

Online Learning and Instructor Feedback

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Feedback is essential to enhance students' performance in an online learning environment, although this is influenced by how feedback is delivered. Feedback is an assessment of learning and promotes motivation to the learner. With the COVID-19 pandemic, teaching and learning rapidly shifted to online learning, and the importance of instructor feedback became critical. A sample assessed forty-two students within an online distributed learning environment. Students were requested to rate their experience with the feedback received from the instructor. The completed questionnaire included (6) closed-ended, (5) Likert scale, and (4) open-ended questions. The research intends to discover the learner's preference for the delivery of instructor feedback and how this impacts learners. However, the analyses emphasized that students need more engagement with the online instructor while optimizing learner-to-learner feedback that encourages the benefit of relationship and knowledge building.

Keywords: Feedback, online, teaching, learning, instructor, pandemic

INTRODUCTION

In an online teaching environment, feedback is essential for the learner and necessary for formal and informal learning (Adie et al., 2018). As per Hattie and Timperley (2007), feedback is the most powerful influence on a student's positive or negative approach in a teaching and learning environment. Feedback is helpful as it provides the student with the learning progress and how the learner must follow the required instructional steps. Feedback directly encourages the learner, as learners constantly seek to know how they are progressing. Hence there could be a positive learner engagement with the mode of feedback delivery.

Tanis (2020) states that in an online setting, instructor and learner communication promotes collaboration, engagement, active learning techniques, completion of tasks on time, the learner's high-performance expectation, and prompt feedback. To effectively teach the online learner the instructor must engage the learner with course contents and meaningful feedback and continuously help the learner to complete the educational journey (Howard, 2020). This paper is written based on two theories that contribute to the enhancement of the learner and assist in structuring their learning and study priorities. According to Chen (2014), the instructor can offer several types of feedback. Knowing the various kinds of methods exercised in the educational environment will help the instructor fully engage, uplift, and encourage the student in online learning. Chen (2014) also states that mediated feedback is the most common feedback used in an online environment, which is the least valued by students. The self-regulated method is robust but rarely used by instructors. This study aims to ascertain the learner's positive and negative reflections on the approach of instructor feedback and how this impacts the learner. Instructors should reflect on their feedback strategies to provide adequate stimulation and enable students to participate actively (Chen, 2014). The current study will explore: (a) what feedback methods encourage students to learn more effectively in an online learning environment? (b) how does constructive feedback impact student learning? and (c) how did feedback impact the learner during the pandemic?

THEORETICAL FRAMEWORK

Boekaerts (1999) describes self-regulated learning as a student's thoughts, actions, and feelings toward accomplishing goals. Self-regulated learning is a fundamentally constructive and self-directed method. When offering feedback to the students, instructors need to apply proper strategies of shaping the learning environment in which students attempt to allocate resources through (1) *cognitive learning strategies* that help students to organize information within a deep level of understanding through concentration, selection, and elaboration; (2) *metacognitive and regulation strategies* that regulate cognitive strategies through planning and monitoring and (3) *resource management strategies* that enable learners to reach for goals internally and externally using resources that are at their disposal to manage and control (Boekaerts, 1999). As per Williams (2018), self-regulated learning is more a process than an ability; the learner uses self-regulation to reach academic success effectively. The instructor's primary goal is to assist students in becoming self-regulated learners, who hold the ability to generate internal and external feedback and understand the expectations of satisfactory performance. Instructors help students to develop self-assessment

and self-reflection skills, encourage student-teacher and student-peer dialogue about learning, and provide multiple opportunities for repeat practice, inspiring positive self-esteem, and motivational beliefs (Williams, 2018). Zhou et al. (2015) mentioned that self-regulated learning lies in negative and positive feedback. Learners can proactively motivate and guide their actions by setting challenges and goals for themselves and trying to fulfill them. These enable the learner to gain self-efficacy, skills, and resources.

