Introduction: Research Areas in Online Distance Education

Olaf Zawacki-Richter and Terry Anderson

THE STRUCTURE OF RESEARCH AREAS

Research questions should be posed within a theoretical framework and, most commonly, quality research is embedded within a holistic structure of research areas within a discipline. Furthermore, the structure, culture, history, and past accomplishments of a research discipline form the foundation for identifying gaps and priority areas for researchers. Thus, with regard to distance education, Mishra (1998) made a plea for “a comprehensive and cohesive structure internationally to provide a strong foundation to the discipline” (p. 281).

Over the years a number of reviews of distance education literature have been published in which the authors developed categorization schemes of research topics that they mapped onto the articles under review (e.g., Holmberg, 1985; Sherry, 1996; Koble & Bunker, 1997; Mishra, 1997; Berge & Mroczewski, 2001; Rourke & Szabo, 2002; Lee, Driscoll, & Nelson, 2004; or Oviatt, Burdis, & West, 2012). However, the various attempts to describe the broad and interdisciplinary field of distance education showed a disparate picture. In contrast to unsystematic and often arbitrary selection and aggregation of research topics, Zawacki-Richter (2009) carried out an
international Delphi study (cf. Charlton, 2004) to develop a validated framework of research topics that would help organize the knowledge in the field and identify research gaps and opportunities.

Three broad categories of research were described in the Delphi study:

- macro-level: distance education systems and theories
- meso-level: management, organization, and technology
- micro-level: teaching and learning in distance education

Under these three levels, the research issues were further categorized into the following 15 research areas:

**Macro-level: Distance Education Systems and Theories**

1. Access, equity, and ethics: the democratization of access to distance education afforded by new media and finding ways to deliver high quality education to those who have limited resources and poor infrastructure. Issues that refer to the (sustainable) provision of distance education in developing areas. For example, what is the impact of distance education (e.g., via mobile learning) on narrowing (or broadening) the digital divide? What is the role of ICT (information and communication technologies) and/or OER (open educational resources) in terms of access to education? Should distance education have an inherent and explicit goal to reduce inequality and promote both high quality and affordable educational opportunity?

2. Globalization of education and cross-cultural aspects: aspects that refer to the global external environment and drivers; the development of the global distance education market; teaching and learning in mediated and multicultural environments; and the implications for professional development and curriculum development.

3. Distance teaching systems and institutions: distance education delivery systems, the role of institutional partnerships in developing transnational programs and the impact of ICT on the convergence of conventional education and distance education institutions (hybrid or mixed-mode).

4. Theories and models: theoretical frameworks for and foundations of distance education, e.g., the theoretical basis of instructional
models, knowledge construction, interaction between learners, and the impact of social constructivism, connectivism, and new learning theories on distance education practice.

(5) Research methods in distance education and knowledge transfer: methodological considerations, the impact of distance education research and writing on practice, and the role of professional associations and higher education institutions in improving practice. Literature reviews and works on the history of distance education are also subsumed within this area.

Meso-level: Management, Organization and Technology

(6) Management and organization: strategies, administration, and organizational infrastructures and frameworks for the development, implementation, and sustainable delivery of distance education programs. What is required for successful leadership in distance education? Distance education and policies relating to continuing education, lifelong learning, and the impact of online learning on institutional policies, as well as legal issues (copyright and intellectual property).

(7) Costs and benefits: aspects that refer to financial management, costing, pricing, and business models in distance education. Efficiency: What is the return on investment or impact of distance education programs? What is the impact of ICT on the costing models and the scalability of distance education delivery? How can cost-effective but meaningful learner support be provided?

(8) Educational technology: new trends in educational technology for distance education (e.g., Web 2.0 applications or mobile learning) and the benefits and challenges of using OERs, media selection (e.g., synchronous versus asynchronous media), technical infrastructure, and equipment for online learning environments, and their affordances for teaching and learning.

(9) Innovation and change: issues that refer to educational innovation with new media and measures to support and facilitate change in institutions (e.g., incentive systems for faculty, aspects referring to staff workloads, promotion and tenure).
Professional development and faculty support: professional development and faculty support services as a prerequisite for innovation and change. What are the competencies of online teachers, counsellors and support service staff, and how can they be developed?

Learner support services: the infrastructure for and organization of learner support systems (from information and counselling for prospective students to library services and technical support, to career services and alumni networks).

Quality assurance: issues that refer to accreditation and quality standards in distance education. The impact of quality assurance requirements and regulation and the impact of quality learner support on enrolments and drop-out/retention, as well as reputation and acceptance of distance education as a valid form of educational provision.

Micro-level: Teaching and Learning in Distance Education

Instructional or learning design: issues that refer to the stages of the instructional design process for curriculum and course development. Special emphasis is placed on pedagogical approaches for tutoring online (scaffolding), the design of (culturally appropriate) study material, opportunities provided by new developments in educational technology for teaching and learning (e.g., Web 2.0 applications and mobile devices), as well as assessment practices in distance education.

Interaction and communication in learning communities: closely related to instructional design considerations is course design that fosters (online) articulation, interaction, reflection, and collaboration throughout the learning and teaching process. Special areas include the development of online communities, gender differences, and cross-cultural aspects in online communication.

Learner characteristics: the aims and goals of adult and younger students studying at a distance, the socio-economic background of distance education students, their different approaches to learning, critical thinking dispositions, media literacies, and special needs. How do students learn online (learner behaviour patterns, learning
styles) and what competencies are needed for distance learning (e.g., digital literacy)?

**FURTHER INVESTIGATIONS TO EXPLORE THE FIELD OF DISTANCE EDUCATION RESEARCH**

The Delphi study initiated a fruitful discussion about the structure of research areas in distance education. Later literature reviews have referred to and build upon this framework (cf. Simonson, Schlosser, & Orellana, 2011; Guri-Rosenblit & Gros, 2011). In 2009 a research consortium in Australia between the University of New England (UNE), Charles Sturt University (CSU), Central Queensland University (CQU), the University of Southern Queensland (USQ), and Massey University in New Zealand was established and funded by the Australian government—the Distance Education Hub (DEHub). In this project the universities developed a research program for 2011–2021 with research themes categorized by the main research levels (macro-, meso-, micro-) and by the 15 research areas identified in the Delphi study (http://wikieducator.org/DEHub/Research_Themes).

