Chapter 8
Promoting Inclusive, Deep Learning in Online Contexts

Developing the design, climate, social, and academic presence of instructors and students, as well as pedagogical activities both online and outside the web-based learning context, is a complex endeavor. This complexity and flexibility is necessary to developing an inclusive learning culture in web-based instructional contexts. We encourage faculty to start with simple formats and develop course complexity over time. Partnering with students, especially those from different cultures than the instructors own, is essential to this development.

Key Considerations in Developing Inclusive Online Learning Cultures

It is helpful for instructors to consider some principles or considerations that differ fundamentally from teaching in a face-to-face context. Over time, it becomes clear to many instructors that to develop deep learning experiences for and with students in web-based contexts, it is necessary to work from a different set of understandings. This can be a bit uncomfortable at first, perhaps like shifting from riding a bicycle to riding a horse. Good teaching in either a face-to-face or web-based context requires partnering with students, focusing on their learning more than on our teaching, and moving flexibly within the learning context. Yet in an online course, students seem more likely to "take off on their own" even when the instructor is highly involved and paying close attention. Once an instructor gets used to this, it can be a powerful instructional dynamic. Some key considerations when designing and facilitating web-based courses include the following.

F. Ke and A.F. Chávez, *Web-Based Teaching and Learning across Culture and Age*,
DOI 10.1007/978-1-4614-0863-5_8, © Springer Science+Business Media New York 2013

The Instructor Is Not the Primary Focus of Student Attention

With the exception of intermittent queries to the instructor for clarifications, students' primary focus within a web-based learning context is mostly on the content of the course, their own learning, and if designed accordingly, on their interactions with each other. In essence, web-based instructors must develop a kind of "egoless" sense of teaching, knowing that much of their role is as a behind the scenes learning designer, guide, and facilitator. The positive aspect of this reality is that focus is placed firmly on students and student learning. Even when faculty offer videotaped lectures or facilitate online class sessions, students seem to be less focused on faculty at the center of their learning than in face-to-face courses. This can be a bit disconcerting for some faculty who are used to and perhaps enjoy this dynamic in a face-to-face course. Some faculty will find this more comfortable while others find it less. Either way, it is a significant adjustment in conceptualizing learning design and facilitation.

An Active Caring Presence Is Key to Student Learning, Satisfaction, and Success

Even though instructors are not the primary focus of student attention in a web-based course, faculty social and academic presence is a critical factor in student learning, satisfaction, and success. Students, especially from more integrated cultures, benefit from instructors who overtly indicate their dedication to students through responsiveness to student queries and needs, complex design, and positive, encouraging interactions with students. There are many ways faculty can show an active and caring presence including responding quickly to e-mails and other kinds of student queries, joining in online discussions, developing an online course design that is "user-friendly" in part based on ongoing student input, offering a variety of kinds of learning experiences and assignments based in differing ways students learn, and finding ways to connect as human beings to students through sharing of professional and/or personal stories.

A Variety of Learning Experiences to Match a Diversity of Student Ways of Learning

Students learn and are most satisfied and successful in web-based courses that at least in some ways match their own natural or preferred ways of learning. Because any one web-based course has a variety of student learners, it is beneficial to develop courses that are inclusive of many ways of learning and doing. Students benefit most when a variety of assignment and evaluation types, online activities, connections to real-life situations or case studies, ways of reflecting and interacting, and

ways of disseminating knowledge are used over time within a course. For example, if all assignments are written or evaluations happen only through tests, certain types of learners (verbal and logical) have their ways of learning/doing privileged throughout the course, while others (such as visual or kinesthetic learners) do not. Over time, instructors can purposefully develop a wider variety of ways of presenting materials, facilitating interactions, and sequencing learning components. It can be very helpful to apply a culture- or diversity-related learning model such as the Cultural Constructs Teaching and Learning Model in Chap. 5 (Fig. 5.2) to consider and design a variety of types of learning activities.

