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# Active Learning Techniques and Student Satisfaction: Role of Classroom Environment

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**ABSTRACT**

**Purpose:** The ever-changing nature of the workplace compelled educational institutions to reconsider the teaching and learning strategies necessary to equip students with the requisite abilities. In this regard, educational institutions and academics have investigated several teaching/learning methodologies and have recommended that the active learning strategy is the most effective and significant approach for enhancing student outcomes, such as student performance and satisfaction. Past studies have explored the benefits of an active learning approach on student achievements in several areas, such as science, technology, engineering, and the arts, but business students have received less attention. Importantly, no study has studied the moderating effect of classroom environment on the relationship between active learning and business student satisfaction. Consequently, this study explores the impacts of an active learning strategy on student satisfaction with the moderating function of the classroom environment among business students in Saudi Arabia. **Method:** Data was collected from 213 business students studying at the university level using a survey questionnaire. Simple random sampling was used to select the respondents, and SPSS version 19 was used to analyze the data.

**Findings:** Results of the regression analysis and correlation analysis reported that the active learning approach positively influences business students' satisfaction, and results also support moderating role of the classroom environment between the active learning approach and students' satisfaction. **Implications for research and practice:** Findings of this study will be helpful for researchers, faculty members, and experts in designing course contents and learning/teaching approaches.



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## Introduction

The primary objective of educational institutions is to provide students with the skills, knowledge, and talents that will enhance their professional performance. Educational institutions utilize all available resources and diverse teaching and learning styles to maximize student learning. Similarly, researchers and academic professionals are investigating contemporary teaching and learning strategies that assist students in acquiring target skills and enhancing their knowledge and abilities. Recent scholarship has focused on the prominent learning strategy known as active learning, and researchers have been eager to comprehend the function of active learning techniques in student learning and performance. Cooper et al. (2018) proposed that student activities such as working in pairs, solving case studies as a group, doing tasks based on role-playing, debating, writing brief exercises, and engaging in cooperative learning are examples of active learning strategies.

Traditional face-to-face instruction makes it challenging for teachers to maintain their students' interest and effectively foster active learning (O'Connor, 2021). It might be challenging to elicit student participation during a lecture when one aims to spark class discussion on a particular topic. The usage of clickers, also known as classroom response systems or personal response systems, can promote active learning. This can result in improved student involvement (Halverson & Graham, 2019). When the right environment is provided, students enrolled in hospitality management studies emphasize participatory instruction and display a strong desire to learn. (Green et al., 2018). The active application of concepts helps increase classroom collaboration, contributing to increased student engagement (Plasman, 2018). This application of principles can be linked to teachers employing clickers as a tool to foster peer-to-peer learning, encourage engagement, conduct evaluation, and stimulate small-group discussion, among other things. Active participation in the lecture, especially when it's enforced through the use of technology like clickers, helps students engage with and enjoy the subject being given (Shea, 2019). The hardware of clickers is subject to the same pace of change as technological progress. Despite this, the objective of increasing student learning outcomes stays unchanged independent of the gadget utilized in the classroom.

Freeman et al. (2014) found that active learning increases the students' examination performance compared to traditional lectures and further reported that formal lectures increase the failure rates of the students by 55%. These findings show that active learning plays an important role in enhancing student performance whereas traditional teaching and learning methods cause poor performance in student failures. Freeman et al. (2014)'s findings are not surprising because similar results have been reported by other researchers, including Zhao et al. (2018) and Kalaian et al. (2018), who discovered that active learning techniques have a greater impact on undergraduate students than traditional lectures in the Science, Technology, Engineering, and Mathematics (STEM) field. Although past studies have examined the effectiveness of active learning techniques in STEM but STEM, limited research has been done to explore the importance and effects of active learning techniques on business student satisfaction and performance. More specifically, none of the studies has investigated the moderating role of the classroom learning environment between active learning techniques and business students' satisfaction. In addition, to the best of the researcher's knowledge, no previous research has studied the effects of active

learning approaches on business students' satisfaction with the moderating role of the classroom learning environment in the setting of Saudi Arabia. Therefore, this study aims to examine the effects of active learning techniques on business students' satisfaction with the moderating role of classroom learning environment in Saudi Arabia.

