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The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning

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Effective online teaching and learning requires a carefully designed classroom that promotes student engagement with faculty, peers and course content. This research included an investigation of the importance of *faculty–student communication and collaboration*; *student–student communication and collaboration*; *active learning techniques*; *prompt feedback*; *appropriate time for tasks*; *high performance expectations*; and *respect for diverse learning styles (preferences)* (Chickering and Ehrmann 1996) to faculty in their online teaching and to alumni in their online learning. The participants were 14 college faculty and 111 alumni, from the same graduate program. A 45-item Likert survey and two open-ended questions were presented to the participants to explore the important factors contributing to their online teaching and learning. The results demonstrated that holding students to high standards of performance, academic honesty and professional conduct was the most important factor to both faculty in their online teaching and alumni in their online learning. Additionally, alumni valued engagement with their faculty more than engagement with other students or course content. Students need an online instructor who is organised and communicative in the online classroom, and faculty need a solidly designed online classroom, with engaged students who are timely in their work. An analysis of the findings with specific application to online teaching and learning is presented in this article.

Keywords: effective online teaching; best practices; active learning; diverse learning; Seven Principles of Good Practice

Introduction

With online classes becoming increasingly popular, teaching–learning strategies must be carefully constructed to provide students with a quality learning experience and to compensate for the distance associated with space and time (Gallien and Oomen-Early 2008; Moore 1997). These strategies should encourage student-to-instructor, student-to-student and student-to-content engagements (Moore 1993). To be effective, faculty should create a safe learning environment built on trust and communication (Mayne and Wu 2011), and a sense of social presence where students feel connected to their faculty, colleagues and the online classroom (Plante and Asselin 2014). Additionally, the online class should encourage students to explore and engage in content as a group of learners that include experiences in and out of the classroom (Pallof and Pratt 2007).

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In 1987, Chickering and Gamson proposed the model, *Seven Principles of Good Practice*, to facilitate engagement in the face-to-face or on-ground classroom. In 1996, Chickering and Ehrmann, appreciating the demand for online learning, expanded this constructivist model for online environments. Their framework has become a reference for best practice in online design and instruction (Bangert 2004). Collaboration, engagement and differentiation are the overarching themes of this model that include seven principles: *Faculty–student communication and collaboration*; *student–student communication and collaboration*; *active learning techniques*; *prompt feedback*; *appropriate time for tasks*; *high performance expectations*; and *respect for diverse learning styles (reframed in this context as 'preferences')*.

Faculty–student communication creates a sense of online community that is initiated through emails, introductions, faculty and student biographies, and photos. Jones *et al*. (2009) found that video introductions by faculty and students, emails and video calls, online chats and discussion boards improved students' experiences in the online class despite differences in language, culture and time zone. In Martin and Bolliger's (2018) study, students found icebreakers used at the beginning of the term to be a highly beneficial engagement activity. Prompt communication and feedback by faculty also engages students and compensates the distance associated with online learning (Moore 1997). According to Lewis and Abdul-Hamid's (2006) qualitative study with 30 online instructors, exemplar instructors provide individual student feedback throughout every stage of the course and contact students who are absent through reminder emails and messages. Additionally, timely instructor feedback promotes student motivation and course satisfaction (Dahalan *et al*. 2013) and cultivates positive connections with the University (Lewis and Abdul-Hamid 2006). Communication can be achieved multidimensionally between faculty and students and includes course-specific and informal dialogues. Lewis and Abdul-Hamid (2006) identified a faculty member in their study who developed a 'Harmony House' where informal chatting via the classroom café enhanced the communication among peers and faculty (p. 88). Sitzman and Lener (2010) investigated students' perceptions of online faculty. The students identified these caring behaviours as important for their learning: faculty with an empathetic presence, who are experts in the field, and are fully engaged in the class content.

Student–student communication and collaboration provides opportunities for students to share experiences, resources and ideas, and engage in learning as a community (Bolliger and Martin 2018). According to Winkler-Prins *et al*. (2007), the online classroom should be constructed and facilitated in such a way to avoid feelings of isolation and loneliness. Interaction can be facilitated through the use of carefully constructed written discussions and the use of student-generated audio and video responses (Gedike, Kiraz and Ozden 2013). These are means to promote connectivity with course content and fellow colleagues (Bolliger and Des Armier 2013). According to Berge (2002), group work instead of solo activity is recommended to prevent isolation and encourage critical thinking and application of course content. 'Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated' (Johnson 2014, p. 43).

High performance expectations, respect for diverse learning preferences, active learning techniques and appropriate time for tasks are necessary for student engagement in class content. According to Johnson (2014), high expectations are important for all students, from the low motivated and the ill-prepared to the high performing. Instructors should direct students to the course syllabus and course module where

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class expectations, goals and objectives are clearly outlined, and then hold students to those standards (Lewis and Abdul-Hamid 2006). Young (2006) surveyed 199 online students and many commented on the importance of instructors placing high standards in online courses. Additionally, students stated that accountability and responsibility to class expectations and coursework made the course higher quality. Students desired to demonstrate proficiency, increase their knowledge of the topic and be challenged in the process.

Students excel in the online classroom when allowed to engage and demonstrate ability with activities that match their learning preferences (Johnson 2014). Respect for diverse learning preferences integrates direct experiences outside the classroom that include shadowing and interning, and indirect experiences in the classroom that include case study development, simulations and stories (Storytorials; Fink 2013). Online classes should not merely be a repository of information or consist solely of the 'Holy Trinity of online instruction' (Craig 2015, para 8), with a repeat of the lecture, discussion group and weekly assignment. Respect of learning preferences also includes online orientation and technical assistance so that students who feel unequipped can work smoothly and without barriers (Çakýroðlu 2014). According to White, Brown and Sugar (2007), the success of their department's transition to online learning began with technology resources and orientation sessions for new students. Students also had continuous access to a technical assistant.

Active learning encourages students to engage in the course content with their colleagues. It is 'learning by doing' (Bolliger and Des Armier 2013, p. 201). Learning by doing replaces passive listening, memorising and regurgitating answers with interactive discussions, reflections and relative applications (Johnson 2014). According to Hove and Corcoran (2008), interactive multimedia is one means of promoting active learning that makes the course effective and alive. In their study with online students, students who had unlimited access to lecture video presentations earned higher grades than students who did not have the same access. The availability of such presentations provides students with study aids and offers a measure of control over their learning process. In another study by Lewis and Abdul-Hamid (2006), an innovative online teacher incorporated contemporary news articles and videos to facilitate active learning. Another instructor invited guest speakers to her online class for synchronous chats to facilitate student learning and engagement about the subject matter. Berge (2002) encourages authentic projects and problem-solving situations through the use of group projects, reflection assignments and interactive discussions. Gedik, Kiraz and Ozden (2013) state that authentic, coherent, meaningful and purposeful activities immerse learners in real-life scenarios. This develops new knowledge that relates to students' prior knowledge and experiences.