Shaping an Integrative Cultural Epistemology of Teaching

Native, Hispano, and Mestizo American college students in this study reside firmly within an integrated cultural epistemology in regard to learning. It is likely that within the Germanic and English cultural origins of higher education and high prevalence of faculty from cultures based in these individuated cultural epistemologies, many domestic and international students of color are experiencing a disconnect between their own cultural epistemologies of learning and learning processes experienced in college courses (Brayboy & Maughan, 2009; Guido-DiBrito & Chávez, 2003; Ibarra, 2001; Rendón, 2009).

In most ways, integrated cultural epistemologies of learning were quite similar for Native, Hispano, and Mestizo students in this study. Students described their preferred learning processes as interconnected, contextual, involving mind/body/spirit/emotions, starting with doing/examples/storytelling, including broader conceptions of time and built-in ways to learn with and from peers, involving feeling cared about by the professor, and incorporating metaphorical and symbolic representations of course content.

There were some distinctive differences in how aspects of integrated epistemologies played out for Native and Hispano students. Native American students spoke of the importance of professors providing archival/historical ways to return to earlier course content, time for individual and collective reflection, visual means of learning, and learning from other students especially by reviewing their assignments:

> Brayboy and Maughan (2009) suggest that Native American peoples "…come to know things by living their lives and adding to a set of cumulative experiences that serve as guideposts for both individuals and communities over time. In other words, individuals live and enact their knowledge and, in the process, engage further in the process" (pp. 3–4).

To enhance learning and success across cultural epistemologies of students, we would encourage faculty to assess their own cultural constructs of learning and systematically observe how these cultural epistemologies play out in current pedagogy; relational dynamics with students; assumptions we make about students, education, and learning; and classroom climate. Faculty who teach might consider blending some of the suggestions for integrated cultural constructs of teaching and learning, not already present, into their teaching to shape more culturally inclusive

learning contexts with and for students who abide within integrated epistemologies of learning. We believe this would be beneficial to student learning among Native, Hispano, and Mestizo students as well as students from other integrated cultural origins. Though faculty from minority and mixed cultural origins in our study were more likely to include a mix of cultural epistemologies in their design, it can be a reverse challenge for some faculty to design from within their own integrated forms of teaching and learning to balance with individuated forms of pedagogy, interactions, and climate. Once again, applying the missing side or components of the cultural constructs model and other models can be very helpful in developing an inclusive learning culture online.

Find Ways to Overtly Show Care for Students

Integrated learners are situated within a highly relational cultural epistemology and often expect overt expressions of care from those around them. These students are likely to learn most effectively when they feel cared about by professors. If professors are comfortable, they can share stories of themselves in relation to the subject. Advising and office hours can be used to assist students with academic needs as well as show care. Hispano, Mestizo, and Native students are likely to interweave questions about academics with sharing about relationships, life struggles, etc. These connections are made for integrated learners as a natural part of communicating within an integrated worldview. This sharing may include spiritual, familial, tribal, financial, and health-related aspects affecting their education. Listening and referring students to appropriate campus offices is often enough to show care to students and encourage them to continue in their academics. Faculty can add a continuing practice to their teaching by taking a few moments in classes or in weekly messages/announcements throughout the semester to highlight various campus services which takes little time and goes a long way in communicating care to students. Providing information about services on campus to assist students with the many parts of their lives such as childcare, student counseling, recreational services, tutoring, and financial aid is a technique that allows faculty to signal empathy for students by acknowledging the realities of their lives while referring students to professionals on campus who are available to assist in these areas.

