Open and Distance e-Learning: What, When, Why

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Roadmap

1. Definitions (Key concepts in ODeL)
2. Generations (Evolution of ODeL)
3. Rationales (Why ODeL)
Definitions
Definitions

Open and distance e-learning (ODeL)

• “[F]orms of education provision that use contemporary technologies to enable varied combinations of synchronous and asynchronous communication among learners and educators who are physically separated from one another for part or all of the educational experience” (Alfonso, 2012, n.p.)

• Expansion of the term ‘open and distance learning’ (ODL), “[a] learning system that combines open learning characteristics with distance delivery” (Abrioux, 2006b, p. 10), to include the adoption of e-learning or online learning methodologies

• Convergence of ‘open learning’, ‘distance education’, and ‘e-learning’
Definitions

Open learning

• “An approach to learning that gives students flexibility and choice over what, when, at what pace, where, and how they learn”

• A philosophy of education: “to be open to people, places, methods and ideas”
  - accessibility to more students, including and especially non-traditional learners
  - “independence of learning location”
  - “methodological flexibility”
  - open exchange of ideas
Definitions

Distance education (DE)

- A mode of education where teachers and learners are physically separated most of the time
- Usually contrasted with conventional, face-to-face, classroom-based instruction
- “[P]lanned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organisational and administrative arrangements” (Moore & Kearsley, 2004, p. 2)
e-Learning

• “[L]earning [that is] facilitated and supported through the use of information and communications technology” (JISC, 2012) such as computers, interactive whiteboards, digital cameras, mobile phones, online communication tools, and VLEs

• Also known as technology-supported learning

• May take place in the context of campus-based instruction and/or in DE contexts; modes include e-learning in the classroom, online learning, and blended learning
Definitions

Online learning

• Involves “use of the Internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience” (Ally, 2008, p. 17)

• One type of DE, but it is not always DE — i.e. it may be a component of conventional on-campus education
Definitions

**Blended learning**

- A pedagogical approach “that combines face-to-face meetings with deliberately designed online activity” (Haythornthwaite & Andrews, 2011, p. 13), such as online discussion forums to discuss particular course topics outside of regular class hours

- Integration of face-to-face oral communication and online written communication (Garrison & Vaughan, 2008)
Adapted from Power (2008)
Generations
Generations

**By technology used** (Taylor, 2001)

1. Correspondence education - use of print and postal technologies

2. Mass media-based education - use of one-way, broadcast technologies (television, radio, film)

3. Telelearning - use of conferencing technologies (text, audio, video, Web conferencing)

4. Intelligent flexible learning - use of interactive multimedia online and computer-mediated communication (CMC)

5. Flexible learning - use of campus portals and CMC with automated response systems, in addition to interactive multimedia online
Generations

By technology used (Anderson & Elloumi, 2004)

1. Correspondence study
2. Use of mass media
3. Use of synchronous technologies
4. Use of computer conferencing
5. Use of educational Semantic Web
Generations

Generations of online learning (Downes, 2011)

1. placing learning content online; programmed learning (Generation 0)
2. networked learning: using bulletin boards and email to communicate (Generation 1)
3. application of computer games to online learning: multiple users in open-ended game environments engaged in synchronous, real-time communication and collaborative activities (Generation 2)
4. introduction of CMSs and LMSs; putting content and communication together in the same online environment (Generation 3)
5. e-learning 2.0 - learners authoring content and distributing it to their networks using social software (Web 2.0); mobile computing (“platform independence”); the rise of open content
6. massive open online courses (MOOCs): leveraging widespread free and open content and applications and cloud-based connectivity/networks (persistent networks); content is created and shared by the participants; distributed technology and distributed knowledge => connectivism
Generations

‘Pedagogical generations’ (Anderson & Dron, 2011)

1. Cognitive-behaviourist generation - focus on knowledge transmission, emphasis on highly structured content using instructional systems design, with minimal social presence (learning largely an individual process) and reduced teacher presence (teacher-learner interaction through summative assessment)

2. Social-constructivist generation - focus on construction of meaning by/in a community of learners, emphasis on interaction and dialogue

3. Connectivist generation - focus on ‘produsage’ — i.e. production as consumption of educational content in/through networks
# Anderson & Dron’s pedagogical generations

