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Article

Enhancing the Quality of Hybrid and Online Courses by Enforcing and Motivating Techniques and Tools for Maximum Engagement in Discussions

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Abstract: This study reflects nearly two decades of continuous skill development in teaching online and hybrid courses at SUNY Old Westbury and SUNY Empire State University. In online and hybrid environments, discussion forums have played a vital role in fostering engagement and participation compared to face-to-face courses. Learners are assigned to actively participate in discussions, while the instructor works to bridge the gap between face-to-face classroom interactions and the online environment. Early feedback is one technique that instructors use to enhance social presence, ensuring that class activities in discussions are maximized and that the direction of discussions remains organized. This technique presents its own challenges, as learners tend to interact more with the instructor when responding to feedback rather than engaging with their classmates. Conversely, providing feedback at the end of module courses is a common technique, but a drawback is that topics may develop in the wrong direction. A balanced technique for discussions involves the instructor monitoring the conversations and responding to posts without providing explicit feedback on what is right or wrong. Instead, the instructor should emphasize what has been presented and encourage learners to elaborate or expand on topics when necessary. To further motivate participation in discussions, a significant portion of the final grade—ranging from 20% to 35%—should be assigned to these discussions, which should last for two weeks within the module. The evaluation of discussions will be done at the end of the module among seven modules of the course both considering quality and quantity. It is possible to incorporate a strategy to enhance discussions as a central part of online and hybrid courses where the course activities are directed and prioritized. To ensure quality, several enforcing and motivational techniques are introduced in conjunction with the existing tools for progress reporting and assessment in Learning Management Systems. A technique of indirect feedback encouraging learners to post more and build toward quality value. The motivation scheme used at discussions makes everyone participate and contribute. Smart tools like cameras and voice recorders make it easy for learners to contribute and enjoy the process. The study highlights the implementation of enforcing and motivational techniques that enhance the quality of discussions, ultimately improving the overall quality of the course. Additionally, the use of instructional tools is essential for optimizing course performance. The study also concludes by examining some of the key differences between discussions in online and hybrid courses.

Keywords: online teaching; online discussions; students' engagement; quality enhancement; motivating techniques; enforcing techniques; tools for engagements

1. Introduction

Technology, since its start, has reshaped higher education and continues to advance the way education is delivered, making it more flexible, personalized, and accessible. The technological innovation has impacted the way knowledge is acquired, shared, and disseminated. The growth of online education necessitates the establishment of a variety of techniques and tools to accommodate diverse learning backgrounds and enhance learning outcomes. The COVID-19 pandemic has significantly disrupted the normalcy of education, leading to the widespread adoption of online and hybrid courses by educators. This unprecedented situation has required educators to showcase innovation and creativity in order to effectively engage and motivate learners. They have implemented a range of tools and techniques to ensure student involvement and enthusiasm in the

learning process. Due to the pandemic, universities had to transition their courses to online formats. In online and hybrid teaching and learning modalities, the discussion forum plays an important role in fostering engagement and participation compared to traditional face-to-face teaching. Learners are assigned to actively participate in the discussions. The instructor strives to bridge the gap between face-to-face classroom interactions by bringing the discussion forum to life and encouraging active engagement from learners. A significant portion of the final grade, such as 20% to 35%, has been assigned to the discussions to motivate learners to participate. Each discussion should last two weeks within the seven modules. This study represents a continuous improvement of skills developed over nearly two decades of teaching online and hybrid courses at SUNY Old Westbury and SUNY Empire State. It involves observing students' engagement and its reflection on learning and assigned tasks. One technique for responding to learners in discussions is to provide feedback as early as possible (early feedback). This approach helps establish social presence and ensures that the discussion criteria are followed. Instructors plan to maximize class activities in discussions and keep the discussions on track. However, this technique presents challenges, such as the need for ongoing interaction between instructors and learners, which can result in less responsiveness to feedback from classmates. On the other hand, a common technique involves providing feedback at the end of the course module or on the due date of the discussions. A drawback of this end-of-module feedback technique is that topics might go off track, or students may rush to post their contributions close to the module's end or the due date.