Chickering and Ehrmann (1996) stated, 'Time plus energy equals learning. Learning to use one's time well is critical for students and professionals alike' (p. 4). The online classroom must be designed effectively, and directions for student navigation must be included to preserve time for learning (Fish and Wickersham 2009). Additionally, course expectations should be clearly listed in the syllabus and online classroom and include the deadlines and responsibilities of the student and the instructor of the course (Berge 2002). Students must have well-written instructions for all coursework to ensure they are on pace for successful completion (Fish and Wickersham 2009).

According to Hathaway (2014), the *Seven Principles of Good Practice* (Chickering and Erhmann 1996) focuses on student engagement and is useful for creating active online learning and understanding. Bali (2014) stated that these principles continue to

be acceptable to enhance online learning and can also be used to evaluate university courses. In 2012, this author, the director and faculty member of a 36-unit master's degree program collaborated with the universities' 'Office of Innovative Teaching and Technology (ITT)' to create a 100% online programme. Prior to this year, 25% of the programme was instructed online. The ITT designers integrated the constructs of the *Seven Principles of Good Practice* (Chickering and Erhmann 1996) in the online classes. They also worked with the faculty in this master's programme to develop the following online curriculum: Two additional core classes (seminar in professional literature, and curriculum theory and design); five additional content classes (coaching, teaching, exercise science, administration and sociology); and two capstone classes. In this research, the author-director evaluated the online learning preferences from the graduating students from this master's programme. The author also explored the online teaching preferences from the faculty in this master's programme, because research is lacking within the faculty population. Since the online master's programme was designed using Chickering and Ehrmann's (1996) online model as a framework, the author used this model as the construct for investigation. The purpose of this study was two-fold: To investigate alumni perceptions of the *Seven Principles of Online Learning* to their online learning in this master's programme, and to investigate faculty perceptions of the *Seven Principles of Online Learning* to their online teaching in this master's programme. The research questions were: (1) How important are each of the principles of Chickering and Ehrmann's (1996) online model for online learning? Which factors positively and negatively influence alumni in their online learning? (2) How important are each of the principles of Chickering and Ehrmann's (1996) online model for online teaching? Which factors positively and negatively influence faculty in their online teaching?

In a previous study, Schwiebert (2012) surveyed online community students to determine the importance of each of Chickering and Ehrmann's (1996) *Seven Principles of Online Learning*. He developed 35 Likert scale statements using a 5-point scale: (1) completely unimportant to my online learning, (2) mostly unimportant, (3) somewhat important, (4) fairly important and (5) critically important to my online learning. According to Leedy and Ormrod (2019), rating scales are useful to quantify participant attitudes or perceptions on a specific topic. However, it is limited because the researcher is unable to gather clarifying responses. A Likert scale survey was implemented in this research to determine the importance of each of the *Seven Principles of Online Learning* for alumni and faculty. Additionally, two open-ended questions were posed so the participants could elaborate and qualify their responses to the factors that influenced their online learning and teaching. Schweibert's (2012) publication did not include statistical information for the survey, and therefore, the initial step in this research was to conduct a reliability study.

Methods

Participants and preliminary analysis

The research was approved by the University's IRB board. Participants for this preliminary analysis were currently enrolled students in the author-director's online graduate programme. They were informed of confidentiality, the option to decline participation without penalty and the ability to withdraw from the study as needed. One hundred students were invited to complete two surveys and 35 agreed. The first

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survey was Schweibert's (2012) *Seven Principles of Online Learning,* consisting of 35 Likert scale statements. A reliability analysis was administered on the five Likert scale items in each of these seven principles. Hair *et al*. (2010) recommend reliability values to be a minimum of 0.60 when used in exploratory surveys, such as the one used in this study. The results for each principle in this first survey were as follows: Principle 1 ($\alpha = 0.60$), Principle 2 ($\alpha = 0.76$), Principle 3 ($\alpha = 0.69$), Principle 4 ($\alpha = 0.75$), Principle 5 ($\alpha = 0.64$), Principle 6 ($\alpha = 0.86$) and Principle 7 ($\alpha = 0.74$). The author used this survey as the basis for the new research and provided an additional 11 statements because they were pertinent to the design and teaching protocols of the 36-unit graduate programme.

A reliability analysis was again administered on the results from the second survey. Five additional Likert scale items were added to the first principle, *faculty–student communication.* The reliability analysis, comprised of 10 Likert scale items, revealed an improvement in reliability ($\alpha = 0.87$), with all items being acceptably correlated with each other in this principle ($r > 0.30$). Therefore, all 10 items were used in the survey of the proposed research. Two additional Likert scale items were added to the second principle, *student–student communication and collaboration.* The reliability analysis on this second principle, now comprised of seven Likert scale items, showed this updated survey to be acceptable for reliability ($\alpha = 0.74$), with all items being acceptably correlated with each other in this principle ($r > 0.30$). These seven Likert scale statements were used in the survey of the proposed research. The reliability analysis on the third principle, *active learning techniques*, now comprised of six Likert scale items, showed this updated survey to improve in reliability ($\alpha = 0.73$), with all items being acceptably correlated with each other in this principle ($r > 0.30$). Again, all six Likert scale items were used in the survey of the proposed research. The reliability analysis on the fourth principle, *prompt feedback,* now contained six Likert scale items. The alpha score was acceptable ($\alpha = 0.70$). All items were acceptably correlated with each other in this principle ($r > 0.30$), and all items were used in the final survey of the proposed research as the alpha score reduced if removed. The reliability analysis on the fifth principle, *appropriate time for tasks,* included six items. The reliability score decreased to $\alpha = 0.58$ in this second analysis. The added question did not show correlation with the other items ($r < 0.30$), and Cronbach's alpha improved to the original score of $\alpha = 0.61$ if the item was deleted, so this question was removed in the proposed research. The reliability analysis on the sixth principle, *high performance expectations,* included six items and had the same reliability score as the first survey ($\alpha = 0.86$). All items were acceptably correlated with each other in this principle ($r > 0.30$) and were used in the proposed research. The reliability analysis on the seventh principle, *respect for diverse learning styles,* included the same five Likert scale items as the first survey. The results showed a reliability score of $\alpha = 0.79$, with all items acceptably correlated with each other in this principle ($r > 0.30$). All items were used in the proposed research (see Appendix for both surveys).

Participants and method

Two sets of participants were recruited for the research. The first group of participants were full-time and adjunct faculty, currently teaching in the author-director's online programme. They completed the 45-item online survey with the following five response options: (1) completely unimportant to my online teaching, (2) mostly

unimportant, (3) somewhat important, (4) fairly important and (5) critically important to my online teaching. There were two open-ended questions at the end of the survey that prompted the faculty to identify factors that positively and negatively influenced their online teaching. The second group of participants were alumni from the same online graduate programme where the faculty currently teach. The same 45-item survey was administered to these alumni, but with the following five response options: (1) completely unimportant to my online learning, (2) mostly unimportant, (3) somewhat important, (4) fairly important and (5) critically important to my online learning. Again, there were two open-ended questions at the end of the survey that prompted the alumni to identify factors that positively and negatively influenced their online learning

Results

Fourteen full-time and adjunct university faculty who teach online in the same graduate programme were requested to complete the online survey, and 12 agreed, for an 86% response rate. There were six male (50%) and six female (50%) participants. The online teaching experiences were as follows: six (50%) participants had 1–3 years of online teaching experience; five (42%) participants had 4–6 years of online teaching experience and one (8%) participant had 7–9 years of online teaching experience.

