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Instructional Strategies to Help Online Students Learn: Feedback from Online Students

Firm Faith Watson[1] · **Marianne Castano Bishop**[2] · **Debra Ferdinand-James**[3]

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Abstract Increased enrollment in online programs and courses has prompted a plethora of research on instructional strategies that impact online students' learning. Most of these strategies came from instructors, and others were solicited from students. While the literature notes that students who have more university experience tend to provide more substantive responses when solicited, there seems to be limited representation of online master's students' preferences on what instructional strategies work for them. There is paucity in the literature on how these preferred instructional strategies inform existing theoretical and practical frameworks that could impact online learning performance. This article discusses the Top Ten Instructional Strategies preferred by master's students who responded to a dissertation survey question - *What specific things would you like your online instructors do to help you learn successfully?* - and relates these strategies to the Seven Principles for Good Practice in Undergraduate Education and the Quality Matters Rubric.

✉ Firm Faith Watson
firmfaith4ever@yahoo.com

Marianne Castano Bishop
DrMSCBishop@yahoo.com

Debra Ferdinand-James
debra.ferdinand-james@sta.uwi.edu

[1] Murray State University, 107 Center, Oakley Applied Science Building, Murray, KY 42071, USA

[2] Indiana University South Bend, 1700 Mishawaka Avenue, South Bend, IN 46634, USA

[3] School of Education, The University of the West-Indies, Room 203, Agostini Street, St. Augustine, Trinidad

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Introduction

What strategies do online students prefer their instructors use to help them learn successfully? The answer to this question continues to gain significance for online practitioners due to increased enrollment in online programs and courses. Notably, Allen and Seaman (2017) articulated in their report on distance education enrollment an increase in Fall 2015 enrollments by 3.9% over the previous year, with more than 6 million students taking at least one distance course. This growth rate was higher than the past two years. They found that 29.7% of all higher education students are taking at least one distance course. This percentage is broken down into 14.3% of students (2,902,756) taking only distance courses and 15.4% (3,119,349) taking a combination of distance and non-distance courses. In 2014, Dahlstrom and Bichsel reported on undergraduate students and information technology. After surveying 75,306 undergraduate students from 213 participating academic institutions regarding student technology experiences and expectations, they found that students mostly preferred and experienced courses that included online components.

With this phenomenal increase in online student enrollment, several existing and practical frameworks have been used in studies to continually explore best practices for supporting online learning and student success (e.g., Clinefelter and Aslanian 2016; Cuthrell and Lyon 2007; Jacobi 2016). A 2015 dissertation research study that focused on factors that impacted master's students' satisfaction and

dissatisfaction in online learning included an open-ended survey Question 9 that asked: *What specific things would you like your online instructors do to help you learn successfully?* Responses from master's students (N = 624) from a large system-wide Midwestern university were analyzed. This paper discusses these results and features the Top Ten Instructional Strategies preferred by students. Discussion of these instructional strategies includes a contextualization of these strategies based on theoretical and practical frameworks used widely for the past several years. Specifically, Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education and the Quality Matters Rubric (2014) are discussed in light of how the 2015 dissertation study's findings on preferred instructional strategies from survey Question 9 resonate with principles and standards from these internationally-applied frameworks. This paper provides online course practitioners with practical strategies to help online master's students learn more successfully and potentially improve academic performance.

Online Instructional Strategies Impacting Students' Learning

Identifying and applying effective instructional strategies are critical to the success of online students' learning. Wolfe (2010) defined instructional strategies as the various methods and activities educators and trainers use to help students or participants achieve the learning objectives. For the purpose of this study, an instructional strategy refers to the ways and means used by instructors to facilitate, support and enhance students' learning.

Moreover, various theoretical and practical frameworks have been developed for assuring quality in online courses. One of the oldest and frequently cited frameworks used in both face-to-face and online courses is the Seven Principles for Good Practice in Undergraduate Education: 1) encourage student-faculty contact, 2) develop reciprocity and cooperation among students, 3) use active learning techniques, 4) give prompt feedback, 5) communicate high expectations, 6) emphasize time on task, and 7) respect diverse talents and ways of learning (Chickering and Gamson 1987; Chickering and Ehrmann 1996).