<table>
<thead>
<tr>
<th>Generation of distance education pedagogy</th>
<th>Technology</th>
<th>Learning activities</th>
<th>Learner granularity</th>
<th>Content granularity</th>
<th>Evaluation</th>
<th>Teacher role</th>
<th>Scalability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive–behaviourism</td>
<td>Mass media: Print, TV, radio, one-to-one communication</td>
<td>Read and watch</td>
<td>Individual</td>
<td>Fine: scripted and designed from the ground up</td>
<td>Recall</td>
<td>Content creator, sage on the stage</td>
<td>High</td>
</tr>
<tr>
<td>Constructivism</td>
<td>Conferencing (audio, video, and Web), many-to-many communication</td>
<td>Discuss, create, construct</td>
<td>Group</td>
<td>Medium: scaffolded and arranged, teacher-guided</td>
<td>Synthesize: essays</td>
<td>Discussion leader, guide on the side</td>
<td>Low</td>
</tr>
<tr>
<td>Connectivism</td>
<td>Web 2.0: Social networks, aggregation &amp; recommender systems</td>
<td>Explore, connect, create, and evaluate</td>
<td>Network</td>
<td>Coarse: mainly at object and person level, self-created</td>
<td>Artifact creation</td>
<td>Critical friend, co-traveler</td>
<td>Medium</td>
</tr>
</tbody>
</table>
Generations

Changing emphasis (Burge & Polec, 2008)

- from course **Content** (high quality, pre-designed materials + mostly written text correspondence)

- to **Connection** (real-time structured discussions and adaptive teaching responses)

- to **Community** (aiming for group synergies in a medium that enable both self-interest and group-interest behaviours)
Generations

Some observations

• No single generation has provided all the answers, and each has built on foundations of its predecessors rather than replacing the earlier prototype => co-existence of generations

• With new affordances, “it becomes possible to explore and capitalize on different aspects of the learning process”

• “For each mode of engagement, different types of knowledge, learning, and contexts must be applied”

• Demand for educators and students to be skilled and informed to select the best mix(es) of pedagogy and technology

• Role of cognitivist, behaviourist, constructivist, and connectivist theories of learning in enhancing learning effectiveness: each provides an understanding of how people can learn more effectively
Rationales
Rationales

Why ODeL?

✓ To broaden access; to reach the unreached
✓ To improve quality
✓ To reduce costs
✓ To achieve cost-effectiveness
Rationales

‘Iron triangle’ (Daniel, 2009)

• Any two of the following — flexible access, quality learning experience and cost-effectiveness — can be achieved but not all three at once (Kanuka & Brooks, 2010, p. 69)

• Trade-offs among the three key elements; triangle has a fixed-length perimeter such that one can only increase access to a given course under circumstances where one lowers its level of quality (Daniel, 2009)
Rationales
‘Iron triangle’

![Diagram showing the iron triangle with accessibility, efficiency, and quality.](image)
Rationales

**DE as a way out of the iron triangle**

- DE as a way of breaking out of the iron triangle, because it lowers cost while maintaining quality and increasing accessibility => the overall fixed-length perimeter can be extended, allowing the accessibility and quality sides of the triangle to be extended without a corresponding increase in the size of the cost vector (Daniel, 2009)
allows for improvements in accessibility and quality, as well as economies of scale that traditional universities simply cannot attain. In Figure 1, a graphic representation of Daniel's thesis is presented.

As noted earlier, despite high growth in the 1970s and 1980s, DE has not been adopted by mainstream universities (Bates, 2005). Indeed, from its outset, DE has been vigorously resisted by faculty in traditional universities (Perry, 1976). Now, under its new guise as OL, DE has only been partially and begrudgingly embraced by regular university faculty (Mitchell & Geva-May, 2009). In light of these trends, we view Daniel's iron triangle framework as dated and fundamentally unworkable, an industrial solution in a post-industrial period. Indeed, the iron triangle theory implicitly suggests that universities will inevitably evolve of their own accord to embrace DE/OL, because taking such a step liberates universities from the zero-sum paradigm.

Yet this has not occurred. In short, had DE been such an obviously viable solution, it would likely already have been implemented.