The second group of participants were alumni who graduated from the same online programme where the faculty currently teach. An email was sent to 358 alumni who graduated between 2009 and 2017 inviting them to participate in the research. A total of 111 respondents successfully completed the online survey representing a 31% response rate. There were 66 male (59%) and 45 female (41%) alumni participants. The programme is offered as a hybrid (75% face-to-face and 25% online) and 100% online. There were 43 alumni (39%) who entered the programme before 2013, which meant they completed 25% of their coursework online, and 68 (61%) alumni who entered the programme after 2013, which meant they completed 25%–100% of their coursework online. There were 11 (8%) respondents who earned 3.0–3.5 grade point average (GPA) in the master's programme and 100 (91%) respondents who earned 3.5–4.0 GPA.

An analysis of the Likert scale survey responses was administered including the median (Mdn), interquartile range (IQR), frequency and percentage for each of the 45 survey items. The responses from the two open-ended questions regarding the factors that positively and negatively influenced online teaching and learning were investigated using line-by-line coding (Glaser 1978) followed by open coding to identify the themes from the individual data (Agar 1996). These themes were then correlated with the associated practice in Chickering and Ehrmann's (1996) *Seven Principles for Online Learning*.

High performance expectations consisted of six Likert scale items and included high standards of academic and personal integrity; clearly stated course objectives in the syllabus and the online class; and the use of rubrics, templates and exemplars to ensure understanding. The six items in this principle received the highest score for both the faculty (Mdn = 5; IQR 0 or 1) and alumni (Mdn = 5; IQR 0 or 1). From the entire 45-item survey, this statement, *instructors hold students to high standards of performance, academic honesty and professional conduct,* received the highest response from faculty and alumni (Mdn = 5; IQR = 0), with 12 (100%) faculty and 92 (82%) alumni identifying it as critical for their teaching and learning. The alumni identified

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several ways an online course can support high performance. Positive factors that influenced their online learning included: 'clear and structured assignment descriptions', 'clear expectations and rubrics' and a 'class schedule of due dates'. These responses were consistent with those of a faculty member who stated, 'I like to utilize templates, rubrics and sample papers to help students to thoroughly understand the expectations'. On the contrary, two alumni identified the following as negative factors to their online learning: 'lack of information on the syllabus or rubric for paper, especially since you cannot get ahold of your professor as quickly' and a 'lack of accountability' (see Table 1 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Respect for diverse learning preferences consisted of five Likert scale items and included various means of classroom engagement and assessment, orientation for the learning management system (LMS) and student autonomy to select paper topics and post diverse responses. This principle received the second highest combined score for faculty and alumni (Mdn = 4 or 5, IQR = 0 or 1). Within this principle, there were three items that received similar responses from both participant groups. The first item, *throughout the term there are multiple ways for students to demonstrate their knowledge of the subject that includes tests, writing assignments and discussions,* showed as being critically to fairly important for faculty in their online teaching (Mdn = 5, IQR = 1) and alumni in their online learning (Mdn = 5, IQR = 1). The second item, *students are allowed and encouraged to share opinions and experiences that may be different from the instructor,* demonstrated as being critically to fairly important for faculty in their online teaching (Mdn = 5, IQR = 0) and alumni in their online learning (Mdn = 5, IQR = 1). The third item, *instructors are willing to adapt the course to match the students' needs,* revealed as being fairly to critically important but with lower median scores (Faculty and Alumni: Mdn = 4, IQR = 1).

For faculty, *orientation sessions and technical help are provided for students who are not as comfortable with computers* was more important in their online teaching (Mdn = 5, IQR = 1) than it was for alumni in their online learning (Mdn = 4,

Table 1. High performance expectations.

Statement	Alumni				Faculty				
	M	IQR	Critical	Fairly	*M*	IQR	Critical	Fairly	Somewhat
Objectives in syllabus	5	1	79 (71%)	23 (20%)	5	0	10 (83%)	2 (17%)	---
Objectives in class	5	1	66 (59%)	31 (28%)	5	0	10 (84%)	1 (17%)	---
Rubrics for papers	5	0	92 (82%)	16 (14%)	5	0	11 (92%)	---	1 (8%)
Rubrics for discussions	5	1	68 (61%)	26 (23%)	5	0	9 (75%)	---	2 (17%)
High performance expectations	5	0	92 (82%)	15 (13%)	5	0	12 (100%)	---	---
Templates, exemplars	5	1	76 (68%)	23 (25%)	5	1	8 (67%)	4 (33%)	---

M, Median; IQR, interquartile range.

IQR = 1). However, a few alumni identified that 'not understanding how to access information (on-line school library)' and 'not knowing how to use certain online technologies that need to be used' were negative factors to their online learning. In the following qualitative responses, faculty members noted the impact of class design, the students' inability to navigate technology and the accessibility of technical support on their online teaching. One faculty member stated, 'both the student and the instructor need to be able to navigate technology. Depending on the LMS, this can have its own challenges on student success and the opportunity to teach a course to the best of my ability'. Another faculty member stated the following as a challenge to teaching, 'When the online module we are using has too many glitches and/or issues that need revising in the middle of the term'. However, a faculty member emphasised that 'solidly designed LMS, engaging students, organized course (set up accurately to match syllabus), updated rubrics, et cetera' were positive factors to online teaching. Additionally, 'students who are geographically unable to attend can attend online… adds to the classes diversity and richness in shared experiences'.

Students are allowed to select their topics for papers, as long as it matches the instructor's guidelines was more important for alumni in their online learning (Mdn = 5, IQR = 1) than faculty in their online teaching (Mdn = 4, IQR = 1). One alumni participant stated: 'Getting to choose my own topics, instead of set ideas, gives more creativity and ability to learn from classmates'. Many alumni identified 'flexibility and freedom' and 'working at my own pace' as positive contributors in their learning. Another stated: 'The asynchronous format of the course allows the working professional to access the course at their convenience. Freedom to go on when I was free [and] freedom to choose my own topics for assignments' were beneficial to learning (see Table 2 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Prompt feedback contained six Likert scale items. Five of these items, scores returned within a week, faculty providing constructive comments, timeframe for replying to emails listed in the syllabus, quiz questions and scores available, and rubrics for grading and feedback, were noted as critically to fairly important for faculty in their online teaching (Mdn = 5, IQR = 0 or 1) and alumni in their online learning (Mdn = 4 or 5, IQR = 1). The only item, *practice or sample quizzes are provided to allow students to prepare for the test,* revealed a wide range of responses, as alumni found this fairly to critically important for their learning (Mdn = 4, IQR = 1), but faculty found this mostly unimportant for their online teaching (Mdn = 2, IQR = 2) (see Table 3 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Table 2. Respect for diverse learning preferences.

