Available on: https://gjefm.ep-journals.org/ E-ISSN: 3117-6771, P-ISSN: 3117-6763

Global Journal of Education, Finance and Management

Volume: 02 Issue: 05 May-2026

# Enhancing Student Engagement and Satisfaction Through Active Learning in an Online Healthcare Administration Course Redesign

**Hwangji Lu**
The University of Arizona Global Campus, Chandler, Arizona, USA

**Robert Smiles**
The University of Arizona Global Campus, Chandler, Arizona, USA

**Published Date: May 12, 2026** **DOI: 10.65150/EP-gjefm/V2E5/2026-01**

**ABSTRACT:** The rapid evolution of telecommunication technology has facilitated the expansion of educational boundaries beyond physical limits. Higher education institutions have incorporated online modality to deliver courses. Since the quality of course design or redesign is a key performance indicator for any higher education institution, it has become increasingly important for academic leaders to ensure high-quality course design that encourages student engagement, student satisfaction, and academic success. This study examined the effectiveness of a redesigned online introductory healthcare administration course that integrated active learning strategies to enhance student engagement, satisfaction, and academic outcomes. Using a mixed-methods research design, quantitative and qualitative data were collected from multiple sources, including in-house student survey, standardized end-of-course survey, Power BI course metrics, instructor observations, and qualitative student comments. Quantitative data were analyzed using descriptive statistics and Analysis of Variance (ANOVA), while thematic analysis was applied to qualitative responses. Findings reveal that students in this revised course reported high levels of satisfaction with the course design and active learning assessments. Instructor flexibility, timely feedback, and clear course instructions were particularly valued. The results suggest that intentional course redesign grounded in active learning principles can improve students' learning experiences and sustain academic persistence in online graduate healthcare administration education.

**KEYWORDS:** active learning, course redesign, online learning, student engagement, student satisfaction

## 1. INTRODUCTION

Online education offers students various benefits, including accessibility, flexibility in time and location, cost-effectiveness, positive effects on students' mental health, and the ability to address varied learning styles (Creed et al., 2023; Elshami et al., 2021; Jahani et al., 2023; Steenkamp & van Schalkwyk, 2023). On the other hand, students in online learning environments juggle multiple roles, including working full-time, supporting families, and taking online courses, which can lead to feelings of disconnection and isolation, potentially affecting their ability to engage online (Doyle & Chiu, 2023; Fanshawe et al., 2025). Online learning is crucial to higher education institutions, as it provides financial sustainability, given that enrollments have steadily increased over the years (Goetzke & Lumpe, 2025). In response to the continual growth of enrollment, academic leaders must provide high-quality distance education to strengthen student engagement, enhance student learning experience, and facilitate academic success, ensuring that best practices for course design and organizational structures are in place to support faculty members to offer high-quality online courses that meet student needs (Fanshawe et al., 2025; Jahani et al., 2023).

The paper is structured as follows. It begins with an introduction. The literature review in section 2 describes the quality of course design and redesign, active learning, student engagement, student satisfaction, and research questions. Section 3 summarizes the study setting, sample, and data collection analysis methods. Section 4 outlines results and discussions. The study's limitations, along with future research, are discussed in Section 5, while the conclusions and implications presented in Section 6 conclude this paper.

## 2. LITERATURE REVIEW

The theoretical foundations will focus on the quality of course design and redesign, active learning, student engagement, and student satisfaction. A review of the literature provides contexts for quality course design/redesign that incorporate active learning strategies to boost student engagement and satisfaction in online education. Finally, four research questions are formulated for this research study.

### 2.1. Quality of Course Design and Redesign

The quality of online programs is crucial in online education (Goetzke & Lumpe, 2025). Academic leaders need to recognize factors related to course design that influence the course development process and quality, understanding which specific features of online course design can optimize student learning and engagement (Creed et al., 2023). Attention to course design is crucial for high-quality online education, as it impacts

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

both student engagement and performance (Martin & Bolliger, 2022). Creating learning activities that are relevant, enjoyable, and involve active learning can increase student engagement (Sciutto, 2024).