This structure was the starting point for a number of further bibliographic studies into the field of distance education research. The next step in our research program was a large-scale literature review to investigate and quantify research trends and gaps, methods, and authorship patterns in distance education research published in scholarly journals (Zawacki-Richter, Bäcker and Vogt, 2009). Five of the major peer-reviewed journals were reviewed for this study: Open Learning (OL), Distance Education (DE), the American Journal of Distance Education (AJDE), the Journal of Distance Education (JDE) and the International Review of Research in Open and Distance Learning (IRRODL). The sample comprised of 695 full papers that were published in the five journals between 2000 and 2008. The major outcome of this study was a frequency tabulation of the research areas covered in the publications revealing a strong imbalance: The micro-perspective (teaching and learning in distance education) is highly over-represented. Over 50% of all papers deal with the top three issues, i.e., interaction and communication in learning communities (17.6%), instructional design (17.4%), and learner characteristics (16.3%), whereas other important areas (e.g., costs and benefits, innovation and change management, or intercultural aspects of distance learning) are dreadfully neglected.
<table>
<thead>
<tr>
<th>Rank</th>
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<th>Level</th>
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**Total** | 695 | 100 |

*Level: 1=macro, 2=meso, 3=micr*

Based on the same sample of research publications, Zawacki-Richter and von Prümmer (2010) explored gender and collaboration patterns in distance education research. Following a bibliometric approach, collaboration was operationalized through co-author relationships. The study revealed
a significant trend over the nine years of this study towards collaborative research in distance education. There are no significant gender differences regarding the number of co-authors of collaborative papers. However, female researchers significantly choose different research topics than their male colleagues. Women are over-represented in research areas such as learner characteristics, learner support or interaction, and communication in learning communities, while men are more concerned with topics stereotypically associated with them: technology and management. There is a significant propensity for female researchers to apply more qualitative methods or to triangulate qualitative and quantitative methods than males. Research methods also affect collaboration. On average, research teams on quantitative projects are significantly bigger than those who produce articles that are qualitative in nature.

A third set of studies investigated the impact of distance education journals in terms of citations and the perceived value of journals by experts in the field and the structure of the scholarly journal network to investigate relationships and patterns of scientific information exchange. The sample was extended to 12 journals (6 open access and 6 published in closed/proprietary format by commercial publishers) and 1,123 full articles published between 2003 and 2008 (Zawacki-Richter, Anderson, & Tuncay, 2010).

Open access dissemination resonates with many distance education researchers and practitioners because it aligns with their fundamental mission of extending access to learning opportunities. However, there remains lingering doubt whether this increase in access comes at a cost of reducing prestige, value (often determined in promotion and tenure hearings), or reference to the work by other authors. Using an online survey completed by members of the editorial boards of the 12 journals and a systematic review of the number of citations per article (N=1,123) and per journal issue between 2003 and 2008, the impact and the perceived value of the 12 journals were investigated. The results showed that distance education editors do not perceive the open access journals as significantly more or less prestigious than their closed counterparts. The number of citations per journal and per article also indicates no significant difference. However, a trend towards more citations per article in open access journals was observed. Articles in open access journals are also cited earlier than in non-open access journals. The most prestigious journals in terms of citations and perceived value are IRRODL, DE, AJDE, JDE and OL.
Publication of research results in peer-reviewed journals is the most important means of dissemination, discourse, and arguably to application and practice in the discipline of distance education. However there has been little work analyzing the relationships and influence among these journals. Our fourth study (Zawacki-Richter & Anderson, 2011) applied social network analysis techniques in which the nodes in the network are the journals and the links between them are the citations by one author to the works of another. The bibliographic description and analysis helps to investigate the intellectual structure and patterns of information exchange within the field of distance education research. The analysis of this citation network and the similarities in citation patterns revealed a clear core-periphery structure among distance education journals with regard to the centrality and prestige of the journals, network congruence, sending/receiving, and self-feeding ratios (see figure i.1). The vertical and horizontal scales in the figure show the relative distances between the journals based on citations (Multidimensional Scaling, cf. Borg & Groenen, 2005; Kruscal, Wish, & Uslaner, 1978).

Figure i.1 Core-periphery structure of the distance education journal network (Zawacki-Richter & Anderson, 2011, p. 451).
Towards a Research Agenda

The goal of this volume is to create a comprehensive overview of distance education research and the disciplines from which it emerged that could be a primary reference and guide to distance educators, researchers, and policy makers. We also wanted to synthesize the issues, opportunities, questions, and challenges associated with each of these major focus areas to create an empirically driven research agenda. To achieve these goals, the editors of this volume invited an international expert or, occasionally, a team of experts with international reputations for research and leadership in each of the 15 research areas identified in the 2009 Delphi study. We asked each author to create an overview of the respective issue and its relevance, the major theoretical insights that guide and have arisen from the research on this topic, a short summary/review of the major research articles/authors/controversies and empirical data relative to the issue, open questions and directions for future research, as well as implications for distance education practice that arise from this research. Of course, being academics they did not all follow precisely our directions, but each did produce a quality piece that frames the challenge and opportunities associated with a research area in which they have had many years of experience and which they bring world-class expertise. Distance education scholars and students will no doubt recognize many of the names of the chapter authors, as we sought and in most cases were successful in recruiting the scholars whom we believe had not only the greatest expertise, but who have a reputation for looking beyond the obvious and being able to map out a research agenda in the particular area of their special expertise.

As shown in table 1.1, the majority of published research deals with topics and issues with regard to teaching and learning processes in online distance education. The very broad field of instructional design could be taken as the overall umbrella term for this kind of research with learner characteristics and interaction and communication in learning communities as sub-fields. Given the richness of topics and issues addressed in this wide area, it was decided to further differentiate the micro-level by two additional chapters. The broadest area of interaction and communication in learning communities is covered by a chapter that emphasizes quantitative methods to investigate online interaction patterns; whereas, another chapter deals with this topic with a focus on theoretical and qualitative considerations. Two
chapters in this volume also cover the broad field of research into distance learners and learner characteristics. One chapter deals with the changing profiles and characteristics of both traditional adult distance education students and so-called net generation students who are coming in increasing numbers to online education opportunities. We also realize that issues around persistence and high dropout rates have long been associated with distance education and continue to be debated with newer forms of online learning. Thus, we integrated an additional chapter to provide an overview of research into dropout and retention in distance education.

As distance education research develops, it will continue to address new themes by enlarging its scope of research areas. The editors hope that this volume is an important step towards a research agenda to develop a clear-cut profile of the discipline.

* * *

As a form of executive summary, we have overviewed the main ideas, content, and approaches of the chapters for all research areas on the macro-level (distance education systems and theories), meso-level (management, organization and technology), and micro-level (learning and teaching in distance education) in the following section.