Statement	Alumni				Faculty			
	M	IQR	Critical	Fairly	*M*	IQR	Critical	Fairly
Ways to demonstrate knowledge	5	1	63 (56%)	42 (38%)	5	1	9 (75%)	3 (25%)
Orientation sessions	4	1	48 (43%)	9 (35%)	5	1	7 (58%)	3 (25%)
Autonomy in topic selection	5	1	67 (60%)	39 (35%)	4	1	5 (42%)	5 (42%)
Autonomy for diverse responses	5	1	66 (59%)	33 (30%)	5	0	10 (83%)	2 (17%)
Adapted course accordingly	4	1	48 (43%)	38 (34%)	4	1	3 (27%)	6 (55%)

M, Median; IQR, interquartile range.

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Table 3. Prompt feedback.

Statement	Alumni				Faculty			
	M	IQR	Critical	Fairly	*M*	IQR	Critical	Fairly
Scores posted in 1 week	5	1	70 (63%)	30 (27%)	5	1	9 (75%)	3 (25%)
Constructive comments	5	1	66 (59%)	43 (38%)	5	1	9 (75%)	3 (25%)
Practice quizzes	4	1	38 (34%)	48 (43%)	2	2	---	---
Timeframe for replies	5	1	72 (64%)	29 (26%)	5	1	7 (58%)	3 (25%)
See quiz questions and scores	5	1	70 (43%)	39 (35%)	5	0	10 (83%)	1 (8%)
Rubrics are available	5	1	77 (69%)	30 (27%)	5	0	10 (83%)	2 (17%)

M, Median; IQR, interquartile range.

In the qualitative analysis, 11 alumni participants identified 'lack of feedback' as detrimental to their online experience, and one participant emphasised: 'I did not feel the importance of getting in my book due to lack of feedback and personal connection and I would not come close to achieving or learning as much as I would have in the traditional classroom setting'. Additionally, the alumni participants in this study did not identify a preferred type of feedback in their qualitative responses, but reported that instructor availability and the promptness of feedback were imperative for motivation and enthusiasm in the classroom. One alumni participant summed it up well with this response: '[I especially appreciated] when professors graded the quizzes or discussion board quickly with positive feedback and even constructive criticism…[it] made it much easier to understand'.

Appropriate time for tasks contained five Likert scale items and included the number of logins and time online per week; the use of assignments, discussions and quizzes; and a schedule of activities and regular reminders of upcoming due dates by faculty. The item, *the instructor provides a schedule of activities, either within the syllabus or on the course calendar,* was shown as being critically important for faculty in their online teaching (Mdn = 5*,* IQR = 0) and alumni in their online learning (Mdn = 5*,* IQR = 1). The faculty also stated that it was critically to fairly important for their teaching when *the syllabus mentions the amount of time students should expect to spend on the class in a week* (Mdn = 5*,* IQR = 1), but alumni believed this to be only fairly to somewhat important for their online learning (Mdn = 4*,* IQR = 2). One faculty member identified that a negative contributor to teaching occurs when 'students do not complete their work yet ask for exceptions'. However, one alumni participant stated that the contrary and a negative contributor to learning was …. 'We are all working, have families, coach, etc. and sometimes we are late getting an assignment in… be flexible'.

The use of *weekly assignments, discussion board posts and/or quizzes* was critically to fairly important for faculty in their online teaching (Mdn = 5*,* IQR = 0) but only fairly to somewhat important for alumni in their online learning (Mdn = 4*,* IQR = 2). However, in the qualitative analysis, many alumni participants identified assignments to be a positive factor to online learning: 'The weekly assignments not only allowed me to demonstrate what I had learned that week but also it allowed me to interact with my peers and have great discussions about our assignments for that week'. The time spent on discussion boards was meaningful too, but only if they were scaffolded and built upon a topic or subject each week. If they weren't, the alumni participants identified them as 'time wasters' and 'busy work'.

The expectation for *students to log in to their online class at least 3 days a week* revealed a wide range of responses and somewhat to critically important for faculty in their online teaching (Mdn = 4, IQR = 2) and to alumni in their online learning (Mdn = 4, IQR = 2). This diverseness was also evident for the item, *instructors post regular reminders in the online class about upcoming due dates.* This item was critically to fairly important for alumni, but fairly to critically important for faculty (alumni and faculty: Mdn = 4, IQR = 1). One alumni participant identified that a positive contributor to online learning was a 'calendar of events and due dates for me to work ahead. I never once had to stay up late on a project/paper because I was constantly working ahead' (see Table 4 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Faculty–student communication and collaboration contained 10 items that included faculty and students posting pictures and biographies for introductions, the accessibility of the faculty to answer questions, and faculty providing weekly announcements and replying to student discussions. Faculty identified seven and alumni identified three of the 10 items in this principle as critically to fairly important for their teaching and learning (faculty and alumni: Mdn = 5, IQR = 0 or 1). One faculty stated, 'I utilize regular teacher videos and email reminders to add the personal touch. I recently have begun calling all of my students to welcome them to class and bring down the stress level'. One alumni participant confirmed the importance of this to his/her learning by stating: 'There needs to be a personal element. Gaining knowledge is important, but so is human interaction and engagement'. Another stated, 'I like that every student and teacher have a picture of themselves. It makes it more personal since we will not meet in person'. And yet another alumni participant emphasised, 'I need reassurance at times, so if that comes from an instructor who can get back to me immediately, I can gain that from her/him'.

The importance of timely emails was also evident in the quantitative responses. There was consensus for the item: *When students email the instructor, they receive a reply within 24 hours,* with 83% of faculty and 85% of alumni acknowledging this as critically important for their teaching and learning. Additionally, faculty and alumni stated that it was critically to fairly important for their online teaching and learning, *if*

Table 4. Engagement: Appropriate time for tasks.

Statement	Alumni				Faculty				
	M	IQR	Critical	Fairly	*M*	IQR	Critical	Fairly	Somewhat
Time expectations	4	2	32 (28%)	44 (39%)	5	1	8 (67%)	3 (25%)	---
Schedule of activities	5	1	76 (68%)	28 (25%)	5	0	10 (83%)	1 (8%)	---
Assignments, discussions, quizzes	4	2	38 (34%)	48 (43%)	5	0	11 (12%)	1 (8%)	---
Faculty reminders	4	1	52 (46%)	41 (36%)	4	1	3 (25%)	8 (67%)	---
Students login 3 days a week	4	2	28 (25%)	37 (33%)	4	2	5 (42%)	---	4 (33%)

M, Median; IQR, interquartile range.

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the class requires discussion board posts, the instructor replies to the posts, praising good points, asking questions and encouraging deeper thought (faculty: Mdn = 5, IQR = 0; alumni: Mdn = 5, IQR = 1). One alumni participant stated:

> 'The professors who put forth the effort to respond to emails quickly, joined class discussions, provide further help on their own time, and offered a genuine connection were the ones I learned the most from and respected which caused me to want to do even better in their classes'.

One faculty member identified that a negative factor to his/her online teaching was 'the lack of opportunity for real-time discussions with students'. An alumni participant stated, 'online is a great tool but for me it was always important to have the ability to call the professor and talk things out or meet in person' (see Table 5 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Active learning techniques contained six Likert scale items identifying methods for student learning. These include blogs, wikis, images, video, audio, interactive apps,

Table 5. Faculty–student communication and collaboration.