As students' perceptions have the potential to impact course quality, it is important to understand student expectations and maintain course quality through effective online course design (Martin & Bolliger, 2022). Academic leaders need to integrate students' needs and learning preferences into their planning and use this information to adapt learning activities (Fink, 2013). Identifying student needs and preferences can help reduce shortcomings in course redesign and increase student ownership by linking learning to students' interests and contexts (Doyle & Chiu, 2023). Student ownership and active involvement lead to increased student engagement (Sciutto, 2024). Moreover, to reduce barriers to student engagement, it is essential to have a Learning Management System that is easy to navigate and provides easy access to learning resources, as well as connects online content (Doyle & Chiu, 2023; Sciutto, 2024). A well-designed online course, which is user-friendly and features regular communication between instructors and students, can provide students with direction, support, and opportunities for practice, ultimately increasing learners' satisfaction (Sheridan & Gigliotti, 2023).

According to Fink (2013), online learning environments need to be far more integrative, with alignment among course deliverables, content, activities, collaboration, assignments, and assessments. Besides well-structured content with clarity, quality assignments, and the timeliness of feedback, these elements can also enhance students' learning experience, all of which assist students in self-regulating and increasing their engagement with online learning (Martin & Bolliger, 2022; Sheridan & Gigliotti, 2023). It is well established within the higher education context that students' learning is positively impacted through their use of strategies to self-regulate their learning and learning opportunities (Creed et al., 2023). Sciutto's study (2024) revealed that students' learning was positively influenced by the curriculum redesign, with student satisfaction results indicating that the curriculum redesign increased students' access to information, engagement, motivation, as well as student's reflection and written expression. Overall, students expressed that their learning experiences were knowledgeable, motivating, purposeful, and resourceful. In Jahani et al.'s (2023) quantitative study, survey respondents rated student-student interaction and student-teacher interaction as the most significant issues in online education. Survey respondents gave the highest score to immediate feedback. The findings also show that timely feedback from instructions and analysis of feedback improves the effectiveness of online learning (Goetzke & Lumpe, 2025; Jahani et al., 2023).

**2.2. Active Learning**

Active learning refers to a set of teaching interventions that facilitate students' participation in the learning process beyond listening and passive note-taking (Ariel et al., 2023; Majeed et al., 2021; Pallangyo & Isangula, 2023). The active learning techniques employed in class may vary and can be done individually, in pairs, or in small groups (Steenkamp & van Schalkwyk, 2023). These interventions include exercises and solving problems in class, comparing notes with a partner, interactive notes, concept mapping, simulations and games, role-playing, small group presentations, self-directed learning, case-based learning, experiential learning, problem-based learning, team-based learning, peer problem solving, project-based learning and others (Ariel et al., 2023; Creed et al., 2023; Jahani et al., 2023; Majeed et al., 2021; Steenkamp & van Schalkwyk, 2023; van Wart et al., 2025; Yousaf et al., 2023). Discussion also plays a vital role in online learning success because it is an active learning process that encourages students to engage with content through conversation and reflection (Elshami et al., 2021). Moreover, the use of interactive multimedia can facilitate active learning and encourage authentic learning, problem-solving skills, and reflection, thereby fostering the development of new knowledge (Elshami et al., 2021). Compared to traditional teaching methods that involve passively receiving information through lectures and note-taking, active learning can yield better educational outcomes because students are engaged through various learning activities, which deepen their understanding and improve critical thinking (van Wart et al., 2025; Yousaf et al., 2023). Active learning engages students, encouraging them to think, discuss, investigate, and create in the classroom. Students discuss what they learn, write about it, relate it to their experiences, apply it to their daily lives, and make it a part of themselves (Majeed et al., 2021).

Active learning is a student-centered teaching strategy in which learners engage directly with the material through activities such as discussion, problem-solving, writing, and creating, and students decide and control the content, resources, strategies, and pace of learning (Creed et al., 2023; Van Wart et al., 2025; Yousaf et al., 2023). In the student-centered learning approach, the instructor acts as a facilitator, guiding students to acquire the necessary skills that enable them to learn independently and from one another (Ariel et al., 2023; Yousaf et al., 2023). Active learning has long been regarded as an educational approach to enhance students' participation in the learning process, ultimately improving their knowledge and skills (Jahani et al., 2023). It emphasizes higher-order thinking, critical analysis, and applying knowledge to build deeper understanding, retention, and motivation through hands-on participation and often collaboration (Jahani et al., 2023; Yousaf et al., 2023). Students may solve problems, practice skills, or become deeply involved in the learning process (Pallangyo & Isangula, 2023). Thus, Active learning not only facilitates the development of critical thinking skills but also bolsters self-efficacy and enhances self-confidence (Steenkamp & van Schalkwyk, 2023; Van Wart et al., 2025).