MACRO-LEVEL RESEARCH: DISTANCE EDUCATION SYSTEMS AND THEORIES

Access, Equity, and Ethics

Alan Tait and Jennifer O’Rourke combine their experience (as distance education administrators, consultants, and academics in the UK and Canada) and talents to create a compelling and very practical chapter on the challenging issues associated with social justice. Social justice, especially as it is manifest in the provision of access to education to those groups to whom such opportunity has traditionally been denied, has always been a major driving force for individual educators and distance educational institutions. However, distance education historically and online education today has also been seen as an opportunity for business and for profit and for
exploitation by so-called degree mills. Thus there is a need to understand thoroughly the components of social justice and to have a clear rationale for thoughtful inclusion of social justice concerns in the policy and the practice of all online programming. Tait and O’Rourke meet this challenge in an engaging chapter that not only defines social justice in this context but, more practically, offers a framework for a social justice audit to measure it. They provide a path towards both recognizing and improving effective social justice policy and practice within online education development and delivery.

In the first part of the chapter, Tait and O’Rourke cover the historical and political roots of the basic ideas that ground ideals of social justice—namely, that “our concept of social justice for each individual encompasses both the notion of equality rights as a ‘level playing field,’” and the “right to opportunities and support that enable each person to fully participate in all aspects of society—to get to the playing field in the first place.”

The chapter then turns to the particular role of online distance education and social justice. No particular technology, institution, or discipline need bear the total responsibility for maintaining and building social justice, but distance education has a long and proud tradition of working towards these goals. The increasingly powerful and costly technologies used in online forms of education offer possibility of exclusion as well as of inclusion. Thus, there is an increased need for vigilance and for a formalized process to analyze social justice impact and to create polices for any open and distance learning program. To meet this agenda Tait and O’Rourke introduce an audit by which institutions, teachers, and learners can insure—through measurement, external and self-evaluation, participatory dialogue, and reflection—that their programming does, in fact, promote a social justice and equity agenda. They provide guidelines for looking at various components of online distance systems from a social justice perspective. These components include not only the familiar accessibility issues, but they expand to the choice of curriculum and pedagogy; to the operations and administration of ODE systems; and to the provision of quality assurance, adequate student support services, and effective institutional administration. They do not exclude social justice issues that are related to the costs and sustainability of ODE programs.

This chapter, like others in this volume, illustrates the complexity of ODL systems, but it also makes a clear and compelling argument to insure that
all forms of distance education are challenged to think carefully and plan effectively to insure that they are used as positive tools in the continuing effort to insure social justice for each individual and all societies.

Globalization and Cross-cultural Aspects

Charlotte Gunawardena, a scholar from the University of New Mexico originally from Sri Lanka, writes about ODL’s increasing global impact and effect and response to cultural change. Gunawardena has researched and published many articles on the implications of these educational models on both distance education exporting and importing countries. Gunawardena begins her chapter by positioning ODL within the larger context of globalization with its wide focus on mobility, international transportation, and marketing, and the emergence of global cultures, memes, and economies. She directly confronts the question: Does ODL merely represent another example of Western hegemony and an attempt to export (for profit) a homogenizing Western culture? Such questions are challenging if not impossible to answer definitively; however, sensitivity to the biases inbuilt in all cultural artifacts—including formal education content and institutions—cannot and should not be ignored. Gunawardena notes the deficiencies of static description of whole cultures such as those developed by Hofstede (1986) and instead argues for a change from an essentialist to a negotiated perspective, to conceptualize culture as being negotiated within the ODL course.

Gunawardena next turns to a challenge experienced by any teacher (or student) involved in educational activities with students from other cultures, languages, and geographic locales. Educational behaviour and expectation are not homogeneous, with many cultures promoting and discouraging different types of activity, work ethics, respect for authority, and other activities that define much of formal education experience. When participants from different cultures engage in the same context of learning, misunderstanding and unmet expectations are likely. When these occur online, with limited opportunities for personal intervention or even awareness of concerns, the results can be devastating. However, such cultural encounters can also be very powerful learning experiences as we learn to live with each other and steward our single, global ecosystem.

The chapter then focusses on major issues that surface when teaching and learning across multiple cultures and geographies, including issues of language and of silence, of unequal wealth distribution, differences in
expectations, and initiation of help-seeking behaviours. The chapter concludes with reflections on Gunawardena’s own research in cross-cultural contexts. She, like other researchers who conduct research in multiple contexts, writes from her first-hand experience of the challenges of finding comparison groups, given global diversity and the necessity of collaborating with local educational researchers to insure both validity of research outcomes and the engagement and support of local researchers.

**Distance Education Systems and Institutions**

In the next chapter, distinguished Israeli researcher and author Sarah Guri-Rosenblit addresses the effects on distance education institutions induced by the rapid and disruptive changes of technological development and delivery platforms that define online education. Ironically, the single-mode distance education institutions, especially those large enough to be considered as mega-universities (Daniel, 1996), that led the innovation to distance education as “open universities” in the 1970s, are faced with some of the greatest challenges in moving to online delivery. Lest we be accused of being technologically driven and assume that online education makes obsolete all previous modes of distance delivery, we repeat Guri-Rosenblit’s contention that the traditional (often text or mass media) modes of delivery common at the open universities “are able to enrol large numbers of students at a lower cost, and as such contribute greatly to the broadening of access to higher education and to social equity” (p. 4). Little evidence to date indicates that institutions employing typical small classes and interactive and constructivist models of online learning show the per-student costs are not significantly lower than traditional campus-based education.

Guri-Rosenblit concludes the first part of this chapter by reviewing the type of macro-research usually related to the innovations, costs, and affordances of the then-new industrial models of distance education. Given the affordances of the online environment, and especially the capacity to increase modes of student-student and student-teacher interaction in distance education, Guri-Rosenblit points out the shift in research away from the macro-issues related to increasing access and reducing, to those focussing on micro-issues such as interaction and instructional designs. Then moving to blended learning, she notes that it is easy in both online and blended learning to keep adding on features, toys, and tools, without
analysis of the costs, usage, and accessibility issues involved. These are especially challenging for the large, single-mode open universities that for many years dominated research in distance education. Now they are left wondering if their delivery model is hopelessly out of date—even though it has proven to be cost- and learning-effective.

The chapter then notes both the national culture and perspective that influence educational intuitions and the technologies and pedagogies they employ. Further, Guri-Rosenblit notes the emergence of global culture and the challenges it represents as institutions attempt to exploit the “anywhere” capacity of distance education, while still insuring that it is relevant and effective for students across the globe.