Statement	Alumni					Faculty				
	M	IQR	Critical	Fairly	Somewhat	*M*	IQR	Critical	Fairly	Somewhat
Instructors post biography	4	1	---	50 (44%)	28 (25%)	4	1	6 (75%)	4 (42%)	---
Instructors post photo	4	1	---	42 (38%)	---	5	1	9 (75%)	2 (17%)	---
Students post photo	3	2	---	30 (27%)	35 (31%)	5	1	7 (58%)	3 (25%)	---
Instructors offers online office hours	4	2	40 (36%)	36 (32%)	---	4	2	5 (42%)	---	3 (25%)
Instructors reply to emails in 24 h	5	0	95 (85%)	34 (30%)	---	5	0	10 (83%)	2 (17%)	---
Instructors participate in discussions	5	1	58 (52%)	34 (30%)	---	5	0	10 (83%)	2 (17%)	---
Instructors provide weekly announcements	5	1	70 (63%)	23 (25%)	---	4	2	5 (42%)	4 (33%)	---
Students respond in video instead of writing	3	2	---	32 (29%)	31 (28%)	5	1	8 (67%)	2 (17%)	---
Instructor is available over the weekend	4	1	---	38 (34%)	30 (27%)	4	3	4 (33%)	5 (42%)	---
Instructor calls me during the term	3	2	---		26 (23%)	3	2	5 (42%)	---	5 (42%)

M, Median; IQR, interquartile range.

websites and silent power point notes or lecture material to emphasise content. Additionally, peer evaluations and application of the information outside the classroom were also emphasised. The item in this principle with the highest response, *students have the opportunity to apply what they've learned to real-life issues,* was critically to fairly important for faculty in their teaching (Mdn = 5, IQR = 0) and alumni in their learning (Mdn = 5, IQR = 1). A few alumni responses confirmed this finding as one stated: 'I would rather apply the information to a real-life situation' and another emphasised:

> 'I'm regularly enriched by conversations with colleagues from other institutions when the question is posed, "How do you handle ___ issue?" It's really helpful to hear from others what it is they're doing now and what they have done that has and has not worked'.

Additionally, faculty and alumni preferred images, video and audio to emphasise course content (faculty and alumni: Mdn = 5, IQR = 1) instead of silent power point notes or lecture material to guide the readings (faculty and alumni: Mdn = 4, IQR = 1). One alumni participant stated:

> 'I personally would have like [sic] more videos that explained concepts. However, I am a visual learner. The majority of the content was to be learned via book so it would have helped me focus more if there was a video that co-existed with the course material'.

One faculty member stated:

> '… when the instructor regularly includes videos of himself/herself, the students tend to feel more connected to the instructor – they can see that the instructor is a real person and they are interacting with an expert in the field, not just with individualized learning activities on a computer screen'.

Another alumni participant emphasised: 'I like the balance of discussions sometimes being video or written. It's a great way to learn from others'.

The requirement for students to *analyse or critique one another's work (peer evaluation)* received a diverse response from faculty and alumni, and overall, it was somewhat to critically important for faculty in their teaching (Mdn = 4, IQR = 2) and somewhat to fairly important for alumni in their learning (Mdn = 4, IQR = 1). Additionally, the use of *links to interactive apps or websites relating to the current lesson* was considered critically to fairly important for alumni in their learning (Mdn = 4, IQR = 1) and fairly to critically important for faculty in their teaching (Mdn = 4, IQR = 2). Finally, the use of *Web 2.0 tools such as blogs or wikis* was considered somewhat to fairly important for alumni in their learning (Mdn = 3, IQR = 2) and for faculty in their teaching (Mdn = 2, IQR = 2), but faculty had overall lower scores (see Table 6 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Student–student communication and collaboration contained seven items identifying means for students to interact, work together and learn as a cohesive group. The results for six items within this principle implied that student–student communication and collaboration was fairly to somewhat important for faculty in their online teaching (Mdn = 3 or 4, IQR = 1 or 2) and for alumni in their online learning (Mdn = 3 or 4, IQR = 1 or 2). According to 83% of faculty (Mdn = 5, IQR = 0), *students choose to respond to the forum of any colleague in the class* was critically

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Table 6. Active learning techniques.

Statement	Alumni					Faculty				
	M	IQR	Critical	Fairly	Somewhat	*M*	IQR	Critical	Fairly	Somewhat
Web 2.0 tools	3	2	---	24 (21%)	40 (36%)	2	2	---	3 (25%)	3 (25%)
Image, video and audio	5	1	59 (53%)	36 (32%)	---	5	1	9 (75%)	2 (17%)	---
Real-life issues	5	1	77 (69%)	26 (23%)	---	5	0	11 (92%)	1 (8%)	---
Peer review	4	1	---	39 (35%)	26 (23%)	4	2	3 (25%)	4 (33%)	4 (33%)
Interactive apps/websites	4	1	45 (40%)	43 (38%)	---	4	2	4 (33%)	5 (42%)	---
Silent power points	4	1	48 (43%)	41 (37%)	---	4	1	5 (42%)	5 (42%)	---

M, Median; IQR, interquartile range.

important for their teaching, yet only 28% of alumni (Mdn = 4, IQR = 2) found this true for their learning. Although the quantitative findings were lower from the alumni, the qualitative responses from the alumni participants suggested the importance. Ten alumni stated that 'lack of communication among peers', 'lack of personal interaction', 'isolation' and 'not feeling connected to others in the class' were negative contributors to their online learning. Additionally, three alumni stated that 'interacting among peers' was beneficial to their online learning. One faculty member added, 'In face-to-face classes, there is a synergy that exists when the students and I are physically present in the same room. This synergy is absent from online classes'. Two other faculty stated, 'the spontaneity of organic conversation' and 'lack of face to face interaction that provides more in-depth learning' are negative factors for their online teaching.

The option, *students work together in the class to complete a group project or paper*, was disputed by faculty (Mdn = 3, IQR = 1) and alumni participants (Mdn = 3, IQR = 2) and seen as mostly unimportant to somewhat important for their teaching and online learning. One alumni participant emphasised that 'other students who are not responsible in their aspects of on-line posts if replies to others are necessary as part of the class' was a negative aspect for his/her online learning. Two others stated, '….group projects were a challenge as were constant discussion board posts' and 'If I am doing an online class, I would want to go at my own pace. Group work when online gets sometimes too tricky'. Although group work was not identified as positive to online teaching or learning, the item *students develop or respond to case studies according to their vocation* was fairly to critically important for faculty in their online teaching (Mdn = 4, IQR = 2) and alumni in their online learning (Mdn = 4, IQR = 1) (see Table 7 for the Mdn and IQR scores, and the frequency and percentages of the highest responses).

Discussion

The results of this research support the need for high academic standards in the online classroom and for faculty to hold students accountable to academic rigour and academic integrity. The data revealed that 100% of faculty and 82% of alumni

Table 7. Student–student communication and collaboration.