Active learning strategies have been used in a wide range of disciplines and course formats (van Wart et al., 2025). Broadly, research demonstrates that active learning approaches can engage students in the learning process, thereby enhancing their attention, engagement, motivation, confidence, enjoyment, and learning (Ariel et al., 2023; Pallangyo & Isangula, 2023). Active learning also permits students to engage with the content (course material) they are applying during the active learning method, which aids students to comprehend what and why the content is important and how the content is relevant (Jahani et al., 2023; Steenkamp & van Schalkwyk, 2023). Consequently, students process the content at a deeper level. Moreover, employing active learning strategies can facilitate the development of critical thinking competencies, increase long-term retention, and reduce attrition and frustration among students with less academic preparation and lower self-efficacy (Yousaf et al., 2023). In fact, active learning strategies can improve the academic performance of both high-performing and poor-performing students (Ratan et al., 2022; Steenkamp & van Schalkwyk, 2023).

In online learning, course design can foster engagement by incorporating interactive elements and adopting student-centered approaches (Morgan, 2024). Martínez-Argüelles et al (2022) emphasized the importance of incorporating authentic learning experiences into the curriculum. Active learning approaches, such as scenario-based learning, offer learners opportunities to engage in authentic learning experiences within real-world

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

problem-solving situations that are contextually relevant (Morgan, 2024). These approaches immerse learners in simulated situations, demanding real-world problem-solving and decision-making with consequences (Kerimbayev et al., 2023). By incorporating scenario-based learning activities, learners can apply theoretical concepts to practical problems within defined situations, effectively bridging the gap between theoretical knowledge and practical application (Morgan, 2024). Martínez-Argüelles et al.'s (2022) research study, conducted in the context of an asynchronous online undergraduate business course, demonstrated that introducing authentic learning scenarios in an online course improves students' perceptions of acquiring employability competencies.

Active learning, turning passive students into eager, vested, and engaged students, can be a challenge within the online learning environment. Facilitators often struggle to create meaningful activities meant to inspire students beyond conventional learning processes. Active learning can foster a deeper understanding of the designated learning objectives by engaging in problem-solving discussions and collaborative team projects. The benefits of active learning processes and strategies include improved student engagement, critical thinking, and the ability of students to master specific, applicable skills. El-Thalji (2025) suggests, "active learning and associated techniques such as flipped classrooms have been demonstrated to have positive impacts on student learning and performance" (p.2). Regarding active learning principles such as a "flipped classroom environment," student participation centers on time spent outside the classroom reading, researching, and watching videos. Classroom engagement would then consist of applying information through problem-solving activities and case-based discussions. Carroll (2023) suggests that "as education continues to expand across learning formats, faculty must have the pedagogical skills to meet stated outcomes and learning needs" (p.3). Implementing diverse teaching methodologies will help online facilitators improve students' active learning and the application of information processes. For example, by incorporating problem-based learning techniques, students are encouraged to apply information to gain an intimate understanding of a given issue, policy, or procedure.

**2.3. Student Satisfaction**

Student satisfaction refers to students' holistic perception or attitude about their overall educational experience, including satisfaction with their learning experience in the classrooms, university services, facilities, and learning environment (Elshami et al., 2021; Yin et al., 2024). Scholars have recognized that student satisfaction is closely linked to student learning and is defined as students' perceptions of the quality of their education (Wong & Chapman, 2023). Student satisfaction is shaped by comparing their expectations to their actual perception of value in various aspects of their educational experience within a university (Martin & Bolliger, 2022). Wong and Chapman (2023) asserted that student satisfaction is a key indicator of an institution's performance.

In online education, student satisfaction is a complex and multidimensional construct (Martin & Bolliger, 2022). Myriad factors that have the potential to impact student satisfaction in online learning environments identified in the literature are active and authentic learning, autonomy, communication, community, computer and internet, class sizes, course design, interaction with instructor, peers, and content, flexibility, instructional materials, instructor's behaviors, pedagogical skills, and feedback, available resources and tools, platform interface, technology reliability and support, social and technical ability or preparedness, support systems, workload, and student factors such as self-efficacy (Elshami et al., 2021; Martin & Bolliger, 2022; Wong & Chapman, 2023). A growing body of literature validates that student satisfaction is a crucial indicator of successful online learning, influencing engagement, motivation, learning, academic performance, and retention in online learning (Elshami et al., 2021; Martin & Bolliger, 2022; Yin et al., 2024). Student satisfaction has a direct connection to student attrition, and low student satisfaction could signal the risk of dropout (Wong & Chapman, 2023).

