Transforming Conventional Education through ODDE

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Abstract

Open and distance education has a long history and rich heritage, its literature affirming that a systems approach based on industrial production is an optimal means of providing education that is accessible, cost-effective, flexible, open, and scalable. This approach to education, based on an asynchronous separation of participants, continues to find its expression in the Internet age. The recent COVID-19 global pandemic necessitated a rapid shift to emergency remote teaching (ERT). This sudden adoption of online education took place more in response to need than careful strategizing. Significantly, the term "online distance education" is often used to describe the mostly synchronous ERT model, even though this is out of step with classic distance education theory. This chapter explores the differences across educational models beneath the terms "conventional education" and "open, distance digital education (ODDE)," and the nature of "transformation" as conventional and distance models of education are

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O. Zawacki-Richter, I. Jung (eds.), *Handbook of Open, Distance and Digital Education*,
https://doi.org/10.1007/978-981-19-2080-6_35

expressed online. Transforming conventional education through ODDE challenges our thinking as to the nature of education practice and the potential of digital technology in the twenty-first-century context. The potential of ODDE – anytime enrolment and assessment, effectiveness and efficiency in tuition, enhancing student success by design and personalized provision – goes well beyond extending the classroom into the online space. For on-campus providers to become effective ODDE providers, a transformation is required. The final part of this chapter deals with the challenges of rethinking the role of the educator and of reformulating a university's operating model.

Keywords

Online distance digital education · Transformation · Operating models · ODDE

Introduction

In education, what does it mean to "go online"? What does it mean to "transform" a university? Does the apparent inevitability of going online require a transformation? And what have the recent challenges of COVID-19 revealed about global readiness for online education? These are complex questions. Not only does "going online" mean more than one thing, but the term "transformation" is also all-too-frequently used to imply any challenging change, even where these changes do not fundamentally alter practice.

The Internet has transformed multiple elements of twenty-first-century life, yet many of the trappings of conventional education practice have remained remarkably similar for hundreds of years. Transformation of practice, it seems, is rare in higher education. This chapter explores why "going online" can fall well short of transformative objectives and suggests how conventional education might move to truly realize the benefits of open, digital distance education (ODDE). Transformation is not a term to use lightly, nor is it an automatic outcome of extending the use of online technologies. In the context of transformation being used as an umbrella term for change, this chapter aims to provide decision-makers with an authoritative vocabulary and pathway toward transformation, in part to assist readers in "resisting the influence of others with limited expertise in online education" (Beaudoin, 2016, p. 17).

Terminology: Conventional Education, ODDE, and Transformation

The challenge of describing how conventional education might be transformed through open, distance digital education (ODDE) is firstly conceptual; definitions tend to be clumsily applied in literature. In his overview of literature related to online and distance education, Paul notes that many authors "take their own terminology

for granted" (2014, p. 176). Where does the term "ODDE" sit in the context of terminology including "blended learning," "e-learning," "flexible learning," "technology enhanced learning," and "online education"? Further, how do these terms relate to "distance education" – a term that is descriptive of a wide variety of practice while also serving as the title of a significant field of scholarship? This chapter assumes ODDE as the contemporary phrase used to describe the scholarship and thinking that has classic distance education literature as its heritage. Charles Wedemeyer, Michael Moore, Börge Holmberg, Otto Peters, Sir John Daniel, and Tony Bates – and the editors and authors associated with this book – are among the thinkers and practitioners whose work ODDE builds upon.

Conventional education might be defined as "a teaching method involving instructors and the students interacting in a face-to-face manner in the classroom. These instructors initiate discussions in the classroom, and focus exclusively on knowing content in textbooks and notes" (Li, 2016, pp. 105–106). Conventional education broadly consists of authoritative perspectives and voices (instructors) and interpersonal engagement in real time in a physical setting (the classroom), drawing primarily on reference works (selected by the instructors). Using the term "conventional" to describe this model highlights its apparent normative nature, in that other forms of education are constantly compared with this traditional convention even though it is not necessarily a gold standard.