Statement	Alumni					Faculty				
	M	IQR	Critical	Fairly	Somewhat	*M*	IQR	Critical	Fairly	Somewhat
Student lounge	3	2	---	20 (18%)	44 (40%)	3	2	2 (17%)	1 (8%)	5 (42%)
Chat room Instant message	4	1	---	39 (35%)	36 (32%)	3	1	---	5 (42%)	6 (50%)
Group projects or papers	3	2	---	26 (23%)	19 (17%)	3	1	---	2 (17%)	5 (42%)
Simulated debates	4	1	---	43 (38%)	28 (25%)	4	2	5 (42%)	3 (25%)	3 (25%)
Visible student profiles	3	1	---	39 (35%)	37 (33%)	4	1	4 (33%)	7 (58%)	---
Autonomy for colleague discussion	4	2	28 (25%)	46 (42%)	27 (24%)	5	0	10 (83%)	1 (3%)	---
Develop and respond to case studies	4	1	41 (37%)	47 (42%)	---	4	2	4 (33%)	5 (42%)	---

M, Median; IQR, interquartile range.

acknowledged it as critical for their teaching and learning when *instructors hold students to high standards of performance, academic honesty and professional conduct*. As Johnson (2014) indicated, course expectations correlate with learning outcomes, higher expectations result in higher learning and lower expectations result in lower learning. Additionally, students believe that the course is of higher quality and their overall level of education and proficiency improves when the instructor requires high academic standards (Young 2006). Online classes must be designed carefully and rigorously with the use of a curriculum matrix for course learning outcomes, signature assignments and assessments. The Carnegie hour formula continues to be used for on-ground and online classes to calculate the required 'seat time' and 'out-of-class' work. The Carnegie formula requires 1 h of instruction time for all levels, plus 2 h of out-of-class work for undergraduates and 3 h of out-of-class work for graduates in a 15-week term. This formula is then adjusted accordingly for class length. However, this formula can be difficult to translate in the online classroom, and some schools have scrutinised and re-evaluated this formula for online teaching and learning (Silva 2013). In an online class, the hours of instruction may include the following options: video/ audio instructor lecture, textbook readings, media presentations and synchronous meetings. Additionally, discussion boards, chat rooms, case studies and problem-solving scenarios, blogs and journals, outside research, field trip or service opportunities, individual and group projects, papers and assessments are used to promote discussion and out-of-class experiences (Pallof and Pratt 2007).

Respect for diverse learning preferences is achieved by integrating various means of classroom engagement and assessment, orientation for the LMS, autonomy for topic selection and acceptance of diverse responses. The data revealed that 75% of faculty and 56% of alumni identified it as critical for their teaching and learning when there are *multiple ways for students to demonstrate their knowledge of the subject.* This finding correlates with Martin and Bolliger's (2018) research with online students. They noted that structured or guided discussions, as well as real-life projects, were most relevant to their

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learning. The data also demonstrated that 83% of faculty and 59% of alumni claimed it as critical for their learning and teaching when *students are allowed and encouraged to share opinions and experiences that may be different from the instructor.* According to Serdyukova1 and Serdyukov (2013), it is important to encourage student autonomy in the online classroom to facilitate independent work and thinking which encourages learning.

The results indicated that 60% of alumni and 42% of faculty stated it as critically important for their teaching and learning *when students were allowed to select their topics for course papers assuming it aligns with course and faculty guidelines.* Alumni participants in this study identified 'flexibility and freedom' as important contributors to their online learning experience. The majority of online students are employed adults, with responsibilities in the home that include caring for children, ageing parents or other members (Hewson 2018). Thus the flexibility of online learning enables the adult learner to achieve educational goals and fulfil these other responsibilities (Stone *et al*. 2016). Faculty should exercise academic freedom to interact with and instruct students using both synchronous and asynchronous means. Without this opportunity, the online class could be considered as merely a repository of information with a repeat of dull lectures, assignments and discussions (Craig 2015). Respect of learning preferences also includes *appropriate orientation and technical support for faculty and students so they can work smoothly and without barriers.* The results showed that 58% of faculty and 43% of alumni identified this as critical for their teaching and learning. One faculty respondent emphasised the importance for student and instructor to easily navigate technology, because without this, online learning and teaching is negatively affected. Additionally, Çakýroðlu (2014) reminds instructors to be flexible and adjust the online class when technology does not work as expected.

Prompt feedback and assessment refers to the timing of responses such as the return of test scores and email replies. Rubrics should also be accessible to students and used for all evaluations in the classroom. In this study, 75% of faculty and 63% of alumni stated that it was critical for their teaching and learning that scores from tests and assignments are returned to students. Additionally, 75% of faculty and 59% of alumni stated that it was critical that in addition to scores, the faculty provide constructive written or audio comments. Lee's (2014) study with online students also confirmed this finding as 95% of students agreed or strongly agreed that the professor's timely and constructive feedback was important for them. Gallien and Oomen-Early (2008) also stated that students' overall satisfaction of the class correlated with the immediacy of faculty feedback. Morris and Chikwa (2016) in their study with 68 online students found that the type of feedback, audio or written, did not impact students' grades in subsequent assignments, and although students responded favorably to audio feedback, they preferred written feedback. However, Lewis and Abdul-Hamid (2006) warned that providing quick, quality and in-depth comments is a lengthy and challenging process for faculty. In their study with online faculty, one responded 'I normally check the website about four times a day and try to provide immediate feedback if it's a question to me about something'. Another faculty participant gave insight into how quickly grades are returned to students: 'On their papers I try, within five days of submission, to have the grades back to them and give them personal feedback' (Lewis and Abdul-Hamid 2006, p. 91). Magnussen (2008) recommends that faculty set boundaries to maintain manageable workloads and specify to their students when to expect feedback.

Rubrics for projects and papers were critically important for 82% of alumni in their learning and 92% of faculty in their teaching, and rubrics for online discussions was critically important for 61% of alumni and 75% of faculty. Not only do the

majority of alumni and faculty desire the use of rubrics for classwork, but also 69% of alumni and 83% of faculty believe it as critically important for their learning and teaching if *the rubrics used for grading and feedback are available for student viewing in the class.* Martin and Bolliger's (2018) online students rated announcements, email reminders and grading rubrics as most beneficial to their online learning. A faculty member from this study emphasised the importance of templates, rubrics and sample papers to help students understand the instructions and expectations of assignments. This statement supports the findings of Bacchus *et al*. (2019) whose study demonstrated that rubrics in addition to exemplars were the ideal online teaching strategy. However, a disadvantage to the use of rubrics was emphasised by a faculty member in Bolliger and Martin's (2018) study, who stated, 'Giving them a rubric or checklist for every assignment. They become doers rather than engagers' (p. 576).

Appropriate time for tasks consists of clearly explained course objectives, and requirements listed in the syllabus, on the course calendar and in the class. Additionally, students welcome weekly written, audio or video reminders by their faculty to keep them on track for the upcoming coursework. One alumni participant appreciated a 'calendar of events, and due dates' so that he/she could work ahead. Alumni participants didn't comment that the amount of work negatively affected their learning, but that 'busy work', 'non-scaffolded discussions' and other 'time wasters' were definite inhibitors to their learning and their overall impression of the class. Lewis and Abdul-Hamid (2006) noted that one online instructor administered a simple quiz at the beginning of the term based on the syllabus to ensure that students read and understand the course description, learning outcomes, workload and time expectations. Another online faculty member developed a bank of common problems, questions and responses that were available for each class to manage the workload of online teaching, while providing clear expectations and reminders to online students.

