This paper describes the shared responsibility model—in which instructors, institutional administrators, and learners all assume responsibility—for learner success in distance education environments. Discussed in detail are the specific strategies to be deployed by: (1) the instructor, who plans instructional outcomes, selects course content, and ascertains how learning will be assessed; (2) the institution, which accepts the responsibility of delivering education and must provide technical and other assistance to the distance learning environment; and (3) the learner, who must actively engage in those processes that will lead to learning success. The paper explains the Major Levenburg Curriculum Matrix, a decision-making model based on desired educational outcomes and designed to help instructors decide which distance learning tools to use and when. Also described are various distance learning technologies, such as interactive television, the Internet, videotaped lectures, printed materials, audio conferencing, multimedia simulations, and CD-ROM/DVD. (EMH)
Learning Success in Distance Education Environments: A Shared Responsibility

Howard T. Major
Nancy Levenburg

Distance Learning Dynamics
Learner Success in Distance Education Environments: A Shared Responsibility

Howard Major
HowardT908@aol.com

and

Nancy Levenburg
Nlevenburg@aol.com

Abstract

This article advances a “shared responsibility model” for learner success in distance education environments. It describes the types and characteristics of distance education and the technological toolkit that is optimally applied to deliver distance education. It describes specific behaviors that can and should be engaged in by instructors, delivering institutions, and learners, if optimal learning is to occur. It offers suggestions for creating learner-focused distance education systems that demand much from all three parties, learners, instructors and institutions, but which also offer the promise of learning excellence.

Student success and achievement is a primary focus of virtually all educational institutions and an area of national concern. If our learners are failing to adequately master the content and processes we are trying to teach, then we, as educators, are unsuccessful as well. The successful mastery of academic content was once viewed entirely as the learners’ responsibility and success variables were viewed as being entirely in the learners’ control. However, we have come to realize that the responsibility for learner success is shared between three major players: the student, the instructor, and the educational institution.

Much has been written about the learner success strategies that can be deployed in traditional classroom environments by each of these three “partners” in the educational process. Less understood are the strategies that can lead to effective learning in distance education environments. While some of the key strategies are the same as or similar to those which lead to learner success in traditional teaching and learning situations, some strategies are unique to distance education environments. Many critical success strategies can be categorized as those initiated by either the instructor, by the institution and/or by the learner her/himself. Each of these categories is considered here.
What is Distance Education?

Simply stated, distance education occurs whenever the instructor and the learners are not in the same location at the same time. Figure 1 illustrates that the instructor and learners may vary with regard to their spatial and temporal locations. If they are in the same place at the same time as in the upper left quadrant, then this is not a form of distance learning. The other three quadrants depict situations in which the instructor and the learners are either in different locations (lower left quadrant), or operating in a different timeframe (upper right quadrant), or both (lower right quadrant). While the term “distance education” implies that the location shifting capability is of paramount importance, many times learners are more interested in the time-shifting capabilities provided by technology-based distance education systems than they are in the location-shifting capabilities of the systems. For this reason, some scholars of the field are recommending a shift to the term “virtual education” rather than “distance education” to describe these systems.

Insert Figure One here (2X2 Matrix)

The Role of Educational Technologies in Distance Education:

Probably all distance education systems must deploy educational technologies to enable communication between instructor and learners that can surmount barriers of time and location. In the historical development of the field, print-based correspondence courses led the way. Today few distance education systems rely on a single technology to facilitate all of the communication that must occur for effective learning to occur. Many apply two or more technologies to facilitate the learning process. In fact the trend in distance education is movement toward a “blended” technology approach in which multiple technologies are deployed, each at its strength (Major and Levenburg, 1997).

Figure 2 depicts graphically the point that the outcomes (goals and objectives) of the learning experience should be at the center of the decision-making process, and that the communication technologies should be selected based on their ability to facilitate established desired outcomes.

