Applying Universal Design for Learning (UDL) Principles for Building Intentional Student-Faculty Relationships in an Online Graduate Program

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Author Biography

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Student engagement in learning and relationship building among faculty and students can be challenging in an online learning environment. Relatedness and positive engagement with other students and faculty foster positive learning outcomes. The intentional application of the Universal Design for Learning (UDL) engagement guidelines and checkpoints (CAST, 2018) with Chickering and Gamson's (1999) Seven Principles for Good Practice accommodates learner variability and promotes relationship-building experiences. In an online M.Ed. program, key elements and strategies of the UDL engagement guidelines and the Seven Principles are integrated in curriculum, teaching methods, and learning activities. Implications for practice related to the application of these relationship-building strategies and instructional design principles are discussed.

Introduction

Online learning in higher education presents challenges for faculty and student relationship-building, interpersonal reciprocity, and social support. Although synchronous learning with face-to-face Zoom sessions brings faculty and students together virtually, those spaces and experiences may not be intentionally designed to promote relationships among students and between faculty and students to facilitate learning and academic achievement (Wong & Liem, 2022). Use of technology and video interface platforms have allowed for live, face-to-face teaching and learning experiences and have created a necessity for faculty to leverage the technology by optimizing synchronous and asynchronous learning activities that motivate, engage, and support students. When students perceive a sense of relatedness, belonging, and social support with their instructors and among themselves, they develop and demonstrate self-efficacy and habits and behaviors that promote motivation and positive learning outcomes (Kim et al., 2018; Ryan & Deci, 2017). Building positive, effective relationships among faculty and students in an online graduate program is integral to student achievement and positive learning outcomes.

The Universal Design for Learning (UDL) (CAST, 2018) engagement principles can be utilized as a framework for promoting reciprocal, authentic, and supportive relationships. The design and implementation of an online Master of Education (M.Ed.) program will be examined through the alignment of the UDL engagement guidelines with Chickering and Gamson's (1999) Seven Principles for Good Practice. The M.Ed. program curriculum was designed with purposeful learning strategies that support engagement, effective relationship building, and ways to minimize learning barriers. There will be an overview of how an online M.Ed. program was intentionally designed to incorporate UDL engagement guidelines of recruiting interest, sustaining motivation and effort, and supporting self-regulation while building supportive student-faculty relationships. Implications for practice will include how the UDL engagement guidelines promote collaborative learning. These engagement guidelines, when applied in conjunction with Chickering and Gamson's (1999) Seven Principles, foster effective student-faculty relationships that enhance student learning. These seven principles directly address strengthening student-faculty relationships by addressing the following elements: encouraging contacts between faculty and students, developing student reciprocity, using active learning techniques, giving prompt feedback, emphasizing time on task, communicating high expectations, and respecting diverse talents and ways of learning (Chickering & Gamson, 1999; Cornelius-White, 2007). Aligned with the Seven Principles, UDL engagement strategies, derived from practice and application in an online M.Ed. environment, will be discussed as effective strategies for building positive student and faculty relationships.

M.Ed. Program Background

The online M.Ed. program resides at a small, private career-oriented university in New England. It is intentionally designed with robust student-faculty interactional opportunities with multiple touchpoints via Zoom synchronous group and individual sessions, video announcements, and personalized video formative feedback. More importantly, emotional support, caring, encouragement, and empathy have been conveyed during these ample opportunities for connection among students and faculty. This is paramount in an online environment to build strong student-faculty relationships that minimize threat, promote social support, and facilitate academic success. Many of the students in the M.Ed. program are early career public school teachers who are seeking to further cultivate their teaching practice through critical self-reflection and instructional design strategies that are inclusive and equitable for their students from diverse backgrounds.

Given the design of the online M.Ed. program with varied interactional opportunities that are synchronous and formative, this approach offers a multitude of experiences for relationship-rich educational practices in an online learning environment. Likewise, the application of the UDL engagement principle with its guidelines focused on collaboration, community building, minimizing threat, promoting coping strategies, and increasing student interest also seamlessly aligns with building relationship-rich education spaces. Integrated throughout the program, Gibb's (1998) reflective cycle model provides a solid foundation for describing, reflecting on, analyzing, and evaluating teaching experiences that provide opportunities to develop more effective relationships with students through the application of the UDL engagement guidelines.

Universal Design for Learning Framework

Adopted as the pedagogical model for the online M.Ed. program, Universal Design for Learning (CAST, 2018) is a framework that optimizes teaching and learning, based on scientific research, by removing barriers to learning and leveraging high impact strategies that provide intentional and flexible ways of presenting content, engaging students, and expressing learning. The defining characteristics of UDL include proactively designing and implementing flexible learning experiences, allowing for student voice and choice, front loading multiple ways of representing content, providing different modalities for students to express and act on their learning, incorporating mastery-oriented feedback, and leveraging technology to maximize accessibility.

