Final Summary of the Foundations of Distance Education

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I. Introduction

Today Distance Education (DE) is changing the way we teach and learn. Distance education provides "a valuable learning experience to students who might not otherwise have access to learning" (Simonson, Smaldino, Albright & Zvacek, 2011, p. 219). With the continuous growth in distance education programs worldwide, educators must look collectively at the overall picture when planning instruction for distance education. Therefore, it is essential for educators to identify the factors that have an effect on online delivery of instruction. This paper will present a summary of the major components that affect the delivery of online instruction – the instructional design, student and teacher perspective, administration, and challenges that arise in relation to ethics and copyright laws in distance education.

II. Instructional Design

It is important to plan ahead when delivering instruction online. Instructional design (ID) is defined as a "systematic design process" (Morrison, Ross, Kalman, & Kemp, 2011, p. 6). According to Morrison et al. (2011), "the goal of instructional design is to make learning more efficient and effective and less difficult" (p. 2). The components of ID include: learners, content, method and evaluation, and the environment, which are critical for planning instruction (Morrison et al., 2011; Simonson et al., 2011).

There are numerous ID models that can be used to plan and design instruction. Some of the more popular models include the Dick and Carey model, Morrison, Ross, and Kemp model, Gagne's Nine Events of Instruction model, ADDIE model, and the ASSURE model, to name a few. However, there are four models today that are used for designing World Wide Web courses. They are: 1) Linear-designed instruction; 2) Branched-designed instruction; 3)

Hypercontent-designed instruction; and 4) Learner-directed design. (Simonson et al., 2011, pp. 167-168). All four models use a Unit-Module-Topic (UMT) approach. These models are best suited for the design of courses that will be delivered asynchronously (Simonson et al., 2011). For synchronous delivery of instruction, the ASSURE model is a good fit because it is designed to "effectively integrate [the] use of technology and media" (Smaldino, Lowther, & Russell, 2012, p. 37). Ultimately, the model which the instructor chooses for online delivery will depend on the instructional setting for the course (i.e. synchronous or asynchronous), the characteristics of the learners, and the content. Regardless of which model is chosen, "well-designed instruction is repeatable" (Simonson et al., 2011, p. 153).

Best practices help Instructional designers to develop effective courses. Simonson et al. (2011) cite Bates' "12 golden rules" that offer guidance for designing and developing DE courses (p. 172). In addition, the Indiana Partnership for Statewide Education (IPSE, 2000) proposed "Guiding Principles for Faculty in Distance Learning" (as cited in Simonson et al., 2011, p. 174). Both "golden rules" and "guiding principles" are essentials that provide Instructional designers with a toolkit for planning instruction.

Course Management Systems (CMS) such as Blackboard and WebCT are necessary tools for DE. The CMS consists of software components that provide a virtual environment for students and instructors to interact. Course Management Systems typically include the following components: syllabus, calendar, grade book, discussion and announcement sections, quizzes, required and recommended course readings, lecture notes, graphics, video, email functionality, digital drop-box for assignment submissions, and course evaluation tools (Simonson et al., 2011).

III. Student Perspective

The learner is an integral part of any distance education program and as such should be considered in the early stages of planning and organizing content, instruction, and technology for DE. According to Simonson et al. (2011), the learner is "the crucial member of the distance learning system" (p. 218). Therefore, from a student's perspective, understanding the characteristics of distance learners, learner responsibilities, and factors influencing learner success are important because they will ultimately shape learners' outcome and learning experience in an online learning program.

In general, distance learners are self-motivated, self-disciplined and able to work independently (Illinois Online Network, n.d.; Worcester Polytechnic Institute, 2007). Learners come from diverse backgrounds, different age groups, gender, ethnicity, and income levels. In particular, Simonson et al. (2011) describes adult learners as "self-starters" and notes that younger learners (i.e. P12) bring a "wealth of literacy related" technology skills to distance education settings (p. 221). In a research study conducted by Howland & Moore (2002) which examined students' perceptions of Internet-based courses, the data showed evidence that "self-management, self-reliance, and accurate expectations of learner responsibilities are important attributes for successful Internet-based learning experiences" (p. 187). As a result, it is important for students to understand the demands of online learning so that they are able to set expectations prior to starting an online course.

