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ENHANCING MOTIVATION, ENGAGEMENT, AND LEARNING THROUGH SOCIAL INTERACTIONS

The three common types of interactions in the online environment are learner–content, learner–instructor, and learner–learner. Chapter 4 addresses learner–content interactions. This chapter builds on learner–content interactions and focuses on the fourth design aspect: social interactions that derive from technology-mediated interpersonal communication between learner and instructor and learners with other learners. These interactions can be formal or informal via discussion forums, emails, instructor messaging, group chats, and audio or videoconferencing sessions. In the integrated framework for designing the online learning experience, social interactions enhance learner motivation, promote student engagement in active learning, and facilitate knowledge construction in a social context. The instructor plays an important role in designing and managing social interactions through actions and personalized communication that project copresence, immediacy, and intimacy. In this chapter, we explain why social interactions matter, highlight types of social interactions, identify five factors influencing the design of social interactions, provide a process for designing social interactions, and suggest strategies for integrating social interactions into learning experience design.

Guiding Design Questions

- How can a positive climate be set through social interactions?
- How can social interactions create emotional connections?

- How can personalized communication be conveyed through social interactions?
- How can learners be engaged in deep learning through social interactions?
- How can learner involvement through social interactions enhance the flow of the course?

Why Social Interactions Matter

In the face-to-face course environment, the instructor and learners are in the same space, have a clear sense of time, and are in close proximity to each other; in the online environment, it is more difficult to involve learners in social interactions. Social interactions play an essential function in learner satisfaction and persistence in online learning (Croxton, 2014). When social interactions are incorporated into an online course as a learning activity without a purpose, learners may not understand why they need to participate in a discussion or connect with other learners within the social context of the course. We have found that learners frequently view feedback from instructors in an assignment as an end in itself leading to a grade, rather than an opportunity to reflect on a higher-order learning goal in the course. Unclear course expectations, lack of clarity in direction, and poor communication from the instructor can lead to confusion, loss of focus, and feelings of disconnection on the part of learners. Instructors often overestimate learners' capacity to make connections between what is being learned in the course and their understanding of the directions provided through announcements. Learners' inability to connect with the instructor and other learners and lack of understanding of the overall goals of the course are issues that can be overcome through the intentional design of social interactions in an online course.

It has been proven that online courses with great levels of social interaction between learner and instructor and among learners point to increased levels of learner motivation, superior learning outcomes, and greater satisfaction (Park & Choi, 2009). Social interactions matter in learning experience design, but they require a shift in the course designer mindset. This involves creating personalized, engaging, and meaningful social interactions. These learning interactions can help learners recognize the purpose of the course, connect with the instructor and other learners, and increase motivation and engagement in learning experiences; however, they must be intentionally designed. Intentional design means using strategies that take into consideration the learner perspective and the learning journey throughout the course.

Strategies provide tactics to set the stage for a positive climate, create emotional connections, strengthen personalized communication, promote deep learning through learner engagement, and build learner involvement.

Types of Social Interactions

In this chapter, we focus on two types of social interactions: learner–instructor and learner–learner. These interactions may be informal or formal, synchronous or asynchronous. The right combination of learner–instructor and learner–learner interactions in online courses can enhance learner satisfaction, motivation, and achievement (Offir et al., 2008; Park & Choi, 2009) and create a memorable learning experience.

Informal social interactions may be asynchronous or synchronous. Asynchronous interactions in non-content-related forums are often used for logistical and social purposes and serve to answer logistical questions about the course, share personal and professional stories, and help with technology issues. Informal synchronous interactions may occur during virtual office hours where learners ask questions, clarify issues, or share personal experiences within the course and receive an immediate response. By including a space for informal interactions, learners can gain a sense of belonging to a learning community, helping them overcome fears about technology and find ways to express themselves in an informal manner (Conceição & Schmidt, 2010).

Formal social interactions can be accomplished during asynchronous and synchronous discussions and involve cooperative or collaborative exchanges. Learners work together in cooperative interactions to share, discuss, and synthesize ideas or concepts on a specific topic. Cooperative interactions involve content discussions or debates conducted in delayed time. Asynchronous discussion forums may be close-ended (learners answer a set of close-ended questions), open-ended (learners reflect on the learning process or develop different perspectives through open-ended questions), or integrated (including both close-ended and open-ended questions) (Ngeow & Yoon-San, 2003). In these types of formal interactions, questions may be posted by the instructor or peer facilitators. Formal synchronous discussions tend to follow the instructor presentation of content with learners located in the same virtual space or distributed into breakout rooms.