A newer and internationally used framework for evaluating the design of online and blended courses is the Quality Matters (QM) Rubric (Quality Matters 2014). QM is comprised of eight general standards (subdivided into 43 review standards). Quality Matters' fifth standard - Course Activities and Learner Interaction - underscores the instructor's role in facilitating learner-instructor interaction, learner-learner interaction and learner-content interaction (Quality Matters 2014). This standard highlights the importance of interaction when developing instructional strategies in online learning, one of the foci of this current study. Another recognized framework, developed by the Online Learning Consortium specifically for online teaching, is the Five Pillars of Quality Online Education (Online Learning Consortium 2017). Its *Student Satisfaction* pillar emphasizes constructive, timely, and substantive interaction between faculty and students that impacts the design of effective instructional strategies for achieving students' satisfaction in online learning.

Several researchers have discussed the aforementioned theoretical frameworks in light of instructional strategies faculty have used with undergraduate and graduate students (Crews et al. 2015; Gautreau et al. 2008; Tobin et al. 2015; Shattuck 2015). Research with undergraduate students by Crews et al. (2015) applied Chickering and Gamson's (1991) Seven Principles. In their study, 179 students were asked to assess components of their online computer application course based on these principles. The study's survey results showed much convergence among the course design strategies, students' preferences, and Principle One of the Seven Principles - Encourages student-faculty contact – yielding the highest level of agreement among students (Crews et al. 2015).

Further, Gautreau et al. (2008) surveyed and interviewed eight graduate faculty in a Master of Science in Instructional Design and Technology (IDT) on their instructional practices used in this program. Among the best practices Gautreau et al. (2008) used to assess faculty's reported online teaching practices were Knowles' (1992) adult learning principles and guidelines for assessing online instruction as well as Chickering and Gamson's (1991) Seven Principles of Good Practice in Undergraduate Education. Similarly, Tobin et al. (2015) also revisited criteria for online teaching and relied heavily on Chickering and Gamson's (1991) Seven Principles, among other frameworks used in their study, for updating best practices for evaluating online teaching.

A widely accepted best practice is to administer student course evaluations in online teaching, which usually remains internal and not published for the benefit of online practitioners. Several studies have underscored the importance of learners' input to effectively evaluate and enhance online teaching and learning (e.g., Cuthrell and Lyon 2007; Jacobi 2016). Shattuck (2015), for example, noted the importance of including the learner's voice while developing the Quality Matters Rubric for informing design elements for online courses. Jacobi (2016) also found that students' voices were nominally represented in her research, with only 4 out of 47 participating students being graduate students. The current paper aims to contribute to closing this gap in the literature for informing instructional strategies that help graduate students to learn successfully online.

Research Methodology

This descriptive study, employing a survey design, involved master's students from a system-wide Midwestern university who had taken at least one online course. Master's students were selected for the study as they are typically expected by researchers to provide more substantive responses (e.g., Chyung and Vachon 2005; Katt and Condly 2009). Moreover, master's programs tend to have the highest penetration rate for online offerings. Penetration rate refers to the proportion of institutions offering both master's and undergraduate on-campus and online programs (Allen and Seaman 2005). For this study, an online course was defined as a university instructor-led course with more than 75% of the course content delivered online. The office of institutional research provided a list of all registered master's students from the university's system-wide campuses who had taken at least one online course ($N = 5245$).

The 13-question survey had two sections: a demographic section with four questions regarding gender, age, number of online courses taken to date, and field of study; and another section with nine questions. The questions for the latter section prompted students to describe experiences that led to their satisfaction or dissatisfaction in an online course, as well as Question 9, the focus of this study: *What specific things would you like your online instructors do to help you learn successfully?* Most of the open-ended questions on the survey were inspired by an interview protocol designed by Herzberg's et al. (1959) to investigate factors that made workers satisfied or dissatisfied with their jobs. Herzberg's et al. (1959) study has been widely replicated, and some researchers (Chyung and Vachon 2005; Danielson 1998; Katt and Condly 2009) have applied Herzberg's et al. (1959) study in educational settings.