Offer Contextual Connections of Course Content Across Mind, Body, Spirit, and Emotions

Integrated learners feel a need to connect academic content to self, family, tribe, community, and the natural world as essential to their learning. This is often most helpful prior to processing abstract or theoretical components of the subject because it brings learning first into personal context for integrated learners. Most students in this study shared that their professors almost never related academic subjects

beyond an abstract, mind-oriented context to student home communities or their own lives and expressed concern about this as an oversight of teaching. Finding ways to make connections between academic subject areas and student lives is unique to each professor and course. Some professors may feel comfortable adding their own stories and examples of connections between themselves and academic content, discussing challenges they have faced in learning or offering examples of application in their professional experiences. Faculty may also consider facilitating connections between course content and aspects of students' lives. Some students in this study described projects or examples that helped them make connections to their own lives. One Native American student described a chemistry professor who had them collect soil samples from old mining sites on tribal lands to test toxicity and then discussed the implications for the health and well-being of tribal peoples, plant life, and wildlife in these areas. A Hispano American student described a nursing professor who had them develop health charts of their families and in their communities to assess health-care needs and patterns. A mechanical engineering professor discussed ways he moved away from what he described as an "engineering culture of teaching" that always starts with the abstract toward alternating sometimes starting with a real situation (such as a cup falling over or water system needs in rural area of South America) and processing toward abstract theory while other times starting with the traditional abstract theory to practice normative in the field. This professor described his pleasant surprise at how much better this worked in assisting all students to learn and to feel comfortable with and understand connections of theory and practice.

Learners from integrated cultural epistemological origins are likely to expect to explore knowledge through the mind, body, spirit, and emotions. These students may feel lost or limited if learning does not go beyond mind-only exploration. Instructors are encouraged to incorporate a variety of lenses and processes in learning throughout assignments, class activities, and interactions with students. Simply asking how students feel about what they are learning and exploring implications of what they are learning to their own lives and communities can often lead to these important connections for students. Often, the more abstract the discipline or subject, the more fear or discomfort students with origins in an integrated epistemology/worldview feel in learning. Instructor facilitation of discussions about what makes this uncomfortable or even frightening can lead to helpful understandings of the discipline or theory itself. Instructors who facilitate these kinds of conversations with students in classes often discover key components and dynamics that students are missing or not understanding and are able to develop instructional processes to enhance learning more effectively over time.

Incorporate a Variety of Integrated Pedagogical Elements: Questions of Time and Process

Students in this study often spoke of learning through visual and other nonverbal means and found it helpful when teachers used models, charts, drawings, symbols,

and other visual representations to explain concepts. Most found it difficult to learn when teaching consisted of only words in visual and audio forms. Instructors are encouraged over time to include visual aspects beyond words to enhance learning for all. Video, websites, student crafted objects, models, charts, photographs, art, and other visual images can assist in offering students more than one way to explore and understand a specific concept. Many integrated learners in this study also spoke of their use of metaphor or symbol as part of their process of making sense of what they were learning. Faculty can facilitate this type of processing among students by asking students to reflect between class sessions on a metaphor or representation of an idea, concept, or process and be ready to discuss or share in the next class. One of the authors for this book regularly has students in research courses describe and compare qualitative and quantitative research modes of inquiry through the use of metaphor, drawings, music, and poetry. The more abstract the concept, the more a variety of learning processes are essential to integrated learners. Even the act of having to figure things out enhances learning as does hearing from other students both about how they interpret or make sense of a theory or concept and about the process they went through to journey to this understanding.

Many integrated learners benefit from time to reflect on questions they might have for the instructor, time to think about a question asked by the instructor prior to having to respond, and time to reflect before class discussions. Even a moment can give students time to pull together a few thoughts, jot down notes, or sketch an idea. Online written discussions which often take place over a period of days in a web-based course facilitate this reflection naturally.

In online class sessions, faculty can offer a moment for students to jot down ideas prior to asking for input or pose questions for discussion prior to class time. Native American students often grow up in cultural environs where contemplation and reflection are a large part of everyday life (Covarrubias & Windchief, 2009). One Mestiza author's mother often encouraged her children to "go out and sit by the river and think about life" and found it difficult in formal educational contexts to respond without first being allowed quiet time to reflect. Instructors can also acknowledge this need in some learners by purposefully protecting time for reflection and encouraging external processors not to chat during these silent times. It can be very helpful to alternate time for reflection with time for immediate discussion so that internal and external processors benefit from both kinds of interactions.