In collaborative interactions, learners work in teams to develop a product or project and complete tasks. Case studies, storytelling, and virtual team projects are examples of learning activities that include collaborative interactions (Lehman & Conceição, 2010). With videoconferencing technologies,

learners engage in team tasks through synchronous interactions for same-time discussion, document sharing, and session recoding.

Formal instructor–learner interactions also include instructor communications that provide learner guidance around assignments, projects, and other learning tasks. These formal communications often include pedagogical wrappers, mentioned in chapters 4 and 5. One type of formal asynchronous instructor–learner interaction consists of a concise prefatory content message that frames the social interaction to make explicit the instructor's purpose and how a task connects with subsequent learning as well as its relationship to specific course objectives. This wrapper primes and prepares learners cognitively and motivationally before engaging in a learning task. Pedagogical wrappers can be provided by instructors in various media formats, most commonly as text, but also as audio, video, or mixed media. The instructor briefly explains the purpose of the task and the performance criteria; for more complex tasks, rubrics and worked examples can be provided. The pedagogical efficacy of simple short pedagogical wrappers at the beginning of assignments has been empirically demonstrated through transparency in the design of learning (Felten & Finley, 2019).

Instructor–learner communication, often of a less formal nature, should occur at the end of a learning unit to give a sense of closure and prepare learners for what comes next. This type of "wrap up" communication by the instructor serves to bookend a series of related assignments or a small project to ensure that learners make connections between what they have just learned and other material in the course. Although formal in purpose, these instructor–learner communications are most effective when they convey a personalized tone and style that instills a sense of instructor presence.

Both formal and informal interactions are dependent on learner motivation, engagement, and presence and are associated with all four dimensions of learning. To experience optimal learning, learners need to cognitively engage in intellectual contributions, be socially involved in the exchange of ideas with others, emotionally connect with group members, and perform meaningful tasks. Several factors influence the design of social interactions.

Factors Influencing the Design of Social Interactions

We have identified five factors that influence the learning experience when incorporating social interactions in an online course. These factors should be carefully considered to foster engagement, enhance presence, and promote learning through social interactions.

Learning Objectives Shape the Format of Social Interactions

Learning objectives are the starting point for establishing a meaningful learning experience and can shape the format of the interactions. Depending on the learning objective, the format should specify the type of interaction (learner–instructor or learner–learner), mode of communication (formal or informal), and characteristics of technology (synchronous or asynchronous). The format should align with the learning objective(s) and aid in selecting the different design aspects to incorporate into a learning interaction.

Learning objectives give a purpose for accomplishing the different social interactions within the course. For example, if the learning objectives of a course unit involve identifying, synthesizing, and reflecting on five concepts, learners may complete a set of readings (instructional content), create a concept map synthesizing the concepts (learning activity), and cooperatively participate in an open-ended discussion (social interaction) to share and reflect on the concepts.

Intimacy and Immediacy Affect Social Interactions

The online learning environment is often characterized as lacking the human element. Some of the reasons why individuals feel this way are "the lack of visual and verbal cues, doubts about the identity of those interacting with [them], and unease about feeling impersonal with others" (Lehman & Conceição, 2010, p. 14). In the face-to-face environment, intimacy is contingent on nonverbal factors such as eye contact, physical proximity, or facial expression, and immediacy is carried out through verbal and nonverbal cues. In the online environment, intimacy is achieved through the expression of emotions or feelings with others, and immediacy is based on the timing of responses. Lack of immediacy in responses during an asynchronous interaction can be frustrating to learners. Both intimacy and immediacy of social interactions are associated with the cognitive and emotional dimensions of learning.

The directness and intensity of interaction (immediacy) with the instructor can affect learning (Zhang & Oetzel, 2006). Respect, encouragement, support, and fair treatment can affect the sense of presence in learners. Immediate feedback, number of cues, language, and intent focused on the recipient can influence learners' perception of presence. When learners become aware that the instructor is copresent (intimacy) in the online environment, they perceive directness and intensity, have a close and connected relationship with the instructor, and feel present (Wei et al., 2011). Learners tend to see instructors with a high degree of online presence as positive and effective.

