some of the key thinkers referred to in what would have been a lecture. It might be possible to organise a video conference where some of the key thinkers are live guests, interviewed by the lecturer and even possibly the students. Lectures may turn into self-organised conversation making use of interaction processes such as [Open Space Technology](#) where conversations are self-organised online. An example of such a platform is [Qigochat](#). In this example we move from a process of advocacy (telling, delivering, showing) towards something inquiry-based (dialoguing, discussing, allowing learning to emerge). The achievement of learning can still be attained, but not necessarily through a transferred or transposed delivery model. With possibilities of real-time search, and the ability to bring academic thinkers and practitioners virtually into the classroom, learning can become more dynamic, responsive to student enquiry, and can augment the lecture format.

Another example of transformation, could be the creation of a podcast which is entirely interview based. There has long been evidence that imagination is stimulated more through a radio rather than a video format. Learning can become more active without the risk of passive viewing. In all cases what is now possible can even change the learning intention where content is not just delivered but can be discovered.

Transcendence (T4)

Perhaps the most difficult approach to understand is transcendence. Transcendence pulls the rug from underneath the educator. The accepted models of education are entirely changed. One way to get the sense of what transcendence is in relation to management education and development in the future in the digital world is to enter into an imagination of a concept called by futurist Ray Kurzweil as the 'technological singularity' (Kurzweil 2005).

In this futuristic scenario the question arises: Do we need to teach our students at all? No. Do we even need them to discover learning for themselves? No. How is that achieved? Through a digital implant! Knowledge and possibly even attitude and skill are implanted into the brain and perhaps other parts of our body. Education is rendered obsolete by this new form of digital technology. Traditional education is transcended.

Emergent, family-based learning in lockdown

Perhaps less outlandish examples can be found during the Covid-19 crisis. There has been a lot of home schooling and online teaching of children, but some families have simply gone back to being just families.

Learning and development has happened simply through getting through the crisis as a family - by simply being families. Here learning simply becomes part of family life during difficult times, with new skills and knowledge developed emergently through that informal process. Formal learning simply falls off the agenda as simply being a family in crisis together transcends it. Learning then emerges unpredictably through the natural dynamics of family life. Emergent learning simply happens, and is not part of a designed or delivered plan.

Similarly, an example of transcendence more specific to the digital learning agenda is 'incidental learning'. The internet now is rich in information and all kinds of educationally relevant resources. It affords not just content, but also various platforms, programs and apps for learning languages, observing stars in the sky, joining a political simulation, the gaming world of Minecraft where we can design build and even inhabit buildings, online 'how to' videos on just about everything. All this points to the possibility that students can often design their own forms of learning and, when tested, demonstrate knowledge and experience equivalent to formal programs offered by educational institutions. Will formal education become almost completely transcended by these emergent, incidental approaches? Self-managed learning has been in existence for decades. In a management education context during the Covid-19 outbreak, access to online courses, educational videos, even one-to-one coaching, has become low cost and even free of charge.

So, where are we now?

In our current management education and development environment, where blended learning requires at least a significant degree of online learning, educators and developers are realising that transfer is not enough, and may even be detrimental to the learning and development experience. Most are now experimenting with transposition, but are still often creating online lonely experiences that bear a resemblance to physical learning. The metaphors of breakout rooms online, virtual flip charts and whiteboards, live and recorded lectures still suggest a belief in the value of physical learning, even in a digital context, and reflect a need to maintain traditional metaphors to guide what is designed and created online.

Applying the 4T Model: examples

In a management education context, examples during the Covid-19 outbreak are easy to find at an anecdotal level. There are currently no more detailed studies though these may come over time.

Here is one more detailed, analysed example of each element of the model. (There are many more)

Transfer (T1)

Lectures on an MBA Programme at a business school are transferred directly into an online context. The lectures are presented live via the [Microsoft Teams platform](#). The lecturer speaks for an hour with a short break halfway through, speaking directly into a desktop PC camera. Students attend by signing into the platform, attendance is taken and there is time for questions and answers at the end.

Here the advantage is that lecturers to large groups (of over 50 students) are transferred fairly literally into the online context. Student feedback is mixed, with the majority of comments negative, pointing to “Screen tiredness” as a key challenge. The lecturer uses PowerPoint slides and students using mobile devices to view lectures complain that they cannot see the slides clearly.

There is also an issue around equality and diversity. Due to the specific design of the Teams platform, only a maximum of nine students are visible on the screen at any one time (even less on mobile devices). In a physical classroom all students (sitting at desks or in a lecturer room) can, to a greater or lesser extent, be physically seen by the lecturer and fellow students. With a limitation of nine students whose faces appear when they speak, the quieter and more shy students are essentially invisible during the lecture. So those who speak loudest during Q and A and discussion are the more prominent. A kind of social Darwinism in the visual space is a result.