ODDE is much more difficult to define, mainly because the "distance digital education" part can be applied to *any* form of online education that enables at least some separation from the classroom, even if a classroom still features. ODDE "is complex in nature and scope as it involves a wide range of non-traditional ways of teaching and learning that are mediated by various media and technologies" (Jung, 2019, p. 1). For example, a lecture theater providing a live, streamed option might be validly described as providing a distance digital education option. To "go online," then, is to enter the distance digital education sphere of practice to some degree. However that "online" (or "digital") is not the same as "distance" has been well understood in ODDE circles for some time (Guri-Rosenblit, 2005, 2014). The distinctions between the two are fundamental to any discussion about transformation in education, because distance education as a scholarly discipline has a tradition of accessibility, cost-effectiveness, flexibility, openness, and scalability. Distance education scholarship is rooted in the benefits and practice of print-based correspondence learning. As technology matured, distance education scholarship broadened to complementing correspondence resources with multimedia, and then online discussion through bulletin boards and discussion forums as further dimensions were added to the generations of distance education (Nipper, 1989). As online possibilities extend, the genealogy of this classic form continues to express its largely asynchronous traits.

A spike in journal publications about distance education started in 2004 (Amoozegar, Khodabandelou, & Ebrahim, 2018). At about the same time a distinctive phase of the journal *Distance Education* from 2005 to 2009 is identifiable as being when "online education is beginning to be seen as the new face of distance education… as distance education is becoming about online education, it is quickly

becoming fashionable to be in this business" (Zawacki-Richter & Naidu, 2016, pp. 258–259). Since around 2005, when online possibilities became more mainstream, the term "distance education" increasingly became used to describe normal, synchronous practice extended through the Internet. In more contemporary practice, Zoom and Teams provide synchronous contact whereby the trappings of conventional education are extended into "distance education" practice. The terminological difficulty here is obvious: "distance education" is both a description of any practice allowing a physical separation between instructor and learner, and of a scholarly discipline that traditionally promotes distance education as a predominantly asynchronous pursuit in support of the nontraditional, "backdoor" learner.

ODDE, of course, emphasizes the concept of "openness." Unfortunately this is yet another nebulous term; over 30 years ago it was said that "the terms 'open learning' and 'distance learning' have never been used precisely" (Rumble, 1989, p. 28), an issue that still confronts scholars today. Helpfully it is possible to describe various principles of "open and distance learning" that, together, contribute to the uniqueness of ODDE. Open education is motivated by a desire to democratize education as an element of social justice (Daniel, 2019), typically through the development of custom learning materials designed to a high standard. Open and distance learning approaches are also seen as key to breaking the so-called iron triangle of access, quality, and cost of education such that cost-effective, high-quality, mass availability might be possible all at once without the traditional trade-off across these (Daniel, Kanwar, & Uvalić-Trumbić, 2009). Asynchronicity – the ability for tuition to take place independent of time – is a natural feature of the approach, as the voice of the instructor is largely predetermined through specially developed courseware.

It is helpful to consider conventional education and ODDE as having synchronous and asynchronous biases, respectively. In conventional education, the teacher's identity is obvious; they are the face, voice, and presenter of authority, and the institution is designed around their availability through timetabling. However, in open approaches, the teacher tends to be a facilitator; the entire institution is designed around the open model; and the overall approach is designed to operate effectively at scale. Broadly speaking, in conventional education, a teacher is the teaching point of reference; in ODDE, it is a set of learning materials supported by an academic and/or tutor. A conventional education educator is able to work in isolation; an ODDE educator is invariably a member of a team including, at the least, a learning designer. Conventional education tends to promote live instruction; ODDE tends to be predetermined. Conventional education can be easily traced back to the classroom; ODDE can be traced back to classical distance education models.

The distinctions here are best illustrated in their most extreme and appreciative forms. In the paradigm of conventional education:

- The voice of the instructors brings the subject to life, giving the subject a coherent, up-to-date scholarship and interpersonal authority through the instructors' credentials and research.

- The teacher is almost solely responsible for the tuition provided by the student and, at the least, is the primary authority on course-related issues.
- Attendance in the classroom exposes students to the energy, passion, and insight of instructors they may academically aspire to emulate and to one another as a group of peers involved with processing the same ideas at the same time.
- The immediacy of conversation, the opportunity to question instructors, and the artifacts of campus and schedule all serve to stimulate learning and promote the student's sense of academic journey.
- Lecturing/teaching, timetabling, student cohorts, campus services, due dates, and teaching ratios are central to planning.