According to Macfarlane & Smaldino (1997), students must also "assume ownership of their learning experiences" (as cited in Simonson et al., 2011, p. 227). Distance learners must take responsibility and "focus on their own learning and be able to judge whether they need additional assistance and how to proceed to request it" (Simonson et al., 2011, p. 233). In addition, as a

distance learner, students need to be able to manage their class time and tasks (such as logging in to get course assignments, participating in discussions, and completing assignments on a regular basis), and balance their personal time. Because online programs do not have a pre-defined day and time for class, students have to establish a regular study/learning schedule (Shirley, n.d.). Shirley (n.d.) suggests, keeping a calendar or journal with important dates clearly marked and looking at it daily, determining a time that is best to study, and having a dedicated study place. In addition, students have to make sure that they have access to or obtain appropriate technology (such as a computer or mobile device, the internet etc.), and understand how to use the virtual classroom technology. Whether they are communicating synchronously or asynchronously with the instructor and peers, distance learners will have to make it their responsibility to learn how to use the course management tool(s) (such as Blackboard or WebCT) and other technologies that are used in the distance education course. Simonson et al. (2011) suggests that students get "early exposure to the technology being used (e.g. during student personal introductions) and modeling by the instructor can reduce anxiety and alleviate problems later on" (p. 228). Mensch (2009) proposes an online orientation class "to acclimate the student with the technology involved in an online class and the faculty expectations" (p. 2). Contacting the instructor directly or being proactive by using internet resources to find information on distance education technologies can help students make the transition into online learning smoother.

Simonson et al. (2011) highlight educational setting, prior knowledge, and learning styles as indicators of successful learners in DE. Distance learners should also set goals for themselves (PACE University, n.d.; Shirley, n.d.). By setting goals, learners will be able to establish a routine which will help them to keep up with coursework and assignments. Other factors which can help to influence student success in DE include: asking questions, participating in

discussions, knowing their learning style, communicating immediately with the instructor if issues arise, and making sure that they have dedicated access to a computer and internet service (Illinois Online Network, n.d.; PACE University, n.d.; Shirley, n.d.).

IV. Teacher Perspective

It is of equal importance that teachers provide appropriate instruction and guidance for DE learners. Although a lot of responsibility for learning rests with the student, the instructor can provide assistance to help students get started. The instructor's role is mainly that of facilitator in a DE virtual classroom. Simonson et al. (2011) indicate that structuring and organizing the instruction so that students understand the expectations for the class; using a syllabus to ensure proper communication; creating a learning community; facilitating active learning; using instructional materials to assist learning; and addressing assessments will "create a learning environment that facilitates student learning" (pp. 197-203). Also, Simonson et al. (2011) suggest that getting to know the students "provides the instructor with an understanding of how to best approach instruction to ensure an optimal learning experience for all" (p. 219).

Furthermore, Simonson et al. (2011), describes the syllabus as the "*glue* that holds the course or learning experience together" (p. 259). Therefore, instructors must provide a syllabus to clearly communicate to students such things as class expectations; online etiquette; information on how to operate some of the class technology or where to find technical help; instructions for completing assignments; details on grading structure (e.g. a rubric); and instructor contact information (Simonson et al., 2011).

The selection of visuals is an important consideration for instruction online. Many types of visuals can be used in an online setting, such as pictures, drawings, charts, maps, and graphs.

Teachers must keep in mind good principles of graphic design such as letter size, appropriate fonts for display on monitor screens or television monitors, color and contrast, unity, and visual balance when designing instruction for the online environment (Simonson et al., 2011; Smaldino, Lowther, & Russell, 2012). In addition, the information in printed materials must be clear and free of errors.