Technology Shapes the Context of Social Interactions

Social interactions are dependent on the social context. The social context in the online environment is based on the characteristics of the technology (synchronous or asynchronous), the learner's perceptions of the technology-mediated environment, and the online communication. Learners' perceptions of the technology include familiarity with other learners, formal and informal relationships, trust and social relationships, psychological attitude toward technology, and access and location (Sung & Mayer, 2012). Online communication is the substance that is transmitted through the medium and is the consequence of social interactions. Online communication involves the language and keyboarding skills of learners, use of icons or emoticons and paralanguage (intonation, pitch and speed of speaking, hesitation noises, gestures, and facial expression), and characteristics of synchronous and asynchronous online interactions. If a learner has a negative experience with technology or online learning prior to entering a new online course, the tendency is for the learner to enter the online environment with a negative perception of the technology-mediated social context. This affects learning and interactions with other learners.

Social Interaction Attributes Influence Learner Motivation and Engagement

The attributes of the social interactions such as types of interactions, structure of the interactions, timing of communication, group size, and interaction tasks influence learner motivation and engagement. For example, delayed communication in the online environment can be seen as forced and unnatural; learners may feel impatient while waiting for others to respond (Biesenbach-Lucas, 2003). However, some learners may find the delay in response as an opportunity to reflect before writing comments. Group discussions with more than five members can be overwhelming when the length of postings is more than one screen and group members generate multiple postings. Online synchronous interactions that mirror face-to-face lectures may not portray a feeling of personal connection. Team projects that follow a checklist for tasks may not provide a sense of flow, excitement, and accomplishment. These attributes need to be carefully considered when designing social interactions to help learners stay motivated and engaged throughout the learning experience.

Learner Characteristics Affect Social Interactions and Engagement

Age, prior knowledge, and culture and ethnicity are factors that can affect social interactions and engagement. There is a difference between how traditional-age college students and older adults perceive social interactions. Younger learners appreciate sharing their work with other learners (Walker &

Kelly, 2007); adult learners prefer to work on their own and learn what they need to learn on their own time. Prior knowledge goes in tandem with age as a factor during social interactions because prior knowledge and experience can increase engagement during online discussions when the topic is relevant and appealing. Younger learners may not have a repertoire to share in the discussion and may feel less confident engaging in social interactions.

Cultural differences play prominently in social interactions in online courses. For instance, minority students from high-context cultures tend to prefer social interactions (Ke & Kwak, 2013) and community in the online environment (Adams & Evans, 2004; Ibarra, 2000; Smith & Ayers, 2006). African American learners prefer frequent oral communication among learners, face-to-face rather than online; when taking online courses, they often want to speak to their instructors offline (Merrills, 2010). Hispanic/Latinx adult learners often demonstrate a strong preference for social interactions that are collaborative rather than competitive; the opportunity to work in groups on projects that are planned, carried out, and evaluated by the group; and reflexivity that is well supported by asynchronous discussion boards (Sanchez & Gunawardena, 1998). Because the asynchronicity feature of online learning may hinder the development of real community, it is important to intentionally design social interactions that promote engagement and explicitly encourage, coordinate, or scaffold cross-cultural online interactions.

Designing Social Interactions

One distinctive aspect of creating social interactions within the integrated framework for designing the online learning experience is the adoption of a process for designing a social interaction through the completion of tasks. These learning interactions may be preplanned or part of the emergent design during the delivery of the course. Some social interaction design may be done during the first week of the course through surveys based on learners' characteristics. Decisions about social interaction attributes such as age and prior knowledge may affect the composition of a group or team.

We suggest the following tasks for designing social interactions: establish a goal, determine the type of interaction, select the mode of interaction, identify and develop a strategy, determine the format and duration of the social interaction, define the virtual space, create expectations, and develop a course wrapper and instructor communication. Table 6.1 provides a description of the design tasks for developing social interactions. Table 6.2 shows an example of a social interaction in an online course. Table 6.3 shows expectations for group discussion of content. Figure 6.1 shows an example of a pedagogical wrapper.