In the paradigm of ODDE:

- Well-designed and engaging learning materials bring the subject to life, giving the subject a clear, substantial series of explanations in the form of a learning journey.
- The education experienced by students consists of the contribution of multiple specialists, including learning designers, subject experts, media developers, and tutorial support staff.
- Students are in the pursuit of a valid qualification made up of meaningful learning and, for the sake of convenience and access, view engagement with other students as desirable but not essential for their success.
- For whatever purposes including employment and family commitments, real-time attendance at any venue is unlikely to be a priority. Learning materials and institutional success services including academic representation are vital elements of academic tuition.
- Course materials development (and maintenance), the adjunct workforce, online interface UX, success services, and improving flexibility are central to planning.

Additional elements might also be mentioned but the paradigms can at least be differentiated. A summary of the differences, useful as a basis for discussing transformation, is in Table 1.

Significantly, "going online" does not force any change to the table whatsoever. All aspects of the conventional and ODDE paradigms can be facilitated digitally, and, where doing so enables learning to take place outside of the classroom, "digital distance education" might be said to be taking place. ODDE, though, is

Table 1 Differences between conventional and ODDE teaching models

	Conventional	ODDE
Synchronicity	Full	Minimal
Tuition responsibility	Teacher	Team
Instructor voice	Live	Predetermined
Location of instruction	Classroom	Independent
Peer involvement	Conversational	Optional

only properly taking place where *openness* is also apparent, which is where the learning experience is based on asynchronicity and is scalable in ways that break the iron triangle of access, quality, and cost.

Emergency Remote Teaching and ODDE

What would happen if classroom-based, synchronous learners were suddenly independently isolated from their instructor? What would the digital response resemble? In the paradigm of Table 1, the response would likely be an immediate transfer of practice through the application of online tools. Such is the COVID-19 emergency response teaching (ERT) phenomenon, though sadly the mixed success of ERT is often described in terms of online or distance transformation and therefore as proof that "distance education" is a questionable form of education seen as a compromise by students, and as overly demanding by teachers. Unfortunately, this conclusion is a category error; what ERT has demonstrated is the logical outcome of digitally transferring conventional education under urgency. Zoom became foundational to the education experience, highlighting the synchronous, conventional model's transfer into online education. Any slur on the reputation of "distance education" resulting from this online extension is limited to ERT practice and should not be projected across the traditional asynchronous heritage and practice of "distance education" as a scholarly pursuit. ODDE, for the most part, did not need an emergency response; its asynchronous model was already robust enough to cope with closed campuses and lockdowns.

The purpose here is not to disparage the importance of the ERT response and the sincere efforts of those who quickly adapted to new, challenging circumstances. It is sufficient to point out that there was not a sudden uptake of ODDE practice among educators during the pandemic. One systematic literature review concerning the educational response to the pandemic proposes a SWOT (strengths, weaknesses, opportunities, threats) analysis "on the digital transformation to online learning" (Talib, Bettayeb, & Omer, 2021, p. 3). The article concludes that:

> The flexibility and convenience ODE offers and the much-needed push for change it has inspired cannot be denied. However, its efficiency in terms of student outcome as compared to traditional education is still a point of dispute. It is therefore imperative to continue investigating online education. (ibid., p. 21)

What is missing from this summary statement is a recommendation of further context: "...to continue investigating online education *as an extension of the conventional model*." While ERT and ODE (online distance education) might be equivalent, ODE and ODDE (open distance digital education) are not the same thing. Instead, ERT as expressed through ODL might be considered a form of triage appropriate under emergency conditions, never intended as a long-term model of education (Reynolds & Chu, 2020), a view shared by many educators seeking to get back to the way they operated before the pandemic (Erdem-Aydin, 2021). It is

unfortunate that "experiences with ERT will, rightly or wrongly, influence perceptions of teaching and learning online for generations to come" (Stewart, 2021, p. 98). ERT, a digital form of conventional education, could never lead to the sustainable, systematic practice of ODDE because ERT is an extension of synchronous practice.

