Instructional-Design Theory to Guide the Creation of Online Learning Communities for Adults

By Martha M. Snyder

The Internet provides a powerful delivery system for learning. With improvements in web-based applications and information technology come new opportunities and challenges for educators to design, develop, and deliver effective instruction. Over the past few years, an increasing amount of research has been devoted to the design of online learning communities that embrace learning as a social and constructive process (Dawson, 2006; Garrison & Arbaugh, 2007; Rovai, Wighting & Lucking, 2004; Shea, Li & Pickett, 2006; Snyder, 2002).

As online learning matures, it is important for both theorists and practitioners to understand how to apply new and emerging educational practices and technologies that foster a sense of community and optimize the online learning environment. To accomplish this goal, it is critical that researchers continue testing instructional-design theories and models in different online contexts and either build upon those theories and models or develop new ones that will provide appropriate and relevant guidance.

Problem Statement

New instructional-design theories are needed to guide the design of instruction using new technologies and tools that the Internet offers. Designers need prescriptions on how to effectively use these new tools and technologies to enhance teaching and learning in various settings (Reigeluth, 1999). For example, educators who teach online may select a particular tool (e.g., threaded discussion forum, blog, wiki) because it is available to them or use an instructional method (e.g., lecture, discussion, cooperative groups) because it is the method with which they are most familiar; however, they may not have a clear understanding of how the tool or method supports a particular type of content or instruction. This unfamiliarity is especially true with regard to some of the newer web tools such as blogs, wikis, podcasts, and virtual worlds. As new technologies emerge, educators seek guidance on how to use these technologies to enhance teaching and learning and build a sense of community. Garrison and Arbaugh (2007) suggest that research is needed to help define the online learning community framework including how instructional-design theories and models can support this framework.

Goal

The purpose of this paper is to propose an instructional-design theory that supports a sense of community. The theory may also serve as the basis for further development of specific instructional design prescriptions for how to use some of the new and emerging web tools that are available in the Read/Write Web such as blogs, wikis, podcasts, and virtual worlds, to create a sense of community among adult learners. This theory originates from formative research conducted to design an online learning community for older adults in non-academic settings (Snyder, 2002). In this paper, situations that describe when a particular method works best were added to suggest

how this theory might apply to adults enrolled in online graduate programs.

What is Instructional Design Theory?

Design Theory vs. Descriptive Theory

There are key differences between design theory and descriptive theory. Design theory is *goal* oriented and descriptive theory is *outcome* oriented. Design theories emphasize prescriptions for accomplishing a given end while descriptive theories describe how things work. Reigeluth (1997) contends that in the applied field of education, design theory is more useful and more applicable. Schrumm (2005) suggests that educational technology research should focus on the identification of specific instructional problems and the appraisal of technology applications best-suited to solve those problems.

Formative Research

Reigeluth and Frick (1999) describe a type of developmental or action research called *formative research*, which is intended to develop a new design theory or improve an existing theory. Formative research attempts to identify what aspects of the theory work, what elements need to be improved, and how these improvements should be made. This type of research is recommended for expanding the knowledge base in instructional-design theory. Traditional quantitative research methods are less desirable for this type of research, especially in the early development stages.

The formative research method has been used to create and advance new instructional-design theories, including collaborative problem solving, self-regulated learning, and teaching and learning for understanding. This method has also been used to identify ways to improve instructional-design theories and models such as the elaboration theory, a theory to facilitate understanding, a theory for designing instruction for teams, and a model for the design of motivational instruction (Reigeluth, 1999). The formative research method to develop a new instructional-design theory was used to develop the instructional-design theory described herein.

Theoretical Framework

The theoretical framework that supports the goal, values, and methods of the proposed instructional-design theory comes from three fields of study: learning communities, adult learning theory, and constructivism.

Learning Communities

Learning communities are groups of people that share the common interests of learning and sharing knowledge. The goal of a learning community is to advance collective knowledge by supporting the growth of individual knowledge (Bielaczyc & Collins, 1999). For example, Tinto (1997) suggests that learning communities can enhance student learning by enabling students and faculty to interact with each other and participate in collaborative learning experiences. Online learning communities can help students in distance education programs feel more connected to their professors and classmates. Shea, Li, and Pickett (2006) suggest that "good learning environments are learner-centered, knowledge-centered, assessment-centered and community-centered" (p. 176).