Offering a variety of forms of evaluation is important to varying student conceptions of time and ways of thinking and learning. Timed tests may have disproportional effect on students from differing cultural backgrounds. Native, Hispano, and Mestizo students in this study spoke of the importance of time to reflect, sleep, dream, pray, and meditate to process effectively and suggested that professors have some timed and some take-home tests to create a more culturally inclusive balance of time in evaluation processes.

Offering choices in format for assignments and projects naturally facilitates a variety of ways students make sense of knowledge. Moving from always requiring a paper or exam for example to offering options for students to respond to an assignment in other formats such as PowerPoints, e-posters, website developments, and

video offers venues to incorporate many ways of presenting knowledge and increases complexity of many assignments. Asking students to share and discuss their own and others' projects online typically increases the caliber of projects and increases student learning by offering many ways to explore a concept or topic across a group of learners in a class. Over the course of a semester or quarter, students could be asked to do several different types of evaluative learning components (e.g., a paper, an exam, and a project presentation).

Learn from Each Other

Many integrated learners, especially among Hispanic students in this research project, spoke of a wish to learn from student peers through discussion, group activities, and reviewing peer assignments. This was explained as a process of comparing and contrasting their ideas with others bringing clarity to thinking. Many also spoke of their own feelings of responsibility to assisting other students to learn. Faculty can incorporate group processing activities in class to assist students in figuring out complex concepts, solving a problem, creating a solution, or processing a case study. In addition, online library e-reserves, web enhancement of courses, and other means can be applied to allow students to access each other's assignments for peer review, as readings for the class, or to share parts of an evolving group assignment.

One faculty member regularly has at least one set of student assignments become readings for the entire class by letting students know their projects/papers will be shared as a class reading and then uploading them after the due date to the course site. This faculty member and students in the class have remarked that sharing assignments increased the quality of student work; allowed everyone to learn from student efforts, insights, and thought; widened the diversity of knowledge accessible by class members; built self-esteem among individual students; and increased appreciation of peer knowledge.

Online asynchronous and synchronous discussions are another way to enhance knowledge and experience sharing among students in web-based courses. As noted earlier, written discussions allow more reflective, internal processing students the time to prepare and interact deeply with peers. Synchronous discussions in both written and audio forms may be more conducive to peer learning and processing among external processing students who benefit from immediate responses. Alternating synchronous and asynchronous discussions is likely to improve learning among all students. In many of the beginning math courses in this study, students were required to work online in discussion groups on problems and writing with the stated directive for students to work together during the week until everyone understood and could demonstrate math concepts. Students were charged with making sure their peers understood concepts throughout the semester. Since teaching others is an excellent way to increase one's own understanding, this learning technique enhances learning for everyone in a class.

Engage the Power of the Internet and Student Lives in the Learning Process

Web-based courses offer a unique opportunity and openness for connecting students to the world outside a specific course or collegiate institution. We encourage faculty to make use of available resources via the Internet in the form of links, educational tools and assessments, professionals' sites, and even social media. One astronomy professor in this study created a highly complex course complete with links to publicly available observatory sites around the world, astronomical charts, calculation tools, and star/planet gazing real-time observation links. Another professor, realizing the highly rural nature of her students, asked her students to suggest ways they might interact more effectively and began to have students upload discussion thoughts to a shared Twitter site from their cell phones. Some faculty in the study connected subject matter to student home communities by asking students regularly to make connections as well as having students develop community-based projects, papers, and research.

Design and Instructional Techniques for an Inclusive Online Learning Context

In this section, we would like to discuss specific design and instructional techniques for constructing an inclusive online instructional context. These techniques are both data-driven by the project findings on the learning or instructional contexts of the online courses examined and model-driven syntheses of prior research on e-learning design and our Online Instructional Context framework presented in Chap. 6.