Research investigating students' satisfaction with learning has found that students' interactions with other students, instructors, and content play a significant role in satisfaction (Martin & Bolliger, 2022). Instructor feedback in online learning is essential for enhancing learning outcomes, and constructive and timely feedback on student performance can improve students' learning, help them monitor their progress, and increase their satisfaction with online learning (Elshami et al., 2021; Yin et al., 2024). Elshami et al.'s (2021) study demonstrated that students value helpful and timely feedback in online classrooms, which helps them achieve better performance. Moreover, the instructor's availability was crucial for the success of online learning (Wong & Chapman, 2023).

**2.4. Research Questions**

The quality of course redesign is a key performance indicator for any higher education institution. It is critically important that we investigate the effectiveness of this revised course after it goes live. By examining the usefulness of the revised course, four research questions are raised:

(1) What are the students' perceptions and experiences regarding various learning assessments in the revised course?
(2) Are there any different levels of satisfaction between students taking the old version and the revised course?
(3) Does the revised course improve GPA, fail rate, drop rate, and progress rate?
(4) What improvements are needed for future course revision?

## 3. RESEARCH METHODOLOGY

**3.1. Study Setting and Design** This study was conducted at a university's global campus in the southwestern United States. The university has offered its Master of Healthcare Administration program fully online since 2009. The foundational course traditionally used case scenario–based discussion boards and assignments. In its previous design, the course required students to complete one to two discussion boards and one paper each week in a six-week term.

However, in the previous cycle of course evaluation, many students commented that they perceived the workload as overwhelming in this entry-level course, particularly those who had returned to school after several years away. In response, we conducted a redesign guided by student feedback. The revised structure includes one discussion board per week, a quiz to reinforce core concepts, and three strategically placed assignments across the term.

The integration of active learning strategies has been proven to be beneficial in educational modalities for understanding and applying concepts and theories in various disciplines (Jahani et al., 2023). The revised course includes problem-based case scenario discussion boards and role-play

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

assignments to facilitate active learning and meaningful engagement. To further strengthen engagement and learning, we integrated interactive components to enhance course quality and fostered a sense of community by inviting students to create video introductions.

We used a mixed-methods research design and collected data from multiple sources. Data sources comprised qualitative analyses, artifacts from the course, instructor observations, Power BI data, the University's standardized end-of-course survey, and two in-house questionnaires: one for students and another for instructors. Since this study collected both quantitative and qualitative data, the researchers attempted to triangulate the results across various data sources.

### 3.2. Sample

The study population encompassed adult learners who enrolled in the entry course of the master's program in healthcare administration from February 6, 2025, to December 2, 2025. The master's program in healthcare administration offers online courses specifically designed for busy working professionals. The instructors who had taught this course during the same time period were also included in the study population. The Institutional Review Board at the university approved this study. All data were anonymized and kept confidential.

### 3.3. Data Collection

We designed an in-house student survey that specifically asked students about their perceptions and experiences with various learning assessments in this revised course, as well as their interactions with the instructor. The ratings were on a five-point Likert-type scale, ranging from "strongly disagree" (1) to "strongly agree" (5), with intermediate options of "disagree" (2), "neutral" (3), and "agree" (4). We also included the university's standardized end-of-course survey to assess students' level of satisfaction with the course, comparing students who enrolled in the old version with those who enrolled in the revised one. The ratings were on a five-point Likert-type scale, ranging from "strongly disagree" (0) to "disagree" (1), "neutral" (2), "agree" (3), to "strongly agree" (4).

### 3.4. Data Analysis

Once the quantitative data were collected and verified, the SPSS Statistical software suite was used to analyze the data and conduct statistical analysis. Before analyzing survey data, descriptive statistical procedures were used to profile the characteristics of the sample as a whole. The measures of central tendency and variability were obtained. The data were analyzed using Analysis of Variance (ANOVA) to determine whether students in two different versions of the courses exhibited differences in academic achievement and satisfaction. We utilized the thematic analysis method to identify patterns and themes in the qualitative data collected.

## 4. RESULTS AND DISCUSSIONS

### 4.1. The Findings from The In-House Survey

We sent out 213 in-house student surveys, but only 51 students responded, resulting in a 23.9% response rate. The first research question was raised to understand the students' perceptions of various learning assessments and their interactions with the instructor in this revised course. Table 1 presents the in-house survey results expressed by the percentage of students who either agreed or strongly agreed with the survey item.