She next turns to the opportunities afforded by new tools to increase the collaborations and the cost-effectiveness of distance education institutions by sharing resources and services. The open scholarship and open education movements are prime examples of the potential of sharing, but in these early years, we are finding less adoption than expected—both by individuals and by institutions—including those charged with open and distance mandates (Ngimwa & Wilson, 2012). It seems that the success of these early distance providers in the past is slowing rather than accelerating an appetite (perhaps wisely) for change and adoption of online learning by these dedicated distance education institutions.

Guri-Rosenblit concludes her chapter by noting the extra challenge of researching distance education systems and institutions when there is such diversity and lack of consensus about what online learning is and what (if any) are its special mandates (especially related to costs, access, and accessibility). She notes how important it is for researchers to study the multiple modes and models of distance education, without losing sight of the still valued contribution, accessibility, and cost-effectiveness of traditional models of distance education.

**Distance Education Theories and Models**

Margaret Haughey and Terry Evans do an excellent job of moving beyond the theories and models of distance education based on earlier technologies (postal communications, mass production, and big media) and earlier pedagogies to focus on the social technologies of Web 2.0 and the net-informed pedagogies of connectivism. The chapter chronicles
developments of online education, from its first mass use in the earlier 1990s when access to online resources was a major issue, to 2012 when the use of multi-forms of text, data, audio, video, and immersive communications has become ubiquitous. However, they also point out that universal use does not imply universal social homogeneity or effectiveness in educational use. They note in their summary, “there is a need to extend research to be of a socially critical kind that takes into account, local, regional, and global circumstances and diversities.” Such research demands the active participation of both researchers and, especially, practitioners as prescribed in design-based and action research.

Haughey and Evans also provide an overview of new theories developed mostly in social activity and media studies such as actor-network theory and activity theory. They argue for the necessity to get beyond a focus on the technology prescribed for delivery by institutions, to the interactions and actual use and adaptation of these tools by active participants. Finally, the extraordinary speed with which new information and communications are introduced and the rapid decrease in their costs compel researchers to pay attention to effects of change—adoption issues, obsolescence, literacy, training, and support systems.

**Research Methods in Distance Education**

American scholar Farhad Saba notes in his chapter on research methods that distance education research has been subject to harsh and consistent critique (e.g., Berge & Mrozowski, 2001; Bernard et al., 2004; Perraton, 2000; Saba, 2000). Moore (1985) stated that there is “a massive volume of amateur, unsystematic and badly designed research producing information of very little value” (p. 36). After a review of the Indian distance education literature, Panda (1992) concluded that “most of the studies are either descriptive status surveys or experimental studies with poor methodological footing” (p. 322).

In 2000 Saba criticised the lack of theoretical underpinnings in distance education research: “Research questions are rarely posed within a theoretical framework or based on its fundamental concepts and constructs” (Saba, 2000, p. 2), and he was supported by Perraton (2000): “An examination of existing research shows that it is often atheoretical and predominantly descriptive” (p. 1). Have things improved?
In his chapter, Saba remarks on having seen early signs of maturity in the scholarship of distance education. In a recent article, Simonson, Schlosser and Orellana (2011) come to similar conclusion: “the literature of the field has matured, and research has improved” (p. 124). For them, “scientific inquiry, conducted with rigorous attention to correct procedures, is the key to success of this field. Research and theory are at the foundation of credibility and quality” (p. 125).

Distance education in particular and the teaching and learning process in general are complex matters. Many variables are involved in instructional settings, not to mention other elements involved in distance education, such as social, organizational, technical, and global issues affecting the theory and practice in the field. Therefore, Saba and other experts advocate for mixed methods research: “Researchers are realizing that in practice the methodologies can be viewed as complementary. . . . Researchers who advocate combining qualitative and quantitative methods are thus on solid epistemological ground” (Garrison & Shale, 1994, p. 25). This approach, also termed triangulation (cf. Neumann, 2007, p. 149), has the advantage that a complex research field such as distance education can be explored from different ontological and epistemological perspectives (or angles), utilizing different instruments and methods, and the data gathered can be used to triangulate or mutually validate the results. Furthermore, Saba describes the ascendance of qualitative methods such as phenomenological research, and he emphasizes the need for further exploratory studies, which are important sources for formulating hypotheses that can be tested in rigorous quantitative investigations.

The notion that qualitative or interpretive studies serve mainly to guide the development of later quantitative work has been hotly contested by warriors on both sides of the paradigm wars between qualitative and quantitative social science research over the past two decades. Our position is that exploratory studies (of all paradigms) are necessary but that they do not necessarily lead to the development of any particular methodology as a climax species, to use a biological metaphor. Rather, each research paradigm answers important questions and opens understanding and insights for online distance education research and practice that are not often seen, or conceived of, through the lens of alternative research paradigms.
Management and Organization of the Distance Education Enterprise

Ross Paul brings his scholarship and experience to the critical research issues associated with management and leadership in distance education. Paul has served as president or vice-president of both single-mode open universities and of dual-mode, campus-based universities. Thus, he brings in his considerable experience as both a senior administrator and as a scholar to the two dominant educational systems for delivering post-secondary distance education. Paul addresses the common and the unique challenges of leadership, planning, and administration in both and, more importantly for this text, clearly outlines the research imperatives.

As in other industries, Paul notes the increase in focus on consumers (in this case, students) and the, sometimes, related speed of technology-induced change. These changes force and often conflict with existing university culture, and Paul notes the need for researchers and change agents to acknowledge and work with these powerful sociological and psychological forces, which have defined university culture and context for hundreds of years.

Paul also examines the impact of openness, which goes far beyond that envisioned in the last century with the founding of the open universities. Open courseware, open textbooks, open research publications, and access to a wealth of non-institutional knowledge resources (such as Wikipedia, Google books, and so on) force universities not only to lose their exclusive roles of knowledge repositories but also that of exclusive providers of credited courses. This presents challenges, of course, but also provides great research opportunities as different economic and pedagogical models are tested in the real world. Finally, the cost of entry to post-secondary education has plummeted, leaving opportunities for organizations with different models and cultures to develop online distance education programs. These may provide different models to meet their student, staff, and institutional resource capacity and opportunity—but many of the same challenges that have confronted the earliest providers of distance education programming remain.

Finally, as also noted by other writers in this book, Paul regrets the two solitudes that separate scholarship in research in classroom and campus
contexts to those forms of education offered at a distance and online. At a practical level, online tools unite in delivery and learning resources these two modes of teaching and learning, and certainly the number of learners alternating between the two, in either blended courses or a mix of on-campus and online courses, continues to grow. Yet as Paul shows, the crossover in authorship and citations of research articles is minimal with neither group benefitting from the past and current research conducted by the other.