The principles and instructional methods for creating learning communities support the direction of the current status of adult learning theory and the new paradigm of instructional-design theories. Furthermore, the design of learning communities has been noted in the literature to be a natural fit with the newer technologies that are being offered via the Internet (Herrmann, 1998; McLellan, 1998; Palloff & Pratt, 1999; & Ravitz, 1997).

Adult Learning Theory

In an effort to better understand how adults learn, adult learning theories are derived to help theorists and practitioners by providing workable and testable explanations of the learning process. These theories seek to explain how the process of learning as an adult differs from learning as a child. They focus on describing how various social, psychological, emotional, and physiological factors affect adult learning. To that end, ideas generated by educators, sociologists, and psychologists all contribute to a comprehensive understanding of the adult learner and how to create a learning environment that is most suitable to their unique needs.

Several major theories on adult learning such as andragogy (Knowles, Holton, & Swanson, 1998), self-directed learning (Caffarella, 1993; Brookfield, 1995), and transformational learning (Mezirow, 1997) are cited in the literature. These theories attempt to further justify the distinction between learning as a child and learning as an adult. One of the most influential contributors to the advancement of adult learning theory and the popularization of andragogy in North America was Malcolm Knowles. Over thirty years ago, Knowles developed a theoretical model that focused on the teaching and learning of adults (andragogy) as a separate practice from the teaching and learning of children (pedagogy). Knowles challenged the principles of pedagogy and traditional instruction

by proposing a learning environment that fostered learner-centered approaches and mutual trust and respect among learners and facilitators. Knowles based his model on the following six assumptions: the need to know (adults need to know why they are learning something), self-concept (as people mature they transition from having a dependent personality toward having a self-directed personality), experience (experiences gained throughout life become valuable learning resources for adults), readiness to learn (adults want to learn things that are relevant to their daily lives), learning orientation (as people mature, their learning orientation evolves from one of content- or task-centered to problem centered), and motivation (adults are more intrinsically motivated). These assumptions reinforce the goal, values, and methods of the proposed instructional-design theory (Knowles, Holton, & Swanson, 1998).

Constructivism

Constructivism is one of three primary theoretical perspectives that determine the instructional methods used in instructional-design theories. By combining new information with existing knowledge and experience, learners "construct" their own learning. The educator facilitates learning by providing authentic learning scenarios and problems (Dick, Carey, & Carey, 2005). Through the process of reciprocal intention-action-reflection cycles, meaningful and transferable learning can take place (Jonassen, 2004). For example, a learner first intends to resolve dissonance (the difference between what is perceived and what is understood). The learner acts on his or her intentions by consciously articulating the intention and then actively resolving the dissonance physically, mentally, or socially. The learner then reflects on his or her intentions and actions to regulate learning and construct meaning. This cycle is especially useful for solving problems "in complex and new domains" (Jonassen, 2004, p. 136).

Constructivism supports learner-centered environments that are authentic, collaborative, constructive, and active. Many of the traditional instructional-design theories focus on simple, domain-dependent, cognitive learning (Reigeluth, 1999). As we continue to move further into the information age, new competencies are required such as the ability to innovate and create and to solve ill-defined problems. Constructivism helps to develop these skills through such teaching methods as group-based and cooperative work, problem-based activities, and discovery learning (Roblyer, 2006).

Design Theory Goal, Values, Methods, and Situations

Research in the fields of learning communities, adult learning theory, and constructivism provide the theoretical framework for the following instructional-design theory. Instructional-design theories begin with a goal. The goal communicates the general or overarching aim of the theory. From the goal comes the development of values. These values describe the guiding principles for how instruction is designed and delivered. The instructional-design methods are variables in the learning environment that can be manipulated to change or influence behavior (Reigeluth & An, 2006). Situations describe the conditions under which a method works best and the desired instructional outcomes (Reigeluth, 1999). Beatty (2002) advises that assessing the instructional conditions may be the most important step to implementing effective online instruction. Following is a brief description of the design theory, including its goal, values, and methods. Many of these values and methods draw from existing research related to learner-centered, collaborative learning environments. For those values and methods, references to the literature are included. Table 1 includes a summary of these elements along with the situations in which each method works best.