**Table 1: Student Survey Results Expressed in Percentage**

| Survey Item | N | % of Agree + Strongly Agree |
|---|---|---|
| Q1. Graduate Readiness Modules prepared me to embark on academic graduate study. | 51 | 88.24 |
| Q2. Case-Scenario Based Discussion Boards and Assignments prepared me to deal with various aspects of health care management. | 51 | 92.16 |
| Q3W2 Assignment (Health Care Innovation) helped me polish my PowerPoint Presentation and oral presentation skills. | 50 | 80.00 |
| Q4. The templates for W2A, W4A, and W6A embedded in the course shell helped me complete my assignments. | 50 | 84.00 |
| Q5. The interactives were engaging and helped me understand the concepts of healthcare management. | 50 | 82.00 |
| Q6. The videos for W4A and W6A were engaging and helped me understand the case scenarios in W4A and W6A. | 51 | 92.16 |
| Q7. The information regarding Career Service Center and professional organizations such as ACHE, HFMA, etc. is beneficial. | 50 | 78.00 |
| Q8. The instructions for discussion forums, learning activities, or assignments were clear. | 51 | 92.16 |
| Q9. This course increased my knowledge of the health care industry. | 51 | 94.12 |
| Q10. The instructor provided flexibility and cared about my success. | 50 | 96.00 |
| Q11. The instructor communicated effectively in the classroom. | 50 | 90.00 |
| Q12. The instructor provided timely and constructive feedback for improvement. | 51 | 94.12 |

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

The survey item, 'The instructor provided flexibility and cared about my success,' received the highest score. About 96% of surveyed students either agreed or strongly agreed with this statement. The University has advocated for a Culture of Care for years, as research on student persistence at the University has found that when faculty actively seek to understand their students' circumstances and collaborate with them on a plan for completing their work, students exhibit behaviors that indicate increased sense of belonging in school and self-efficacy. The finding serves as evidence on how the instructors have implemented the University's best practices in the master's program of healthcare administration.

The survey items, 'The instructor provided timely and constructive feedback for improvement,' and 'This course increased my knowledge of the health care industry' are ranked as the second highest at 94.12%. Here are some verbal comments from students regarding the timely and constructive feedback they received for improvement. *"*Timely feedback given!*" "Grades were inputted promptly, which is appreciated." "Feedback was great for content and formatting!." "My instructor gives valuable feedback on each assignment and discussion." "She provided helpful feedback to guide me in the right direction!"* Many of the students work for our strategic partners for years. However, they still learned a lot from this entry level of course. Here are a couple of examples, "*I have been in healthcare 31 years but this course added to and increased my knowledge in the Healthcare industry!" "I am shocked how closely the topics I learned follow to my day to day work. Working in a bigger level 1 trauma center, I found myself being able to point out different leadership styles and reasons behind the why in situations."*

There are three survey items received the same score at 92.16%: 'Case-Scenario Based Discussion Boards and Assignments prepared me to deal with various aspects of health care management,' 'The videos for W4A and W6A were engaging and helped me understand the case scenarios in W4A and W6A,' and 'The instructions for discussion forums, learning activities, or assignments were clear.' Some students may not enjoy the case-scenario based discussion boards and assignments, while other students reflected on their experiences as we expected, "*I enjoy doing discussion boards, as well as engaging with other students on thoughts and concerns." "Case scenario helps provides an opportunity to apply critical thinking and connect course concepts to a real-world situation. It allows me to analyze key issues, explore possible interventions, and demonstrate how evidence-based practices can lead to better outcomes." "I like that it feels engaging for potential issues that may or will be faced in administrative roles!" "It helps me provide outlook on current situation and gives me readiness for my future endeavors!"*

Literature has reported that incorporating videos into online learning can enhance engagement, comprehension, and retention, tailoring to diverse learning styles and making complex topics easier to grasp (Majeed et al., 2021). Our students' verbal comments align with the findings reported in the literature. "*Made it easier to understand!" "It gave me a visual on the issues which gave me better insight into the issues. "The videos were simply a narrative, consider actually having people act it out." "I found them to be more engaging rather than just reading the topic, which kept me to wanting to follow the topic." "Videos are more engaging than simple text.*"

For years, we have striven to provide clear instructions for discussion forms, learning activities, and assignments to reduce confusion and increase student engagement. Despite the fact that some students may not agree with the statement of the survey item, many students made positive comments about it. Here are some examples, "*Instructions were detailed and thorough!" "It was easy to follow!" "Very clear, very helpful!" "Everything was in full understanding and easy to navigate." "I found it easy to follow alone and had a good idea of expectations and level of commitment. This gave me an idea how to plan my schedule and time management for the week." "All assignments had clear rubrics to follow to ensure all key elements were included.*"

