Distance Learning Roles and Competencies: Exploring Similarities and Differences between Professional and Student Perspectives

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We utilized a Delphi technique to explore roles and competencies as identified and ranked by 106 upper level graduate students specializing in distance education. Student responses were compared to two previous studies utilizing distance education practitioner/scholar respondents. Although the roles identified were similar to previous studies, the highest rated competencies identified by graduate students emphasized technical expertise to a greater degree than did the previous practitioner/scholar studies. Implications for current training and future research and practice are discussed.

Keywords: Distance Education, Competencies, HRD

As the demand for implementation of distance education increases concurrently with increasing interest in academic credentials in distance learning, questions regarding the appropriate preparation focus for distance learning practitioners and scholars persist. Recent studies (Thach, 1994; Williams, 2003) have identified competencies for distance education practitioners utilizing a Delphi technique. These findings indicated the importance of communication and interpersonal skills as key competencies for distance educators. This study explores whether graduate students in programs providing specialized distance learning education would perceive roles and competencies for distance education similarly to professional and scholar perspectives which were recently reported.

Background

Including the early emergence of the correspondence course, distance education has an over 100-year history and, according to Moore and Kearsley (1996), had four distinct historical phases: 1) correspondence study; 2) open universities in the 1970s; 3) broadcast and teleconferencing; and 4) computer conferencing and multimedia. At present, the distance education literature focuses primarily on computer conferencing and multimedia approaches. Use of distance education has increased dramatically over the past decade to the point where well over one third of US universities are utilizing distance instruction (including a significant number of fully online degree offerings) and usage in for-profit and non-profit organizations is increasing at a similar rate (Lewis, Alexander, & Farris, 1997). Many have identified the new "technology-mediated interactive learning" environment as continually enhancing the learning experiences of participants through improvements in technology and delivery strategies (Dede, 1990). Such enhancements include the Internet supported information sharing and retrieval systems such as World Wide Web databases, chat groupware, electronic mail, and threaded discussions. Courses may engage in real-time, or synchronous formats, or asynchronous approaches. Such approaches support human resource development (HRD) efforts in a variety of ways from formal employee education to information sharing and training modules.

Purpose of Study and Research Questions

The evolution of distance learning technology and the limited number of studies examining approaches to distance learning from the perspective of professional roles and competencies limit our understanding of distance learning (Thach, 1994; Williams, 2003). As distance learning education continues to emerge as an important means of teaching and learning to public and private sector organizations and institutions of higher education, training needs for a variety of positions associated with distance learning continue to emerge relatively. Similarly, formal education programs at the graduate level offering specialized training and degree programs in distance learning and related areas have increased.

As the field of distance learning continues to evolve, questions persist regarding the parallel evolution of related roles, competencies, and curricula supporting those developing professional skills in distance learning, in training,

and in formal degree programs. Although the aforementioned studies conducted by Thach and Williams provide us with better insight regarding competencies associated with distance learning as identified by expert professional respondents, a question remains as to whether those currently studying distance learning are being influenced by the perspectives of long-term professionals in the field. This question is important to our understanding both of the perspectives of emerging and new professionals in the field, as well as providing implicit signals as to the ways in which advanced students of distance learning may be trained. The purpose of this study is to develop an understanding of advance graduate students' perspectives regarding the roles and competencies associated with distance learning. The research questions for this study are:

1) What are advanced distance education graduate student perspectives regarding the roles and competencies of distance educators?
2) How are advanced graduate student responses compared to those of expert scholars/practitioners?
3) What explanations are there for the differences and/or similarities in responses from the current and previous studies?
4) What implications are presented by this study for the field of distance education?

Review of Related Literature

This study focuses on competencies of distance educators. In order to develop and promote an effective learning environment in distance education, the competencies of those who are in charge are critically important for all aspects and processes of such highly complex teaching and learning medium. Regardless of the infrastructure, successes of students, or other factors, the competencies of distance educators are the center of all interactions . In today's rapidly changing technology, distance educators are constantly challenged to design assignments, projects, and tests that would teach and assess students' "critical thinking and doing" skills. Other challenges for distance educators are that not all learners are willing to execute the tasks and activities that lead to successful distance learning and the learners often need support and structured learning experiences (Laurillard, 2002; Collins, 1998). Research on distance education indicates that the way learning environments are designed, structured, conceptualized, and developed has profound influences on student learning (Inglis, Ling, & Joosten, 1999; Jarvela, 1995; Roschelle & Teasley, 1995). Therefore, a profile of competencies associated with distance education must balance the demanding objectives of the curriculum and rapidly changing nature of technology.