Meanwhile, as per Riofrío-Calderón & Ramírez-Montoya (2022), mediation is an element in the educational process that combines technology and innovation. Mediation supports a person, team, or community to generate products or solve problems through continuous feedback. González et al. (2008) declares that mediated learning experience indicates how the instructor interacts with the learner, which affects the learner's cognitive system allowing them to solve different problems in their future practices. Riofrío-Calderón & Ramírez-Montoya (2022) state that students can generate innovative ideas and solve problems through mediated learning as educational relationship links between instructor, learner, and peer. Mediated learning triggers the learner to reflect not only on the solution to the problem but how the solution was obtained. Mediated learning describes an exceptional interaction between the learner and the teacher (González et. al., 2008). Brown (2003) states that Vygotskian theory stipulates that the development of a child's mental process depends upon the presence of mediation as a child interacts within the environment. According to Vygotsky, formal education is considered the most important. Mediation enables a person to gradually enhance and develop to reach their highest level of autonomy in learning (Riofrío-Calderón & Ramírez-Montoya, 2022). Mediation is an essential factor in the distance learning environment as this increases participation that fosters a sense of community among learners and interactivity with instructors and peers.

LITERATURE REVIEW

In an online learning platform, where face-to-face interaction is absent, students express preference in seeking teacher interaction and expect to receive constructive feedback within their learning environments. Feedback drives learning, and students require much feedback and interaction with teachers to be successful (Chen, 2014). As per Hattie and Timperley (2007) and Chen (2014), there are five types of feedback teachers offer to the students a. feedback about a task; b. feedback about the processing of the task; c. self-regulation; d. self as a person; and e. mediative feedback that fills the gap and silence. The feedback types discussed in this paper provide the instructor with the best delivery method for student enhancement. Al-Hattami (2019) mentions that the best way to close the gap between student current

and desired performance is to give constructive feedback. As per Istenič (2021), feedback is multidimensional by nature and includes socio-emotional and cognitive domains associated with learners' engagement, motivation, achievement, behavior, and self-regulation.

According to Al-Hattami (2019), teaching and assessing are conducted in the 21st century through higher-order thinking (e.g., problem-solving, cognitive skills, and reasoning) due to the rapid development of knowledge. Teachers should provide clear and constructive feedback for a more significant learning outcome to achieve higher-order learning. During the COVID-19 pandemic, students depended on instructor feedback more than before as teaching and learning shifted from a face-to-face setting to an online learning environment (Istenič, 2021).

According to Hattie and Timperley (2007), feedback is a "consequence of performance" (p.81). Feedback is the only way to develop a strong linkage between faculty and students that leads to better learning outcomes (Gopal et al., 2021). This study explores the effectiveness of feedback given by the instructor to the online learner, the impact of constructive feedback. The feedback that could impact the learner during a pandemic situation is separated to address the relevant literature related to the topics mentioned above.

Constructive feedback impact student learning

Hattie and Timperley (2007) explain that efficacious teaching includes imparting information, understanding students, or providing constructive learning tasks; but it also involves evaluating and assessing students through feedback. When an instructor provides valuable information about their progress in an external feedback process, the learner gains awareness of his/her strengths and weaknesses while addressing the gaps in learning (Williams, 2018). Through feedback, students can set reasonable goals for themselves and track their performance while adjusting their direction, determination, and approach. Feedback is effective when it consists of information about progress and how to proceed. Tanis (2020) states that faculty and student communications in an online environment are initiated through introductions, emails, and faculty-student biographies. Timely instructor feedback promotes student motivation and satisfaction. Hattie and Timperley (2007) mention that positive feedback increases the chance that students will return or continue in the activity and self-reported interest in the activity as feedback is aimed to "drive" students towards goals or to "do more" or "do better." With corrective feedback, the teachers develop teaching qualities and the learner's learning quality. Frequent constructive feedback will provide greater student engagement and higher educational achievement in learning (Hattie and Timperley, 2007).

Feedback methods that encourage students to learn effectively

Adie et al. (2018) state that when students learn new knowledge or skills, their cognitive resources are expanded, adding to their memory ability. When teachers provide feedback detailing the areas of improvement, the students challenge themselves to think of many avenues to progress their learning and develop their self-regulatory skills. Chen (2014) describes four types of feedback methods. a. feedback about the task, also known as corrective feedback; b. feedback about processing the task shows the student how to approach the alternate strategies during the task engagement; c. feedback about self-regulation, which facilitates students through self-monitored control and confidence in their learning; d. feedback about self as a person (superficial praise): commenting, e.g., giving comments as “smart.” and e. feedback about mediative: that discuss topics rather than giving comments on the students. Instructor mediation feedback is a vital function of student collaboration, stimulating interaction, and allowing instructors to share with students and instruct their individual opinions through discussion of the topic instead of commenting on students’ writing (Chen, 2014).