The survey for this study underwent a rigorous review process. A five-member dissertation committee reviewed the survey, and their feedback was used to revise the initial survey. The survey was emailed using the Qualtrics survey software to a sample of students ($n = 245$) for pilot testing, and 42 responses were received. Subsequently, based on feedback from the pilot test, the instrument was revised to improve the clarity and flow of the questions, and a few questions were added to improve the usefulness of the data. After receiving final approval for the revised survey from the Human Subjects committee (for the university that awarded the dissertation) and the Internal Review board (for the university of the survey sample), an email was sent to the remaining 5000 students using the Qualtrics survey feature.

A demographic profile of study participants comprised a total of 624 students who provided usable responses to the survey. Of the 590 students who indicated their gender, 68% (399) were females and 32% (191) were males. In addition, of the 591 students who reported their age, 70% (416) were below the age of 35, 24% (142) were between 35 and 50, and 5% (33) were over the age of 50.

Under the supervision of the head researcher, three coders employed content analysis to code the survey's open-ended responses that included the students' responses to survey Question 9. The works of the US General Accounting Office (1989), Kaid and Wadsworth (1989), and Krippendorff (1989) were selected as they clearly explained the content analysis process. A synthesis of the steps used in this study for analyzing open-ended responses included but were not limited to the following:

1. Determining the objective of the content analysis: This was done by making inferences from the students' responses to survey Question 9.
2. Identifying the unit of analysis: This step involved selecting the portion of the data to be categorized which were the students' individual responses to Question 9.
3. Coding the data which included developing the coding: The coders were trained to identify emerging categories which involved reviewing examples of students' responses for each category that would be coded.
4. Drawing inferences: This step involved summing the frequencies for each category and providing a discussion, conclusion and recommendations for each.
5. Determining validation: The head researcher and three coders reviewed 20% of the students' responses and agreed on suitable categories for coding the remaining responses. Subsequently, two coders coded the remaining responses and the third coder checked 1 in every 7 responses. If a discrepancy existed between the two coders' choice of category, the third coder was used to reach an agreement. If the disagreement persisted, the response was eliminated.

Top Ten Instructional Strategies Recommended by Online Master's Students

The following is a discussion of students' responses to Question 9 of the self-reported survey. Figure 1 displays the 35 categories that emerged with the frequencies that were associated with the students' responses. There were cases when different parts of a student's responses were associated with more than one category. Hence, the total frequencies is more than 100 because each frequency does not reflect a percentage of the total frequency.

This article focuses on the Top Ten Instructional Strategies ranked from highest to lowest as follows: 1) be available and responsive to students, 2) engage/interact with students, 3) provide prompt feedback, 4) foster interaction/communication among students and instructor, 5) provide expectations, 6)