TABLE 6.1
Design Tasks for Developing Social Interactions

1. Establish the goal for including social interactions within the overall purpose and objectives of the course, which include linkages and integration with other design aspects within the course.
2. Decide the type of social interaction: Learner–instructor, learner–learner, or a mix of both.
3. Select the mode of interaction: Formal or informal.
4. Identify and develop the social interaction strategy: Cooperative (debates or content discussion) or collaborative (case study, storytelling, and virtual team projects), or a mix of both.
5. Determine the format of the social interactions: Open-ended discussion, close-ended discussion, or a mix of both.
6. Determine the duration of the social interaction (e.g., number of weeks, throughout the course, beginning of a unit, end of course)
7. Define the space for the interaction: Select the technology (text, audio, video, or blend of each) and characteristics of technology (synchronous or asynchronous).
8. Create expectations. This may be done through the use of rubrics.
9. Prepare learners for the social interaction through a course wrapper and instructor communication. The course wrapper is part of the course page that describes the learning goal, requirements, guidelines, and rubric. Instructor communication invites learners to participate in the social interactions through announcements.

Strategies for Integrating Social Interactions Into Learning Experience Design

Instructors play an essential role in designing and managing social interactions in the online environment. Though the design of social interactions may seem straightforward to set up, the interpersonal interactions during the delivery of the course are unpredictable because they depend on several factors: learning objectives, intimacy and immediacy, social context, social interaction attributes, and learners' characteristics. In this book, we focus on the design aspect of social interactions, which can make it easier for the management of social interactions when delivering an online course. The design of social interactions sets the stage for a positive climate, helps create emotional connections, strengthens personalized communication, promotes deep learning through learner engagement, and builds learner involvement. The

TABLE 6.2
Example of a Social Interaction in an Online Course

Goal: The purpose is for learners to identify, analyze, and apply principles of learning experience design and the design thinking process. This activity is part of Module 2, Week 2.
Type of Social Interaction: Learner–learner.
Mode of Interaction: Formal.
Strategy: Cooperative (content discussion).
Format of the Social Interactions: Close-ended discussion. Instructor provides questions, learners respond to questions.
Duration: 2 weeks.
Space for the Interaction: Asynchronous text-based.
Expectations: Table 6.3 shows the expectations for the social interactions.
Pedagogical Wrapper: Figure 6.1 shows an example of a pedagogical wrapper.

TABLE 6.3
Expectations for Group Discussion of Content

Criterion	*Description*
Writing Quality	Consistently uses grammatically correct posts with rare misspellings; uses APA standards correctly
Relevance and Clarity of Post	Consistently posts topics related to the discussion; gets to the heart of the matter; expresses opinions and ideas in a clear and concise manner
Contribution to Group Learning	Answers all questions posted by the instructor; posts an initial entry on the first day and responds to others' ideas throughout the discussion; expresses ideas collegially; posts at least three substantive contributions throughout the discussion
Knowledge and Understanding of Module Topics	Demonstrates accurate understanding of the concepts and principles based on the readings; substantiates claims with evidence; shows deep critical engagement with the issues
Originality and Creativity	Explores relationships between the different concepts and principles; introduces new examples or insightful observations; attempts to develop a new or stimulating perspective on every issue

Figure 6.1. Pedagogical wrapper for a social interaction.

Module 2, Week 2: Learner Experience Design

Welcome to Module 2, Week 2! During this module, you will be able to do the following:

- Describe principles of learner-centered design
- Explain the integrated framework for designing online learning experiences
- Identify and analyze the learning experience design principles

Reading Assignments

1. Reading 1
2. Reading 2
3. Reading 3

Participate in the Discussion

After reviewing the assigned readings for this week, participate in Module 2, Week 2 Learner Experience Design discussion by reflecting on your own experience as an online learner based on what you learned from the articles.

Tips for Participating in the Group Discussion

- Be sure to provide evidence from the literature when responding to the questions.
- Each response posted must clearly tie back to the reading materials.
- You may post comments in a variety of different formats: introduce scholarly references from other sources to support or highlight perspectives; discuss personal or professional experiences.
- You may make arguments, describe experiences, or discuss alternative perspectives within the context of the reading materials. Therefore, each comment should explicitly connect with some aspect of the readings.
- Respond to at least two people in your group.

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skillful involvement of the instructor after setting the stage will be key to establishing presence, engaging learners in the online course, and influencing intellectual curiosity (Orcutt & Dringus, 2017).

Set the Stage for a Positive Climate

Setting the course climate is a function of the instructor and it means establishing and facilitating a constructive learning environment for intellectual conversations. A positive climate sets the tone for the entire course from the get-go. Having an open and hospitable environment creates intimacy and

trust between instructor and learners and among learners. Instructor actions such as getting to know learners, forming authentic relationships, building rapport with learners, and setting and reinforcing expectations are instrumental in supporting learning. Four strategies help to set the stage for a positive climate: sharing personal and professional stories, group responsibility for learning, pedagogical wrappers, and informing learners about instructor involvement.