As a critical aspect of education, feedback is difficult when the student and the instructor are at a distance. However, the focus needs to be on quality feedback, and the instructor should not ignore the critical selection of delivery (Tanis, 2020). Enhanced feedback from the educator to the learner and learner-to-learner benefits the relationship building in an online learning environment. As per Hattie and Timperley (2007), self-regulation contains an interchange between control, commitment, and confidence. Self-regulation addresses how students direct, monitor, and regulate actions towards their learning goals and indicates independence, self-control, self-discipline, and self-direction. These regulations also engage in self-generated thoughts, actions, and feelings and are planned and constantly personalized to accomplish personal goals leading to seeking, accepting, and accommodating feedback. Chen (2014) mentions that constructive and deep learning does not occur without adequate guidance. As such, learners need direction from their instructors. Teacher interventions are essential for student collaboration, especially in an environment where there is no face-to-face communication and teacher presence has been distant. Although with technological developments, it has become easier to learn from anywhere and anytime. The synchronous learning environment facilitates the learner to attend live lectures with real-time interaction between another student and the instructor, where feedback drives learning (Chen, 2014).

As indicated by Chen (2014), the feedback that the students’ value least is mediated feedback, although mediated feedback is the most common feedback used by the instructor in an online environment. Instructors rarely use the most powerful method of self-regulated feedback. Hattie and

Timperley (2007) mention that teachers can construct a learning environment in which self-regulation and error detection skills develop. These may include a more self-regulating learning process, greater fluency, more strategies to work on tasks, deeper understanding, and more information about what is, and is not understood.

Impact on learner feedback during the pandemic

Due to the COVID-19 pandemic, face-to-face classrooms rapidly moved to remote digital learning. The faculty required a new set of skills and practices to facilitate the increased demands that the student required from written communication, inquiries, engagement, and virtual meetings, in addition to collective and personalized feedback (Gallien and Oomen-Early, 2008). Howard (2020) indicates that students in an online learning environment anticipate feedback to be respectful and supportive, while the feedback should be specific, reliable, and valuable to the learning goals. Educators face various challenges in constructing quality feedback, hence, text-based, and video-based production can be more effective. As video-based feedback creates an instructor's social presence, this kind of feedback impacts students' perceptions. Istenič (2021) also indicates that feedback toward student improvement guides student engagement and personal needs and significantly impacts learning. Feedback also includes cognitive and socio-emotional domains associated with learners' engagement, achievement, motivation, behavior, self-regulation, and satisfaction. Feedback is not a one-way communication from the instructor to the student; it has expanded towards a dialogic framework that helps to facilitate learning as the construction of knowledge within the learning environment (Istenič 2021).

According to Howard (2020) and Istenič (2021), instructors in virtual classroom settings need to prioritize the delivery of feedback in the form of text-based (effective) and video-based (affective). Text-based delivery is standard and can be accessed from various devices, while instructions created in text form can be read on the go without other people hearing the feedback from the instructor. Although video-based feedback has practical benefits and supports the learner, this requires greater bandwidth. The feedback offered to the student should be positive, specific, personalized, with clear guidance, supportive, and formative feedback. Feedback from instructor to learner and learner to learner builds relationships in an online learning environment, increasing a stronger sense of community and student motivation (Howard, 2020).

METHODS

The study reported in this paper analyzed gaps in communication, interaction, and engagement under the qualitative method of textual analysis. The paper investigates whether proper feedback does improve the system. The survey was conducted through a questionnaire based on the Likert scale, differential scale, and closed-ended and open-ended data collection that encouraged students' freedom of thought and obtained opinions in their own words. The validity was carried out by analyzing the data through triangulation and employing an inductive data analysis approach to identify patterns and trends within the dataset.

Participants

Participants in the study were students in the undergraduate, master, and doctoral classes enrolled in the 2021 fall semester at a university in Texas. The respondent participants were 43 in total. All 43 students in the online synchronous class responded to the questionnaire sent to their school-registered email. There was one null record.

Materials

The qualifying factor for research participation was students from the distributed learning program in the learning technologies department. A questionnaire generated from the Qualtrics experience management systems collected participants' views. There was no related treatment that applied to the participants. The collected data was then analyzed and open-ended questions were coded.