Insert Figure 2 here
The metaphor of a "toolkit" is sometimes applied to this process. The educator should be able to select and apply the appropriate distance education "tool" to facilitate students' engagement in optimally appropriate learning activities for the outcome being addressed. A decision-model for making this decision is depicted in figure 3.

Insert Figure 3 Here (Major Levenburg Curriculum Matrix)

The Major-Levenburg Distance Learning Curriculum Matrix, the instructor begins at the top center with the pre-instructional analysis and then proceeds clockwise to make the critical distance education instructional design decisions. The pre-instructional analysis provides baseline information about the learners and their entry level skills and aptitudes as well as about the resources available in the "toolkit". Next, the appropriate learning outcomes are established for those learners, in that learning environment. Assessment strategies are also developed at this point to assure that learning outcomes will be measured and instruction modified to facilitate their achievement. Next, the learning activities are selected which are most appropriate for facilitating learner achievement of the learning outcomes. Finally, the technological tool(s) that are best able to support those learning activities are selected and deployed. Thus the technology is selected for a precise reason in each instructional instance. The learning environment may call for the use of several instructional technologies, just as a home-repair situation may require the carpenter to use a variety of tools from her/his carpentry "toolkit." For too long, application of educational technologies can best be described by the adage that "when all you have is a hammer, everything looks like a nail." In the emerging distance education systems, the entire educational technology "toolkit" is available to the instructor and to learners. This implies an obligation on the part of the institution to provide access to the entire range of educational technologies, and on the part of the instructor to learn how to use them effectively.

Distance Learning Success Strategies Initiated by the Instructor:

As the "instructional leader", the instructor typically plans the instructional outcomes to be achieved, selects much of the content of the instruction and ascertains how successful learning will be achieved, measured and assessed. The instructor sets the norms for interaction and controls the pacing and the communication patterns of the learning environment.

In a traditional classroom teaching and learning situation, much of this occurs at the unspoken, almost subconscious level. However, in distance education environments, the roles are less defined, and thus must be more overtly
articulated by the instructor. Thus the distance education instructor must provide the following structures for him/herself and for learners so that everyone will have a clear understanding of the expected behavior and communication patterns:

**Pre-instructional analysis**
The instructor will conduct a pre-instructional analysis which will provide information about the learners, the resources which are available, the technology “tools” that can be accessed, and the barriers and constraints that must be overcome or circumvented.

**Learner orientation**
The instructor will provide the learners with a thorough orientation which will reduce uncertainties, provide clear guidelines for success, clarify expected performance and behavior patterns and establish the direction of the learning experience. This orientation can take many forms, depending on the communication tools available to the instructor. It can take the form of a live interactive session held in an interactive television environment, a videocassette prepared by the instructor and mailed to learners, an introductory online session, etc. The critical criterion is that students having completed the orientation should understand what is expected of a successful learner in that instructional environment. The orientation should also familiarize learners with the technological tools that will be used in the learning process and provide them with direction for accessing those tools if they have not already established such access.

**Course outcomes**
The instructor will clarify expected outcomes of the course. These desired outcomes should take the form of specifically identifying the behaviors that the successful learner will be able to perform upon completion of the learning experience. These outcomes are often listed as course goals and objectives.

**Instructional design**
The instructor will apply established principles of instructional design. These would include such strategies as: a) a pre-instructional analysis of the learners’ characteristics and goals and the resources and barriers in the learning environment, b) identification of desired learning outcomes, c) determining methods of authentic assessment of the degree to which learners achieve the specified course outcomes, and d) selecting and deploying the learning activities and technologies which will best lend themselves to the learner achievement of course outcomes.

**Practice and feedback**
The instructor will provide the learners with opportunities to practice learned behaviors and to receive corrective feedback with regard to these performances.

**Authentic assessment**
The instructor will apply principles of authentic assessment in diagnostic, formative and summative contexts. In other words, measure learners’ entry levels as they relate to course objectives, check for progress along the way, and measure the achievement of the objectives with criterion-referenced measurement instruments at the end of the instructional process.