The Nature of Transformation

Thus far, the terminology of conventional education and ODDE is considered. It is clear that these forms of education can both find their expression "online" in terms of Table 1, and so it is proposed that ERT (the response of educators to the COVID-19 pandemic) does not represent a shift from conventional education to ODDE. What, then, is transformation? When should we apply it as a term to describe change to educational practice?

Norris, Brodnick, Lefrere, Gilmour, and Baer (2013, p. 3) remind us that "just because we are changing a great deal does not mean we are transforming." Much effort toward online education is more of a transference of incumbent practice than anything truly indicative of transformation. It is helpful to consider the R.A.T. and SAMR models at this point, both of which seek to describe how technology might influence conventional teaching practice. The R.A.T. framework suggests that technology might Replace, Amplify, or Transform teaching learning and curriculum practice (Hughes, 2021). ERT might be said to Replace conventional education insofar as technology provided a digital means for the same educational practice. Some elements were likely Amplified, as various educators sought to explore how a palette of digital potential might complement their online conventional instruction. The SAMR framework (Puentedura, 2006) describes technology as being applied in ways that *enhance* education through Substitution and Augmentation or *transform* education through Modification or Replacement of practice. Transformation, then, might be seen as a form of change whereby incumbent practice no longer resembles what was before. According to Norris et al. (2013), transformation involves four Rs: Redesign, Redefine, Reengineer, and Realign.

The nature of transformation rests in the scope of what needs to be changed for a new state to come about. In the terms of Norris et al., what needs to be Redesigned, Redefined, Reengineered, and Realigned is the *educational operating model*, defined as "how functions work and interrelate" (Nichols, 2020, p. 145), which can be likened to the institution's DNA (Christensen & Eyring, 2013). An operating model is a description of how an organization actually works, consisting of those operational patterns and constraints that determine – and limit – how things are done. This is equivalent to the systems approach as defined by Moore and Kearsley, which "consists of all the component processes. . . including learning, teaching, communication, design, and management" (Moore & Kearsley, 1996, p. 5). As such, the operating model touches upon all elements of the institution, which must be designed in such a way as to align in support of the ODDE learner (Minnaar, 2013; Nichols, 2020). An operating model is expressed across both practice and policy and is typically taken for granted as part of the organization's overall context.

Drawing on Norris et al. (2013), a transformation can be defined as a level of change that requires an educational operating model to be redesigned, teaching roles redefined, processes reengineered, and practices realigned with a new vision for teaching and learning.

Some forms of change – Hughes's Replace and Amplify, Puentedura's Substitution and Augmentation – might be said to bend rather than break the parameters of an operating model and so *transfer* existing practice within an existing operating model. Streaming lectures and making additional resources available through an LMS or VLE are changes to conventional education that do encourage study at a distance, but they do not require transformation as defined above. Other forms of change to the conventional education student experience – enabling students to enroll and complete anytime or study completely independently, which are more akin to open education – *would* require conventional education organizations to revisit their operating models and so could be described as truly transformative. Revisiting the conventional education and ODDE paradigms in Table 1, overlaying digital change, suggests a differentiation between transfer and transformation of practice as illustrated in Table 2.

Institutions, rather than individual practice, are configured to provide either conventional or ODDE education. The institutional operating model both determines and limits the approaches to education that can be sustained. The operating model required for conventional education requires a transformation if it is to truly enable ODDE and realize its benefits. In terms of taxonomy, "conventional" and "ODDE" might be considered separate genus of formal education. The differences between the two are such that ways of working are largely incompatible. The five elements of synchronicity, tuition responsibility, instructor voice, location of instruction, and peer involvement are all interrelated; together they form the expectations of and context for the teaching role and the expectations of students. An individual teacher, academic, or faculty member either has full responsibility for the tuition of "their class" or they do not. Either lectures are part of the teaching model, or they are not either a synchronous teaching timetable is required, or it is not.