## Literature Review

### *Active Learning Techniques (ALTs)*

Undergraduate STEM students learn more effectively with ALTs than with traditional, instructor-centered, lecture-based methods because ALTs put the student at the center of the learning process (Betti et al., 2022; Bonwell & Eison, 1991). ALTs call for students to take an active role in their education by participating in various learning activities, including reading, writing, discussion, or problem-solving (Bonwell & Eison, 1991; Zeng et al., 2019). Students are required to engage in thought processes that elicit their preconceptions, think about concepts in multiple contexts, define their learning goals, and be metacognitive with their learning progress to complete ALTs, which is one of the reasons why ALTs are so effective (Bonnet et al., 2018). Pedagogical practices that foster active participation and collaborative problem-solving can enhance students' learning, attitudes, and capacity to remain involved in STEM-related educational programmes (Indorf et al., 2021). To promote talent in STEM disciplines and support the achievement of all learners, mainly those marginalized and underrepresented in STEM, it is vital to make modifications to pedagogy that increase the use of ALTs (Trout et al., 2019). Even though there is abundant evidence suggesting that traditional lecture is not the most effective method for fostering learning, the lecture is still the method of choice in most college and university settings (Al Basheer & Almazrou, 2021). It is considered that identified barriers, which can limit the adoption of ALTs, the need for organizational structures that promote change, and the need for faculty beliefs towards teaching and learning to change are responsible for the lack of ALT adoption (Patil & Kamerikar, 2020). There are hints that certain subjects, including the geosciences and mathematics, are undergoing upheaval. Recent studies indicate, for instance, that a rising number of faculty members are focusing their instruction on student-centered methods, and that their predominance in the classroom has expanded in recent years (Mercat, 2022). Despite this, greater research on how to support this change toward the use of ALT is necessary because didactic practices are still extensively employed (Indorf et al., 2021).

Understanding the environment, the people in it, the reward structures, the culture, the values, the history, and the resources is necessary for implementing change (Zawawi et al., 2019). Therefore, to better understand how to drive the adoption of pedagogical practices, it is essential to identify factors that influence and/or motivate faculty to adopt ALTs. This will allow for a better understanding of driving pedagogical practices' adoption. Three categories can be used to classify these factors: the personal domain, the professional domain, and the departmental/institutional domain. The personal sphere comprises inner issues such as a person's job satisfaction level. In the professional realm, productivity and the question of whether teaching conflicts with other professional responsibilities are emphasized. It is feasible to analyze the departmental and institutional domain based on how faculty members perceive various external circumstances.

The departmental and institutional domain comprises of variables relating to the environment in which faculty members work. When personal and professional domain variables and climate factors are in conflict, the former can be more influential (Herde et al., 2018). The confluence of these distinct areas produces a structure that can guide research and suggestions in this field. It is considered that broad adoption of ALTs is dependant on an institutional culture that places a premium on teaching as a crucial component of academic activity (Zawawi et al., 2019).

Academic departments and the decision-making of individual faculty members have been identified as primary targets for implementing systemic changes in teaching practice (Fusic et al., 2018). The faculty members decide that faculty members who choose to adopt teaching practices that are evidence-based and effective should be encouraged and supported in their role as leaders who can inspire others to make changes that are effective in their teaching practices (Wilder, 2020). The dissemination of best practices on their own and a "top-down" approach in which administrators stipulate that faculty members change their teaching practices are ineffective for the wide-scale implementation of ALTs (Zawawi et al., 2019). Instead, an effective strategy for promoting change is to cultivate knowledgeable individuals who can act as change agents and encourage others to reflect and challenge their beliefs on teaching and learning (Patil & Kamerikar, 2020).