Procedures

The data collection was from students enrolled in the distributed undergraduate, master, and doctoral programs in the learning technologies program. The students were requested to rate their experience with the feedback they received from the instructor in an online learning environment. Students completed the online questionnaire (Table 1). The questionnaire included (6) closed-ended, (5) Likert scale, and (4) open-ended questions that allowed a choice of autonomy for the learner to provide more valuable and contextual information on the feedback given by the instructor, the way of assessment and the overall experienced with online learning and instructor feedback. (Table 1) indicates the questions posed in the questionnaire.

Table 1
Questions on the Questionnaire

1. Did the instructor motivate your interest in the course topic?
2. Was the instructor well-prepared and organized for every class?
3. Did the instructor encourage discussions online and answer all your questions?
4. Did the instructor provide feedback promptly and within the stated timeframe?
5. Did the instructor clearly communicate the information regarding feedback and assessment?
6. Did the instructor's feedback show you how to improve your work? (e.g., corrections including comments).
7. Was the requested information received timely to continue your assignment?
8. Did you have difficulty in reaching out to the instructor?
9. Did you reach out to a class peer for guidance on the assignment?
10. Was the guidance offered by the instructor too complex?
11. Did the instructor give guidance on where to find resources?
12. Was the feedback given by the instructor enough?
13. Would you have liked a different way to get feedback? Please explain?
14. Would you have liked a different way to be assessed? Please explain?
15. What is your overall experience with online learning and instructor feedback? Please explain

RESULTS

Participants included 43 students. All participants were adults and enrolled in the online distributed program in learning technologies. There was one null record. The results of the instructor feedback separated responses from the questionnaire. The below (Figure 1) indicates the respondent percentages by the students for (Table 1) questions 1, 5, 6, and 7. According to the survey results, the analysis shows no significant difference in the lack of feedback provided to the students. The open-ended pessimistic (Table 2) and positive (Table 3) responses help to explain the respondent's unbiased feedback.

Table 2
Open-ended (Pessimistic) Responses

Pessimistic Responses
"Request feedback on big projects"
"Doing assignments without the previous grades."
"Feedback in the document is the best way to understand the context and specific comments"
"Not just saying something is wrong but instead explaining it in a way to correct any mistakes"
"I do not think us students knew what some of the assignment required, so we would chat with among each other"
"They can be clearer, give exact explanation. some of them change the parameter after we asked or after we are done."
"Yes, I would have liked consistent feedback through the semester"
"Yes, I would have liked a different way to receive feedback. Credit for answers that were marked incorrectly by the grader. Feedback as to why the grader graded the way they did."
"Exams in the course. There was not enough time for the number of questions and time given. Specially the exams given. It was extremely hard to keep up with fill in the blank questions."
"I would have liked feedback throughout the semester and an opportunity to fix assignments based on instructor feedback."
"I feel that giving busy work and end of chapter homework was an incorrect use of my time. I learned little to nothing in this particular class and did not appreciate the assignments which were more busy work than anything."
"Some are good in explaining while other don't give direct answers frustrating if not answered timely"
"Feedback was poor, room for improvement"
"Experienced the worst with the instructors and feedback this semester"
"Much different than live classroom. No real connection and do not feel valued"
"Discussions are geared more toward people who have an educational background. Helpful to hear information for those coming from diverse backgrounds"

Table 3
Open-ended (Positive) Responses
The open-ended (positive) responses pertaining to the instructor feedback

Positive Responses
"Canvas feedback system is good"
"I wouldn't change a thing; Instructor provides quick and efficient feedback"
"I like the way feedback was given was sufficient"
"The feedback from my professor was explicit enough"
"Email and Canvas was sufficient."
"If I needed help I always got it the right way."
"I found the assessment to be just."
"Nope this was better"
"I felt that I was assessed fairly."
"It was great, plenty of instructional resources, never felt I lacked support"
"Instructors were helpful, responded in a timely manner, provided clear instructions"
"Fast response time"
"More flexible"
"More accommodating to the schedule"
"Very uniform"
"Able to get help when needed"
"Provide engaging course material"
"Classes are handled excellently"
"Instructor feedback works seamlessly"

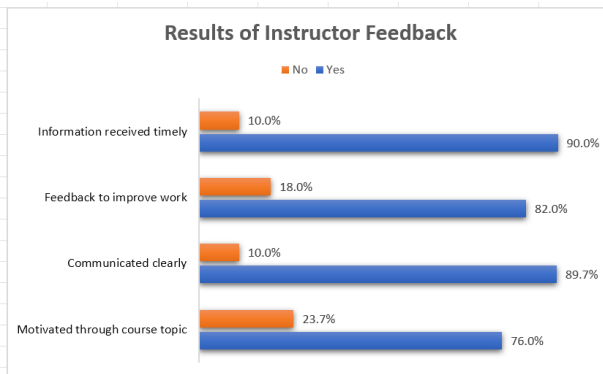


Figure 1 Results of instructor feedback.