Transformation of conventional education cannot be so much *through* ODDE as it must be *to* ODDE. The place of conventional education is left in favor of an ODDE destination. Conventional education is different to ODDE *to the extent that they are operationally incompatible*. Table 2 also illustrates why the term "blended" or

Table 2 Digital change to conventional education and ODDE teaching models

	Conventional			**ODDE**	
	Digital transfer = = >			**< = = Digital transfer**	
Synchronicity	Full	Mostly	**Digital transform**	Some	Minimal
Tuition responsibility	Teacher	+ Assistance		+ Specialists	Team
Instructor voice	Live	+ Distributed		+ Added	Predetermined
Location instruction	Classroom	+ Distributed		+ Block	Independent
Peer involvement	Conversational	+ Mediated		+ Facilitated	Optional

"hybrid" is not straightforward; underneath any "blended" or "hybrid" practice is an operating model based around a particular teaching role. At its most fundamental, any teaching role either has at its foundation synchronous class time (or not) and reference to a cohort for timetabling purposes (or not). The teaching role determines and limits what a blended or hybrid model might offer students in terms of opportunity and flexibility, and so reflects either a conventional education or an ODDE starting point. The role of the learning designer or learning technologist also differs by starting point; under a conventional education paradigm, such a role will *complement* the teacher or member of faculty. In ODDE, the role is an established part of a course design team.

Conventional education is based on assumptions around education practice that are incompatible with ODDE. The difference is not so much one of "sage on the stage" vs. "guide on the side" or opportunities to study away from a classroom at distance as it is the conventional educator's identity, which is founded on synchronous, timetabled tuition. Conventional education is simply not configured to provide the accessibility, cost-effectiveness, flexibility, openness, and scalability advantages that ODDE is able to further extend through digital practice. At the core, conventional education and ODDE have very different operating model requirements. In the words of Norris et al. (2013, p. 8), "Put simply, institutions have layered technology over existing practices, tinkering with them but not transforming them."

Why Transform?

Providers of higher education cannot ignore the sorts of trends already well underway across the HE sector: increased demand for online distance learning courses, increased competition, pressure on public funding, more use of adjunct staff, "off-the-shelf" learning content, competition across online learning management systems, and the rise of MOOCs are among those apparent almost a decade ago that continue to shape education practice (Amirault, 2012). Despite these trends, higher education has been remarkably unchanged by the disruptive elements of the digital revolution. Sector after sector has been – literally – transformed such that convenient access to banking, travel agencies, music and video media, government systems, taxi services, and consumer goods will never again resemble the commercial dynamics of the twentieth century. Access, convenience, cost-effectiveness, personalization, subscription, customization, and control are increasingly expected by twenty-first-century citizens. Conventional higher education, however, remains wedded to lectures, lecture theaters, timetables, and subject representation by a single expert. The operating model of conventional education universities reinforces these assumptions and perpetuates their longevity. The potential of digital education to provide a quality robust, accessible, cost-effective, flexible, scalable, supported, and personalized education – the very benefits twenty-first-century learners will increasingly expect (Nichols, 2020) – cannot be fully realized by the conventional education model.

The role of open, distance education has long been recognized as improving access and opportunity to education for those who otherwise might never have the opportunity to attend conventional education for whatever reason. Transforming conventional education to ODDE, then, is motivated by issues of social justice (increased inclusion) and continuous improvement (innovation unrestricted by synchronous tuition and timetabling). That such transformation leverages digital technologies is more opportunistic than techno-centric. Transformation to ODDE can take place within an education-centered philosophy, as described in Nichols (2020). ODDE need not require higher education to compromise its ultimate commitment to the standards of the academy.

Facing Up to the Challenges

Transforming conventional education through ODDE requires facing up to several significant challenges facing higher education. Norris, Brodnick, Lefrere, Gilmour, and Baer (2014) propose the following challenges, identified here as they apply to the American higher education experience (transferable to the context of other countries):

Challenge #1: Students and their families can no longer afford a college degree.
Challenge #2: American higher education institutions are facing a sea of red ink – declining state support, burdensome institutional debt, unrealistic instructional costs, plateauing tuition revenues, and intense competition for adult learners.
Challenge #3: American higher education has failed to assess student learning and performance.
Challenge #4: Most institutions lack the organizational agility to meet rapidly changing student learning needs and the needs of the US economy.
Challenge #5: Higher education has been unable to leverage technology to truly transform learning and competence building to be more accessible, relevant, challenging, and aligned with workforce needs.
Challenge #6: Higher education has failed to learn from the disruptive innovations pioneered by the for-profit institutions.