2. Background Studies

The COVID-19 pandemic required a swift transition to online education, leading to the introduction and exploration of various techniques, tools, and methods to adapt to this new learning environment. The article (Bashir et al, 2023) examines the impact of pandemic in higher education and the shift towards online learning models and the implication for the courses.

Analysis of the gathered data reveals that students experienced a decline in their engagement and attendance, with 72 percent indicating that this lack of engagement negatively impacted their online learning experience. Additionally, a majority of students expressed challenges in maintaining connections with their peers and instructors, as well as managing the pace of coursework (Hollister, et al., 2022). This article aims to explore techniques and tools that can be implemented to enforce and motivate maximum engagement in online and hybrid course discussions. Online courses come with their challenges of isolation and lack of motivation in comparison to face-to-face traditional classroom settings.

The prominence and prevalence of online teaching and learning have increased, making digital platforms the sole medium of communication during lessons. The limited interactions between teachers and students can significantly hinder effective learning. Therefore, it is crucial to enhance these interactions in online lessons by implementing strategies that enable educators to create a more engaging and interactive learning experience for students (Ong & Quek, 2023). The study by Duggal, Gupta, and Singh (2021) examines the use of gamification and machine learning techniques to enhance classroom engagement and learning outcomes. It discusses how these techniques can increase student motivation, participation, and overall performance by tailoring learning activities to individual needs and providing instant feedback. This approach creates a more engaging, personalized, and efficient learning experience in education.

In online courses, discussions can be used as a forum to bridge the gap of interaction in the traditional classroom setting, and with a little care, they can bring motivation to the learners. Create an icebreaker topic for each discussion to foster a welcoming and inclusive environment, encourage learners to participate as much as possible, and promote a sense of belonging by sharing personal experiences.

Online discussions are an essential component of online courses as they facilitate interactions among learners. However, a challenge arises when learners exhibit inadequate participation in these discussions, necessitating the instructor's intervention and the consideration of a design and strategy for online learning. This research proposes the role of mandatory participation, and the findings

indicate a direct positive effect on learning performance and the enhancement of learning outcomes. By implementing mandatory participation policies and providing clear instructions, educators can cultivate a more dynamic and collaborative learning environment in online courses, resulting in increased learner engagement and improved quality of interactions within online discussion forums (Du et al.,2022). This study by Essa, E. K. (2023) explores how the integration of active learning strategies within a hybrid learning model can enhance the quality of online courses. It examines various active learning techniques, such as collaborative projects and interactive activities, and their effectiveness in improving student engagement and comprehension in online environments. The study also addresses challenges, including the need for careful course design and adequate technological support. The study by Khan, Egbue, Palkie, and Madden (2017) examines various strategies to enhance student engagement through effective course design and delivery, particularly by integrating active learning pedagogies and collaborative tools. The findings reveal that 100% of respondents considered student engagement a persistent challenge, irrespective of their experience with online teaching. The lack of physical presence and reliance on digital communication create obstacles to building a sense of community and interaction among students and between students and instructors. The study emphasizes the importance of course design as a best practice, highlighting the need for clear expectations and instructions. Additionally, providing timely and constructive feedback helps keep students engaged, while the presence of instructors fosters a sense of connection and support. The study by Rios, T., Elliott, M., & Mandernach, B. J. (2018) focuses on the importance of student satisfaction in online learning environments, which is crucial for the success of online educational programs. It emphasizes that understanding and addressing student satisfaction can help educators and course designers create more effective online courses. The authors highlight several strategies for designing courses that enhance satisfaction and explore various instructional methods that can positively impact student experiences. They also find that individual differences among students, such as technology self-efficacy, personality traits, and engagement levels, influence their satisfaction with online courses.

Nilson, L. B., & Goodson, L. A. (2022) offer an in-depth exploration of enhancing online teaching by integrating effective instructional design with robust teaching practices. The authors emphasize the importance of aligning instructional design with teaching practices to foster student engagement and improve learning outcomes. They provide actionable recommendations for creating compelling online courses, such as incorporating interactive activities, offering timely feedback, and building a supportive learning environment. The book concludes that by focusing on user-friendly design, clear guidance, constructive feedback, and effective use of multimedia tools, educators can create online courses that better meet students' needs and enhance their overall learning experience