Design Theory Goal

The goal of this theory is to foster the sharing of information, knowledge, skills, and experiences among adults with common interests and goals, through online communication, collaboration, and interaction.

Design Theory Values

The instructional design values support the goal and the methods used to attain the goal. Following are the five values upon which this theory is based (see also Table 1)

Value #1: Cultivate a learner-centered environment: Learner-centered environments engage learners in meaningful learning, which is authentic, collaborative, constructive, and active (Jonassen, Peck, & Wilson, 1999). A learner-centered approach supports instructional methods prescribed by adult learning theorists.

Value #2: Leverage community synergy: Synergy is the co-mingling of parts to improve the whole (Covey, 1989). In learning communities, synergy means improving the quality of learning for all by sharing information, knowledge, skills, experiences, and best practices.

Value #3: Respect individuality, diversity, and experience: Each adult should be recognized as a contributor to the learning community and opportunities should be created to engage all adult

learners in sharing their unique expertise (Palloff & Pratt, 1999).

Value #4: Focus on real-life problems: Adults seek learning that will help them cope with everyday situations (Knowles, 1975; Knowles, Holton, & Swanson, 1998). Learning community activities are structured to help members solve real-life problems.

Value #5: Promote self-directed learning: Self-directed learning is encouraged. Members take charge of their own learning. They define their own learning goals, find supporting resources, determine their own learning methods, and evaluate their own progress (Brookfield, 1995; Knowles, 1975). Instructors guide the learning process (Palloff & Pratt, 1999).

Design Theory Methods

While instructional-design values serve as general guiding principles for designing instruction, instructional methods are specific variables in the environment that can be manipulated to change or influence behavior (Reigeluth & An, 2006). Following are the major methods that this theory offers.

Establish trust and rapport: Devoting adequate time to building relationships by establishing trust and rapport with members early on helps them to feel more secure and comfortable in an online learning community. It is important for community members to get to know each other and the facilitator. Sharing personal information, finding commonality with one another, and clarifying roles and responsibilities help to establish trust and rapport.

Maintain consistency and predictability: This value attribute pertains to all elements of the learning community from interface design to lesson format to server availability. Maintaining consistency and predictability supports the feeling of connection, strengthens trust among community members, and facilitates online learning activities (Ito, Adler, Linde, Mynatt, & O'Day, 1999). For example, members know what to expect from one week to the next. They come to rely on the server being up so they can access the community at any time and they know where to go for specific activities or types of information such as the course syllabus, specific course instructions, and additional resources. They know what to expect each week in terms of communication and lesson requirements. They know what to expect from the instructor and other members in the community.

Define and communicate the learning community's purpose: Learning communities are built around a common need or interest. Defining a purpose helps to identify the target audience and the community's structure (White, 2000). Once the purpose has been established, ensure that it is clearly communicated several times to all members. Frequent communication of purpose and how planned events connect to the purpose can be delivered via email, discussion forums, online syllabi, and audio/video-casting (e.g., podcasts or vodcasts).

Confirm member expectations: Ask members to write down and share what they expect to gain from the learning community. Open exchanges of this kind encourage members to think about the community's purpose and clarify what they want to achieve. Sharing their expectations with the rest of the community reinforces the purpose and helps both the members and the facilitator have a clearer understanding of the learning community's direction.

Provide learning opportunities that facilitate communication, collaboration, and interaction: People learn by sharing information with each other and collaborating to solve problems (Jonassen, Peck, & Wilson, 1999). Online learning requires tools and facilitation techniques that encourage communication, collaboration, and interaction.

Offer a flexible learning framework that enables community members to set and achieve individual goals: Since members are in charge of their own learning outcomes, their purposes for participating in the learning community may vary. Therefore, it is important to offer a variety of ways that they can engage in the community to ultimately achieve their own personal goals (Berge, 1997).