This is not to disparage or dismiss the effectiveness of conventional education. Those students able to attend and willing to pay the costs of tuition and (likely) relocation for a full-time, on-campus study experience no doubt value the direct teaching presence, social and peer engagement, and the buzz and social serendipity that a campus can offer. Such settings will find, though, that further "going online" to increase flexibility and meet the expectations of twenty-first-century learners will likely serve to increase costs and place increasing pressure on teaching operating models. "Going online," after all, places additional expectations on teaching staff and risks an inconsistent online experience for students as they advance from course to course (Nichols, 2020).

Moving from a Supply-Centric Orientation

To be supply-centered is to place the institutional operating model above the flexible preferences of learners. While "online education" is increasingly endorsed as a means by which higher education might be made "cheaper, more accessible, and better" (Beaudoin, 2016, p. 11), it is the starting point of a conventional education or ODDE paradigm that determines whether these are achieved. ERT showed that taking conventional education online does not lead to cheaper and better education alongside accessibility. Incremental changes to the conventional education model may have made education more accessible and better, but certainly not cheaper. ODDE is designed to challenge the iron triangle and so improve access, reduce cost, and improve educational quality. This is demonstrated by one recent study that found online ODDE results in increased revenues because of increased openness, improving student access (Ives & Walsh, 2021). Some also propose that there is a sizable. This matches the impression of some that there is a sizable, likely growing portion of would-be students who are "cost-conscious, pragmatic learners. . . [seeking] Greater openness, flexibility, and adaptability" (Norris et al., 2013, p. 1), to the extent that traditional timetables and the limitations of semesterization are considered barriers to student choice and progress (Nichols, 2020; Norris et al., 2013).

It was mentioned earlier that education is remarkably unchanged by the digital revolution. One central reason for this is the supply-centeredness of conventional education and its inability to cater for the increasingly reasonable expectations of students for anytime, anyplace tuition that flexes around life's circumstances and students' individual learning strengths. That students for the main cannot access any higher education course at any time for individual study for a reasonable price, and be personally guided to a successful outcome, is more a matter of design than it is a limitation of education itself. Approaches to learning design, analytics, artificial intelligence, evidence-based improvement, flexible access, interpersonal engagement, and student achievement can all be underpinned by the focused work of education specialists in an education orientation that provides accessible, scalable, and personalized education (Nichols, 2020).

It should not be assumed that digital education involves the transfer of conventional education model online or that such a transfer is progressive. Technology has the potential to entirely replace time-bound and lecture-based education with asynchronous, flexible, and personalized approaches that maintain the integrity of formal education achievement in ways that are both cost-effective and scalable. This disrupted form of education relies on an ODDE operating model, based on the paradigm of asynchronous, team-based, authoritative courseware that can be studied independently by design, with optional peer engagement. Clearly there are elements of most disciplines where interpersonal interaction and practical skills may require some synchronous engagement. However, these supplement, rather than determine, the teaching model. Developing an education orientation by necessity dethrones the teaching- or supply-focus that dominates most traditional or conventional forms of education. Typically the impetus for change is felt more sharply by administrators than by faculties (Norris et al., 2013), though even those in institutional leadership

roles "continue to demonstrate a startling lack of insight into the power and promise of, in particular, online education now occurring at all educational levels" (Beaudoin, 2016, p. 11).

Transforming to and Within ODDE

Despite the apparent benefits and student-centeredness of ODDE and multiple indications that transformation is both educationally desirable and strategically sensible (Christensen & Eyring, 2013; Nichols, 2020; Norris et al., 2013, 2014), why is it seldom seen? Reasons such as strong demand for the social rite of passage for full-time university study, academic resistance, lack of vision, and concern as to the quality of online digital distance education are often cited. However, it could be argued that these factors are not as apparent as they may have been. More likely is that higher education favors the incumbent through high barriers to entry (large investment, high compliance requirements, and the need for a quality academic reputation in advance); no crisis of demand (enrolments continue to increase even as tuition costs do); and an operating model built around the scarcity of academic knowledge (Nichols, 2020). Beaudoin points out the "obvious irony in the fact that although the college experience can be transformative for so many people, the learning organization is inherently resistant to transforming itself" (2016, p. 15).