Student engagement and experience in online environments play a vital role in attaining academic success, as actively involved students are more likely to maximize their academic potential. The role of instructors in creating learning environments and the importance of technology tools in facilitating interaction and collaboration cannot be underestimated. Through the implementation of these strategies, educators can actively foster a culture of learning, thereby enhancing student outcomes in both online and hybrid teaching contexts (Gamage et al.,2022). A comprehensive review shows how educators utilize AI to enhance student engagement in online learning environments (Almusaed et al., 2023). The article (Bockorny et al., 2023) provides insights into how intrinsic motivation improves engagement in a hybrid learning environment and how these strategies enhance student participation and learning outcomes. The study by Heilporn, Lakhal, and Bélisle (2021) focuses on incorporating interactive activities, providing timely feedback, and creating opportunities for collaborative learning. It discusses how these methods enhance the learning experience by bridging the gap between online and in-person instruction. Additionally, the study examines the challenges educators face in implementing these strategies, including the necessity for adequate training and resources. The study by Holbeck and Hartman (2018) explores strategies to enhance online student satisfaction and engagement by leveraging technology to improve cognitive, social, and teaching presence in online courses. It highlights the use of various tools and software to create a learning community, enabling instructors to be more dynamic and responsive. However, the study

identifies challenges, including the need for instructors to become familiar with these tools and the potential workload involved in managing them. The research conducted by Marey, A., Goubran, S., & Tarabieh, K. (2022) explores the need for thoughtful planning and investment in both infrastructure and technology to successfully implement hybrid learning focusing on the balance between infrastructure upgrades and technological enhancements to ensuring that all students have access to a high-quality educational experience.

An educator's acknowledgement of the posting and response to the entry can create a sense that the posting has been read, valued, and that learner engagement is essential to the course. Additionally, a relevant icebreaker topic in discussion can contribute to a memorable learning experience and provide an opportunity for learners to connect with another in a sense of community through the course. The initial communication and acknowledgement between learners and educators through discussion postings are indeed crucial for creating a comfortable and inclusive classroom environment. This interaction serves as the foundation for building trust, establishing a sense of ownership, and ensuring that both learners and educators feel comfortable, valued, and actively engaged in the learning process. An observation of online learning indicates that students employ various problem-solving approaches that are both challenging and unique. However, these approaches are often not straightforward when it comes to finding solutions. Sometimes, students rely on trial and error methods, aiming to achieve the desired result rather than following the correct process. This is in contrast to face-to-face learning, where instructors play a significant role in guiding the direction and facilitating the assimilation of intermediate problem-solving processes (Ebrahimi, 2007). Many researchers have made efforts to model and theories that explain feedback, student interaction, and the effectiveness of feedback. These models and theories are intended to be utilized for the development of instructional activities, assessments, and interventions (Lipnevich & Panadero, 2021). Early feedback techniques involve instructors actively participating in discussions and responding as soon as possible to students' postings. In early feedback, instructors have a high social presence to ensure that class activities in the discussions are maximized and the direction of discussions remains in order. However, the early feedback technique also has its challenges. Students may develop a habit of relying solely on feedback from instructors, which could hinder responses from classmates. Additionally, instructors spend a significant amount of time responding to students, and with a large number of students in the class, it can become burdensome. Instructors' interactions with students at the early-stage lead to choosing the correct approach, and early intervention helps clear up misconceptions in understanding the problem set at the early stage of the module (Ebrahimi, 2012). Laura Niemann's (2022) study investigates the impact of teacher support on students in online learning environments. Using a mixed-methods approach that combines quantitative surveys and qualitative interviews, the research offers a comprehensive understanding of how teacher support influences student experiences and outcomes in online courses. The study identifies several types of crucial teacher support for online learning success, including emotional, instructional, and technical support. Findings indicate that when teachers provide timely feedback, respond promptly to queries, and create a supportive learning environment, students are more likely to engage actively with course material and participate in discussions. Overall, students perceive teacher support as a critical factor in their online learning experience.