Similarly, the issue of competency has been studied, examined, and addressed by both the researchers and professionals in the field of HRD (Knowles, 1962; Nadler, 1968; Pinto & Walker, 1978; McLagan & McCullough, 1983;Lindeman, 1991; Swanson, 1994; Rothwell, Sullivan, & McLean, 1995 Rothwell & Cookson, 1997). The competency literature in HRD, however, indicates variations in terms of the conceptualization HRD and its purpose. According to Swanson and Holton (2001), competence suggests that an employee has an ability to do something satisfactory, not necessarily outstandingly or even well (p. 229). Competency in HRD has also been associated with expertise. Expertise is defined as "the optimal level at which a person is able to or expected to perform within a specialized realm of human activity (Swanson, 1994, p. 94). On the other hand, competency is related with credibility of the performer (Rothwell, Sullivan, & McLean, 1995). Similarly, Knowles, Holton, and Swanson, (1998) present self-diagnostic rating scale competencies for the role of adult educator and trainer (p. 217). HRD strategy, training, and professional development considers competencies to be the foundation of all activities which are essential to an organizations' market value as organizations rely increasingly on the knowledge and skills of their employees (McLagan, 1997). HRD considers competencies to be part of an employee's *human capital*, which refers to the knowledge, expertise, and skills one accumulates through education and training.

The studies by Thach (1994) and Williams (2003) were similar in that they explored distance education roles and competencies from the perspectives of expert practitioners and scholars. Williams (2003) argued that ongoing changes associated with technology advancement and the newness of the field required ongoing investigation and further research. The ongoing development of understanding regarding distance education roles and competencies is important to the development of related training and educational programs. Organizations such as the American Society for Training and Development (ASTD) recognized the importance of ongoing clarification regarding roles and competencies associated with general training and development. Two studies, Pinto and Walker (1978) and McLagan and McCullough (1983) were commissioned by ASTD and focused on knowledge skills and attitudes needed for developing the talented training professional capable of high performance. Although often not discrete, but overlapping, competencies are commonly identified as the specific units that clarify professional roles and outputs.

Thach's (1994) competency study appears to be the first to identify the roles, outputs, and competencies most important for distance education professionals. Respondents were thirty-six distance learning professionals in the

United States and Canada. Similar to the McLagan and McCullough study, roles, outputs, and competencies were explored. The top ten competencies identified in the study conducted by Thach were interpersonal communication, planning, collaboration/teamwork, English language proficiency, writing, organizational, feedback, knowledge of distance learning field, basic technology knowledge, and technology access knowledge. Study respondents identified four distance education roles to be the most important: administrator, instructor/facilitator, instructional designer, and technology expert.

Williams (2003) extended the exploration of roles and competencies in his study utilizing fifteen expert professional respondents averaging over eleven years of experience. Similar to Thach, the results included a menu of roles and related competencies that were determined to be most important by expert respondents (see Tables 1 and 2 below for full list).

Methodology

Similar to previous competency studies, our approach utilized distance education experts to determine roles and competencies. However, unlike other studies, the experts identified were advanced distance learning graduate students. The assumption about "expert" perspectives is altered in this study as compared to others from expert practitioner/scholar to students who have expertise assumed to be influenced from their formal and advanced involvement in distance learning education. The aims of previous studies were to inform the field of distance education regarding core roles, outputs, and competencies needed in the development of distance educators. Although the focus of this research is similar, the exploration is not only focused on the identification of distance education competencies perceived to be important by advanced graduate students focusing on distance education, the study also focuses on a comparison between competencies identified by graduate students and expert practitioners. A Delphi technique was selected to structure the group process in this study.