While reviewing the data, there was no major difference in the negative aspects of the instructor not providing feedback to the students. However, open-ended responses indicated that the students preferred feedback explaining ways to correct mistakes. Hattie and Timperley (2007) indicate that feedback about a task is powerful when task information is distinguished, often mentioned as helpful feedback of knowledge of results. As per Chen (2014), feedback helps promote self-regulation, which is a crucial factor for advancing learning. Adie et al. (2018) indicate that self-regulating students are mindful of thinking, motivation, and behavior during their learning. When the teacher develops dialog and open interactions, the students open spaces to articulate the help they require while asking questions to clarify meaning, negotiate and reflect on feedback and provide feedback to the teacher, which then develops self-regulatory skills. As per Hattie and Timperley (2007) and Tanis (2020), positive feedback increases motivation more than negative feedback. Improving feedback from educator to learner and learner to learner serves as a relationship-building process in online learning environments. Feedback increases students' motivation and enthusiasm to build a stronger sense of community. To raise learners' performance educators should offer consistent, timely, and frequent feedback to students in an online learning environment (Chen, 2014; Howard,2020). According to Tanis (2020), timely instructor feedback will promote student motivation and course satisfaction. In an online environment, students and instructors may feel the lack of human touch because of the virtual mode. As such, instructors should set the stage to incorporate the virtual environment with instructiveness, collaboration, and a creative and fun-filled atmosphere to avoid boredom and should always be willing to help students. When unable to reach the instructor for guidance, the students will reach out for peer support. The below graph (Figure 2) compares the instructor and class peers.

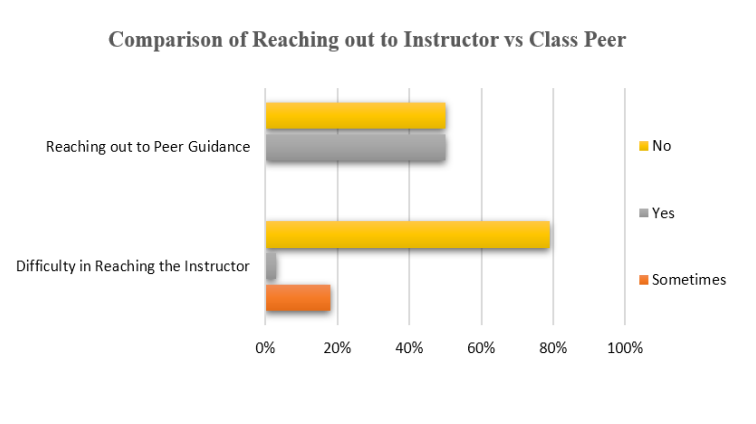


Figure 2. Comparison of reaching out to instructor vs class peers.

The response in (Figure 2) reveals that, overall (50% of students) had difficulty in reaching out to the instructor, and an equal percentage reached out for peer guidance. As per Gielen et al. (2010) feedback received by peers is not always as effective as the instructor feedback, as teachers are the domain experts not peers. The outcome of the accuracy on the feedback varies and the advice and judgment could be misleading, fully incorrect, or partially correct. Although peer feedback is beneficial for learning, the absence of clear “knowledge authority” can alter the meaning and impact of feedback. Engaging students in the assessment process increases the number of assessors and feedback opportunities but the accuracy might be lower compared to teacher feedback, as peer feedback is not always as effective as the instructor feedback (Gielen et al., 2010). The overall Likert scale responses received for the instructor feedback and guidance (Figure 3) were more than 50% and indicated that the instructor gave positive feedback.