In contrast, students gave this survey item, 'The information regarding Career Service Center and professional organizations such as ACHE, HFMA, etc. is beneficial,' the lowest score at 78%. It is no surprise that the majority of our students are middle-aged healthcare professionals. They returned to school to pursue a master's degree, utilizing the benefits provided by their employers. The likelihood is that those students do not need the services offered by the University's Career Service Center. However, some students felt it was helpful to have. "*This is information that we all need to be aware of as work in the healthcare field." "The career service center was useful and beneficial!" "I didn't know these options were available so it was nice that all connections and links were provided!*"

**4.2. The Findings from The End-Of-Course Survey**

The second research question explored the levels of student satisfaction in the revised course. Since we have had a pool of faculty teaching this course, we only included the classes from five faculty who had taught both years to explore the end-of-course survey (EOCS) data. The university administered the standardized EOCS to a select group of students. The EOCS data shows that 53 out of 103 surveys were returned in the revised course, resulting in a 51.5% response rate, while 58 out of 121 surveys were returned in the revised course, resulting in a 47.9% response rate.

**Table 2: The End-Of-Course Survey Results**

| Question | Old Version (N=58) | Revised Version (N=53) |
|---|---|---|
| **Comprehensive Items** | | |
| Recommending this course. | 3.65 | 3.62 |
| The quality of education meeting my expectations. | 3.70 | 3.60 |
| **Course Assessment** | | |
| Clear instruction given for grading. | 3.76 | 3.78 |
| Assignments requiring critical thinking. | 3.66 | 3.74 |
| Hard work required to earn a good grade. | 3.67 | 3.74 |
| Clear instructions for completing assignments. | 3.55 | 3.62 |
| Engaging course content | 3.72 | 3.64 |
| **Instructor Assessment** | | |

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

| | | |
|---|---|---|
| Recommending this instructor. | 3.59 | 3.74 |
| The instructor adding his/her expertise. | 3.76 | 3.83 |
| The instructor communicating high expectation. | 3.73 | 3.74 |
| The instructor fostering critical thinking. | 3.74 | 3.76 |
| The instructor promoting active participation. | 3.83 | 3.77 |
| The instructor offering consistent grading. | 3.66 | 3.79 |
| The instructor giving timely feedback. | 3.65 | 3.70 |
| The instructor giving useful feedback. | 3.62 | 3.75 |
| The instructor's feedback aligning with her/his stated expectations. | 3.66 | 3.71 |
| | 3.68 | 3.72 |

As displayed in Table 2, 12 out of 17 survey questions received a higher rating in the revised course compared to the old version, although the differences were not statistically significant. The survey questions about the instructor received higher scores in the revised course, and students in the revised course are more likely to recommend their instructors, which also confirms the findings from our in-house survey.

**4.3. The Findings from Key Course Metrics**

The third research question examined whether the revised course improves GPA, fail rate, drop rate, and progress rate. As Table 3 shows, the revised course had a slightly higher GPA and the same fail rate compared to the old version, although the differences were not statistically significant. Indeed, we are pleased to see that the revised course had a 9% lower drop-out rate and a 7% higher progression rate.

**Table 3: Key Course Metrics**

| Data Source | Old Version (N = 289) | Revised Version (N=188) | Changes |
|---|---|---|---|
| GPA | 3.62 | 3.66 | |
| Fail | 2% | 2% | 0% |
| Drop | 18% | 9% | -9% |
| Progression | 75% | 82% | 7% |

**4.4. The Findings from Verbal Comments in The In-House Survey**

The fourth research question inquires whether any improvements are needed for future course revision. Some comments are more student-specific or instructor-specific concerns. We did not identify any significant concerns that would necessitate implementation for future course revisions.

## 5. LIMITATIONS AND FUTURE RESEARCH

We identified three notable limitations and boundary conditions for this study. First, this study population came from a single course at one institution; therefore, the findings drawn from this research may have limited generalizability to any graduate courses at other programs within the university or to different types of higher education institutions. Second, this research heavily relied on two student surveys to collect data. Substantial errors or bias often occur because respondents' behaviors may not always be warranted, which can harm the accuracy of survey estimates. Third, to compare the EOCS results fairly, we only included those courses taught by the same instructors in both years. Indeed, we have about 10 qualified instructors to teach this course in both years. Thus, the findings of EOCS might not be truly representative of the student population of this entry-level course. Therefore, another research study with the same research design should be conducted in the near future to validate the findings from this study.