Historically, several features have characterized the Delphi technique as a relatively small group of participants with anonymity of participants through multiple rounds of surveys and the reporting of group results to individual participants (Turoff & Hiltz, 1996). Participants usually do not meet face-to-face during Delphi process. In some cases the research goals may require participants to be identified, but this is generally atypical (1996). Although typically described as a group decision making process aimed at consensus, the Delphi technique does not encourage false or rapid movement toward agreement by participants. Minority or additional perspectives are typically encouraged, as was the case in this study. By avoiding face-to-face interaction, the Delphi technique may avoid groupthink problems where members may coerce or unduly influence individual participation or group decision-making. The four criteria for experts in this study were that they:

- must be an advanced graduate student in a program featuring an emphasis in distance learning;
- must have related distance learning field experience;
- must have published or be actively writing about distance education with the intent to disseminate related knowledge or information;
- must be willing to participate.

One hundred and thirty-three graduate students from twelve programs in the central US featuring a specialization, minor, or degree program in distance education were identified using the information available on university websites. The final expert panel was comprised of one hundred and six individuals from eleven universities in the central U.S. who participated in all four rounds (79.7%). The time required to collect the data was four months. The expert panel reported an undergraduate grade point average of 3.63 and a graduate grade point average of 3.85. Most had experience in the development and delivery of distance learning contents beyond the scope of their coursework. 47 (44.3%) of the panelists were men and 59 (55.7%) were women.

Modeling the studies by Thach (1994) and Williams (2003), the round one survey asked graduate student experts to accept or reject twelve roles presented with descriptions or make modifications to the role descriptions provided. Respondents were asked to add any additional roles, if needed. After the completion of round one each respondent was provided with a summary of the responses as part of the round two questionnaires. A menu of fifty-seven competencies identified in the distance education literature was provided to experts with a request that they select those most relevant. Respondents were also asked to write additional competencies as they saw fit. In round three, respondents were asked to rate the summarized competency list in terms of their criticality and frequency. Round four involved respondent review of their individual ratings in comparison to the group mean.

It is important to note that the number of participants used in this study is large for a traditional Delphi. It was felt by the researchers that given the population used in the study, gathering broader perspectives were important as the goal of the study was to ascertain both a breadth and depth of perspectives from student experts in several academic programs. Because of larger numbers the study utilized descriptive measures and used mean scores as the

measure of central tendency. The means were compared to the median scores to determine their similarity as median scores are often utilized in Delphi-based studies with smaller groups. The medians and means tended to be similar.

Assumptions and Limitations

This study was limited to advanced graduate students in higher education settings in the central US whose educational focus included distance learning. Participants were required to have access to a computer. The study was limited to student experts who were able to read and respond in typewritten English. The results of this study, therefore, may not be generalizable settings or populations outside of the scope of this study.

Results

Three research questions were addressed in this study (above) are similar to the studies by Thach (1994) and Williams (2003).

Research Question 1: What Are the Roles and Competencies Necessary in Distance Education in Higher Education?

This question was addressed by questionnaires in rounds one and two. Experts were instructed to review a preliminary list of twelve roles from the literature and a role description and related outputs. Respondents were asked to support or reject each role, to make any adjustments in whole or part to each, and to suggest additional roles. Respondent decisions and modifications regarding the roles identified led to adjustments in the numbers, names, descriptions, and outputs of the roles associated with distance learning. Adjustments were made, and the resulting modifications were put before the group for approval in the subsequent round. The total number of roles increased to fourteen. Similar to the Williams (2003) study, the role of administrator was split into two distinct roles: administrative manager and leader/change agent. Also similar to the Williams study (2003), respondents suggested that the role of Web publisher be expanded to encompass all media. The name of the role was altered to media publisher/editor. The fourteenth role added by the panel was systems expert/consultant. This role referred to individuals who serve as external experts to a distance learning project or organization providing expertise on a contract basis. The following fourteen roles resulted:

- administrative manager
- instructor/facilitator
- instructional designer
- technology expert
- site facilitator/proctor
- support staff
- librarian
- technician
- evaluation specialist
- graphic design
- trainer
- media publisher/editor
- leader/change agent
- systems expert/consultant.

In round two, the panel of experts identified more than fifty competencies for each role ($M = 53.2$ per role). Because of the desire for comparison with previous studies, the panel was asked to attempt to identify the top thirty competencies shared by all roles in rank order with one being the most important (this procedure was similar to the two previous studies under comparison). Similar to Williams, these competencies were identified as general or generic competencies and compared to the competencies identified in the Thach (1994) and Williams (2003) studies (see Table 1). Creating a similar organization scheme to Williams' study, the competencies were categorized across all three studies using a notation system (see Table 1 below):

- communication and interaction (coded **C**)
- management and administration (coded **M**)
- technology (coded **T**)
- learning and instruction (coded **I**)

Table 1 reports the general competencies along with the respective rank based on the average number of ranked responses from each respondent.