Shared Personal and Professional Stories

Setting the tone for a positive climate can begin with the instructor's welcome video that includes a short bio, beliefs about teaching and learning, and expertise in the discipline. This may invite learners to participate in a non-content-related forum, often called "Virtual Café," during the first week of the course. In this forum, learners can share personal and professional stories and achievements through open-ended discussions. Learners may share their stories via text, audio, or video format. Learner engagement and intellectual curiosity can be influenced by the instructor's passion for the subject matter portrayed in the video or through text narratives. The video can create intimacy, a feeling that the instructor is a "real person," and encourage learner participation in the course experience. This strategy activates the social, emotional, and behavioral dimensions of learning.

Group Responsibility for Learning

Online learning demystifies the idea of the sage on the stage because the instructor and learners are in the virtual space without geographical boundaries and with a flexible concept of time. In a learner-centered environment, the course focus is on the learning experience rather than the instructor being at the center of the course. Learning is a shared responsibility between learners and instructor. Informing learners about the shared responsibility for learning is an important strategy to use in the beginning and throughout the course by using pedagogical wrappers or course announcements. Pedagogical wrappers and announcements can include explanation of expectations and guidelines for engaging in social interactions and expected engagement during social interactions before facilitated discourse. This strategy stimulates the social, cognitive, and behavioral dimensions of learning.

Pedagogical Wrappers

Creating a comfortable and secure learning environment where learners can share ideas and opinions openly and respectfully promotes deep learning. Having a protocol for communicating with others and sharing ideas about respectful and courteous postings can contribute to the trust of the online

learning community (Cho & Cho, 2014). This protocol can be included in the course syllabus, lesson, or unit pages in the form of pedagogical wrappers that make explicit how to socially interact with others, emphasizing the relevance of the interaction and motivating and arousing interest in the topic.

Level of Instructor Involvement

The dominant instructor voice often displayed in face-to-face courses needs to be pulled back in the online environment. Frequency of instructor interaction can give the sense of an attentive instructor and create a positive reaction from learners (Russo & Campbell, 2004); however, instructor interactions with learners don't always increase participation in online courses; rather, overwhelming instructor involvement in online discussions can constrain learner participation (Mazzolini & Maddison, 2003). It is important to communicate to learners the level of instructor involvement in discussions, so that learners understand what is expected of them. This can influence learner engagement and motivation (Dennen et al., 2007). This strategy prepares learners to be more proactive and to become highly engaged participants in the social interactions.

Create Emotional Connections

Verbal and nonverbal cues are very important resources for creating emotional connections in a face-to-face environment. In an online course, emotional connections are created through a psychological state, an illusion formed when technology disappears and people, though separated by location, feel like they are in the same space (Lehman & Conceição, 2010). When an online learning environment has a friendly learner interface and rich media, learners are better able to share social cues with each other. The learner interface and instructor communication have significant effects on creating these emotional connections. We suggest three strategies for creating emotional connections: an intuitive learner interface, facilitative/guided communication, and logistical/organizational communication.

Intuitive Learner Interface

An online course interface that is cohesive and easily navigated, contains engaging instructional messages, and denotes an emotional tone is more likely to invite learners to interact with each other. The location, title of the discussion, description of the social interaction, and names of participants can give a sense of belonging to a group. Location within the course interface is the point of virtual gathering. This location may be part of an informal or formal interaction. The title and description of the discussion provides a sense of purpose for the social interaction. The tone of the description should encourage a sense of connection with content and other learners. The names

of participants place the learning experience within a community. The social interaction environment should be intentionally designed to create a psychological sense of being present with others, reduce social distance, foster a bond among the participants, and convey friendliness within the online learning environment (Aragon, 2003).

Facilitated/Guided Communication

Facilitated and guided communication comes from the interpersonal messages of the instructor to both individuals and groups to facilitate learning. This type of communication provides coaching, mentoring, and guidance to individuals and groups and enhances learner–instructor interactions to promote engagement and deep learning. It helps create a perceptional experience at the cognitive, emotional, behavioral, and social levels. It is emergent and responsive and can be dialogic, conversational, and unstructured. It happens asynchronously during facilitated online discussion forums, synchronously during direct instruction via videoconferencing technologies, or via instructor reaction to individual and team projects. The tone of language can build up intimacy and trust through personalized comments from the instructor inviting the learner to participate in the conversation and expand insights on the topics of the discussion. The instructor's quick response to issues can prevent learner frustration and encourage ongoing participation.