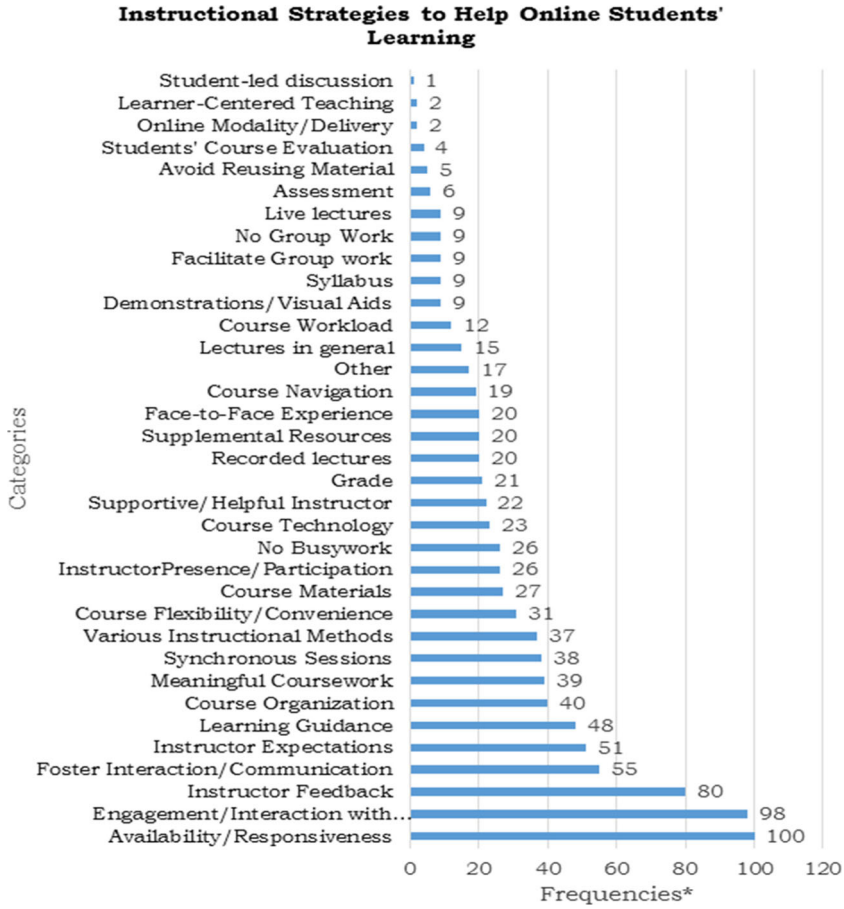

Fig. 1 Instructional strategies to help online students learn. * The frequencies totaled more than 100% because more than one category appeared in some students' responses

provide learning guidance, 7) organize course, 8) provide meaningful coursework, 9) provide synchronous sessions, and 10) use various instructional methods. A discussion of each category follows.

Be Available and Responsive to Students

Provide instructor availability (e.g., schedule for: consultations and office hours online, in-person or phone; response time to email; and timely return of assignments) and promptly respond to students when contacted (e.g., via email and chat). Students' responses included the following:

> "Provide online office hours at two different times during the week to help accommodate the wide range of schedules online students usually experience."
> "Make 'office hours' when [instructors] are available for rapid emails or chats for help."
> "Since we are not in the classroom setting where I can ask questions after a class, for example, it is very helpful for the professor to have available hours/days where we could possibly meet. Or, times/days when we can contact him/her with questions."
> "Be responsive with email or the program the campus uses for its classes, such as Canvas."
> "Respond to posts, set up forums for discussions with classmates, meet at least in person or via video chat if possible, etc. (Essentially, interact with students in some meaningful way)."
> "Teachers need to engage themselves in class and provide lectures just like they do in any other class. Teachers need to respond to emails in a timely manner, its online, they should be checking email at least 3 times a day and getting back to you in less than 12 hours. I have had teachers take 3 days which is unacceptable."

Engage and Interact with Students

Regularly engage and interact with students, and make instructor presence consistent. Students' responses included:

> "Interact more with us on a weekly basis. Posting once a week what the assignment is, although helpful, requires minimal effort and engagement. I also think changing up assignments for an online class is helpful to keep people more engaged."

"Communicate as often as possible. If I'm putting in my time, you need to put yours in for effective learning."
"Anytime there is a high level of engagement, and professors make themselves available for questions, the course runs smoothly."
"Be very engaged in the class…. Make sure assignments are for learning, not just something to do…."

Provide Prompt Feedback

Provide constructive feedback in a timely manner that assists students in accomplishing coursework. Students' responses included:

"One across the board thing that I feel is missing is timely feedback about assignments. It is much harder to ask questions and understand what a professor is looking for through an online platform. If the instructor is not responsive this is frustrating."
"Get feedback and grades to students asap. I know real life stuff gets in the way sometimes, but an assignment I turned in during September should be returned before the end of the semester. I need to know how I'm doing so I can improve."
"I want more feedback. In forum discussions, comment and let me know if I'm on the right track in my thinking."
"Give feedback either during or at the end of group discussions…"
"….. Give feedback on assignments….."

Foster Interaction and Communication among Students and Instructor

Have students engage and interact with each other throughout the semester, and promote and encourage faculty-student and student-student interactions and communication that support a learning community among students and faculty. Students' responses included:

"Require interaction between classmates; interact during discussions, rather than waiting until the discussion was over."
"Get engaged as best as you can with the rest of the class without crossing the line of assigning busywork. You only get out what you put into an online class so it is important for instructors to think about the key concepts that students need to learn when designing courses."
"Be there, but not too much. Instructors who jump in with their own ideas too soon, can stop discussion. So skillfully promote discussion so that it is substantive and not just 'being nice'. Although I think being nice is very important. One can have a different point of view and still be okay."