Of course, a further barrier to transformation is that it is a level of change that is incredibly challenging. Leaving a conventional education operating model for an ODDE one requires attending to four major aspects of an institution: strategy, policy, systems, and challenges (Minnaar, 2013). Beneath these headings, which are the major codes from a synthesis study, lie multiple decisions that challenge the conventional assumptions around teaching and learning such that "To move from a face-to-face institution to ODL needs redefining of the institution as a whole" (Minnaar, 2013, p. 87). Further challenges relate to added requirements for policies related to the design and development of courseware and teaching roles. Legal obligations related to intellectual property, copyright, and licensing come to the fore, as do terms and conditions of employment; most critically, a move toward ODDE from conventional education challenges that most fundamental of academic concerns: what it means to teach and be a teacher. Focusing the teaching role is an important component of transforming to ODDE (Minnaar, 2013; Moore & Kearsley, 1996; Seelig, Cadwallader, & Standring, 2019), particularly because "in distance education instructors usually work closely with a number of different people in the development and delivery of the course" (Moore & Kearsley, 1996, p. 127). That this is the case may explain why faculty resistance to online education is so high (Paul, 2014).

A variety of educational roles must be established or, yes, transformed, if ODDE is to succeed. Each of the seven Canadian universities in Ives and Walsh (2021) mentioned the necessity of instructional designers in their move toward online education, whether in support of conventional education or ODDE. In work considering planning successful uptake of open and distance learning, Minnaar points out that in conventional education "individual teachers develop and deliver their own

courses. . . Educators try to be everything to everyone and to be experts in communication, curriculum design, course design, assessors, motivators, facilitators, as well as content experts," whereas in ODDE "it is important to move to a system where teachers are the specialists within a system" (2013, p. 102). What this might resemble is illustrated in the Open Polytechnic transformation in New Zealand (Seelig et al., 2019), whereby an ODDE institution further refined its academic role to specialize on subject matter expertise, teaching, and research in the context of other roles concerned with learning design and development, assessment activities, and learning support. That the change required further refinement of the organizational operating model and new practice no longer resembles the incumbent confirms its transformational status.

Managing a Transformation

Vision, leadership, strategy, and change management are core themes across institutions transitioning to online education and ODDE (Ives & Walsh, 2019, 2021; Nichols, 2020), though staff development and information technology infrastructure are also essential for adding digital media to education systems (Bernhard-Skala, 2019). Ensuring adequate resourcing is also an identified aspect of success in literature (Ives & Walsh, 2021). Institutions that appear to have made a positive transition to ODDE include Western Governor's University, Southern New Hampshire University, and New Zealand's Open Polytechnic (Christensen & Eyring, 2013; Seelig et al., 2019), each of whom identified opportunities to improve the access, flexibility, and practice of higher education through the deliberate implementation of digital technologies and rethinking the constraints of conventional education systems.

The complexities of managing change are well documented, and an enduring set of stages is readily available for those considering it (Kotter, 1996). The strategy, policies, systems, and challenges arising from change toward ODDE require significant leadership and managerial coordination (Beaudoin, 2016; Minnaar, 2013). Challenges specific to transforming into ODDE include the likes of expensive start-up costs, developing ways of engaging with new learner groups, adopting a new form of competitiveness, new forms of marketing, and addressing different student support requirements (Minnaar, 2013). Minnaar suggests beginning with strategic planning, followed by policy development and systems design (2013).

Norris et al. (2014) suggest starting with a 5-month design phase, whereby multiple perspectives are invited to address questions related to "what is happening now?", "what is the future in 10 years?", and "what opportunity does this create?" In the sixth and seventh months, these ideas are refined as multiple opportunities are consolidated. In the final 5 months, a convergence of these ideas takes place in the align phase, starting with "several big ideas" and "exploring the strategies" that might be used to implement them and then finalizing the "selected strategies and actions" that bring the entire design to a conclusion.