*Active Learning Techniques and Students Satisfaction*

Higher Educational Institutes have been facing criticism for heavily relying on passive teaching methods such as traditional lectures to improve students' employability skills. In contrast, industry professionals and students explained that students' lack of required skills refrained them from performing job tasks at the workplace. This criticism and feedback forced HEI to use active learning techniques to equip the students with the needed skills and provide practical insight into the industry in the academic setting. In this regard, Meyers and Jones (1993) highlighted that educators have started involving the students in the learning process, bringing better student outcomes in terms of student's satisfaction and performance.

Past research has tried to explain the concept of active learning, and (Bonwell & Eison, 1991) have highlighted that active learning is based on instructional approaches that promote student engagement and self-learning ability compared to conventional learning methods.

In this regard, Dilmaç (2021) explains that the 21st century transformed the learning process from passive learning to active learning, in which students actively participate in classroom activities and are accountable for their learning objectives. In addition, Theobald et al. (2020) highlighted that active learning approaches comprise structured activities that increase student involvement and that the function of the teacher is that of a knowledge provider. Researchers divide active learning into three broad categories: collaborative, cooperative, and problem-based understanding. Collaborative and cooperative learning emphasizes teacher-student interaction (Munir et al., 2018), whereas problem-based learning emphasizes understanding the problem before entering the instructional process and solving a given problem according to instructions (Bernstein, 2018). In this respect, Okumus et al. (2020) and Artut and Bal (2018) discovered an excellent correlation between student collaboration and learning.

According to Fayombo (2012), active learning approaches such as "group work, role play, clarifying pauses, game show, discussion groups, five-minute paper, and video clip simulations" favorably influence student outcomes such as student performance and satisfaction. Moore and Quintanilla (2013) discovered that videos have a favorable effect on student satisfaction, but Vaughn et al. (2019) observed that a flipped-classroom approach with multiple instructional tactics such as case studies, discussions, films, and games increases student happiness. Moreover, Hartikainen et al. (2019) propose that a single teaching technique may not be practical, whereas a mixed active learning approach based on blended instructional approaches such as games, role play, video, and conversations may improve student satisfaction and performance. Consequently, this study employs an instructional technique based on "group work, role play, clarifying pauses, game show, discussion groups, and video clip simulations."

**H1:** Group works positively influence business students' satisfaction.
**H2:** Roleplay positively influence business students' satisfaction.
**H3:** Clarification pauses positively influence business students' satisfaction.
**H4:** Game show positively influences business students' satisfaction.
**H5:** Discussion groups positively influence business students' satisfaction.
**H6:** Video clip simulations positively influence business students' satisfaction.
**H7:** Five-minute paper positively influence business students' satisfaction.

*Classroom Environment as Moderator*

Fisher and Fraser (1983) explained that learning environment inventory (LEI) predicts various student learning outcomes, but LEI only measures students' perceptions of their actual classroom environment. In contrast, classroom environment scales (CES) measure students' and teachers' perceptions of the virtual classroom environment. Consequently, the CES is preferable to the LEI for determining student satisfaction and performance. Fisher and Fraser (1983) propose further that CES may be able to forecast a certain level of variance in student performance and satisfaction because it is based on three dimensions: the connection dimension, the personal dimension, and system maintenance and system change. In addition, Dag et al. (2019) discovered that the classroom atmosphere positively influences class engagement and cooperation among students. Even though few previous studies have examined the role of CES in predicting student satisfaction (Trickett & Moos, 1974) and Fisher and Fraser (1983) have proposed that CES can be examined as an independent variable when determining student outcomes such as student satisfaction and performance, this study will examine CES as a moderator between active learning techniques and student satisfaction. The rationale for this program is that the classroom environment has a crucial role in predicting improved student satisfaction when adopting active learning strategies. If the classroom setting does not promote active learning strategies, the degree of student happiness may be compromised or low. Therefore, this study proposes that active learning techniques can only predict greater student happiness if the classroom environment supports active learning techniques-based activities. In other words, the current research suggests that the classroom environment moderates the connection between active learning strategies and student happiness.