The UDL principle of engagement focuses on the affective networks of the brain when engaging and motivating students to learn and provides instructional guidance with the implementation of cooperative learning activities. This principle has three guidelines: (a) recruiting interest, (b) sustaining effort and persistence, and (c) self-regulation. These three guidelines align with building effective student relationships in a variety of ways. Recruiting interest optimizes student choice and autonomy while minimizing threats and distractions during learning activities and assessments. Sustaining effort and persistence is best realized through collaborative learning activities and the provision of mastery-oriented feedback. Self-regulation focuses on developing student capacity for self-assessment, reflection, and personal coping skills to maintain attention and motivation with learning tasks. These UDL engagement guidelines and checkpoints operationalize applicable strategies for building rapport with students through cooperative learning activities and trust and care with supports for self-assessment and coping

strategies. The aforementioned UDL Engagement guidelines and corresponding checkpoints are listed below in Table 1.

Table 1. UDL Engagement Guidelines and Checkpoints (CAST, 2018)

UDL Engagement Guidelines	UDL Engagement Checkpoints
Recruiting interest	• Optimize individual choice and autonomy • Optimize relevance, value, and authenticity • Minimize threats and distractions
Sustaining effort and persistence	• Heighten salience of goals and objectives • Vary demands and resources to optimize challenge • Foster collaboration and community • Increase mastery-oriented feedback
Self-Regulation	• Promote expectations and beliefs that optimize motivation • Facilitate personal coping skills and strategies • Develop self-assessment and reflection

In a flipped learning model with synchronous class sessions and asynchronous discussions, there are ample opportunities for instructors to engage with students in a positive, safe climate that encourages exploration with minimal risks or threats while guiding students with self-regulation strategies and structuring options for choice and autonomy during active learning experiences and constructing assignments. When instructors engage with students in small group or one-to-one sessions to convey mastery-oriented feedback and strategies, this helps students to maintain motivation and persistence. They also learn how to self-assess and reflect on their academic performance to meet the learning goals. Furthermore, when students move from individual learning to interactive and relational learning with their instructors and peers, there is a positive relationship

between engagement with instructors and students and academic achievement and confidence in their abilities (Wong & Liem, 2022).

In an online learning environment, the UDL engagement guidelines and checkpoints provide a roadmap for instructors to create those virtual spaces to be low threat with appropriate scaffolding, ample opportunities to engage in authentic active learning activities, and guidance with how to regulate emotionality and attention while learning how to apply metacognitive skills to develop and apply personalized learning strategies (Nave, 2020). The instructional design of the online M.Ed. program also incorporates Chickering and Gamson's (1999) well-established best practice principles in higher education that were developed for in-person teaching and learning. These principles inform the practices and activities that build effective student-faculty relationships in the online M.Ed. program.

Seven Principles for Good Practice in Higher Education

First conceptualized through an extensive literature review of educational research in 1987, Chickering and Gamson (1999) outline seven principles that foster positive, effective relationships among student and faculty to improve the quality of undergraduate education. Those seven principles are: (a) encourages student-faculty contact, (b) encourages cooperation among students, (c) encourages active learning, (d) gives prompt feedback, (e) emphasizes time on task, (f) communicates high expectations, and (g) respects diverse talents and ways of learning. In an online learning environment, multiple touchpoints between faculty and students are critically important when developing rapport and relationship-building, providing personalized social support, and engendering a sense of belonging and mattering.

To this aim, the synchronous class sessions are face-to-face spaces for collaborative learning and student-to-student interactions during small and large group activities and discussions. Active learning and prompt feedback are also realized during these synchronous class sessions and facilitated by the instructor. Communicating clear and challenging expectations and providing guidance with time on task, or self-regulation skills, are aligned with the UDL engagement guidelines. These practices are embedded in the course design where learning goals are aligned with assignment expectations and strategies and tips for maintaining motivation and focus are included in short instructional videos and during synchronous class sessions. Although these seven principles have been applied to technology-based learning (Chickering & Ehrmann, 1996), there is

an opportunity to examine and discuss how the framework applies to online synchronous and asynchronous learning environments (Aubaugh & Hornick, 2006). Therefore, the applicability of the Seven Principles framework in online learning can be facilitated by the implementation of the UDL engagement guidelines and checkpoints.

Mapping UDL onto the Seven Principles

The alignment between the UDL engagement guidelines with the Seven Principles seems like a natural configuration when designing and implementing relationship-rich online teaching and learning environments. The UDL engagement guidelines and checkpoints can serve as the strategies for enacting the Seven Principles to build positive, effective relationships among faculty and students. Therefore, the UDL engagement checkpoints related to recruiting interest, sustaining effort and persistence, and self-regulation can be mapped onto the Seven Principles. As depicted in Table 2 below, those relevant UDL engagement guidelines are aligned with each of the Seven Principles.