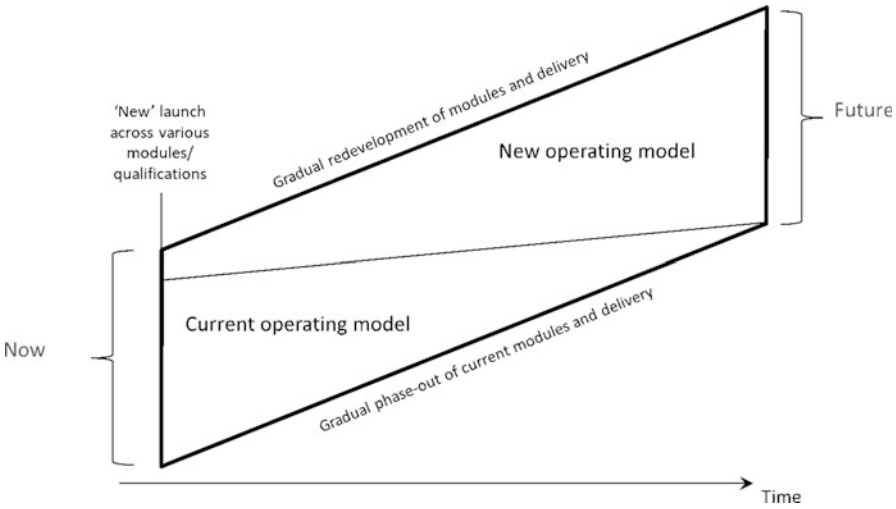

Fig. 1 A gradual adoption of a new operating model. (© The Open University (2017))

There are two main options for transformative change: either reinvent or reshape the core business model or "create a separate disruptive business to develop innovations that will become the source of future growth" (Norris et al., 2013, p. 12) enabling gradual adoption (Fig. 1). Each option leads to very different strategies (Norris et al., 2014), though the latter has the advantage of less risk and the opportunity to encourage further change as success is experienced (Christensen & Eyring, 2013; Minnaar, 2013). The risks of implementing a comprehensive new model of teaching and learning, enabled by a new series of operating processes, make the latter option much more viable. Beginning with tentative, malleable processes enables experience to further shape design in anticipation of more robust, scalable means of working. Regardless of the model employed, transformative change takes a committed investment of time (Minnaar, citing a Commonwealth of Learning report, suggests up to 5 years), funding (most courseware development costs are up-front), and courage.

Conclusion

ODDE is a different paradigm of teaching and learning to that of conventional education. Conventional education providers seeking to realize ODDE benefits, then, must anticipate transformation of their operating models across the dimensions of the timing and responsibility of the education experience, role of the instructor, location of instruction, and the necessity of student peer-to-peer contact. The more fundamental elements of this change relate to the asynchronous bias of ODDE and, therefore, the role of synchronous teaching and the need for a timetable. "Going online," then, does not automatically confer any of the traditional benefits of

accessibility, cost-effectiveness, flexibility, openness, and scalability. Without a deliberate redesign of the underlying operating model of education, "going online" results in transfer of practice rather than transformation.

"Hybrid" or "blended" models are also problematic as means of ODDE, in that these tend to betray a conventional education starting point. The underlying operating model, designed to support lectures, contact classes, and timetables, constrains the potential reach toward accessible, cost-effective, flexible, open, and scalable education. Attempting to cater for both conventional education and ODDE at the same time results in increased costs and a blurring of specialist input across the education endeavor. Ultimately the role of the instructor can be traced back to a binary of synchronously in front of a class or asynchronously represented in courseware.

A transformational shift toward ODDE makes sound strategic and educational sense, but change is challenging. Norris et al. describe transformation as requiring:

> a commitment between the board and the president to push the campus community beyond its comfort zone, risking the slings and arrows of campus pushback in order to fulfill the responsibility of stewardship for the future of the institution in the Age of Disruption. (Norris et al., 2013, p. 13)

It is helpful to consider conventional education and ODDE as contrasting starting places, both with different assumptions about how education takes place. However, while conventional education is identifiable through a dedicated teacher and class timetable, ODDE is more varied. If conventional education and ODDE are considered as extremes (or paradigms), the dynamics of transformation become much clearer. Fortunately there are institutions that have successfully made the transition to ODDE, and a mature literature now exists for those seeing to achieve the same.

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