Any research agenda proposed for this book and other suggestions for the future needs to maximize not only the past expertise and knowledge of researchers from all modes of education, but also to ensure that future research takes account of and partners with the growing number of researchers using any mode of education development and delivery at any age and sector.

**Costs and Funding of Distance Education**

Greville Rumble, formerly professor of distance education management at the OUUK, and one of the very few researchers and scholars in this area of expertise, authors the chapter on the costs and funding of online distance education. Cost effectiveness is one of the most important research areas and yet one the most neglected. The literature review carried out by Zawacki-Richter, Bäcker, and Vogt (2009) revealed that this area is at the bottom of the list in terms of the number of studies conducted in the field of distance education.

Rumble laments the dearth of (comparative) case studies to explore the costs of distance teaching institutions and the application of educational technology in distance, online, and face-to-face settings. A possible explanation for the lack of study in this area is that the data is simply not available. It is not surprising that educational institutions, as competitors in the global education market, are unwilling freely to share business models and data on their budgets and costs.

The issue of costs and funding of distance education is closely related to access to education as a human right. Rumble emphasizes the problem of introducing online distance education courses priced at developed country levels “into a developing world country where the costs of imported technologies are high, and labour costs are low.” He criticizes the gap between rhetoric and reality in developing countries: many students who would benefit most from access to online distance education simply cannot afford it.
However, in the developed countries the fees are continuously rising due in large part to budget cuts in the educational systems. For example at the OUUK, the modular fees will rise from GBP 1,300 to 5,000 per full-time, full-year study for resident students in England in September 2012. This increase will likely affect the take-up rate of higher education studies as students will consider more than before their return on investment: “What someone is prepared to pay may, of course, depend on the benefits that they think they will attain in terms of employment, pay, and future job security. Here no research has been done comparing the private and social costs and benefits of distance and online education on the one hand, and face-to-face education on the other.”

In this context, Rumble raises the question of the credentialling power of distance teaching compared with campus-based universities, i.e., the intangible value and reputation of a degree. Is a degree taken online less prestigious and will thus generate lower income benefits than those of a person from a conventional university? Which factors have an impact on the private and social rates of return? Rumble suspects notions that resonate with authors studying the hidden curriculum of higher education (Ahola, 2000) that it is not so important what and where one learns but “who one gets to know in the process.”

**Educational Technology**

Research into educational technology is an important cross-cutting area and interdisciplinary topic. It has a wide impact on all levels of distance education research: The development of educational technology accelerated the globalization of education and has shaped educational institutions and systems. Media characteristics have to be considered in the instructional design process with regard to access, media literacies of teachers and learners, and the subject matter to be learned. The application of educational media implies a process of change in institutions, influences the quality of instruction and programs, and affects the costs and economics of distance education.

In her chapter on the application of technology in distance education, Gráinne Conole from Leicester University explores the enormous potential of educational technologies and media and the opportunities they afford for innovative teaching and learning in formal, informal, and non-formal contexts. She places a special emphasis on Web 2.0 tools and social media
and the potential for open practice and a paradigm shift from expository teaching and receptive, passive learning to participatory, active, and social learner engagement.

Conole outlines three major challenges in the field: institutional and organizational barriers to the uptake of technologies (e.g., lack of faculty training, limited budgets), the lack of studies that are adequately grounded in theory, and a disconnect between research results and their impact on policy and practice.

Finally, the chapter highlights a number of open research questions and ideas for further research projects that will help us to better harness the potential and opportunities of educational media for teaching and learning. With the emergence of Web 2.0 tools and social online communities, a very relevant and hot topic is the tension between open and closed, formal and non-formal learning environments, especially as instantiated in OERs and MOOCs. How can we design a social learning management system, and what are the implications of open educational resources and courses for formal institutions and their business models?

**Innovation and Change Management**

In perhaps one of the most far-reaching and visionary chapters in this book, Jon Dron from Athabasca University, Alberta, looks at the large, recursive, and rapidly evolving relationship between distance education and technology. Jon does not directly advocate for or against any particular technology or the pedagogies that have become associated and that most thoroughly resonate with particular technologies. However, he articulates the ways in which past, current, and future technologies need to become more directly responsive to the needs of those closest to the coalface of teaching and learning. However, simply adding capacity for or requiring deep customization and assembly of technologies (softening them) by end users can often lead to increasing complexity, sense of disconnection, frustration, and lack of ownership and integration within educational systems. Alternatively, technologies that are too hard cannot be adapted to the cultural, political, and personal agendas of learners, teachers, and educational administrators. Thus, there is the need for balance, even in times of rapid technological change.

Dron also notes the challenges of change within component systems. Formal distance education is composed of many subsystems (most of
which are detailed in chapters of this book). Each of the subsystems has technologies and cultural norms deeply embedded within their current practice. Changing one such system often sends ripples through others, or, as too often happens, attempted change in one subsystem fails as it is dashed against adjacent systems. Thus, the early research from systems perspective related to distance education (notably that of Otto Peters) need not be abandoned, but rather needs to evolve to theorize and generate solutions for vastly more complex systems and networks that define current and next-generation education institutions.

Questions of technology thus must be integrated into all of the research agendas that emerge from the research overviewed in this book and from the practice of distance education. We can assume that technology will become more pervasive, embedded into our learning objects, relationships and tools, will be cheaper and, as Dron points out most emphatically, will give rise to adjacent possibilities that we cannot plan for, but to which we must react and exploit for their educational affordances as they emerge.

Although technology has capacity and is changing at exponential speeds, it is becoming apparent that humans, as biological creatures, are not genetically equipped for the same speed of change. So the capacity to manage change and use emerging technologies effectively becomes as great or greater a research question than the use of the technology itself. We need to research how to best adapt and what type of formal educational institution needs to emerge to support this rapidly changing context. Such change process needs to be understood at the institutional level, but, as importantly, it needs to be understood as individual choices as well. How much and how radical a change in technology-enhanced systems can and should be our goal? At what point is the cost of change higher than the benefits it promises? And more fundamentally, why are some innovations (e.g., the iPad or iPhone) successful while others lead only to bankruptcy and failure?