Direct and Indirect Teaching Presence

It is typical for a designer or an instructor to plan and organize a traditional education experience via a series of instructional events, following a chronological order. Such an event-centered, time-sequenced teaching practice is challenged by the asynchronous nature of the online education setting. Moreover, the traditional approach of teaching via "stand-up presentation" and "hands-on mentoring" is difficult online. As such, the center of direct learning interaction, as observed in this project, seems to shift from an instructor (or trainer) in a traditional learning setting (as a sage on the stage or a guide on the side) to the *content* (information to be delivered) in an online setting. In all online courses examined, student-content interaction, or the design and presentation of the materials via diverse types of content objects, constitutes the most foundational element of the learning environment design. Actually, it is unusual that a novice instructor will simply upload all lecturing

and practice materials online and expect students to mainly learn by reading. Although some scholars have argued that high-quality content-student interaction can possibly replace content-instructor interaction (Anderson, 2003), our project findings indicate certain learner groups still need and value the personable, social presence of teaching and expect direct interaction with an instructor.

In this section, we propose three design solutions for constructing direct and indirect teaching presence (i.e., student-instructor interaction) in an online learning setting: (1) constructing both interactive and noninteractive teaching presence, (2) providing both individualized and protocolized learner management and support, and (3) projecting social, personable identity of the instructor into the course interface and communication.

Interactive and Noninteractive Teaching Presence

As observed, online instructors can integrate their direct instruction into the content objects to be distributed. They do so by videotaping face-to-face lecturing process and putting the video clips online as the learning materials. Some also create lecturing slides with voice-over explanation or podcasts with instructional narration. These lecturing materials, though noninteractive, manage to convey the academic presence of online instructors. In other terms, the student-content interaction process in the online learning setting is blended with the student-instructor interaction. Other instructors choose to construct more interactive teaching presence via text-based posts (e.g., creating a "virtual office" via discussion board or blog) and/or web conferencing. The interactive teaching presence can be conveyed across distance via text-, audio-, video-, and even 3D virtual-reality-based lecturing and mentoring.

Individualized and Protocolized Learner Management and Support

Individual support and learner management are especially challenging while highly sought in the online setting. Text-based asynchronous feedback for each student, via assignment grading and post commenting, is the most often observed learner support. The assignment feedback is not necessarily written and can be provided via adaptive audio comments (e.g., audio comments via the Adobe Professional or podcasting). Some instructors will also check the online activity log and other participation profiles to identify less engaged students and send each of them an individual e-mail.

The aforementioned learner management or support techniques, however, are not prompt and can be time and effort consuming. Online instructors may also provide individual help by phone and scheduled text chat or web conferencing. Still, adaptive synchronous support is rarely occurring mainly due to the differing, busy schedules of both instructor and online learners (with most of them part-time, nontraditional students). As such, a protocolized practice of learner management and

support can be planned as a complement. For example, semester-long or weekly advanced organizers, in a calendar view, can be presented and highlighted on the course website. Daily or weekly announcements can be posted and e-mailed to summarize the learning progress and remind students of major activities or events. In our project, a group of online instructors set up a "virtual-office" discussion forum and let students know that they would daily check this discussion forum to answer questions. This virtual office has been frequently mentioned and praised by their students.

Projection of a Personable Identity

Study findings indicated that a personable social presence of the online instructor helps to reinforce online learning satisfaction. Online instructors should take every chance to project their social presence and personable identity into the course content, the interface design, and daily student-instructional interactions. Instructors can share their personal experiences, stories, and perspectives within the learning materials and online posts to create more social presence. We also found that online courses with a personalized, visual-rich interface (e.g., comprising pictorial icons and content-topic-related image banners), in comparison to those with the default text-tense and file-folder-themed standard view, receive more positive reactions from students across ethnic and age groups. The instructor should also be mindful of the *netiquette* in e-mails, posts, and other written communications (e.g., greeting and addressing names, inserting smiley icons; Shea, 1994).