**Communication protocol**
The instructor will establish appropriate communication patterns and guidelines. Model desired communication patterns. Demonstrate use of the distance education technologies for communication and interaction. Reward assertive and constructive learner communications.

**Constructivist learning**
The instructor will model the learning processes which are effective in distance learning environments. Be a learner in the community of learners. Move from the mental model of “teacher as a dispenser of learning” to a facilitator of a shared constructivist learning process.

**Technology selection and deployment**
The instructor will apply the appropriate instructional “tool(s)” to the instructional process to optimize learning.

**Print materials and graphics**
The instructor will distribute printed materials in advance of the beginning of the learning experience. S/he will also convert graphics and other materials to be displayed to appropriate formats for the distance learning technologies being deployed. Graphics and/or other materials that cannot be clearly seen will kill an otherwise effective instructional process.

**Distance Learning Strategies to be Deployed by the Institution:**

The institution which accepts the responsibility of delivering education at a distance must also make certain structural and systemic changes to support the emerging learning environments(s). For example, the institution must plan to have technical assistance available at all times when it will be needed. This may mean assigning technicians to the second and possible even third shifts, where they have all been scheduled on the first (eight-to-five) shift prior to the advent of distance education delivery. Some other learner and instructor support strategies that must be considered include the following:
**Library services**
Library services must be extended to students at “remote” locations. Some institutions have established the position of “outreach librarian” to support off-campus learners and instructors.

**Counseling and other student services**
Counseling and other student services personnel must also develop skills in the use of communication technologies, and must establish processes for making their services available to learners in remote locations and those who participate in the learning at unconventional times.

**Academic advising**
Academic advising must be available to distant and/or time-shifted learners.

**The technology toolkit**
As previously mentioned, the institution must make the commitment to establishing the total technology toolkit so that instructors are able to select the appropriate technological tool for helping learners achieve a specific outcome. The toolkit metaphor can be shifted somewhat to the field of medicine at this point to illustrate the importance of having access to all technologies. The medical metaphor involves asking oneself if one would go to a hospital who was unwilling to invest in an EKG machine? We think not.

**Professional development**
The institution must also invest in substantial professional development for instructional personnel. Instructors, counselors, administrators, librarians and other educators must have access to the professional development opportunities that will enable them to apply the technology toolkit effectively (Major and Levenburg, 1997). There has been a poor track record in this regard in the field of education. Richard Varne (1996) advocated that twenty-five percent of distance education budgets be set aside for professional development. The reality is closer to three percent nationally. The result has often been the establishment of technologically sophisticated systems that instructors refuse to use because they do not believe that they have the necessary knowledge to provide the same high level of instructional quality that they are currently providing in their face-to-face courses.

**Faculty incentives and compensation**
Rewarding the use of emerging technologies. Institutions must consider implementing compensation systems that will encourage instructors to experiment with distance education delivery. Many successful compensation systems compensate instructors either with released time or financial compensation for taking on the time-consuming process of planning distance education delivery. Some institutions award that compensation during the time
period when the planning takes place (the semester before delivery of the course or training activity) rather than waiting until the instruction is actually delivered. Intangible rewards and recognition systems should also be used to encourage distance education planning and delivery. Finally, institutions should make a point of employing instructors who are themselves the products of distance education delivery. This will bring to the institution a group of educators who have experienced being distance learners themselves, and will have a visceral understanding for the process that can be gained no other way. It will also model appropriate regard for the effectiveness of distance learning per se, and eliminate the current ethical dilemma that exists when institutions offer distance education programs, but discriminate against the products of distance education programs in their employment practices.