Provide multiple ways to learn content: Community members have a variety of learning styles; some like to engage in conversation while others prefer to ponder and reflect. Some learners like to create and others prefer to dissect. Provide activities that allow learners to experiment in a variety of ways (Kommers, Grabinger, & Dunlap, 1996). Instructors can deliver content in various ways including PowerPoint presentations, asynchronous discussions, blogs, podcasts, and vodcasts.

Encourage public sharing of information: Public sharing of information expands the collective knowledge of the entire learning community (Bielaczyc & Collins, 1999). Information sharing helps to create synergy where the whole becomes greater than the sum of its parts. Students can publicly share information in the online forums, wikis, and blogs. They can participate in peer review groups, which enable students to give and receive feedback from each other and the instructor.

Encourage shared authority among learners and facilitator: In a learner-centered environment, the lines of authority and leadership are blurred. Adult learners come together from a vast array of backgrounds and bring with them a wealth of knowledge and experience. This diversity facilitates the ability to reverse roles wherein, at times, the learner takes on the role of the facilitator and vice versa (Berge, 1997). Providing a context for sharing authority shows respect for adults, giving them the opportunity to voice their opinions and share their life accomplishments. For example, give each student the opportunity to facilitate discussion in the discussion forum. Invite students to research and teach a portion of the course instead of the instructor presenting all the information.

Provide relevant and easily accessible information: Information in the learning community should be relevant to the community's purpose and easily accessible to all community members (Jonassen, 1999). For example, supplement the online learning environment with suggested resources—articles, web sites, blogs, wikis, podcasts, and RSS feeds—to guide the learner in researching a particular body of knowledge.

Utilize the World Wide Web as an extension of the learning community boundaries: Members are encouraged to utilize resources available on the World Wide Web as an extension of their online learning community. Examples include blogs, wikis, virtual worlds (e.g., Second Life) and virtual trade shows outside of the course management system or online classroom.

Reinforce, recognize, and reward: In order to motivate members and make them feel more a part of the learning community, it is important to reinforce their participation by privately and publicly acknowledging their contributions, recognizing them for their accomplishments, and rewarding them for their successes. First, model appropriate behavior (e.g., in the forums). Then, when a student posts a model response in the discussion thread, post a response (either publicly or privately) commending him or her on the contribution.

Allot time for closure and reflection: Learning community members need time to reflect on their learning experiences and evaluate whether they achieved the goals they set for themselves (Nelson, 1999). For example, incorporate the final assignment as a reflections piece where students are encouraged to reflect on what they learned over the semester and how they plan to apply what they learned in the real world. Ask students to keep an individual learning blog to reflect on their learning experiences. Instead of submitting a log to the professor at the end of the term, the blog can be open for others in the class to read and respond, thus encouraging shared knowledge and experience.

Table 1 (see pages 54–56) summarizes the goal, values, and methods of this theory. Each of the thirteen methods has been integrated with one of the five values and situations have been added to further describe the conditions under which each method works best.

Summary and Suggestions for Further Research

The design theory elements of an instruction-design theory for promoting online learning communities for adults include the goal, values, methods, and situations. These elements support an online learning community framework that is interactive, collaborative, and constructive. To further develop this theory and make it more practical for designers and facilitators of online learning, it is necessary to develop instructional methods that incorporate emerging web tools such as blogs, wikis, podcasts, vodcasts, and virtual worlds and describe specific situations in which each method works best. Some suggestions were provided here; however, the following questions merit further investigation:

- How do we best use web tools to support collaboration and construction of knowledge among a community of learners? What is the best tool to use to support specific learning outcomes?
- Now that the walls of the classroom have opened up to the global community of learners, what is the role of instructors? How should they dialogue and discourse in such global environments?
- How can we use web tools to enhance student-to-student, student-to-instructor, and student-to-resource interaction in online learning communities?
- What types of tools and technologies can support the value of respecting individuality, diversity, and experience? What can the online facilitator do to foster this value among students in an online learning community?
- What types of web tools help us to bridge the gap between theoretical and practical? What about virtual worlds like Second Life? How can we use virtual worlds and simulations to explore the world and create virtual realities in which we can focus on real-life problems? When should an instructor use a virtual world? What are the issues? What is the instructor's role?
- How can instructors use web tools to foster self-directed learning in online learning communities?