## 6. CONCLUSIONS AND IMPLICATIONS

When redesigning this entry level course, we wanted to adopt a more student-centered approach allowing students to participate in activities and take responsibility for their learning in the online learning process. Thus, the aim of this paper was to investigate the students' perception of the effectiveness of the revised course integrated with several active learning strategies. Understanding students' experience and satisfaction is fundamental to improving the course curriculum and enriching the student's learning experience. The in-house survey revealed that 94.12% of students agreed or strongly agreed with this statement, 'This course increased my knowledge in healthcare,' which gives us confidence about the significance of this studied course. It is critically important that our course meets up with students' expectations of healthcare management education. Instructor's timely and useful feedback helps students succeed in online learning. The research findings derived from our study are in line with those of previous research by Elshami et al.'s (2021) and Yin et al.'s (2024) that instructors need to provide timely and constructive feedback to help students learn more effectively. Accordingly, students will report higher satisfaction and exhibit better learning outcomes and academic performances.

This study has significant implications for instructors, instructional designers, and academic leaders in online education. Online courses must be regularly revised and updated to keep their content relevant to adult learners. Incorporating innovative learning activities and design could promote student participation, generate meaningful discussions, and cultivate critical thinking and problem-solving skills. The findings of the current study could be beneficial for planning, designing, and redesigning online learning activities, as they may increase student satisfaction with online courses

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

and, consequently, the quality of learning. Nevertheless, higher educational institutions should provide professional development opportunities regularly to ensure that all faculty members implement best practices in their teaching, as the instructor plays a key role in student satisfaction with their online learning experience (Elshami et al., 2021; Wong & Chapman, 2023; Yin et al., 2024). Finally, the academic leaders need to ensure that institutional support, technology support, course development and instructional design, faculty support, student support, and course evaluation and assessment are in place to support a well-designed online course.