**H8:** The classroom environment moderates the relationship between group work and positively influences business students' satisfaction.
**H9:** The classroom environment moderates the relationship between role play and positively influences business students' satisfaction.

**H10:** The classroom environment moderates the relationship between clarification pauses and positively influences business students' satisfaction.
**H11:** The classroom environment moderates the relationship between game shows and positively influences business students' satisfaction.
**H12:** The classroom environment moderates the relationship between discussion groups and positively influence
business students' satisfaction.
**H13:** The classroom environment moderates the relationship between video clip simulations and positively influences satisfaction with business students.
**H14:** The classroom environment moderates the relationship between five-minute papers, positively influencing satisfaction with business students.

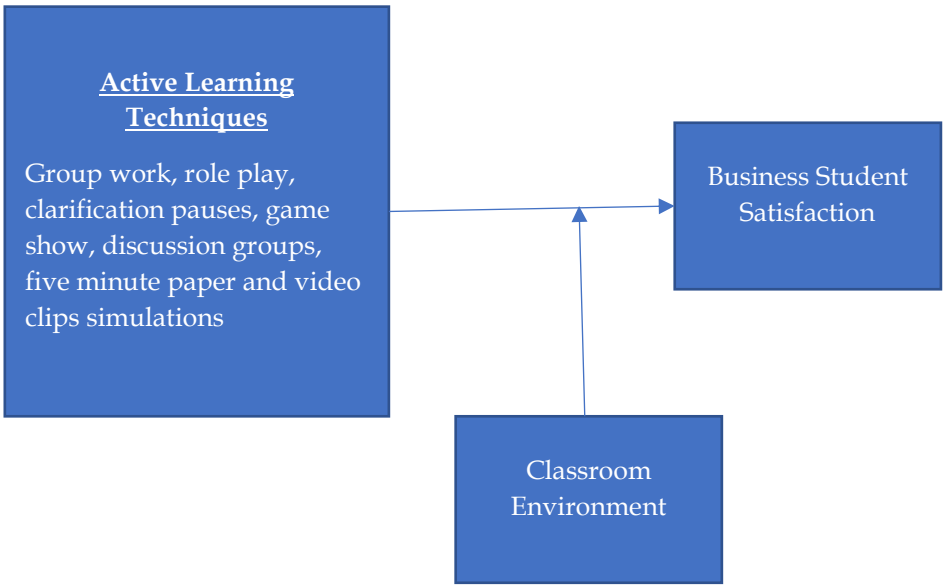


**Figure 1:** *Conceptual framework*

## Methodology

This study is based on deductive reasoning since concepts are already available and well established. In this regard, M. Bhatti and Sundram (2015) suggest that researchers should adopt deductive reasoning when theories and concepts are well based, and the purpose of the study is to validate those theories and concepts empirically. Although earlier research has addressed the impact of active learning in a variety of student outcomes, such as student performance and satisfaction, few studies have investigated the effects of active learning on the satisfaction of business students. Specifically, none of the studies had evaluated the moderating effect of the classroom setting. Therefore, the purpose of this study is to examine the effect of active learning techniques (group work, role play, clarification pauses, game show, discussion groups, five minute papers, and video clip simulations) on business students' satisfaction, as well as the moderating effect of classroom environment on the relationship between active learning techniques and business students' performance.

*Sampling and Data Collection*

A questionnaire was employed to collect data as part of a cross-sectional study. Using a simple random sample procedure, the data was collected. The target audience consisted of the college of business students of King Faisal University (KFU) in the eastern province of Saudi Arabia. The questionnaire was delivered to university business students who had completed at least one year of education. This requirement ensures that students have sufficient experience with active learning strategies. 300 questionnaires were provided to students, of which 220 were returned after completion. 7 surveys were eliminated due to illogical and incomplete responses. Consequently, 213 questionnaires were utilized for data analysis.