Modularization
Institutions should consider "modularizing" distance learning delivery to provide optimal flexibility in packaging and access. Modules could be combined to create courses and/or entire degree or certificate programs. In other instances, learners may desire single modules that can be applied to their performance at their place of employment. Modularization is a step toward the "just-in-time performance enhancement" systems predicted by Perelman (1992)

Team-planning and delivery
Institutions should encourage a "team-planning" approach to distance education delivery. The planning team should consist of the instructor who will deliver the instruction, an instructional designer, a librarian, a representative of the division of continuing education, technicians from appropriate technical areas, and perhaps others. This planning team will help to secure needed resources as the plan dictates. It will also assure that the various components of the institution are working together, as they must for the learners to be well-served. Some institutions are experimenting with a new approach to team-teaching where two or more instructors agree to play different "roles" in the delivery of course. For example, instructors who has an excellent lecture style may agree to videotape their lectures. Others may agree to monitor the online class discussions if they believe that they are adept at analyzing learner writing and providing insightful feedback. This role differentiation may sometimes be used to deploy instructors so that they are able to operate in the ways that they find most comfortable, and in which they excel.

Distance Learning Strategies Deployed by the Learner:

The learner also has a responsibility for actively engaging in processes which will lead to learning success. Learners must be active learners to be successful distance learners. Passivity is typically not rewarded in distance learning
environments. The following are ways in which learners can contribute effectively to their own learning success:

**Self-directed learning**
There are two types of behaviors that seem to characterize the self-directed learner in distance learning environments, self discipline and metacognitive processes. Since many types of distance learning involve choices by the learners about when they will actively engage in the learning process (time-shifted learning), the learners must have the self-discipline and time-management skills which will enable them to “keep up” with the expected learning schedule and pace. Actually distance learning simultaneously demands and encourages self-discipline in the learning process. While the demand for the learners to have or acquire this skill is critical, since employers also share this expectation, distance education should celebrate manifesting this demand rather than apologize for it. While instructors should make this requirement clear in the orientation, learners must “buy in” to the importance of this demand, or select out of the distance education environment if they are not ready to acquire it. The metacognitive process is one of asking oneself if the learning has taken place. This self-questioning process must also result in assertive action if the answer is “no”. The learners must then seek out other learning opportunities by either re-doing the previously engaged-in learning activity(ies) or by asking for help. This process differs from many traditional learning systems in that in some distance learning environments, instructors cannot “read non-verbal cues” and ascertain that the learner is confused. The learners must ask themselves questions that will lead to effective learning. Again, as this is a valuable lifelong skill, one should not apologize for requiring that learners acquire it.

**Using the technologies**
Learners in distance learning environments must also take responsibility for learning to use the communication technologies that facilitate the learning. At times this will mean problem-solving and developing pro-active approaches to acquiring help if needed. The instructor is less the locus of control than is the case in traditional learning environments. Problem-solving is everyone’s responsibility, not just the instructor’s.

**Working together**
Learners in distance learning environments may develop strategies which include helping other learners in the learning environment, and working together as they become less dependent on the instructor. They often find that the learning that they can create together as a learning community is far richer than that gained from a single presenter. The instructor often is one member of that community of learners and functions with them to create the learning rather than simply dispensing it. Learners soon discover that distance education
success lies in the formation of dialogues that occur among learners and between learners and the instructor rather than in adherence to a traditional top-down academic hierarchy in which the knowledge flows one-way from the instructor to the learners (Jonassen, 1995).

Summary

In this article, we have argued that it important to recognize that several groups share responsibility for successful learning. We believe that this is true in all types of learning environments, but is perhaps particularly important in distance learning environments. If responsibility for learners' success is not shared among instructors, institutions and learners, the learning systems break down and function poorly.

To be successful as systems, distance education environments require articulation of this mental model of shared responsibility. Doing so helps administrators, instructors and learners understand and fulfill their roles. This article has described some of the ways in which instructors institutional administrators and learners can all assume appropriate responsibility for learners' success in distance education environments.