**Professional Development and Faculty Support**

In this chapter, Australian scholar Margaret Hicks tackles the research issues and accumulating knowledge from research related to faculty development. It is readily apparent that effective teaching demands effective teachers. Ironically many teachers in higher education and especially those teaching at a distance are themselves inexperienced network navigators who bring many of the fears, inhibitions, and bewilderment of students
when first exposed to the very different context of teaching in mediated and networked contexts. This, of course, provides opportunity as well as challenges as teachers experience the disruptive impact of these new tools simultaneously with students. However, this inherent “fellow traveller” role is not a familiar one for many teachers, whose considerable effort and time spent acquiring and producing discipline-based knowledge, equips them with an attitude more akin to an esteemed expert than to a new initiate.

Hicks begins the chapter by reminding us that the term and the activities known as distance education are continually changing. The recent arrival of blended learning contexts, in which parts of a learning sequence are facilitated online and parts in face-to-face classrooms, demonstrate that all teachers—even those who don’t see themselves as distance educators—are compelled to acquire many, if not most of the skills of a dedicated distance educator. Thus there is need for in-depth qualitative study of what it means to one’s professional image and personal efficacy as one transitions from a classroom to a blended or fully distance educator.

Despite the emphasis on change and transition that marks the profession and this chapter, Hicks is careful to unpack the historical function and results of faculty development as it has matured as a professional support feature in many educational institutions. Despite the expanse of formal programs, assessments, and even associations to support professional faculty developers and employees of teaching development centres, Hicks notes there is very little systematic research on the effectiveness of these interventions and support services. Hicks overviews the first large-scale study of faculty attitude and experience of teaching online and notes the results from this survey point to a number of important but unanswered questions. These include the need to better understand the characteristics, backgrounds, and skill sets of those who are in the front lines of online teaching (many as part-time sessional employees); of their professional competencies and needs; of the various types, costs, and delivery modes of training and support initiatives that are made available to them; and the cost and time effectiveness of these interventions. Finally, of perhaps greatest importance (but equally challenging to answer), is the question of whether formal professional development activities actually affect student learning.

Despite the increase in established centres that employ dedicated professional development staff, there is growing evidence that most professional learning happens informally within a community of practice in which
teachers share, critique, learn from, and help each other while engaged in their daily work lives. Opportunities for such community involvement are, however, often diminished when faculty are distributed over a large area and when large numbers are part-time employees with perhaps limited access to services and integration with the online education institution by whom they are employed. Will new Web 2.0 and social networking tools such as public services (e.g., LinkedIn and Facebook, or institutional equivalents such as ELGG or WordPress Buddy) be able to support communities of practice among these widely dispersed, but highly networked teachers?

**Learner Support Services**

Canadian distance education teacher and researcher Jane Brindley overviews the research agenda and issues related to student support. Student support in all forms of education, including online distance education, is like the proverbial motherhood and apple pie: one can never get enough of any of these, but they come at a cost! However the stakes are higher and in many cases the challenges greater for all forms of distance education. As Brindley points out in her opening paragraph, the skills sets, dedication, time management, and motivation levels required of distance students often exceed that required of campus students who have the ability to immerse themselves in the pace, expectations, and culture of campus living. She notes, “Studying at a distance requires maturity, a high level of motivation, capacity to multi-task, goal directedness, and the ability to work both independently and cooperatively.”

Since many new students to distance education courses and programs lack at least some component of these skills and attitudes, it falls on the education delivery institution to provide support for students as they gain these critical skills—or risk the high costs to both students and institutions of student drop out (see chapter 17 in this text). Fortunately, the online world itself affords new tools for communication, knowledge and skill acquisition, and peer and group support that were not available to earlier generations of distance students. Thus, opportunity grows, but the evidence for effectiveness and especially cost effectiveness is hard to find.

In her chapter, Brindley covers the three major sources that guide the development and design of learner support services. These are theoretical models of learning theory that have evolved within the distance education tradition, the ideas from customer management and support literature, and
predictive models developed by testing support interventions (as independent variables) and, largely, student persistence as outcomes or dependent variables.

The chapter then describes the models of good practice that have emerged from practice and the research literature—exposing a rich history of effective case study provision and general principles of high-quality student service provision. Next, Brindley provides an overview of the major types of empirical research in this domain. These include studies of student satisfaction and met and unmet needs analysis, the need for institutions to understand the type of learners and their general characteristics before implementing expensive services, and more recent studies of effective use of new online technologies—especially in regard to peer and community support that were not possible in earlier, independent study modes of distance education.

Brindley aptly sets a tentative research agenda for learner support services by concluding with four broad areas filled with research questions and as yet meagre answers. These include more study on interventions: which are most cost effective and which result in genuine value added to all students, including marginal groups? Secondly, she notes the need to think about effective ways for institutions to provide these services and underscores the need for cost effectiveness and the study of collaborative or even outsourced provision of student support. Turning to the competencies of individual professionals in this area, she asks: What are the types of training and support needed for those responsible for effective student support? Finally, in an era of social networks she asks how these tools and environments can be used to allow online distance education students to create and sustain their own support networks and communities.

This chapter highlights the need for effective student services and the even greater need to make certain these services are provided or made available at costs that are affordable to students and to institutions.

Quality Assurance in Distance Education

The neo-capitalist agenda that seeks to induce accountability, student fee for service, competition from private enterprise and other components of a free market economy into what originated as a public service is creating tension and challenges throughout higher education systems in the West (Altbach, Gumport, & Berdahl, 1988). Regardless of whether individual
students (or their parents) pay for services or if these services are provided from the public wealth, there is an ever-increasing call for accountability and assurances that online and campus education systems are producing quality product. Unfortunately, as the chapter on quality assistance by Australian Colin Latchem states in its opening paragraph, quality depends on your definition of quality and how you choose to measure it. There is very little consensus over what constitutes quality in campus-based education systems, much less in innovative and new online systems. Yet, there is great pressure to insure that both public and private systems are operating at peak efficiency and producing quality outputs. Thus Latchem's chapter and this issue are of critical importance to researchers, funders, students, and faculty.

Latchem first notes the continuing discrimination by a host of governments, teachers unions, accrediting agencies, and even students against all forms of distance education, including those offered at a distance. It seems the 30 years of no significant difference in learning outcomes research still has not convinced all of the fact that students can and do learn equally as well on campus or a distance. However Latchem is quick to point out that not all online systems are operating at levels of quality process, or outputs, and indeed cyberspace is home to a disproportionately high number of fraudulent degree mills offering degrees for purchase, with no attempt to hide their vacuous credibility.