Faculty identified seven of the 10 items from the category, *faculty–student communication and collaboration,* as fairly to critically important for their online teaching, yet alumni participants only identified three items as fairly to critically important for their online learning. It was not important for the majority of alumni if the following occurred in the online class: *The instructor creates a biography*, *posts a photo of himself/herself*, *offers online office hours*, *is available over the weekend to answer questions*, or *calls me at least once during the term*. Additionally, alumni did not consider a *photo of himself/herself* and *response in class via video instead of writing* to be fairly to critically important for their online learning. However, 83% of faculty and 85% of alumni participants stated that *faculty providing prompt replies to emails* (within 24 h), 83% of faculty and 52% of alumni identified that *faculty participating in class discussions* and 42% of faculty and 63% of alumni acknowledged that *faculty providing a weekly announcement/ email to recap the unit and introduce the upcoming unit* were fairly to critically important for faculty teaching and student learning. This feedback infers that students are primarily focused on the promptness of faculty replies and the way faculty facilitate the class with weekly emails/ announcements to complete the prior unit and present the upcoming unit. However, if prompt replying is important for student learning, then it seems inconsistent that most alumni in this study did not need the instructor to be available over the weekend to answer questions. One explanation for this incongruity is that the online classes for these alumni were so well designed that weekend feedback wasn't necessary for their success. Another explanation might be that the student did not work online or want to be disturbed over the weekend as a means to protect work–life balance. According to Berry and Hughes (2019), the age

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of technology and immediacy of information has resulted in the blurring of work and home life. As a result, online students must define these boundaries, establish rules and adjust their behaviour accordingly.

Alumni students in this study emphasised that the personal element was beneficial to their learning. They appreciated a phone call, course updates and reminders, and teacher availability and passion. In Lewis and Abdul-Hamid's (2006) study with faculty, one noted 'it's not hard to break down the learning objectives in the syllabus. To reinforce those as you go through each module, I use classroom announcements a lot to make sure they're on target' (p. 93). Another faculty member emphasised:

> 'I think you need to be more organized when you teach an online class. You need to plan with care. I actually send out weekly email greetings and the students really like that. I do that to remind them of what they are supposed to be doing'. (Lewis and Abdul-Hamid 2006, p. 94)

Active learning techniques imply that the online class will be interactive with innovative strategies and not a repeat of silent power points, discussions and assignments (Craig 2015). In this study, 92% of faculty and 69% of alumni participants identified the opportunity for students to apply what they learn to real-life issues as critically important for their teaching and learning. According to Sato and Haegele (2018), online problem-solving activities, also referred to as andragogy, are preferred over instructional pedagogical approaches. Morrison (2015) emphasised that active learning techniques require students to engage in higher order learning, thinking and doing while learning from their peers, and applying the information to real-life situations. Active learning makes the course effective and alive for both the faculty and students and provides theory into practice opportunities (Hove and Corcoran 2008).

The responses in the category, *student–student communication and collaboration,* received the lowest scores from alumni, compared to faculty to student and student to class content. This finding is consistent with Martin and Bolliger's (2018) study who also found online students valued learner–instructor engagement the most and learner–learner interaction the least. In this study, prompt interaction, connection and communication among peers were considered beneficial to online learning, whereas isolation and lack of connectedness were detrimental. However, group work was not a preferred method of learning. Alumni participants found delayed responses and limited work from colleagues to be disadvantageous to their learning, and they preferred to work at their own pace. Although Berge (2002) recommends group work to prevent isolation, it is more important to engage students with active learning and doing. This promotes team dynamics and prevents lonely learning.

Application

This section includes some practical ways to integrate the findings of this study. According to Lewis and Abdul-Hamid (2006), 'The role of the online instructor is neither static nor one dimensional' (p. 96). This implies that faculty must prepare and follow a dynamic plan to successfully instruct online. Faculty-to-student engagement can be emphasised prior to, during and after the course. The faculty from this online programme provide an introductory email to incoming students the week before the term begins. They include in their message a welcome, course description and the syllabus. Additionally, faculty publish their online course 3 days before the term begins

to allow students to enter early, become accustomed with the format and content, and email the faculty with questions. This early publication also allows the student to remedy any enrolment or technological issues they might have. Additionally, students can begin to prepare their introductory video that includes specific prompts related to the course. Another introductory discussion in every class requires students to review the course syllabus, complete a course contract linked to Google Forms and reply to the prompt stating they fulfilled these prerequisite tasks. This course contract includes acknowledgement that the student has read and understands the syllabus for the class (course learning outcomes, requirements, evaluation, due dates and academic standards). It also confirms that the student has read and understands all required assignments, forums and format expectations. Additionally, the student acknowledges his/her understanding and practice of academic integrity, and the examples and sanctions for academic dishonesty. The student can pose questions about class expectations in this discussion, the instructor can provide clarification and other students can also review this feedback. This prerequisite discussion establishes the expectations and rigours of the class and supports faculty and alumni desire that *instructors hold students to high standards of performance, academic honesty and professional conduct.*

Once the class begins, faculty use written, audio and video methods to interact with students. Not only do students enjoy this variety of multidimensional interaction, but it allows faculty to teach creatively, efficiently and effectively. Faculty from this programme utilise *Google Hangout* or *Zoom* for synchronous video sessions with individual or groups of students. These sessions can also be recorded and re-accessed by students. The programme, *Loom* is helpful for faculty to explain class concepts or provide systematic feedback on assignments. This programme provides both video and audio options and is ideal when reviewing student papers. Additionally, this author and some of her faculty use mobile messaging platforms such a *Remind* or *Group Me* to be accessible to students over the weekend. We have found this to be especially beneficial for students completing the capstone project, with many reaching out to their faculty over the weekend with specific questions about the research process. Using these mobile messaging platforms protects the faculty and student's personal phone number, yet enables prompt and effective communication via text. Additionally, faculty call each student throughout the term to discuss coursework and become better acquainted offline. Some students prefer this means of communication instead of live video sessions. Although this can be a time-intensive undertaking, we find it helpful for engagement and instruction.

Active learning strategies are preferred by alumni and faculty. Written discussions and the use of student-generated audio and video responses are ways to promote active learning and vibrant discussion among students. Direct learning experiences are included in this online programme that requires students to observe, interview, shadow and intern with professionals outside the classroom. The student then integrates these outside learning experiences with knowledge gained from the course. For example, the student might observe another teacher in the classroom and develop a new lesson plan utilising this observational data and the content of the curriculum. Or a student might interview an athletic director at a local school and develop a comprehensive budget for his/her athletic team utilising the interview feedback and the course content. These authentic learning experiences engage the student in 'learning by doing' instead of 'learning by reading or watching'. It also provides opportunity for students to connect with professionals in their field.

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Case study development is another means to promote active learning and student engagement (Fink 2013). The faculty in this online programme utilise case studies in the following manner: the student is instructed to construct a case study around the course topic, another student is instructed to respond accordingly to the posed questions and the student who developed the case study completes the correspondence with final thoughts and suggestions. For example, in a sports medicine or sport psychology class, the student could design a case study about the sprained ankle or athletic motivational issues using the assigned readings and video presentation for the week. This type of case study development promotes critical thinking and develops rich engagement among students.