Provide Expectations

Provide clear instructions for completing coursework; criteria for assessment of assignments, exams and quizzes; and evaluation of overall performance. Students' responses included:

"…. make expectations known."
"Provide very clear expectations."
"It would be helpful with a more clear rubric."
"Communicate clearly, post more detailed instructions, do presentation with voiceovers or additional notes"

Provide Learning Guidance

Guide students in the learning process which could help them gain confidence that they are on track and increase their motivation to do well. Students' responses included:

"Discuss mechanics of material more … by providing step-by-step guides to show how things are done."
"Provide structured guidance rather than textbook assignments. I don't need to pay [tuition] for someone to tell me to read a book."
"Doing bi-weekly check-up with students to see if anyone has any questions."
"Hold Q&A sessions before exams."
"More lectures – video or otherwise. Less reading out of book and learning without guidance."
"…. offer examples of papers and projects."

Organize Course

Organize course materials and activities that facilitate a clear structure or path for students to follow instructor's lead and complete course requirements. Students' responses included:

"Be more organized."
"Be organized! Post a complete and organized syllabus. Also, have the online classroom organized and ready before the start of the semester."
"Streamline the online courses so it is clear each week what should be completed. If there are multiple assignments, place in one location or in one module."
"For students in online programs, it is highly beneficial to keep the courses structured, consistent, and concise."

"Organization is the biggest thing!!! It is also very important that the assignments are spaced so there is enough time to get them done."

Provide Meaningful Coursework

Provide meaningful learning experiences and activities that support students' interests and academic pursuits. Students' responses included:

"I would like for online instructors to provide choices to graduate students to allow us to pursue readings and assignments that match our long-term career interests."
"… activities that are applicable. It is difficult to be disciplined with online classes so give us assignments that are reasonable and feasible."
"Real world projects always help me learn by doing."
"Avoid busy work. It seems tempting to assign more assignments due to the fact that class is not done in person, however, these assignments should be meaningful and result in practical learning rather than just existing to ensure students are reading and so forth…"
"Have meetings perhaps with real people in the industry… it can build leaders for their company so it is a win-win in a way."

Provide Synchronous Sessions

Provide real-time sessions that support students' learning and academic progress (e.g., exchange and express ideas, clarify or review course content or topics, advise students on academic progress). Students' responses included:

"Perhaps to set-up chat rooms with specific times that the instructor would join the students to discuss topics or answer questions."
"I would like for instructors to hold video chats… It makes questions and answers much more clear."
"… have a weekly google hangout or skype session for questions students may have."

Use Various Instructional Methods

Use several means of instruction and engagement as well as technological tools to help students achieve learning objectives and complete coursework. Students' responses included:

"Be more creative in planning online learning activities and how frequently they appear in the course. Graduate courses are usually forum discussions, presentations, readings and learning tasks. The same format for 15 weeks. It's kind of boring, really."
"Use mixed media and multiple teaching formats … and to ensure the student user experience"
"…. video lectures, video chatting with colleagues, podcasts, etc. would be interesting. I understand that curating materials takes a lot of time, but how about some TED Talks or a This American Life Story every once in a while."

Discussion

The master's students' responses about the instructional strategies they would like their online instructors do to help them learn successfully are useful to online practitioners and also support the literature regarding online learning. As illustrated by Table 1, the Top Ten Instructional Strategies resonate with the Seven Principles for Good Practice in Undergraduate Education. They also refer to four of the eight Quality Matters general standards (4, 5, 6 and 7): Instructional Materials, Course Activities and Learner Interaction, Course Technology, and Learner Support respectively.

A key principle found to contribute to students' success in online learning is contact with their instructor that helps to motivate and move them forward, especially in challenging coursework situations (Chickering and Ehrmann 1996; Johnson 2014). This success principle is corroborated by one of the Top Ten Instructional Strategies identified - Engage and Interact with Student. Students indicated that online instructors should have established student-contact times and respond to students' questions within a reasonable timeframe (e.g., within 24 hours on weekdays).

In addition, students' top online strategy, be available and responsive to students, is endorsed by the fifth Quality Matters standard - Course Activities and Learner Interaction. This standard is closely tied to students' need for instructors to engage and interact with them, provide feedback and foster interaction. Students' awareness of instructors' efforts, or lack thereof, to interact and provide feedback is supported by online learning researchers such as Tobin et al. (2015) and Allen et al. (2016). Some students' comments in this regard could be captured by one student's feedback: "Posting once a week what the assignment is, although helpful, requires minimal effort and engagement."