Logistical/Organizational Communication

Instructor logistical and organizational communication relates to the management of the learning community and process. This type of communication provides course information, clarification of issues, instructions, and guidelines for the entire class. It can be formal and structured when addressing course netiquette, instructions for assignments, introductions to the course and parts of the course, and syllabus in text or video format as an announcement. Communication can also be informal through discussion areas where instructor and learners share personal and professional stories or during virtual office hours, usually optional, which learners attend when they have questions or want to connect with the instructor and other learners. The use of a personal and conversational tone gives a sense of caring, enthusiasm, encouragement, and presence. Ongoing communication humanizes the experience and gives a sense of being together and present with others.

Use Personalized Communication

Instructors may believe that their actions are mainly tied to cognitive (related to content) and behavioral (related to performance) engagement in the course; however, learner satisfaction is mostly connected to learners' feeling

that their interpersonal communication needs are met (Dennen et al., 2007). The instructor and peers play a role in this satisfaction. Personalized communication through social greetings and acknowledgments influence learner behavior, motivation, and engagement in the course. Instructor and learners' personalized communication has a major effect in influencing learners' emotional and cognitive dimensions. Using photos or graphics, sharing beliefs and values, and acknowledging others by name make the interactions more personal, giving a sense of trust and community.

Photos or Graphics for Identifying Participants

As in social media, encouraging learners to upload their photos to their profile within the LMS can personalize the communication and give a feeling of being part of a community. Learners may also share a picture of something in their home that reflects their personality if sharing a photo is not desirable. Using graphics to convey metaphors that communicate personal characteristics can also personalize the experience.

Shared Beliefs and Values

In introductory discussions or cafés, encouraging learners to self-disclose personal stories through words can evoke emotions and feelings; this allows the instructor and learners to see each other as humans and feel a sense of being together. Learners are more likely to feel copresent if they share a kinship and have common beliefs and values with the instructor and other learners (Schimke et al., 2007). Sharing beliefs and values humanizes communication and creates personal connections. It is important to use pedagogical wrappers in social interactions to describe and evoke such feelings as part of the communication guidelines.

Acknowledging Others by Name

Learner identity is an important aspect of intimacy. Recognizing learners by name or the name of the group during discussions gives a social context for the learning experience. Expressing feelings of care and connection can lead to increased participation and social interactions (Sung & Mayer, 2012). Addressing a person by name and using salutations can help learners stay motivated and engaged with others. Encouraging intimacy and copresence through personalized communication stimulates the social and emotional dimensions of learning.

Promote Deep Learning Through Social Engagement

Instructors have the ability to influence learners' cognitive, behavioral, emotional, and social engagement in online courses. Cognitive and behavioral

engagement in a course involves learners' effort, attention, and concentration on the content and involvement in the course through participation in social interactions. Emotional engagement denotes learners' excitement, curiosity, and satisfaction about a course (Cho & Cho, 2014). Social engagement involves interacting with others through interpersonal communication. All four types of engagement play an essential role in sustaining and maintaining learner motivation and engagement in deep learning in an online course. Deep learning occurs when learners use mental resources to understand complex concepts, solve problems requiring analysis and synthesis, and make decisions related to discipline-specific knowledge and experience. One example is when learners transform new information into patterned concepts and relate them to their life experiences (Wei et al., 2011). The instructor can influence deep learning through facilitated discussion, scaffolding social interactions, and use of discussion guidelines.

Instructor-Facilitated Discussion

Instructors can post challenging but manageable discussion questions or encourage learners to come up with thought-provoking questions or opinions as a way to facilitate mastery-oriented discussions (Cho & Cho, 2014). Designing challenging questions requires developing critical thinking prompts ahead of time, so that learners can elaborate, analyze, evaluate, and synthesize topics or course materials during the discussion. Learners' behaviors should include quoting from other learners' messages, referring to others' postings, asking questions, and expressing appreciation or agreement. Encouraging social engagement not only promotes deep learning but also fosters the social and cognitive dimensions of learning.