References:

Jonassen, D, Davidson, M., Collins, M., Campbell, J. and Haag, B. (1995). Constructivism and Computer-Mediated Communication in Distance Education. The American Journal of Distance Education, (9) 17-23.


Distance Education: Overcoming Barriers of Time and Space

<table>
<thead>
<tr>
<th>Location of Communication</th>
<th>Timing of Communication</th>
<th>Traditional</th>
<th>Work Station (Time Shifting)</th>
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<tr>
<td>Same</td>
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<td>Face-to-Face (Meetings, Workshops, and Classes)</td>
<td>VCR</td>
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<td></td>
<td>Different</td>
<td>Work Station (Time Shifting)</td>
<td>Computer</td>
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<td>Interactive Video Disk</td>
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<td>Asynchronous Distance Learning</td>
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<td>Correspondence Courses</td>
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</tbody>
</table>

Figure 1
The Blended Technology Toolkit

Course/Program Goals and Objectives

- Print media
- Interactive television
- Satellite
- Instructor-recorded videotapes
- Online computing (Internet)
- CD-ROM/DVD
- Audio
- Video-based telecourses
### Major and Levenburg Distance Learning Curriculum Matrix

<table>
<thead>
<tr>
<th>DISTANCE LEARNING DELIVERY MODES/TECHNOLOGY</th>
<th>LEARNING ACTIVITIES</th>
<th>PRE-INSTRUCTIONAL ANALYSIS</th>
<th>DESIRED LEARNING OUTCOMES</th>
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<td>Reading</td>
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<td>On-line computer (Internet/intranet)</td>
<td>Writing</td>
<td></td>
<td></td>
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<tr>
<td>Videotape-based telecourses</td>
<td>Oral presentations</td>
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<td>Printed materials</td>
<td>Psychomotor demos</td>
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<tr>
<td>Audio conferencing</td>
<td>Other</td>
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<tr>
<td>Multimedia simulations</td>
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<td></td>
<td></td>
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<tr>
<td>Optical storage technology (CD/ROM and CDI)</td>
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<tr>
<td>On-site/in-person</td>
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<tr>
<td>Other</td>
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</table>

Figure 3
About The Authors

HOWARD T. MAJOR, Ed.D.

Howard Major is Senior Partner with Distance Learning Dynamics and teaches graduate education courses for Eastern Michigan University and Grand Valley State University. His area of expertise is organizational and system-wide development with educational institutions.

Howard is considered one of the United States' foremost authorities in two-way interactive television, satellite telecommunications, and media technology. He is a past-president of ETOM, the Educational Teleconsortium of Michigan, a professional organization focused on developing telecommunications for higher education institutions in the state. In 1990, Howard was awarded the Telecommunications Liaison Award by the Michigan Community College Association.

Howard’s board appointments and memberships include: the National Instructional Telecommunications Consortium Executive Board; the Michigan Association for Distance Learning; the Michigan Community College Telecommunications Network Liaison; and the Michigan Virtual Automotive College.

Howard holds a doctorate in Educational Leadership, and a Master's degree in Library Science from Western Michigan University.

NANCY M. LEVENBURG, Ph.D.

Nancy Levenburg has strong teaching and leadership experience in a variety of academic environments—community college settings, four-year colleges and universities, with returning adult students, and with both credit-granting and non-credit programs. She is Visiting Professor of Marketing at Grand Valley State University. In addition, Nancy has in-depth experience in implementation of online technology to enhance student learning, academic program development, and assessment of student academic achievement.

Nancy and Howard's recent publications include:

- “Designing Multiple-Technology Marketing Courses.” Marketing Educator 16.3 (Summer 1997), 8.

Nancy holds a Ph.D. degree in Management from Union Graduate School, and an M.B.A. in Marketing from Western Michigan University. Her post-doctoral studies include Harvard University Institute for the Management of Lifelong Education (MLE) and UCLA Extension - Certificate Program in Online Teaching.
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