- For graduate courses that are taught solely online, how can we quickly establish the elements needed to form a community of learners? For example, what are some ways we can quickly establish trust and rapport when there is no initial face-to-face interaction?
- For graduate courses that are taught using both face-to-face and online formats, what is the best way to make use of classroom time and online time to cultivate lasting online communities of learners?
- What additional situations, including conditions (i.e., aspects related to what is to be learned, the learner, the learning environment and instructional development constraints) and desired instructional outcomes (i.e., levels of effectiveness, efficiency, and appeal) apply to the proposed instructional methods? How do these situations differ in graduate courses delivered completely online versus courses delivered in a hybrid format?

It is through the process of formative evaluation that researchers can further investigate how to use these tools to support teaching and learning in various contexts such as online graduate courses. The instructional-design theory including its goals, values, methods, and situations can serve as a starting point from which to further investigate how to incorporate new and emerging web tools and develop specific prescriptions for using such tools to foster an online learning community that is interactive, collaborative, and constructive.

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References

Beatty, B. (2002). *Using the situationalities framework*. Retrieved March 4, 2008, from http://itec.sfsu.edu/social/ or contact bjbeatty@sfsu.edu

Berge, Z. (1997). Characteristics of online teaching in post-secondary, formal education. *Educational Technology, 37*(3), 35-47.

Bielaczyc, K., & Collins, A. (1999). Learning communities in classrooms: A reconceptualization of educational practice. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: A new paradigm of instructional theory.* (Vol. II, pp. 269-291). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Brookfield, S. D. (1995). Adult learning: An overview. In A. Tuinjman (Ed.). *International encyclopedia of education*. Oxford: Pergamon Press. Retrieved September 12, 2008, from http://www.fsu.edu/~elps/ae/download/ade5385/Brookfield.pdf

Bull, G., Knezek, G., Roblyer, M. D., Schrum, L., & Thompson, A. (2005, Spring). A proactive approach to a research agenda for educational technology. *Journal of Research on Technology in Education, 3*(3), 217-220.

Caffarella, R. S. (1993). Self-directed learning. In S. B. Merriam (Ed.), *An update on adult learning theory* (pp. 25-35). Ann Arbor, MI: Jossey-Bass Inc. ISBN 1-55542-684-0.

Covey, S. R. (1989). *The seven habits of highly effective people: Restoring the character ethic*. New York: Fireside. ISBN 0-671-66398-4.

Dawson, S. (2006). A study of the relationship between student communication interaction and sense of community. *Internet and Higher Education, 9*, 153-162.

Dick, W., Carey, L., & Carey, J. O. (2005). *The systematic design of instruction* (6th ed.). Boston, MA: Allyn and Bacon.

Garrison, D. R. & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues and future directions. *Internet and Higher Education, 10*, 157-172.

Heckman, R., Li, Q. & Xiao, X. (2006, January). How voluntary online learning communities emerge in blended courses. *Proceedings of the 39th Annual Hawaii International Conference on System Sciences*, p. 3.3.

Ito, M., Adler, A., Linde, C., Mynatt, E., & O'Day, V. (1999). *Final report: Broadening access: Research for diverse network communities (NSF #97124114)*. Retrieved November 24, 1999, from http://www.seniornet.org/php/default.php?PageID=5473&Version=0&Font=0

Jonassen, D. (1999). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: A new paradigm of instructional theory* (Vol. II, pp. 215-239). Mahwah, NJ: Lawrence Erlbaum Associates.

Jonassen, D. (2004). *Learning to solve problems: An instructional design guide*. San Francisco, CA: John Wiley & Sons.

Jonassen, D., Peck, K., & Wilson, B. (1999). *Learning with technology: A constructivist perspective*. Upper Saddle River, NJ: Prentice Hall. ISBN 0-13-271891-X.

Knowles, M. (1975). *Self-directed learning: A guide for learners and teachers*. Englewood Cliffs, NJ: Cambridge. ISBN 0-8428-2215-1.

Knowles, M., Holton, E., & Swanson, R. (Eds.). (1998). *The adult learner: The definitive classic in adult education and human resource development* (5th ed.). Houston, TX: Gulf Publishing Company. ISBN 0-88415-115-8.