3. Methodology

Study Timeline and Course Overview:

The study builds on nearly two decades of experience with pedagogical techniques in online and hybrid courses. The focus is on the period from Spring 2020 to the present. However, the pandemic necessitated a rapid shift to online education, prompting the introduction and exploration of various techniques, tools, and methods to adapt to the new learning environment. The study examines three to five courses each semester, including Introduction to C++ Programming, Information Systems for Managers, Web Systems & E-Commerce, and Operations Management, offered at SUNY Old Westbury and SUNY Empire State. The course Introduction to C++ Computer

Programming is delivered fully online, while Web Systems & E-Commerce and Information Systems for Managers are available in both online and hybrid modalities.

3.2. Course Structure and Design

Each course spans a 15-week semester and is divided into seven modules, with each module lasting two weeks. Every module includes an assignment, discussions, and a quiz every other module, resulting in a total of four quizzes, including one in the final module. The assignment in Module Four serves as the midterm, while the assignment in Module Seven is the final for the course, each weighted at 10% of the total grade. Additionally, the remaining assignments, including discussions and quizzes, are weighted at 5% each within their respective modules.

3.3. Discussions' Structures and Requirements

There is something different here for the students: I can earn the same score in the discussions as in the quiz, even though the quiz requires more work and is more stressful. The course intentionally places a high weight of 35% on the discussions as part of the total grade. This is done to actively engage and motivate students, while indirectly reinforcing the course learning objectives through encouraging active participation in the discussions and absorbing the course materials. The justification for assigning a high weight to discussions is that a portion of the course work, including assignments, the midterm, final, and quizzes, is incorporated within the discussions. In discussions, the importance of the process is emphasized, and students are encouraged to demonstrate their workflow, and may receive some help when necessary. Adding further rules and features to the discussions may result in a significantly higher workload for students compared to regular discussions. Students are asked to make at least four separate posts on 'scattered days' over a two-week period within each module, along with an additional posting. The total number of posts should be five or more. It is important to remind students that each post contributes to their social presence, similar to attending a face-to-face class, and they will receive points for their participation. Students are encouraged to engage in discussions with each other, promoting student-centered conversations. These discussions encompass various types, including content-based thread discussions as well as interactions with the instructor. Active involvement in these discussions allows students to clarify any confusion they may have. Additionally, rather than forming separate group chats outside of class, students are encouraged to bring these conversations to the course platform, where they can earn points for their participation in the discussions. By giving discussions a high priority and making them a focal point of the course, students have the opportunity to get to know one another, understand the course content, and build a mutually empowering and trustworthy connection. These interactions allow the instructor to become familiar with both the students and the impact of the content. The range of activities in discussions varies from easy and enjoyable tasks to more challenging work that encourages innovation. The purpose of this approach is to encourage active participation and shared responsibility, preemptively addressing any potential confusion or uncertainty about assignments, the midterm, or the final assessments. It serves as a form of intervention ahead of time.

3.4. Discussions Participations

As an initial task in the module's discussions, students are asked to introduce themselves by providing a biography and stating why they are taking this course, as well as their expectations for what they hope to gain from it.

At the beginning of the online class, students are often excited, which can be seen in their posts in the discussions where they introduce themselves, share their expectations, and interact with each other. During this stage, the instructor welcomes each student individually by replying to their posts. In another thread of the discussions, students are asked to post content related to the article provided in module One. They are encouraged to engage in conversations by asking and answering questions and providing replies to their peers. The discussion topics revolve around the article given in the module.

In the course "Information Systems for Managers," the first assignment requires students to analyze a provided article and select three topics from it. They must define each topic, provide an example, and explain its importance. Discussions surrounding the article will support students in writing this assignment, which should be one to two pages in length. To ensure accessibility for all students at the beginning of the semester, the assignment primarily relies on the article rather than the textbook. However, students are encouraged to use the textbook as one of two external references for their papers. Additionally, students are required to incorporate personal experiences related to each topic, offering an opportunity to personalize their discussions and enrich their assignments.

3.5. Discussions Observation, and Assessment

Students in the class are required to make their initial post in the first discussion within four days, spread across a two-week module. Additionally, they must make a total of five posts, each worth 20 points, for a combined total of 100 points. After assessing the discussions, the instructor found that, at the end of module one, the average number of postings per student was three days with three substantial postings, which fell short of the desired goal of 4 days and 5 substantial postings. Furthermore, many students overlooked the criterion of 'asking a question,' resulting in some missing a day or two of active participation and others being satisfied with only the introductory post. Anticipating this outcome, the instructor provided personal feedback to students and reinforced the same rubric for discussions grading. Additionally, to enhance engagement and create a positive atmosphere from the start, the instructor introduced a +20 point incentive for uploading a personal avatar (personal photo). This incentive aims to make the discussants more identifiable and encourage active participation in the discussions.