It is therefore necessary, in our view, to understand why stakeholders have not broken out of Daniel's Triangle, when doing so seems so predictable and so beneficial to all. To address this problem, we have expanded upon the triangle concept. Our conceptualization presents OL as a strategic choice associated with defined benefits. It also considers obstacles to the transition process from a stakeholder perspective. We believe there is indeed a way out of the iron triangle—which does involve OL—but it is not OL as we currently know it. In the following section, we
Rationales

Iron triangle revisited (Power & Gould-Morven, 2011)

Figure 3A: Student push, alignment of priorities.

Figure 4A: Student push, administrator pull, and alignment of priorities.

Figure 4B: Administrator push-back due to a non-alignment of priorities.
Rationales

**BOLD to break out of the iron triangle**

- **BOLD (blended online learning design) as an alternative to traditional DE**
- Combines use of an LMS for asynchronous communication and a desktop conferencing environment
- **Power (2008):** BOLD departs from “a classical DE design and development-focused model” because it allows “students and faculty to interact in a fashion quite similar to the on-campus experience while accessing powerful screen-sharing and Web browsing functions” (p. 503), and it enables faculty to “utilise a thoroughly socioconstructivist-oriented learning environment” (p. 509); addresses reduced accessibility for learners who cannot participate in synchronous sessions through the recording of sessions
activities and, on the other, faculty-led and system-led activities. It must be emphasized that BOLD is very much a trade-off model, in that it allows for spatial freedom (reaching out to off-campus learners) but not for temporal freedom (in that seminars are scheduled at set times, as they are on campus).

Figure 6. The blended online learning design (BOLD) model.

As we have seen previously, Traditional Universities (or TUs), whether they implement DE, OL, or BL, fail to address at least one and, at times, two of the three stakeholder priorities to an acceptable threshold level, thereby resulting in limited successful deployments of alternative course delivery modes. BOLD, on the other hand, appears to better harmonize the priorities of all three stakeholder groups, based on current data (Power & Vaughan, 2010). It overcomes the shortcomings of DE, OL and BL in the following ways:

- **BOLD offers a higher level of accessibility to graduate seminars than those offered by TUs implementing BL, in that students attend a BOLD seminar completely online.** It thus achieves enhanced spatial freedom for both faculty and students by removing the on-campus requirement. Student accessibility is further enhanced through access to recordings of weekly classes whenever and as often as they like. This is especially important in the case of second-language students (Moore & Kearsley, 2005).

- **Faculty** experience a pull reaction to BOLD in that they can work with students wherever they may be located geographically. Indeed, faculty report that BOLD-enhanced accessibility allows them to maintain teaching commitments while taking advantage of increased opportunity for off-campus research and fieldwork, making BOLD highly attractive to them.

- **Administrators** also experience a pull reaction vis-à-vis BOLD because, using already available infrastructure (existing institutional computer network and faculty equipment) and offsetting expenses (students use their equipment and their own Internet...
Rationales

Caveats

• BOLD as an alternative for traditional universities adopting DE as a means to broaden access to higher education and to increase enrolments at little or no additional cost; an option for dual-mode DE institutions, or institutions offering both on-campus and DE programmes

• Diversity among learners: those traditionally marginalised by geographic location and economic circumstances as well as those who mix on-campus and distance learning to maximise flexibility (Calvert, 2005)

• Need for a mix of pedagogical approaches
Rationales

from DE to BOLD to ODeL

• ODeL encompasses open learning and DE as well as all variants of e-learning, including blended online learning

• A more inclusive term and may be used to characterise the full range of course design practices that are possible in online DE

• Larreamendy-Joerns & Leinhardt (2006): it is the diversity of ‘online instruction’ in terms of “subject matters, technological means, learning styles, and implementation scenarios (e.g., stand-alone, blended instruction, synchronous online teaching)... that ultimately will allow online instruction to meet the expectations of a student population as diverse as that in traditional higher education” (p. 595)

• A reminder that online instruction has inherited from DE the ideals of openness and democratisation of access to higher education — an idea which the term ODeL communicates with its inclusion of the term ‘open’ aside from ‘distance’ and ‘e-learning’
Thank you.