

# Researching Distance Education

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## INTRODUCTION

This chapter offers a framework for prosecuting research in distance education. The proposed framework is based on widely acknowledged practices in research design and topics of interest in distance education. The two critical components of this framework are key topics or areas of investigation in distance education (which is not an exhaustive list), and methods of research. A key contribution of this framework is that it has the potential to ensure that the most appropriate research method is selected for the topic or question that is to be investigated. The framework itself does not provide directions on how a piece of research ought to be carried out. Instead, it serves as a planning tool for matching *research method* with the *research question or topic*. This discussion is an extended version of an earlier discussion on the topic that was published in *EduComm Asia* (Volume 8, Number 4, June 2003, pages, 16-19), which is non-refereed quarterly newsletter of the Commonwealth Educational Media Center for Asia: New Delhi, India.

## BACKGROUND: PROBLEMS WITH DISTANCE EDUCATION RESEARCH

An overview of distance education (DE) literature from the past few decades shows a great deal of attention being focused on descriptive type of research, which is work that aims to describe the distance education phenomenon. This focus led to some interesting and groundbreaking work on first, defining the nature of distance education activity and then theorizing about learning and teaching at a distance (see Holmberg, 2001; Keegan, 1996; Moore, 2007; Perraton, 1987; Peters, 2002). With more experience, both in the practice of DE and its study, there has been growing interest on evaluating the quality of learning and teaching at a distance, and on the influences of various forms of technology in this regard (see Naidu, 2002, 2005). This research draws from what we know about human

cognition, learning, and teaching, and about the effects of educational technology including how to go about ascertaining their effects validly and reliably.

Despite these positive developments in describing, defining, and theorizing distance education activity, research and scholarship in this broad field is still very weak in many ways. Part of the reason for this lies in the multidisciplinary nature of the field, which restricts the emergence of one or more clearly defined and widely accepted research methodologies (see Bernard, Abrami, Lou, & Borokhovski, 2004). Researchers in this field tend to adopt methods and tools from areas such as education, humanities and the social sciences, and sometimes applied less rigorously than in those disciplines (Berge, & Mrozowski, 2001; Bernard, & Naidu, 1990; Conrad, 2007).

Some studies prepared by the United States Institute for Higher Education Policy, for example, have observed serious limitations with existing research practices in DE (see Phipps & Merisotis, April, 1999). The report by Phipps and Merisotis is based on material that was published during the 1990s, and it pays particular attention to DE technologies that are currently being used by the majority of institutions. This report concentrates on an evaluation of all original work — including experimental, descriptive, correlation, and case study research. It also summarizes key information and findings of other policy papers, articles, and essays that dominated the literature (see also Naidu, 2003).

The authors of this report concede that their review of research does not encompass every study published since 1990, even though it does capture the most important and salient of these works. They also suggest that it might not be prudent to accept the findings of these studies at face value because of problems with the methods that were used to reach these findings. The most significant problem had to do with the overall quality of the research, which pretty much rendered many of the findings inconclusive.

Similar sorts of remarks about distance education research have been articulated by Anglin and Morrison (2000), Diaz (2000), Perraton (2000), and Saba (2000).

Evaluating the quality of any research requires determining if the studies adhered to commonly accepted principles of good research practice (see Naidu, 2003). This is essential if the results of the studies are to be considered valid and generalizable. If a study does not abide by these proven principles and practices, the results they derive can be erroneous and misleading.

The Phipps and Merisotis report identified the following shortcomings in the literature that it surveyed:

- Many of the experimental studies did not use randomly selected subjects.
- Much of the experimental research reviewed did not control for extraneous variables and therefore could not show cause and effect.
- The validity and reliability of the instruments used to measure student outcomes and attitudes were questionable.
- Many of the studies did not adequately control for the feelings and attitudes of the students and faculty.

These are critical concerns and they need serious consideration by researchers in the field, as these issues remain prevalent in much of contemporary distance education research, several years after the Phipps and Merisotis report. A large part of the problem with the poor research effort in distance education is due to the ineffective *match of research question or topic with suitable research methods*.

## MAIN FOCUS: TOWARDS A FRAMEWORK FOR DE RESEARCH

The remainder of this chapter discusses a framework for effectively matching *research methods* with *questions, areas and topics of investigation* in distance education research (see Table 1). The strength of this framework lies in that it has the potential to ensure that the most appropriate research method is selected for the question or topic that is to be investigated. The framework itself does not provide specific directions on how a piece of DE research ought to be conducted. Instead, it serves as a planning tool for matching *research method* with the *research questions or topics*.

## Areas of Investigation

While it is possible to describe distance education activities in several ways, essentially these activities comprise the following key components. The first is the *management and delivery of distance education*. This has to do with the organization of all DE activity, its policies, and processes. Then there is *course design and development*, which is about the preparation and production of study materials. However, the production of students' study materials in print and/or other forms does not suggest that any teaching as such has occurred. Teaching and learning starts to happen when the students start to engage with the study materials and student support staff. Moreover, due to the noncontiguous and increasingly distributed nature of distance education arrangements, *teaching and learning* in these modes takes on significantly different meanings from what happens in conventional residential settings.

A whole host of issues, topics, and questions that are worthy of investigation underlie these broad descriptors of distance education. The list in the following is by no means exhaustive or the only way of seeing these issues. There may be other ways of seeing and conceptualizing these issues and topics. Furthermore, not all of these topics will have relevance for all practitioners, and there will be others that are unique to particular distance education operations. This chapter provides a start.

## Management of DE Delivery

- Models of DE course delivery
- Models of distributed learning and teaching
- Groupware and collaborative learning tools
- Online course/learning management systems
- Online learning content managements systems
- Learning resources and digital learning objects
- Content packaging and tagging of learning objects
- Models of course development and their implication for content development.
- Student administration: Exchanging/tracking learner information and records
- Digital repositories: Housing and sharing of learning resources and objects
- Accessibility issues: Making content available to all learners, including those with disabilities

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