Latchem next provides an overview of the function and focus of the typical quality assurance agency that most governments have established—or at least support—to regulate and certify accredited higher education institutions in their domain. He also notes the growing number of multinational organizations and treaties that have been struck to try to regulate and accredit learning systems internationally thus supporting increasing mobility of students, graduates, and faculty. Turning to the distinct challenges of accreditation for online education systems, Latchem overviews the debate on whether online systems should be judged by exactly the same criteria as campus based, or if the technological mediation, common disaggregation of services, and the often-seen “innovative” administrative hiring and service provisions that define some online institutions, demand higher levels of scrutiny and extra burdens of assuring quality. Despite the challenges, Latchem then provides references to the many national and international quality standards that have been developed and the quality models that
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underpin many of their operating systems. The chapter demonstrates that quality standards are being systematically applied to institutions globally—even if many academics choose to believe that only they can define quality learning within their own online or campus classroom. Thus, the opportunity for research—not only on nature, focus, and intent of quality systems themselves, but on their acceptance, adherence, effectiveness, return on investment, and impact on innovation—are all important and largely unstudied terrain.

Finally, Latchem notes the increasing capacity and growth of online systems that span geographic and cultural boundaries and create challenges and increased demand for quality standards that reflect differing conceptions of quality. Latchem concludes the chapter with references from many of the international quality groups and the different perspectives that these groups adopt when developing quality standards. The mere number of such agencies and documents reminds us of the old joke: “I love standards, because there are so many of them.” This chapter provides an excellent overview and summary of the work that has been done and is ongoing among quality agencies around the world to insure that online education does meet quality guidelines—even if the nature of these guidelines are not standardized themselves. Latchem demonstrates that the costs of determining and then measuring and insuring quality in education systems are not insignificant. Thus, there is room for research on ways in which technology and communications tools can be harnessed to reduce these costs. The chapter ends with challenging research questions related to the nature of quality controls, their cultural underpinnings, and challenges of measuring outputs that may take years to be fully recognized in the highly skilled, engaged, and motivated citizens of tomorrow.

MICRO-LEVEL RESEARCH: LEARNING AND TEACHING IN DISTANCE EDUCATION

Instructional Design

In this insightful journey through the historical development of instructional design, Canadian scholars Katy Campbell and Rick Schwier uncover the connections between psychological theories, social epistemologies, and the cultural contexts that create and shape the designs that teachers
and professional designers use to create distance education content and communications. Distance education has had a special focus on the construction of learning content—it was developed to be consumed by individual learners. This focus on the individual and the objective reality of the behavioural learning objectives that framed the instructional designs of early distance education marked a similar understanding of social as well as mechanical and technical “truths.” Thus, distance education tended to be constructed as if it sat outside of cultural and economic classes and distinctions. However, as chronicled in this chapter, we see that such one-dimensional thinking and design fails to meet the unique and the social construction of knowledge that defines more modern constructivist instructional designs. Such designs take into account—and allow—learners as individuals or especially in groups to co-create the knowledge, rather than to merely assimilate it. Such an analysis begs the question: Are there various types of knowledge extending beyond the simple procedural and declarative distinctions that best lend themselves to learning using older cognitive behaviour designs? Are there other skills, learning designs, and knowledge that can only be acquired in an active social community of learning? The chapter does not provide definitive answers to these questions, but it is obvious that effective distance education designers must be able to operate in both contexts and, perhaps most importantly, must be able to identify and react appropriately to the culture, gender, and economic gestalt in which all forms of formal learning are engulfed.

Campbell and Schwier also focus briefly on the newest and most emergent learning theory coined by George Siemens (Siemens, 2005) as connectivism. They describe the massive open online courses (MOOCs) and other forms of very open education that have attracted both students and designers using connectivist theories. However in these early days it is hard to see if connectivism can find a home in either the objective outcome world of online training or the more constructivist groups that are created using the ubiquitous learning management systems (LMS) of formal education.

The chapter ends with an excellent set of questions that will drive instruction and learning design into the future, but they also add a wise and cautionary note. “In order to be effective, instructional designers need to develop a connoisseur’s appreciation for the broad cultural forces in play when instructional design is done, the ways in which instructional design work interacts with sweeping societal change, and the social ramifications
of new communication technologies and the affordances they offer.” There are no easy, or formulaic, solutions. Rather, designers need to be equipped with a connoisseur’s eye for quality, while always searching for innovation and improvement.

**Interaction and Communication in Learning Communities**

Learning is a social activity that is immersed in social context and understanding, even if carried out by individual learners. Therefore, interaction and communication between members or actors who collaborate in a learning community are at the core of the learning process. The popular community of inquiry model reinforces this social nature of learning and assumes that learning occurs through the interaction of three core elements: social, cognitive, and teaching presence (Garrison, Anderson, & Archer, 2000). The educational experience is constituted through sustained interaction and communication between and among learners, teachers, and learning objects embedded in a social context. In distance education this process is facilitated through asynchronous and synchronous communication media and technologies.

Given the centrality of interaction and communication, it is no wonder that this research area gained great attention in the scientific and, particularly, in the education community. In contrast to the ephemeral communication in face-to-face classrooms, the speech acts in computer-mediated communication are text-based, saved on a server, and therefore much more readily available for the analysis of interaction patterns in online learning communities. Thus, the availability of text-based communication data from computer conferences might be another practical reason for the high number of studies in this area. The era of totally text-based online learning is coming to end, with the increasing use of voice, video, and immersive technologies. However, interactions mediated through the Internet create distinct trails and traces that can and are being gathered and analyzed in the exploding area often referred to as *learning analytics* (Siemens & Long, 2011).

Canadian scholar Dianne Conrad (Chapter 14) and American Allan Jeong (Chapter 15) are leading researchers and scholars with considerable expertise in the field of interaction and communication in online learning communities. Dianne Conrad follows a qualitative approach to explore the nature of interaction in online learning communities in relation to issues of control, autonomy, content, learning styles, culture, and gender. She
discusses current trends in educational technology such as the availability of open educational resources, social media as engagement tools, and the move to ubiquitous mobile learning. How these developments affect the nature of interaction and communication behaviour in online distance learning is still an open question.

Allan Jeong advocates for quantitative approaches to analyze online discourse that go beyond content analysis based on mere frequencies of students’ speech acts and utterances in order to explain and predict how online learners respond to given messages and how particular communication patterns influence the quality of interaction and the success or failure of the learning experience. A central methodological question here is how to code the students’ utterances and how to analyze the discourse data. In his chapter, Jeong describes the advantages and disadvantages of quantitative methods to analyze online discourse: quantitative content analysis, social network analysis, Markov chain analysis, quantitative sequential analysis, structural equation modelling and path analysis. The author has developed a software suite to carry out quantitative sequential analysis, which is freely available (cf. Jeong, 2005). Further, a group of Australian researchers from the University of Wollongong released the SNAPP (Social Networks Adapting Pedagogical Practice) tool that works as a plugin for major learning management systems, such as Moodle, to apply social network analysis to investigate asynchronous computer conferences.