Research Question 2: How Do Distance Education Experts Rate the Importance of the Competencies?

When observing the results from the current study in combination with the Thach and Williams studies, it is interesting to note that 21 of the top 30 competencies identified can be found in all three studies (see Table 2 below). Our study of experienced graduate students' perceptions of competencies has 21 of 30 competencies in common with the Thach study and 28 of 30 competencies in common with the more recent Williams study. These results would appear to provide some affirmation that a general set of distance education competencies that have emerged from the three studies explored here.

Table 1. *Comparison of Three Distance Education Competency Study Results: Identified Competencies in Participant Rank Order by Importance/Criticality*

(1) Current Study	**(2) Williams Study**	**(3) Thach Study**
1. Basic Technology **T**	1. Collaboration/Teamwork Skills **C**	1. Interpersonal Communication **C**
2. Technology Access Knowledge **T**	2. Basic Technology Knowledge **T**	2. Planning Skills M
3. Computer Networking **T**	3. Interpersonal Communication Skills **C**	3. Collaboration/Teamwork Skills **C**
4. Knowledge of Distance Learning Field **I**	4. English Proficiency **C**	4. English Proficiency **C**
5. Multimedia Knowledge **T**	5. Knowledge Of Distance Learning Field **I**	5. Writing Skills **C**
6. Software Skills **T**	6. Writing Skills **C**	6. Organizational Skills **M**
7. Adult Learning Theory **I**	7. Questioning Skills **C**	7. Feedback Skills **I**
8. Organizational Skills **M**	8. Skills In Development Of Collaborative, Student-Focused Learning Environment **I**	8. Knowledge of Distance Learning Field **I**
9.Collaborative/Teamwork Skills **C**	9. Adult Learning Theory **I**	9. Basic Technology Knowledge **T**
10. Data Analysis Skills **T**	10. Knowledge Of Support Services **M**	10. Technology Access Knowledge **T**
11. Project Management Skills **M**	11. Feedback Skills **I**	11. Computer Networking **T**
12. Interpersonal Communication Skills **C**	12. Organizational Skills **M**	12. Questioning Skills **I**
13. Writing Skills **C**	13. Technology Access Knowledge **T**	13. Facilitation (Discussion) Skills **I**
14. Planning Skills **M**	14. Planning Skills **M**	14. Group Process Skills **C**
15. Knowledge of Support Services **M**	15. Software Skills **T**	15. Technology Assess Knowledge **T**
16. Skills in Development of Student Focused Learning Environment **I**	16. Knowledge Of Intellectual Property, Fair Use, And Copyright Regulations **M**	16. Public Relations Skills **C**
17. Facilitation (Discussion) Skills **I**	17. Facilitation (Discussion) Skills **I**	17. Negotiation Skills **C**
18. Presentation Skills **I**	18. Public Relations Skills **M**	18. Evaluation Skills **I**
19. Consulting Skills **M**	19. Multimedia Knowledge **T**	19. Media Attributes Knowledge **T**
20. Editing Skills **C**	20. Presentation Skills **I**	20. Project Management Skills **M**
21. Evaluation Skills **I**	21. Consulting Skills **M**	21. Modeling of Behavior **I**
22. Feedback Skills **I**	22. Evaluation Skills **I**	22. Adult Learning Theory **I**
23. English Proficiency **C**	23. Group Process Skills **C**	23. Change Agent Skills **M**
24. Questioning Skills **C**	24. Editing Skills **C**	24. Knowledge of Interactive Technologies **T**
25. Personal Organization Skills **M**	25. Project Management Skills **M**	25. Multi-media Knowledge **T**
26. Public Relations **C**	26. Change Agent Skills **M**	26. Content Knowledge **I**
27. Negotiation Skills **C**	27. Negotiation Skills **C**	27. Presentation Skills **I**
28. Knowledge of Intellectual Property, Fair Use, and Copyright Regulations **M**	28. Needs Assessment Skills **I**	28. Strategic Planning Skill s **M**
29. Change Agent Skills **M**	29. Data Analysis Skills **T**	29. Teaching Strategies/Models **I**
30. Group Processing Skills **C**	30. Personal Organization Skills **M**	30. General Education Theory **I**