Table 2. Mapping UDL onto the Seven Principles

UDL Engagement Guidelines (CAST, 2018)	Seven Principles (Chicerking & Gamison, 199)
Develop self-assessment and reflection	Faculty and student contact
Foster collaboration and community	Collaborative Learning
Optimize relevance, value, and authenticity	Active learning
Increase mastery-oriented feedback	Prompt feedback
Facilitate personal coping skills and strategies	Time on task
Promote expectations that optimize motivation	High expectations
Vary demands and resources to optimize challenge	Diverse learners

Faculty and student contact can be characterized as reciprocal touchpoints when faculty and students communicate through discussion boards, email, face-to-face interactions (synchronous), video announcements, video or text assessment feedback, and one-to-one Zoom ad hoc and office-hour sessions. When the UDL

engagement checkpoint, develop self-assessment and reflection (under the self-regulation guideline), maps onto this principle of faculty-student contact, this UDL strategy of helping student learn to self-assess and self-reflect on their learning is a capacity building experience that not only facilitates rapport and interpersonal exchanges between faculty and students, but promotes skill development with the students to become more expert and independent learners.

Collaborative learning is an active learning modality that encourages students to provide one another feedback, guidance, and motivation when problem-solving or completing a learning task cooperatively. During synchronous class sessions, small group activities, pair-shares, peer reviews, presentations with respondent feedback, and jig-saw groups, to name a few, provide ample cooperative learning opportunities for students to engage with and learn from one another. Consistent with the UDL framework, engaging students through collaborative learning activities and other community building practices, such as small group assignments outside of synchronous class sessions, fosters community, social support, trust, and wellbeing among students (Cornelius-White, 2007; Nave, 2020).

Active learning involves tasks or activities that activate, excite, and stimulate student learning individually and collaboratively when those tasks are designed in a personalized and meaningful way. The UDL engagement checkpoint, optimize relevance, value, and authenticity, can be realized for all students with a variety of learning activities. Some of these activities may include personal or preferred topics of inquiry for assignments, self-reflection on professional practice exercises, and culturally responsive activities that are holistic and allow for intersectional identities to be shared in synchronous class sessions or discussion boards.

Prompt feedback and mastery-oriented feedback are inextricably linked when providing student feedback (i.e., faculty-student, student-student). Feedback should be delivered in a timely manner to ensure relevancy, immediacy, and opportunity for students to integrate the feedback for the next assignment or learning activity. Similarly, feedback that is mastery-oriented focuses on performance expectations and concrete steps for improvement to meet those standards. That is, feedback that is not evaluative, but formative in helping the student to meet the challenging expectations.

Time on task is an executive functioning skill that involves attention, motivation, time estimation, and goal-directness. The UDL engagement checkpoint of facilitating personal coping skills and strategies is relationship-ship insofar that

faculty can work closely with individual students on identifying and applying effective time management strategies and how to manage stress and workload pressures. Also, faculty can embed scaffolding (e.g., assignment templates, time estimates, graphic organizers) that assists students with completing assignments and meeting the weekly task demands.

High, or challenging, expectations are integral to supporting student motivation and persistence and conveying care and confidence with students. Promoting expectations and beliefs that optimize motivation aligns with high expectations as a method for keeping those task expectations and belief in students' abilities in the forefront. Frequent and incremental reminders of those high expectations and learning outcomes may include visual and textual cues, links, and infographics. These can be posted in asynchronous modules in the Learning Management System (LMS) and provided verbally and via presentation slides during synchronous class sessions.

Encouraging diverse learners can best be addressed with the UDL strategy for varying demands and resources to optimize challenge in multiple ways. Culturally relevant preferences and options for expressing diverse perspectives, backgrounds, and identities in learning activities and assignments can engage students with learning variabilities and from diverse experiences. Flexible options for students to challenge themselves and express and act on their learning may include videos, presentations, infographics, other creative expressions, or a combination of these modalities. The provision of scaffolded resources and interactive materials that are culturally and linguistically diverse can help students to access content and engage in learning individually or with their peers.

Student Perspectives of Relationship-Building Learning

To illustrate the application of the UDL engagement guidelines and the Seven Principles in an online M.Ed. program, current and former students have expressed comments highlighting how those strategies have helped them during their experience in the program. Each section of student commentary is informally coded with the corresponding UDL engagement guidelines and the Seven Principles.

Kathy stated that she benefited from the collaborative learning experiences (Seven Principles) in the M.Ed. program, especially during the synchronous class sessions, and support from her peers that helped with persisting and maintaining motivation (UDL engagement guideline) throughout the program:

Being a part of the M.Ed. program has been an absolute joy because of the relationships formed within our cohort. I feel that the cohort members and I have an incredibly strong bond for people who have only known each other for only seven months, where it feels as though I can be myself, ask questions without hesitation, and learn in an environment that everyone wants to help each other be successful.