Jeong reminds us that each learning community is unique and situated in a social context. Quantitative interaction models have to be applied carefully: “As a result, it may not be theoretically possible or even desirable to develop interaction models that can be generalized across multiple contexts.” Therefore, a mixed-methods approach, i.e., a combination, or triangulation, of qualitative and quantitative methods, might be appropriate and desirable in many cases to investigate interaction and communication patterns in online learning communities.

Learner Characteristics and Profiles of Distance Learners

The study of learning characteristics has long attracted researchers in distance education. Perhaps borrowing from distance education’s psychological roots, there has been continuing interest on individual characteristics such as gender, age, previous experiences and more distinct psychological variables such as learning styles, approaches to learning,
locus of control, and so on. Typically, studies sought to determine relationships between these independent variables and critical distance education output or dependent variables such as learning outcomes, persistence and satisfaction, or intent to enrol in continuing studies.

In this chapter, Joachim Stöter, Mark Bullen, Olaf Zawacki-Richter, and Christine von Prümmer discuss the changing demographics of the “average” online distance education student. Traditionally, distance education has attracted older students, with a high proportion of female learners and those from socio-economic groups that had little previous participation in higher education. This group of “second chance” and fully engaged working adults, many with families, is still a large component of online distance learning. However, increasingly younger students, many enrolled as full-time learners in traditional campus or dual mode institutions, are also enrolling in ODL. Thus, the population can at minimum be described as very eclectic. They might all be classified though as life-long learners—some just beginning their lifetime learning as full-time students, but the majority returning or completing programs that their life work demands and that the flexibility of ODL supports.

From descriptions of online learners’ demographic characteristics, the chapter moves to a discussion of how these interact with institutional variables such as services to support institutional integration and academic resources and activities to engage and motivate academic integration.

A chapter on learner characteristics in ODL can not hope to avoid the controversy swirling around ideas of digital natives or net generations. Some authors, such as Tapscott, Prensky, or Palfrey and Gassner, argue that members of the so called net-generation have been immersed in a networked world of digital technology; they behave differently, have different social characteristics, different ways of using and making sense of information, different ways of learning, and different expectations about life and learning. These assumptions are mostly anecdotal, however, and not based on empirical evidence. In a recent study, Mark Bullen concluded: “Generation is not the issue” (Bullen, 2011). However, we do need to understand what kind of technical devices students own and use today, how students use various media and ICTs for academic activities, and what tools they find are most effective to support their learning. Based on this knowledge we can make better informed decisions in the ID process with regard to the selection of media and online learning activities in the online learning environment.
There may indeed be a shifting of the skills sets and attitudes of learners as they experience and live with the tools and within the merging culture of the online world. However, it is also apparent that there are very high levels of variability of experience and adoption that make age-based generalizations hard to support. Nonetheless, it is equally unlikely that students with many years of experience with educational models that feature multimedia, multiforms and genre of interaction, and support of learning agents will be satisfied with modes of distance education that are reliant on a single medium (such as printed text) and very slow or outdated communications infrastructure and pedagogies.

Yet, the authors also note that because a new technology is available does not mean it meets individual or collective needs of learners, teachers, or institutions. Rather, research needs to continue into supporting adoption of tools that meet criteria for effectiveness and efficiency in learning experience and outcome.

Drop-out and Retention

This chapter on drop-out and retention is a slight departure from the format of a scholarly book chapter and the other chapters in this book, but it very succinctly captures the wealth of knowledge from two of the world’s most experienced distance education researchers. Alan Woodley and Ormond Simpson (both recently retired from the Open University, UK) engage in a conversation focussed on the “elephant in the distance education room”: student dropout, or the low rates of successful completion or persistence. The conversation reveals the brutal facts (hidden as they often are by reluctant institutions), reasons for the regrettable complacency of all actors—including students themselves. The chapter ends with suggestions for interventions—some of which have been tried, but none of which has resulted in the completion rates commonly achieved with campus-based teaching and learning. As always, complicated problems have multiple and complicated causes; Woodley and Simpson do not suggest that there are easy silver bullet solutions, but they are equally adamant that complacency and acceptance is neither economically nor morally justified or acceptable.

In particular they argue for research focussed on interventions. It is not enough to understand the causes, the context, or the circumstances of individuals or aggregates. Rather, we need to focus on things we can do change, measure, and improve student success with distance education.
programming. The authors wisely point out the necessity for action but equally note the importance of cost effectiveness in these interventions. Thus the research challenge might best take a design-based research approach in which serious study is made of the 50 years or more of research on causes and the successful and unsuccessful interventions that have been tried and tested and, secondly, on working with teachers, tutors, student support staff, and administrators to devise interventions that are cost effective and that can be integrated into institutional practice. Third, we need to monitor the results of these interventions effectively—possibly using the many new tools of learning analytics and data mining that are becoming available as student learning interactions go online. Finally, we need to articulate the design principles of effective interventions, such that they can be scaled, replicated, and re-created in other distance education teaching and learning contexts.

This chapter also points to the factors that allow the elephant in the room to remain hidden. In an era of increasing institutional accountability, both the ease of hiding and the acceptance of personal and instructional cost of high attrition is ending. Governments and students as consumers are becoming more demanding of policies and record keeping that allow us to measure the effectiveness of our educational programming. This provides an ideal opening for policy research that shows the impact and effect of changes in government policy, funding formulas, and student support programs. What impact does higher personal cost of higher education have on completion? As Woodley and Simpson show, higher tuition may be a very effective way to increase completion rates, but will it at the same decrease the capacity for inclusion that has been a defining feature of distance education systems? There is high potential for very productive policy research that grows from the complex interaction among institutions, government and employer funding, and individual students and their advocacy organizations.

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Many of the readers of this text will likely be familiar with some, or even most, of the authors of the various chapters. We selected these authors based upon our awareness of their work acquired as students, practicing distance
educators, authors, researchers, and journal reviewers and editors. We supplemented this personal knowledge with Google Scholar searches to determine those researchers who have had the greatest impact on the broader distance education research community. In many cases the authors are generally acknowledged as the foremost experts in the world in the research topic that is the focus of their chapters within a distance education context. To our delight, most of these very well-known (but not coincidentally, very busy) authors and researchers agreed to contribute to this important text. We thank them for the time and energy they have freely given to the project and now offer their contributions to our readers in open access format.

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