Kommers, P., Grabinger, S., & Dunlap, J. (Eds.). (1996). *Hypermedia learning environments: Instructional design and integration*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc. ISBN: 0-8058-1826-6.

McLellan, H. (1998). The Internet as a virtual learning community. *Journal of Computing in Higher Education, 9*(12), 92-112.

Mezirow, J. (1997, Summer). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education, 74*, 5-12.

Nelson, L. M. (1999). Collaborative problem solving. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: A new paradigm of instructional theory* (Vol. II, pp. 241-266). Mahwah, NJ: Lawrence Erlbaum Associates. ISBN 0-8058-2859-1.

Palloff, R. M. & Pratt, K. (1999). *Building Learning Communities in Cyberspace*. San Francisco, CA: Jossey-Bass. ISBN 0-7879-4460-2.

Ravitz, J. (1997). *An ISD model for building online communities: Furthering the dialogue*. Syracuse University. (ERIC Document Reproduction Service No. ED 409 863).

Reigeluth, C. M. (1997). Instructional theory, practitioner needs, and new directions: Some reflections. *Educational Technology, 37*(1), 42-47.

Reigeluth, C. M. (Ed.). (1999). *Instructional-Design Theories and Models: A New Paradigm of Instructional Theory* (Vol. II*)*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc. ISBN 0-8058-2859-1.

Reigeluth, C. M., An, Y. (2006). Functional contextualism: An idea framework for theory in instructional design and technology. *Educational Technology Research and Development, 54*(1), 49-53.

Reigeluth, C. M. & Frick, T. W. (1999). Formative research: A methodology for creating and improving design theories. In Reigeluth, C. (Ed.), *Instructional-Design Theories and Models: A New Paradigm of Instructional Theory* (Vol. II, pp. 633-651). Mahwah, NJ: Lawrence Erlbaum Associates, Inc. ISBN 0-8058-2859-1.

Richardson, W. (2006). *Blogs, wikis, podcasts and other powerful web tools for classrooms*. Thousand Oaks, CA: Corwin Press.

Roblyer, M. D. (2006). *Integrating Educational Technology into Teaching* (4th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Rovai, A. P., Wighting, M. J., & Lucking, R. (2004). The classroom and school community inventory: Development, refinement, and validation of a self-report measure for educational research. *Internet and Higher Education, 7*, 263-280.

Shea, P., Li, C. S., & Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses. *Internet and Higher Education, 9*(3), 175-190.

Snyder, M. (2002). *The design of online learning communities for older adults*. Unpublished dissertation, Nova Southeastern University.

Tinto, V. (1997, Spring). Enhancing learning via community. *The NEA Higher Education Journal, 13*(1), 53-59.

White, N. (2002). *Defining the purpose of your community*. Retrieved January 25, 2008, from http://www.fullcirc.com/community/communitypurpose.htm

Table 1.

(continues through the 2 following pages.)

Goal: To foster the sharing of information, knowledge, skills, and experiences among adults with common interests and goals, though online communication, collaboration, and interaction.		
Value 1	**Methods**	**Situations**
Cultivate a learner-centered environment.	Confirm member expectations.	• Students should first become familiar with course goals and objectives so they can align their expectations accordingly. • Confirm member expectations at the start online course. • Students can share their expectations via a student homepage, blog, wiki, or online discussion thread.
	Define and communicate the learning community's purpose.	• When communicating purpose, show how it relates to the course objectives and the students' real world. Incorporate examples from what the students have shared regarding their personal goals and expectations. • The community's purpose should align with the course objectives and the students' expectations. • Connections among purpose, course assignments and learners' expectations should be frequently communicated throughout the course (e.g., via email, discussion postings, blogs, wikis, and podcasts).
	Encourage shared authority among learners and facilitator.	• This should be done after the students have established trust and rapport with each other and the instructor. • Student must be willing to take on the leadership role. • Provide structured opportunities for learners to take on the role of facilitator whether it be leading a discussion or teaching a portion of the class.
	Provide multiple ways to learn content.	• Provide a rich assortment of resources (e.g., articles, PowerPoint presentations, blogs, podcasts, and discussion assignments) from which learners can learn the content. • Students need to understand how the resources support the learning objectives and be given clear guidance on how to access the resources.