Assessment is an essential process that will measure student learning outcomes, and provide feedback to students and teachers. Simonson et al. (2011) defined assessment as "the process of measuring, documenting, and interpreting behaviors that demonstrate learning" (p. 263). The method of assessment would depend on the learning objective. Assessments in DE should go beyond traditional formative and summative assessments. For asynchronous communication, Simonson et al. (2011) suggests blogs and discussion boards, posting a thought provoking question to foster higher order thinking, online wiki's for student collaborations, and e-portfolios. For synchronous communication, Simonson et al. (2011) suggests desktop audio/video conferencing, group discussions, online chats, instant messaging, and real-time student presentations. Evaluation techniques are usually focused on people (i.e. instructor and learner) and course content. However, teachers should also evaluate the technology or medium used to deliver the training/instruction, because the way in which the training/instruction is delivered could also affect the outcome of students' learning experience.

V. Management of Distance Education

From an institutional perspective, the administration of DE programs addresses the organizational readiness (including faculty and student readiness) of the institution. A major part of this structure involves the leadership, direction, and planning for DE programs. Simonson et

al. (2011) lists five competencies of a DE leader/administrator: knowing, designing, managing, leading, and visioning. In addition, Simonson et al. (2011) states that "a qualified individual at an appropriate echelon should be designated with responsibility for providing leadership, direction, oversight, quality control, and accountability" for DE programs (p. 319). At best, responsibilities of a competent leader should involve: leading institutional change; recommending strategic direction; overseeing student orientation for online courses and degree programs; overseeing faculty development in online learning and development of online courses; overseeing recruitment, retention, graduation and career success of online program students; and monitoring online quality assurance.

Kaye (1981) describes four DE subsystems that reflect the functions and roles of the DE administrator – the regulatory subsystem, course subsystem, student subsystem, and logistical subsystem (as cited in Simonson, Smaldino, Albright & Zvacek, 2006, p. 322). As in business, planning for DE must begin with a "realistic business plan" and needs assessment to determine whether the market exists for online academic services (Simonson et al., 2011, p. 319). These two functions are essential to the regulatory subsystem. In addition, the regulatory subsystem includes tasks such as the "overall management for the distance education program, decision making, planning, funding, and assessment" (Simonson et al., 2006, p. 322). Other specific functions for the regulatory subsystem include: strategic planning, program accreditation, and compliance with standards and regulations (Simonson et al., 2006).

Once this has been established, administrators can address organizational readiness for the program. According to Simonson et al. (2006), the primary functions of the course subsystem includes the design and development of courses. Parscal (2000) notes that DE administrators must establish program development, course development and program delivery options that

meet the needs of a fast growing online population. From a program development perspective, Parscal says the "pedagogical expertise" of the DE administrator will assist in "identifying competencies and outcomes, and evaluating the competitiveness of similar programs of other providers" (p. 2). From a course development perspective, Parscal states that "there needs to be a shift from linear, instructional, teacher-centered, one size fits all course designs to hypermedia, constructivist, learner-centered, and customizable course designs" (p. 2). Furthermore, readiness issues such as costs of the program, policies and procedures for implementation of courses/programs and quality control, whether the institution can offer and support these programs with faculty and support staff, media selection, and adoption of appropriate technologies, are all functions of the course subsystem (Simonson et al., 2006; 2011; Parscal, 2000).

The student subsystem includes all functions related to students and student support. Student support and satisfaction are critical to the administration of DE programs, and must be considered at all levels of planning. Therefore, as part of institutional planning, DE students must receive the same or equivalent support services which the on-campus students receive (Simonson et al., 2011). As Parscal (2000) aptly states, "student orientation and managing the learner's expectations is an important part of the [Administrator's] role in student services" (p. 5).

According to Kaye (1981), the primary functions in the logistical subsystem are "purchasing and maintaining equipment, and employment and training of personnel" (as cited in Simonson et al., 2006, p. 326). Equipment such as servers, network infrastructure, back-up files and storage systems, in addition to the management and hiring of human resources (such as faculty, staff, and instructional designers) are included under the logistical subsystem (Simonson et al., 2006). The

preparation of faculty to teach online courses is essential to the DE system. Parscal (2000) maintains that "faculty members need to be trained to use effectively any program delivery or productivity tools required to execute their responsibilities" (p. 5).