Ashley noted in her comments that she appreciated the asynchronous faculty-student contact (Seven Principles) and the optimization of relevance, value, and authenticity (UDL engagement guideline) with faculty and peer feedback and support:

I love the video feedback from [instructor]. It is encouraging and helpful with corrective feedback. I really like the weekly announcement videos that let us know what is happening for the week and which assignments are due. I appreciate all of your [cohort] support, and I feel like I belong to this program.

Margie was particularly pleased with the opportunities to develop self-assessment and reflection (UDL engagement guideline) on her own professional practice and the active learning experiences (Seven Principles) that encouraged to apply content in her work setting:

Recognizing and honing in on the positives in my organization. The importance of reflection. Learning to analyze and reflect on my practices in a much deeper way. Looking at my own leaders and reflecting on my own practice based on their actions. The different perspectives from the course and how they apply to my professional work.

In her reflection, Nickie stated how valuable scaffolded assignments helped her with sustaining effort and persistence (UDL engagement guideline) while the social support from her peers in the collaborative learning sessions (Seven Principles) ameliorated stressors in her life:

I am grateful for my fellow classmates and my colleague, Jess [in the cohort]. We have been collaborating all semester and it has been helpful to go through this with her and all of you. I am most grateful for all of you [cohort] and for all of the support throughout the chaos of this year. I appreciate for meeting and collaborating with everyone and have learned a lot from everyone. And the assignments broken into smaller parts with class time to discuss them is very helpful.

With all four student perspectives, the integration of the UDL engagement guidelines with Chickering and Gamson's (1999) Seven Principles were evident in their feedback based on their learning experiences in an online M.Ed. program. For these students, the UDL strategies and Seven Principles embedded in the M.Ed. courses facilitated relationship-building among the faculty and students that promoted a sense of belonging, social support, and relevant application of course content to professional practice.

Discussion and Implications

Learning is an affective and relational human experience that requires authenticity, relevance, collaboration, and support among teachers and learners. Given the inherent challenges with student engagement and relationship-building in online learning environments, intentionally designed and authentically embedded engagement strategies, as detailed in the UDL engagement guidelines, facilitate effective relationships and rapport between faculty and students and align with Chickering and Gamson's (1999) best practices in higher education teaching and learning. The relationship-building activities are necessary for increasing and maintaining student engagement in learning and creating interpersonal opportunities for students to receive social support from one another and their instructors (Anderson & Carta-Falsa, 2002). Their learning can be supported, guided, and optimized through those UDL engagement strategies that motivate them to persist and achieve. Those strategies and applications that promote faculty and student relationships and facilitate student engagement align with the UDL engagement guidelines and the Seven Principles.

Collaborative learning activities might include think-pair-shares, small group activities (e.g., Frayer activities), and short presentations with assigned respondent feedback. All of which encourage students to engage with one another and learn to evaluate and trust each other's feedback on formative and summative assignments. Faculty check-ins at the beginning of the synchronous class session, such as a Zoom poll, entry ticket questions, or response question using a shared annotation tool (e.g., Zoom whiteboard), build rapport with students, allow faculty to take a temperature check on students' social-emotional wellbeing, and engage students before any content is presented.

To assist with self-regulation and persistence, it would behoove instructors to scaffold assignments into small parts or stages, provide an assignment template, offer guiding questions upon which students can build, and use concept maps for assignment completion. Not only do these embedded strategies help students

with task completion and acquisition of learning, but they also appreciate faculty's empathy, care, and tangible support with their learning and achievement.

Students should see the value, relevancy, and application of their learning, as it is designed, and be able to integrate their interests, diverse characteristics, and preferences into the learning space with their peers and instructors. To support student engagement and relatedness, instructors should provide choices for how to complete an assignment, allow for personal topics or interests for assignment completion, and involve students in setting their own goals in the course. These options for students provide rich opportunities for faculty and students to learn about everyone's cultural backgrounds, personalized interests, and preferences for learning.

Mastery-oriented feedback is constructive and encouraging among students and between students and instructors. It cultivates trusting and effective relationships and contributes to persistence in effort and self-efficacy. Asynchronous and synchronous learning activities can include student peer review workshops and activities, one-to-one teacher-student check-ins outside of synchronous class sessions, video feedback and commentary between instructor and students, and jig-saw learning activities for students to be experts and teach each other with peer feedback.

In summary, these approaches and strategies are aligned with the UDL engagement guidelines and Chickering and Gamson's (1999) Seven Principles that help to support and further develop students' autonomy, sense of belonging, relatedness, and efficacy. These practices are inclusive and capacity building by allowing for proactive instructional design and methods that center student and faculty relationships in the teaching and learning process and facilitate student engagement in online learning.

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