Table 1. Instructional design theory elements applied to an online graduate course.

Goal: To foster the sharing of information, knowledge, skills, and experiences among adults with common interests and goals, though online communication, collaboration, and interaction.		
Value 2	**Methods**	**Situations**
Leverage community synergy.	Provide learning opportunities that facilitate communica-tion, collaboration, and interaction.	• Instructor needs to determine whether activities will be shared among all classmates or whether to divide students into smaller learning groups. • This method is useful when trying to create something new or solve ill-defined problems. • The course goals and objectives should be reflected in each learning activity. • Students and instructor should be familiar with the goals and interests of each learning community member. • Establish and communicate clear guidelines for communication, collaboration, and interaction (e.g., discussion ground rules, expectations for participation, virtual team guidelines). • Establish and communicate assessment and evaluation methods (e.g., individual or group).
	Encourage public sharing of information, knowledge, and experiences.	• This method is helpful in encouraging students to find and express their own voice. • Learners must be willing to take the risk of sharing their thoughts and ideas with a broader audience.
	Utilize the World Wide Web as an extension of the learning community boundaries.	• Students must be able to evaluate the quality of online resources. • Instructor provides guidance to relevant web resources.

Goal: To foster the sharing of information, knowledge, skills, and experiences among adults with common interests and goals, though online communication, collaboration, and interaction.		
Value 3	**Methods**	**Situations**
Respect individ-uality, diversity, and experi-ence.	Establish trust and rapport.	• Both instructor and students must be willing to self-disclose (e.g., share thoughts, feelings, aspirations, goals, dreams and fears). • Best facilitated by providing instructions on what and how to share (e.g., discussion forum, student homepage). • If a hybrid course, take advantage of classroom time to build trust and rapport through student introductions, and collaborative classroom activities.
	Reinforce, recognize, and reward.	• Trust and rapport should be established among the community of learners. • Students should feel comfortable accepting developmental feedback publicly (e.g., public feedback via discussion forum or blog). • Instructor should be skilled at providing balanced, timely, and respectful feedback. • This method is useful when trying to model appropriate behavior (i.e., publicly praising a student for the way he or she answered a discussion forum post or blog entry).

Goal: To foster the sharing of information, knowledge, skills, and experiences among adults with common interests and goals, though online communication, collaboration, and interaction.		
Value 4	**Method**	**Situations**
Focus on real-life problems.	Offer a flexible learning framework, which enables community members to set and achieve individual goals.	• Students need to understand how their personal goals and expectations connect with the course goals and objectives. • Instructor needs to be familiar with students' personal goals and expectations for the course and how to reinforce them through the course content and instruction. • Provide options for learners to achieve a particular learning objective (e.g., submit a paper; create a blog, wiki, or podcast; take a test). • Provide assignments that learners can apply to their unique situations. Encourage them to complete assignments within that real-world context.

Goal: To foster the sharing of information, knowledge, skills, and experiences among adults with common interests and goals, though online communication, collaboration, and interaction.		
Value 5	**Method**	**Situations**
Promote self-directed learning.	Maintain consistency and predictability.	• The learning environment should be consistent and predictable so that the learner can focus on the content and not the delivery environment. • The learning objectives should align with the course deliverables. • The instructor should provide consistent, formative feedback to students throughout the semester so there are no surprises at the end of the semester.
	Provide relevant and accessible information.	• Students should be intrinsically motivated. • Students need to accept responsibility for their own learning. • The learning environment needs to be rich with resources from which the learner can construct new knowledge and skills.
	Allot time for closure and reflection.	• Facilitators can allot time after each assignment or at the end of the course; however, reflection time should be built into the course up front (e.g., syllabus) and not handled as an afterthought. • Students need to be open to examining what they have learned over the semester and able to evaluate whether they achieved the goals they set for themselves. Encouraging students to articulate personal goals and expectations at the course beginning helps to facilitate this process. • Reflection activities complete the constructivist intention-action-reflection cycle described by Jonassen (2004) that is suggested for meaningful and transferable learning.