Transpose (T2)

In this example lectures are offered online but, given the specific risk of screen tiredness, the time management is transposed. An hour lecture is shortened to divided into three fifteen-minute slots with time for screen breaks and discussion in between. Lectures are experienced more as “TED-style” talks with more concentrated content delivered in shorter amounts. Within the online meeting platform, there are new tools available including a chat panel where students can engage in ongoing discussion, a Q and A function as well as the ability for the lecturer to set up polls, and even to arrange and bring in live guests to add to discussion. Lectures are experienced to be more dynamic, less content-heavy, and more student-influenced

Transform (T3)

Case study work is transformed into an online simulation. The process makes use of [gamification](#). Students still experience a real case example where they can apply theory and practice skilled decision making. This is now lifted off real paper or digital documents into a live simulation.

New possibilities emerge where students can go beyond practicing strategic decision making at the end of a case study narrative and go into a more immersive, real-time experience. The experience is more responsive and felt to be more dynamic. Whereas a traditional case study has very fixed points and decision-making iterations at which decisions are proposed and feedback given, in the simulation there are many more scenarios and options. Feedback is largely positive from students.

Transcend (T4)

Managers interface with their organisation via [virtual worlds](#). Self-managed learning occurs in virtual environments where knowledge is accessible, skills can be developed and formal educational institutions, though they may host such learning environments, are no longer needed to directly deliver knowledge or facilitate learning. Virtual worlds allow self-directed experience gaining, and knowledge acquisition. Students can role play (via different avatars) and practice new behaviours and discover new knowledge.

Early examples of this already take place on social media, where new skills are practiced, attitudes and behaviours experimented with, and knowledge shared in a peer group without need for normal delivery or facilitating. Education becomes a platform rather than institution-based.

Conclusion: digital delight and digital disappointment

Within a fairly short space of time - just the few months of the Covid-19 pandemic - students and staff are reporting mixed results with transference, transposition, transformation and transcendence. Currently this data is largely anecdotal. Some are delighted, many are disappointed. Where distance learning is already established, student expectations are already more clearly formed. The sudden change from physically based to digitally based education is being experienced more as a shock, and comparisons back from the digital to physical world are currently throwing up more problems than solutions.

Digital delight

Digital delight occurs when the student experience is enhanced significantly by the move from physical to digital learning. Many learners (and even members of the public) have reported preference for TED-talk format of online lecturing (Brittin-Snell 2015). Here, a well-presented fifteen-minute talk is experienced as more helpful, informative, inspiring and satisfying than a dry hour in a formal lecture room. Others have criticised this format as tokenistic and superficial. Digital delight most often results from digital transposition and transformation, where significant weaknesses and disappointments in the physical world versions of learning have been skilfully and effectively addressed via digital innovation.

Digital disappointment

Digital disappointment occurs when attempts to transfer, transpose, transform and even transcend physical learning fall short. As I observed earlier, when a digital version of a lecture is experienced by a learner as something less than its original physical version, digital disappointment is present. It can be the technical aspects such as a loss of helpful and expressive body language, it can be screen tiredness. I would suggest that digital disappointment occurs most often when Transfer is the dominant modus operandi.

There is little recent data on the student experience of transferred and transposed education into an online contact during the Covid-19 pandemic. One survey gives some detail in which the significant majority of students experience online education as falling short of the original physical world counterpart (Kelly 2020). For example, "Over 85% said that they "miss the social experience with other students." Also "Over 77% chose "Lack of an engaging in-class experience" as a difficulty in adjusting to online learning". This highlights the significant challenge for online educators, as most online classroom platforms have attempted to transfer and transpose physical classroom social experiences, including online chat, virtual team meetings, and collaborative tools.

Transposition and transformation appear to be the most realistic and promising options in the short term. Transposition attempts to innovate out of what existed before, drawing upon virtues but also letting go of weaknesses. Transformation is more radically innovative, and takes bolder steps into the potential offered by the digital realm.

In our current turbulent times, online education should aim to delight, and should not result in disappointment. As the technology itself develops, and as time emerges for more radical and creative thinking, transcendent ideas will also emerge and be implemented. These are indeed “interesting times.”

APPENDIX

A Glossary of terms

Gamification. “Gamification takes elements from game-design and the general principles and theories which drive gameplay and applies them to other contexts.”

Open Space Technology. This is a form of conferencing based on the principle of self-organisation where participants create the agenda.

Pecha Kucha. A presentation based on 20 slides with 20 seconds of commentary per slide.

Podcast. An audio broadcast over the internet

Qiqochat. A popular online platform for Open Space Technology. (See above).

TED talk. A popular form of online talk usually limited to ten or twenty minutes. Invented by [TED](#).

Virtual Worlds. "A virtual world is a computer-based online community environment that is designed and shared by individuals so that they can interact in a custom-built, simulated world" (Source [Techopedia](#)).

Webinar. A seminar delivered online.

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