Module 2 introduces a quiz in addition to assignments and discussions. At this stage, learners were more actively participating compared to Module 1, primarily engaging in question-and-answer exchanges to eliminate any confusion and ambiguities. Some students suggested bringing the group chat, which was conducted outside the class, into the discussions. Surprisingly, the quiz scores remained the same as the discussion scores, despite the increased effort put into the quiz. Students who had initially complained about the quiz questions realized that they could excel in the discussions as well. Since one question out of the 25 true/false questions carried only a small portion of the overall score, the substantial posting over 4 days proved beneficial not only for the discussions but also for the quiz.

The module 3 discussions witnessed a high level of engagement and performance, mainly due to the fact that the topic and personal experiences were relatable to every student. The discussions focused on ethics, privacy, and security. There were both agreements and differences among students, but the tone remained polite and respectful throughout. However, there were some disagreements regarding the level of enforcement, with a few expressing radical views. During the discussions, the instructor acknowledged the postings and selected portions to respond to. At times, the instructor requested further expansion on certain points. Individual scores were provided at the end of the module.

The midterm module consists of midterm questions, which are a series of questions related to what has been covered in the previous module, along with its own topics of knowledge management. The quiz involves building a database for a small company or replicating the university parking permit payment database. The discussions are focused on knowledge management topics and the process of building a simple database with tables, relationships, and queries.

The modules five, six, and seven adhered to a consistent pattern and rubric, providing students with a clear understanding of their tasks and expectations. In module three, an extra discussion was introduced to enhance students' overall score and remove the lowest score. The objective of this discussion was to acquire knowledge on publishing a resume using web hosting or alternative platforms. A distinct pattern became evident among the students: those who displayed high motivation and/or were subject to enforcement measures demonstrated exceptional performance, whereas those with lower motivation still exhibited improvement but maintained a consistent level of participation with fewer days of posting. Notably, some students conveyed that they acquired

knowledge from the lessons and actively engaged in the discussions, which correlated with their strong performance throughout the course. A significant discovery was that students who excelled in the discussions also excelled in assignments, quizzes, midterms, and final exams, resulting in higher overall course grades. This trend was observed in hybrid classes as well, although the nature of hybrid classes led to a reduced number of discussions and shorter substantial postings compared to online classes.

4. Conclusions

The research focuses on improving the quality of hybrid and online courses through the use of the techniques and tools to enhance engagement in discussions. The results demonstrate the effectiveness of engagement in discussions and collaborations on academic achievements. By combining educator acknowledgement and relevant icebreaker topics in the discussions, learners can experience a supportive and engaging learning environment that enhances the quality of online courses through increased participation, deeper learning, and a more memorable educational experience. The lack of direct interaction between students and instructors leads students to rely on trial and error, which, in some instances, can even result in new discoveries. Providing early and consistent feedback to students increases their awareness of potential errors and helps them avoid choosing the wrong path. However, there is a side effect: it can limit students' creativity and hinder their ability to explore innovative approaches. This can potentially steer students towards conforming to the mainstream ideas within the classroom. Students who finished the score's requirement before the module 1 due date the score was given with satisfactory feedback thanking them in actively participating in the discussions and motivating the classmates.

As a means of both enforcement and motivation, an incentive was introduced in the module one discussion. Students were encouraged to upload a personal avatar, and those who completed the discussion criteria before the due date received early feedback with a high score.

There was a noticeable trend among students: those who were motivated and/or subject to enforcement measures performed exceptionally well, while those who were less motivated still improved but remained consistent with fewer days of posting or concentrated their interactions towards the last few days of the module instead of spreading them out. Some students stated that they learned from the lesson and performed well throughout the discussions. One significant finding was that those who excelled in the discussions also performed well in the assignments, quizzes, midterms, and final exams, resulting in higher overall course grades. This trend was also observed in hybrid classes, although the nature of hybrid classes led to fewer discussions and shorter substantial postings compared to online classes.

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