The aforementioned findings suggest that students require substantive interactions with their instructors and peers in order to succeed in online learning. Therefore, instructors should purposefully structure interactions for students to explore, critique and reflect on ideas to include those of their peers and instructor, while being guided in this process (Garrison and Cleveland-Innes 2005). Moreover, "student-student and

Table 1 Similarities among top 10 instructional strategies with seven principles for good practice in undergraduate education and quality matters standards

Top ten instructional strategies	Seven principles for good practice in undergraduate education	Quality matters general standards
1: Be available and responsive to students	1: Encourages contact between students and faculty	5: Course Activities and Learner Interaction
2: Engage and interact with students	1: Encourages contact between students and faculty	5: Course Activities and Learner Interaction
3: Provide prompt feedback	4: Gives prompt feedback	5: Course Activities and Learner Interaction
4: Foster interaction and communication among students and instructor	1: Encourages contact between students and faculty 2: Develops reciprocity and cooperation among students	5: Course Activities and Learner Interaction
5: Provide expectations	6: Communicates high expectations	5: Course Activities and Learner Interaction
6: Provide learning guidance	5: Emphasizes time on task 6: Communicates high expectations	5: Course Activities and Learner Interaction
7: Organize course	5: Emphasizes time on task	5: Course Activities and Learner Interaction 7: Learner Support
8: Provide meaningful coursework	3: Encourages active learning 7: Respects diverse talents and ways of learning	5: Course Activities and Learner Interaction
9: Provide synchronous sessions	7: Respects diverse talents and ways of learning	6: Course Technology 7: Learner Support
10: Use various instructional methods	7: Respects diverse talents and ways of learning	4: Instructional Materials 6: Course Technology 7: Learner Support

instructor-student communication are clearly strongly correlated with higher student engagement with the course, in general" (Dixson 2010, p.1).

Recommendations for Using Best Practice Online Instructional Strategies

Because the students' perspectives confirmed extant research, the recommendations focus on how faculty can use these perspectives in their own teaching which could lead to improved learning outcomes. For example, to be available and responsive to students as well as to engage and interact with students, instructors could facilitate synchronous online meetings for assignment review, coursework feedback and office hours. In order to determine a common time for synchronous meetings, instructors could poll students using web-based tools (e.g., Doodle, or a polling tool within their campus learning management system or LMS).

Additionally, to vary approaches to instruction and engagement, instructors could allow students to use technology tools such as multimedia programs to create meaningful coursework. For example, students could collaborate on video projects that speak to their collective interests. Through their LMS, they could post their works-in-progress and gather feedback from their instructor and peers for continuous improvement. Making available opportunities for students to engage in projects that are meaningful to them could increase their motivation to submit coursework that could meet or exceed instructor expectations (Castano Bishop and Yocom 2013). Further, to foster interaction and communication among students and instructor, discussion forums have been used successfully for myriad types of interactions such as debates on course topics and in collaborative activities (Ferdinand 2017; Watson and Ferdinand 2015).

The Top 10 Instructional Strategies provide a clear lens on what faculty could do from students' perspectives. To broaden this view, additional research could be conducted to investigate corollary topics. They could include, but are not limited to, the following: a) differences and similarities between the levels of engagement among students from different disciplines who have taken a variety of online courses multiple times, and those who had minimal number of courses, b) ways to combine instructor and student feedback to inform training for online practitioners, and c) differences in students' preferences for online instructional strategies based on academic programs.

Conclusion

Most of the top strategies that students reported that helped them learn successfully related to some form of interaction with their instructors, their fellow students, and the content (e.g., be available and responsive to students, interact and engage with students, and foster interaction and communication among students and instructor). Online course practitioners could use the study findings to enhance student engagement (e.g., making coursework relevant to real-life experiences). Students also need instructors to clearly communicate what is expected, guide them in meeting stated expectations and provide feedback on completed coursework. In sum, this study underscores the necessity to solicit students' perspectives or learners' voices. Consulting learners in some

meaningful way about what instructional strategies online practitioners could employ to help them learn successfully will invariably lead to a more informed and holistic approach to teaching and students' learning. Students are inevitably not only recipients of their instructor's strategies, but by default, creators of their own learning.

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