Instructor Scaffolding of Social Interactions

Scaffolding for social interactions is a way to influence learners' behavioral and emotional engagement in content interaction. It means fostering learner–instructor and learner–learner interactions that challenge thoughts in the discussion and provide feedback. For instance, facilitated questions may follow learner construction and sharing of a concept map in the discussion area through scaffolding of social interactions. Learners can review each other's concept map by comparing and contrasting the different concepts and reflecting on their learning process in the discussion area.

Discussion Guidelines

Setting guidelines for social interactions with cognitive, behavioral, and social expectations for engagement can establish the parameters for a relevant and coherent discussion. Guidelines serve as the blueprint for the

social interaction learning experience. Once established, learners understand what is expected of their cognitive, behavioral, emotional, and social engagement in the online course. Guidelines can be included in the pedagogical wrappers and as part of the rubrics for the social interaction. Although in chapter 7 rubrics are used to assess learning, in this chapter they are used as guidelines to socially engage learners in deep learning.

Build Learner Involvement Into the Flow of the Course

Learner involvement in the online course through social interactions is paramount for maintaining a successful learning experience, and it requires learners engaging behaviorally, emotionally, and cognitively to make the task more enjoyable, personalizing what is to be learned (expressing likes and dislikes, generating options), allowing for greater autonomy (sharing a preference, providing input), and gaining better access to the means for better understanding (soliciting resources, asking for assistance) (Reeve & Tseng, 2011). When learner involvement is part of the flow of the course, learners are more likely to be motivated to learn, practice self-regulation, and believe they can do the task (self-efficacy). We suggest three strategies to build learner involvement through social interactions: asynchronous free-flow areas for learner input about the course design, virtual office hours with a purpose, and debriefing at the end of the course.

Asynchronous Free-Flow Discussion

Learners' engagement in online courses can fluctuate between challenging and easy tasks. Having learners provide input, communicate a preference, present suggestions, offer a contribution, ask a question, share what they are thinking and needing, mention a goal or objective to be pursued, express their level of interest, request resources or educational opportunities, seek clarification, generate options, express likes and dislikes, or ask for assistance are examples of strategies that can be accomplished by online learners during the flow of an online course (Reeve & Tseng, 2011).

Free-flow discussion areas can be set up in a general area of the course and made available as open-ended discussion forums at the midpoint or throughout the course as a way for learners to provide formative assessment about the course through likes or dislikes and suggestions about how the course might improve. This type of learner involvement is proactive because it occurs before or during the learning activity; is intentional, making the learning opportunity more personal, interesting, challenging, or valued; and is a constructive contribution in the planning and flow of the course. Learner involvement in the flow of the course incites the emotional and behavioral dimensions of learning.

Virtual Office Hours With a Purpose
Virtual office hours are offered during scheduled times when learners can attend optional sessions with a purpose. These sessions use synchronous technologies such as videoconferencing and include a specific topic to be addressed over the course of the session. It may include clarification of a course activity, demonstration of a process, feedback on the course interface, or review of team tasks. We have found that when virtual office hours have a purpose, learners tend to attend them. The setting can use a more relaxed and personalized structure in which learners access the course site from home once a week and suggest topics and activities for subsequent meetings. This type of social interaction creates social and emotional engagement and allows learner involvement in providing feedback about the course interface, offering suggestions for relevant modifications of course structure and layout, and asking for live feedback on course tasks.

End-of-Course Debriefing
When learners are highly involved in online learning experiences, they may have a difficult time disengaging at the end of the course. This has happened in our classes and the use of an end-of-course debriefing area has helped learners reflect on their learning process, share and process feelings with classmates, and bring about closure. Courses with high involvement may create challenges in letting go of emotional connections with classmates and the instructor. A debriefing discussion area can help learners detach from the course and move out of the flow.

Social Interactions for Learning Experience Design

Social interactions can serve as the medium for keeping learners motivated and intellectually curious to learn, emotionally connected and engaged in the course, and actively participating in the design and flow of the course. Social interactions are influenced by learning objectives, intimacy and immediacy, technology-mediated social context, social interaction attributes, and learner characteristics. Social interactions in the online environment depend on the copresence of all involved and must be intentionally designed to create memorable learning experiences. In this chapter, we have provided a process for designing social interactions and have suggested strategies for integrating social interactions into learning experience design. The instructor plays an important role in designing and managing social interactions. Setting the stage for a positive climate, creating emotional connections, using personalized communication, promoting deep learning, and building learner involvement into the course flow are strategies that help enhance learner motivation, engagement, and learning through social interactions.