Administrators also have responsibility for accessibility of DE systems. Accessibility not only includes accessibility for persons with disabilities, but also underserved populations. Section 508 standards require that all electronic and information technology is accessible to users with disabilities. At a minimum, distance education websites and Learning Management Systems (LMS) should be accessible for disabled students. This involves tasks such as ensuring that video files are appropriately captioned, and text transcripts of audio files are available to provide an equivalent learning experience for students with disabilities (Distance Education Accessibility Guidelines Task Force, 2011). When it comes to underserved populations and access to technological resources, the term "digital divide" is typically used. According to Bernard (2011), the term describes "the gap in equity between those who have access to computers and the Internet and those who do not". Therefore, DE administrators are tasked with finding ways in which to create programs and outreach that would enable underserved populations to gain access to quality distance education resources.

VI. Ethics and Copyright

Of particular importance to DE administrators are ethics and copyright concerns. According to Smaldino, Lowther, & Russell (2012), "copyright refers to the legal rights to an original work" (p. 13). From a DE perspective, Fair Use, the Digital Millennium Copyright Act (DMCA), and the Technology, Education, and Copyright Harmonization Act (TEACH) are intended to protect and allow educators to use copyrighted material in educational settings.

Smaldino, Lowther, & Russell (2012) state that for fair use, "small portions of copyrighted works may be used in teaching, if properly cited and noted that they are copyrighted and by whom" (p.13). There are four factors that determine whether the use of copyrighted material is fair: 1) Purpose and character of use; 2) Nature of the copyrighted work; 3) Amount and substantiality of the portion used in relation to the copyrighted work as a whole; and 4) Effect of the use on the potential market for or value of the copyrighted work (Simonson et al., 2011; Smaldino, Lowther, & Russell, 2012; University of Washington [UW], n.d.a). All four factors must be considered when determining fair use.

The Digital Millennium Copyright Act (DMCA) was intended to address the circumvention of electronic and digital copyright protection systems (UW, n.d.b). For example, the illegal copying and reproduction of movies on DVDs and music on CDs is considered an infringement of DMCA. The following provisions are particularly relevant to DE administrators:

1. Infringement liability protection for Internet service providers (i.e. in this context educational institutions are considered Internet service providers) as long as they are unaware of the infringement (Simonson et al., 2011; UW, n.d.b)
2. Circumvention of digital copyright protection systems including "no distribution of devices designed to circumvent digital protections, no selling of anti-security tools, and no removing copyright information" (Simonson et al., 2011; UW, n.d.b)

Some of these provisions were viewed as "threats to fair use and academic freedom" (Simonson et al., 2011, p. 304). Therefore, the TEACH Act emerged as the solution to the limitations of the DMCA.

The two main institutional requirements that DE administrators must meet for the TEACH Act are: 1) their institution must be an "accredited non-profit educational institution"; and 2) the institution must have "a published policy" regarding the use of copyrighted materials and a training program for faculty and staff (Simonson et al., 2011, p. 305; UW, n.d.c). In general, educators need to be cognizant of copyright laws which govern printed materials, video, music, images, electronic mail, course websites and other Internet resources - even when fair use and the TEACH act are applicable - and seek permission from the copyright owner(s) when in doubt.

VII. Conclusion

This paper presented a summary of the factors which contribute to the effective delivery of online instruction. It includes sections on the instructional design process, student and teacher perspective on DE learning and instruction, administration of DE programs, and important issues and challenges that arise with regard to ethics and copyright laws in DE. As the technology evolves, students, teachers and administrators must find a balance between technology and the factors that contribute to effective delivery. All things considered, good teaching practices will always be fundamental to the instruction of DE, and thus "students are the core to successful distance learning experiences" (Simonson et al., 2011, p. 239).

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