The use of rubrics, exemplars and templates are important for student learning and faculty teaching (Bacchus *et al*. 2019). These are embedded in every online class and are accessible to faculty and students throughout the term. This way, students understand the parameters of the assignment and how the faculty assess their work. Additionally, the rubrics include both quantitative and qualitative feedback methods as students appreciate narrative feedback in addition to their numerical score. Because timely feedback is very important for students, the programme expectations require faculty to assess and return student assignments within the week and be engaged in discussions multiple times per week.

Online teaching requires a different perspective compared to on-ground teaching. When teaching on-ground, or face-to-face, the faculty *occasionally attends* the physical classroom, but when teaching online, the faculty is *consistently attentive* to the virtual classroom. As a result, online teaching can be very time-consuming and overwhelming, and it can be difficult to set boundaries to maintain manageable workloads. New faculty should be offered to reduce teaching loads to enable them to transition to the demands of online instruction (White, Brown, and Sugar 2007), and all faculty should set boundaries for reasonable workloads (Magnussen 2008). This author establishes a weekly calendar of online duties which assists her in providing prompt and thorough feedback, while maintaining a manageable workload. For example, when the new week/module begins, she sends out either a video or a written announcement/email that summarises the upcoming topics, discussions, assessments and assignments. She also provides an announcement recapping the content from the prior week. She saves this information in a repository, so that it is accessible for future classes. Additionally, she often downloads and evaluates papers outside the online class for accessibility and organisation purposes.

Limitations and future research

The methodological limitations and strengths of this study relate to participant size and methodology. The researcher chose this homogenous group of participants as a means to evaluate the online teaching and learning preferences related to this master's programme. The strength of this study is the consistency in the design and delivery of this online programme and teaching strategies among faculty. However, the researcher's acquaintances with the faculty and some of the alumni participants could be a limitation to this study and a potential cause of response bias. Additionally, there were only 12 faculty respondents, which is considered a small sample size, thus limiting the results and the generalisability of the findings. Future research would include recruiting students and faculty from other programmes and

institutions to compare online learning and teaching preferences. A three-point instead of five-point Likert scale could also be used to simplify the response options considering there were 45 statements in this survey. Additional open-ended questions would also be beneficial to explore specific teaching and learning practices of faculty and alumni.

Conclusion

This study demonstrated the importance of faculty–student communication, student–student communication and content engagement in online classes. High performance expectations including high standards of academic and personal integrity clearly stated that course objectives in the syllabus and the online class, and the use of rubrics, templates and exemplars were regarded by faculty and alumni in this study as most critical for their teaching and learning. The alumni participants preferred engagement with their faculty more than engagement with other students or the course content. Faculty participants desired a well-designed class, with students who can navigate technology and submit timely work. To be most effective, the online instructor must be energetic, organised and communicative with students and have a consistent presence in the online classroom to provide an active, quality learning experience through faculty, student and content engagement.

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Appendix

Instructions

For alumni

Please identify the level of importance the following statements would have on your learning if you were completing an online class. The response options were: (1) completely unimportant to my online learning, (2) mostly unimportant to my online learning, (3) somewhat important to my online learning, (4) fairly important to my online learning and (5) critically important to my online learning.

For faculty

Please identify the level of importance the following statements would have on your teaching if you were teaching an online class. The response options were: (1) completely unimportant to my online teaching, (2) mostly unimportant to my online teaching, (3) somewhat important to my online teaching, (4) fairly important to my online teaching and (5) critically important to my online teaching.

Schweibert's (2012) *Seven principles of online learning:* 35 items *** Additional items in Tanis's research: 45 items
Principle 1: Faculty–student communication and collaboration
The instructor posts a brief biography, including how long they've been teaching, any professional experience and degrees.
The instructor posts a photo of himself/herself, so students can attach a face to the name.
The instructor offers weekly online 'office hours' using a chat room or webinar, where they are available to answer questions, give advice or discuss the readings or assignments.
When students email the instructor, they receive a reply within 24 h.
If the class requires discussion board posts, the instructor replies to the posts, praising good points, asking questions and encouraging deeper thought.
**The instructor provides weekly announcements/emails that recap the unit and/or prepare for the upcoming unit
**Students are required to respond occasionally via video to discussion/forums, instead of in writing.
**The instructor is available over the weekend to answer questions.
**The instructor calls me at least once during the term I am taking the online class
**Students post a photo of himself/herself, so others in the class can attach a face to the name.
Principle 2: Student–student communication and collaboration
There's a 'Student Lounge' discussion board in the online class, where students can talk unofficially.
Students who are online at the same time can talk together using a chat room or instant message.
Students work together in the class to complete a group project or paper.
Students form and post group discussions on the discussion boards, simulating debates.
Student profiles are visible in the class and include contact information.
**Students can choose to respond to the forum of any colleague in the class.

**Students develop or respond to case studies according to their vocation.

Principle 3: Active learning techniques

The online class uses Web 2.0 tools such as blogs or wikis.

The instructor includes images, video and/or audio in the Course Content (modules or lessons) to explain the unit.

Students have the opportunity to apply what they're learning to real-life issues.

Students are required to analyse or critique one another's work (peer evaluations).

The course content includes or links to interactive apps or websites relating to the current lesson.

*** The instructor provides silent power point notes or lecture material to guide me in the assigned readings.

Principle 4: Prompt feedback

Scores from tests and assignments are available within a week of the due date.

The instructor provides constructive comments in addition to scores to discussions and assignments.

Practice or sample quizzes are provided to allow students to prepare for the test. These would not count towards the class grade.

The instructor includes in the syllabus, the timeframe for replying to emails and returning scores.

After the test due date has passed, students are able to see their quiz scores, the questions they got wrong and the correct answers

***The rubrics used for grading and feedback are available for student viewing in the class.

Principle 5: Engagement: Appropriate time for tasks

The syllabus mentions the amount of time students should expect to spend on the class in a week.

The instructor provides a schedule of activities, either within the syllabus or on the course calendar.

There are weekly assignments, discussion board posts and/or quizzes.

The instructor posts regular reminders in the online class about upcoming due dates.

Students are expected to log in to their online class at least 3 days a week.

Principle 6: High performance expectations

The course objectives are clearly listed in the syllabus.

Unit or chapter objectives for each week are clearly listed in the online class.

Rubrics are provided for large projects or papers.

Rubrics are provided for discussion board posts

The instructor holds students to high standards of performance, academic honesty and professional conduct.

***The instructor provides templates, exemplars and other supplemental material to ensure understanding.

Principle 7: Respect for diverse learning preferences

Throughout the term, there are multiple ways for students to demonstrate their knowledge of the subject (tests, writing assignments and discussions).

Orientation sessions and technical help are provided for students who are not as comfortable with computers.

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Students are allowed to select their topics for papers, as long as it matches the instructor's guidelines.

Students are allowed and encouraged to share opinions and experiences that may be different from the instructor.

The instructor is willing to adapt the course to match the students' needs.