**REFERENCES**


1) Ariel, N., Millikovsky-Ayalon, M., & Kimchi-Feldhorn, O. (2023). Watching the backstage of your mind: Redesigning learning how to learn. *Education and Information Technologies*, *28*(8), 9709–9730. https://doi.org/10.1007/s10639-023-11580-4
2) Carroll, J. (2023) *A correlational quantitative study exploring the relationship between faculty's pedagogical strategies in online classrooms and factors influencing active instruction* (Publication No. 30523923). [Doctoral dissertation, Drexel University]. ProQuest dissertations & Theses Global. https://www.proquest.com/dissertations-theses/correlational-quantitative-study-exploring/docview/2842706017/se-2
3) Creed, J. M., Cone, A., Chappell, K. K., & Davis, V. H. (2023). It's the experience: A course redesign to shift student perspectives on population-centered nursing. *Nursing Education Perspectives*, *44*(2), 124–125. https://doi.org/10.1097/01.NEP.0000000000000961
4) Doyle, C., & Chiu, Y.-T. (2023). Blending modalities, pedagogies, and technologies: Redesigning an information systems course to encourage engagement. *Communications of the Association for Information Systems*, *53*(1), 322–341. https://doi.org/10.17705/1CAIS.05313
5) Elshami, W., Taha, M. H., Abuzaid, M., Saravanan, C., Al Kawas, S., & Abdalla, M. E. (2021). Satisfaction with online learning in the new normal: Perspective of students and faculty at medical and health sciences colleges. *Medical Education Online,* 26(1),1920090. https://doi.org/10.1080/10872981.2021.1920090
6) El-Thalji, I. (2025). Boosting active learning through a gamified flipped classroom: A retrospective case study in higher engineering education. *Education Sciences*, *15*(4), 430. https://doi.org/10.3390/educsci15040430
7) Fanshawe, M., Brown, A., & Redmond, P. (2025). Using an online engagement framework to redesign the learning environment for higher education students: A design experiment approach. *Online Learning (Newburyport, Mass.)*, *29*(2). https://doi.org/10.24059/olj.v29i2.4447
8) Fink, L. D. (2013). *Creating significant learning experiences—An integrated approach to designing college courses*. Jossey-Bass.
9) Goetzke, A. K., & Lumpe, A. (2025). Academic leadership perceptions of online program quality and course design. *Online Learning (Newburyport, Mass.)*, *29*(2). https://doi.org/10.24059/olj.v29i2.4410
10) Jahani, M.-A., Ghanavatizadeh, A., Delavari, S., Abbasi, M., Nikbakht, H.-A., Farhadi, Z., Darzi, A., & Mahmoudi, G. (2023). Strengthening e-learning strategies for active learning in crisis situations: A mixed-method study in the COVID-19 pandemic. *BMC Medical Education*, *23*(1), Article 754. https://doi.org/10.1186/s12909-023-04725-z
11) Kerimbayev, N., Umirzakova, Z., Shadiev, R. & Vladimir, J. (2023). A student-centered approach using modern technologies in distance learning: a systematic review of the literature. *Smart Learning Environments, 10*(61). https://doi.org/10.1186/s40561- 023- 00280-8
12) Majeed, S., Zaidi, N. N., Moin, H., & Shafi, R. (2021). Impact of priming with the help of videos on the students' learning experiences in undergraduate medical education, Pakistan, *Journal of physiology, 17*(4). https://doi.org/10.69656/pjp.v17i4.1396
13) Martin, F., & Bolliger, D.U. (2022). Developing an online learner satisfaction framework in higher education through a systematic review of research. *International Journal of Educational Technology in Higher Education, 19,* 50. https://doi.org/10.1186/s41239-022-00355-5
14) Martínez-Argüelles, M.-J., Plana-Erta, D., & Fitó-Bertran, À. (2022). Impact of using authentic online learning environments on students' perceived employability. *Educational Technology Research and Development, 71*(2), 605–627. https:// doi. org/ 10. 1007/s11423- 022-10171-3
15) Morgan, A. (2024). Enhancing access in an online course using universal design for learning (UDL) and scenario-based learning (SBL). *TechTrends*, *68*(5), 904–913. https://doi.org/10.1007/s11528-024-00981-y
16) Pallangyo, E., & Isangula, K. (2023). Promoting students' meaningful engagement in active learning within a group setting: Reflections on teaching and learning using Brookfield's Four Lenses Model. *Journal of Higher Education Theory and Practice*, *23*(10), 198–209. https://doi.org/10.33423/jhetp.v23i10.6194
17) Ratan, R., Ucha, C., Lei, Y., Lim, C., Triwibowo, W., Yelon, S., Sheahan, A., Lamb, B., Deni, B., & Hua Chen, V. H. (2022). How do social presence and active learning in synchronous and asynchronous online classes relate to students' perceived course gains? *Computers and Education*, *191*, Article 104621. https://doi.org/10.1016/j.compedu.2022.104621
18) Sciutto, M. J. (2024). Redesigning and assessing a statistics course: Thinking beyond the pandemic. *Scholarship of Teaching and Learning in Psychology*, *10*(4), 355–369. https://doi.org/10.1037/stl0000291
19) Sheridan, L., & Gigliotti, A. (2023). Designing online teaching curriculum to optimise learning for all students in higher education. *Curriculum Journal (London, England)*, *34*(4), 651–673. https://doi.org/10.1002/curj.208
20) Steenkamp, G., & van Schalkwyk, O. (2023). Active learning in an online postgraduate research module: Perceptions of Accounting students and lecturers. *South African Journal of Higher Education*, *37*(2), 233–250. https://doi.org/10.20853/37-2-4872
21) Van Wart, M., McIntyre, M., Zhang, J., Medina, P., Ni, A., & Njualem, L. (2025). The perceived importance of active learning techniques in online STEM courses. *Computers and Education Open*, *9*, Article 100309. https://doi.org/10.1016/j.caeo.2025.100309
22) Wong, W. H., & Chapman, E. (2023). Student satisfaction and interaction in higher education. *Higher Education. 85*(5), 957-978. https://doi.org/10.1007/s10734-022-00874-0


License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

23) Yin, X., Zhang, J., Li, G., & Luo, H. (2024). Understanding learner satisfaction in virtual learning environments: Serial mediation effects of cognitive and social-emotional factors. *Electronics, 13*(12), 2277. https://doi.org/10.3390/electronics13122277
24) Yousaf, A., Moin, H., Majeed, S., Shafi, R., & Mansoor, S. (2023). The positive impact of introducing modified directed self-learning using pre-small group discussion worksheets as an active learning strategy in undergraduate medical education. *Medical Education Online*, *28*(1), 2204547. https://doi.org/10.1080/10872981.2023.2204547

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

Corresponding Author: Hwangji Lu