Table 2. *Cumulative and Individual Rankings of Competencies Common Across the Three Studies*

Cumulative Rank	**Competencies Common Across Distance Education Studies**	**Competency Rank by Individual Study**			
		(1)	**(2)**	**(3)**	**Total**
1.	Basic Technology	1	2	9	12
2.	Collaborative Teamwork Skills	9	1	3	13
3.	Interpersonal Communication Skills	12	3	1	16
4.	Knowledge of Distance Learning Field	4	5	8	17
5.	Writing Skills	13	6	5	24
6.	Technology Access Knowledge	2	13	10	25
7.	Organizational Skills	8	12	6	26
8.	Planning Skills	14	14	2	30
9.	English Proficiency	23	4	4	31
10.	Adult Learning Theory	7	9	22	38
11.	Feedback Skills	22	11	7	40
12.	Questioning Skills	24	7	12	43
13.	Facilitation (Discussion Skills)	17	17	13	47
14.	Multimedia Knowledge	5	19	25	49
15.	Project Management Skills	11	25	20	56
16.	Public Relations Skills	26	18	16	60
17.	Evaluation Skills	21	22	18	61
18.	Presentation Skills	18	20	27	65
19.	Group Processing Skills	30	23	14	67
20.	Negotiation Skills	27	27	17	71
21.	Change Agent Skills	29	26	23	78

Research Question 3: What are the Similarities and Differences between the Current Study and Those Identified by Thach (1994) and Williams (2003)?

Although there appears to be much agreement between experts regarding many distance education competencies, it is clear that there is much less agreement between the three studies regarding the prioritization of the competencies.

Table 2. *Comparison of Top Ten Ranked Competency Categories Between These Three Distance Education Studies*

Top Ten Rank by Category and Study				
Competency Rank by Study	**Study**			
	(1)	**(2)**	**(3)**	**Total**
Communication and Interaction (**C**)	1	5	4	10
Learning and Instruction (**I**)	2	3	2	7
Management and Administration (**M**)	1	1	2	4
Technology (**T**)	6	1	2	9

We compared the top ten competencies identified in each study and found the Thach and Williams study to emphasize communication competencies to be most important, while the current study focused on technology. This strong similarity in priorities set forth by the Thach and Williams studies is not shared by the advanced graduate students. As part of the study, the graduate students were asked possible reasons for the differences described in Table 3. Over 70% of respondents identified the top ten list in the current study to be similar to the emphases forwarded in their respective course curricula. Although not discussed at length in the other two studies, it would appear that the professional respondents may have emphasized communication related competencies because of their proximity to the realities of the day-to-day work. Many of the graduate students may have been left to make interpretations based on their experiences and the foci of their respective courses and programs.

Conclusions and Recommendations

This study sought additional clarification regarding perceptions of distance education competencies through an examination of advanced graduate student perceptions in comparison with the perceptions of professionals from two previous studies with very similar foci and research protocols. Participants in the study were asked to identify and rank roles and competencies associated with distance education. The study found respondents' perceptions to be similar to the perceptions of professionals in two previous studies (Thach, 1994; Williams, 2003). Most of the roles identified were found to be similar with the addition, in this study, of a role called systems expert/consultant. Additionally, the competencies identified were found to be similar across all three studies. However, the emphasis in prioritization of the competencies was found to be different in the study we conducted from the previous two studies. Although the previous two studies by Thach and Williams emphasized communication competencies, the advanced graduate students group identified technology related competencies to be the most important.

The results of this study offer additional confirmation regarding roles and competencies associated with distance education. The data collected for this study in comparison with two previous studies move the distance education field closer to clearly delineating roles and competencies important to distance education. At the same time, the differences in prioritization between advanced graduate student and professionals should be examined more closely. The differences in prioritization between the two previous studies and student identification that their prioritization was influenced by course curricula begs the question "are the competencies needed for high performance being appropriately emphasized in university distance education courses or degree program curricula?" Further exploration into this issue is needed.

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