Efficiency of Online Facilitation

Online interaction and learning facilitation is found to be an essential element of online instruction. In our project, online instructors differ in their participation level: Some dominate or lead the interaction, some are guides on the side, and others are only monitoring. Their facilitation also differs in the timing: Some tend to only initiate the discussion and some will wait until the end to synthesize or wrap up the discussion, while others will participate all through the session. There are also multiple approaches to online facilitation: Some focus on appraising, some tend to post probes or inquiries, and some serve as experts who elaborate and explain concepts or synthesize across differing perspectives to provide a conclusion. Online instructors are using online interaction spaces as an instructional "microworld" to implement their teaching epistemologies and experiment with their regular teaching techniques. Our suggestion, as discussed in the previous chapter, is to provide multiplicity in the online facilitating practice and adapt the techniques dynamically based on learners' reactions during the semester.

Investment Analysis with Facilitation Techniques

Online facilitation, at the same time, is the most frequently mentioned time-consuming element of online instruction. An efficient practice of online facilitation involves a time or investment appraisal of diverse approaches or alternatives that serve the same design or instructional purpose. Like the needs and learner analysis, a time or investment analysis with a variety of viable online instructional techniques should be considered a component of the design analysis. This analysis process can be associated with the aforementioned cultural analysis. The technique chosen should be the one that is relatively efficient while not sacrificing its being learner adaptive (i.e., by addressing the learning preferences or needs that are based on entrenched cultural backgrounds and hence hard to challenge).

Orientation and User-Friendly Information Design

Other instructional practices that improve the efficiency of online facilitation include providing a good orientation at the beginning of the semester on the expected online learning process and increasing the usability of the online learning environment. Both practices will prepare online learners, especially those with a mismatched learning preference with the online learning culture, to be a better user of online education. Specifically, the instructors can set up a pre-course orientation module that covers generic guidance on learning how to learn in an online setting, communication on the awareness and respect for cross-cultural and intergenerational diversity, and specific descriptions of practical online learning strategies.

Information design is an often ignored, yet often effective online instructional technique. Specifically, a clear structure and an intuitive presentation of the online course content and activity items will enable adult learners to develop an overview of the semester-long learning flow and hence better plan their learning processes during the whole semester. It should also enable ease of navigation so that online learners will only use the least number of "clicks" to find the needed learning materials, tasks, and tools.

Blending Intrapersonal and Interpersonal Inquiries

In an online learning setting when the presence of the instructor becomes more indirect and less dominant, learners will play a more central and more self-regulated role in their learning processes. As observed, it is common for an online instructor to either design online learning as a correspondence-course-like, "content + support" process (Ke & Xie, 2009), or "put forth great efforts in grouping and pairing students" in different collaborative learning activities to honor the social view of learning (Ke & Carr-Chellman, 2006, p. 249). Our project findings imply that neither of the two instructional practices fully addresses the needs of a diversity of

interpersonal and intrapersonal learning orientations and preferences. Therefore, a desirable planning of online learning activities should consider a blending between intrapersonal and interpersonal inquiries. For example, the design of evaluation and learning tasks should emphasize or allow for both individual and team effort. The planning of the knowledge construction processes should provide opportunities for both solitary absorption (e.g., reading comprehension via a list of individual inquiry questions) and collaborative exploration (e.g., online discussions).

Toward an Inclusive Learning Culture

We believe that integrating multiple processes of learning, ways of interacting, and parts of the self are essential to effective teaching among integrated learners across cultures. Mestizo, Native, Hispano, and other minority and nontraditional students in this study were highly articulate in sharing their processes of learning and made many suggestions for faculty. It is our hope that faculty continue to innovate new techniques as they work with an increasingly diverse population of learners. By using a strengths-based approach to teaching and learning across cultures, faculty can garner a wide variety of ways of being, learning, knowing, and doing from both integrated and individuated cultures. This will allow student learners to benefit both from their own ways of learning and from others' ways of learning.

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