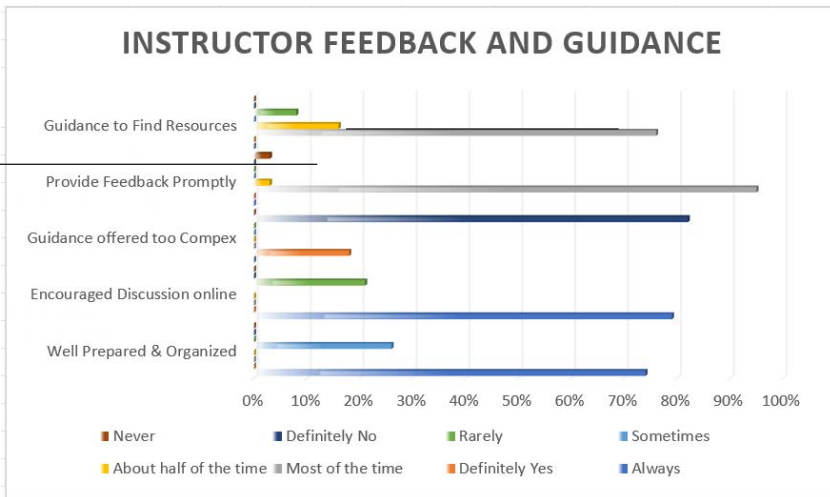


Figure 3. Instructor Feedback and guidance.

DISCUSSION

Instructor feedback in an online learning environment plays a vital role in asynchronous learning; with improved instructors’ communication approaches, the learner will benefit. The author expected a negative result between students’ requests and feedback received from the instructor in the online learning platform; the survey results showed no noteworthy difference. This research study will help instructors better guide and facilitate learners in different modalities acceptable to learners.

According to the responses analyzed in (Figure 3), a higher percentage (94% of students) of responses indicated the instructor supported the learner. Only (6% of students) had numerous issues that are indicated above. These issues could be rectified with more prominence and emphasis given to the instructor on the methods of feedback that would facilitate the learner. Williams (2018) states that with immediate feedback, enhanced learning rates are gained by processing tasks and investing time in reading the feedback, promoting retention. Algiraigri (2014) states that feedback can be “emotionally challenged” (p 3) in the way it is given and received. The focus is on action and the need to change. Although feedback will be in different forms, the common goal is to reinforce positive behaviors or corrective performance. One survey respondent indicated, “Discussions are geared more toward people with an educational background. Helpful to hear information for those coming from diverse backgrounds.”

According to Tanis (2020), learning as a team effort is more effective than students learning on their own to prevent isolation in an online learning group. Meanwhile, instructor availability and prompt feedback are vital for student motivation and enthusiasm (Tanis, 2020). Timely feedback was another necessity that the students longed for through the open-ended responses 21% responded that more feedback was needed. Al-Hattami (2019), Chen (2014), and Howard (2020) indicate that teachers need to offer timely feedback. They must also be prompt while responding to emails, assignments, and modeling good interaction and communication with students.

Al-Hattami (2019) stated that in ensuring the effectiveness of feedback, the desired learning outcomes must be stated clearly for students to implement tasks and collect the required information. Constructive feedback prevents discrepancies in performance and leads to successful teaching and learning for both students and teachers. Per Chen (2014), feedback through self-regulated learning should provide confidence in students’ learning as self-regulation feedback is the most beneficial to students but least offered by teachers. The research questions did not address the students’ impact on the feedback received during COVID-19 when students studied in an online learning environment, even though an overall online student presence was considered a need to explore in future consideration of the topic.

CONCLUSION

This study centered on online learning and instructor feedback, which helps to significantly develop the learners’ learning quality. Guided feedback to students can raise educational achievement (Hattie and Timperley, 2007). The virtual instructor provides a practical, quality learning experience and is organized, enthusiastic, and actively engaged with students in the online learning modularity (Tanis, 2020). This study revealed positive

and negative influences that affected students to become more self-directed learners. This study also highlights that in an online environment while mediated feedback is the most common feedback used among instructors, this feedback type is the least valued by students. Therefore, the most powerful method of self-regulated feedback should be used by instructors, as this is the most valued feedback by the students (Chen, 2014). To provide a successful learning experience and enable students to participate actively, instructors need to change their feedback approaches in the online learning environment. Monitoring and being aware of student outcomes will result in the development of an internal self-regulatory process that will form a powerful motivation for learning and to develop a more autonomous learner.

DECLARATIONS

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The author declared no competing interests.

The author declared that permission for obtaining data from research subjects was obtained from University of North Texas.

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