*Measurements*

The active learning strategy was measured using 21 items developed by Fayombo (2012). There were 7 major active learning strategies used by Fayombo (2012), namely **video clips simulations**, **Discussion**, Group work, role play, game show, five-minute paper, and clarification pauses. **Video clip simulations** were based on 3 items. The sample item includes "Videos create mental images of the topics taught" Discussions were based on 3 items. Sample item includes "Discussion helps me to clarify points discussed during the lecture" Group Work was based on 3 items and sample item includes "Group work enhances my academic achievement" Role Play was based on 3 items. S. Sample item includes "Discussion helps me to clarify points discussed during the lecture" Group Work was based on 3 items and sample item includes "Group work enhances my academic achievement" Role Play was based on 3 items. Sample item includes "Role play creates excitement during lectures" Game Show was based on 3 items and sample items includes "Game show makes the lecture lively and interesting" Five-minute-paper was based on 3 items. The sample item includes "Five Five-minute paper helps to monitor students' understanding of the topic discussed" Clarification Pauses were based on 3 items, and the sample item includes "Clarification pauses help in clarifying points that are not clear".

The classroom environment scale was based on 25 Fisher and Fraser (1985)'s components. These include "1-The teacher converses with each student, 2 — Students express their views during class discussions." 4-Students obtain solutions to questions from texts rather than from investigations 5- Different students do different work 6-The instructor is personally invested in each pupil. 7 The instructor lectures without students inquiring or responding 8 Students choose their group work partners 9- Students conduct studies to evaluate hypotheses 10-Every student in the class completes the same assignment at the same time. 11- The instructor is hostile to students. 12-The opinions and comments of students are utilized during classroom discussions. 13-Students are instructed on classroom conduct. 14-Students conduct investigations to answer questions arising from class discussions. 15 pupils use a variety of literature, equipment, and materials. 16- The teacher assists each student who is having difficulty with the assigned work 17- Students pose questions to the instructor 18-The teacher determines which students will collaborate 19-Students explain the significance of statements, pictures, and graphs 20- Students that complete their assignment more quickly than others go on to the next topic. 21- The instructor considers the students' emotions. 22- Classroom discourse is present 23. The teacher determines the amount of movement and speaking in the classroom. 24. Students conduct investigations to answer perplexing questions. All pupils at the school utilize 25-

The same instructional tools (e.g., blackboard or overhead projector). Student satisfaction was determined using a six-item scale created by Vaughn et al. (2019). Items on the scale include "1-I am satisfied with how the course material was presented; 2-I enjoyed the approaches employed by the teacher to teach the unit, and 3-I would like to retake this course." 3- The format for online distribution of course content was adequate. 4- I appreciated the independence the course afforded me. 5- I enjoyed the course's activities. 6- Learning was boosted using internet content/material

*Data Analysis*

The acquired data were assessed using SPSS version 22 correlation and regression analysis, and it was used for the analysis. In addition, a reliability test was conducted to determine the precision of the scales.

## Results

Using Cronbach's Alpha made it possible to examine the level of internal consistency of the adopted items. If the value of Cronbach's alpha is more than 0.60, then it is permissible to conduct additional research (M. Bhatti & Sundram, 2015). These variables have a Cronbach's alpha value better than 0.60, as indicated in table 1. 0.79 is the maximum value for clarifying pauses, whereas 0.60 is the minimum amount for the game show. Other variables, including video clip simulations, role-playing, five-minute papers, discussion groups, classroom environment, group work, and overall student satisfaction, had respective values of 0.61, 0.62, 0.66, 0.67, 0.71, and 0.74.

**Table 1**

*Reliability Test*

| Variables | Reliability |
|---|---|
| Group work | 0.71 |
| Roleplay | 0.62 |
| Clarification pauses | 0.79 |
| Gameshow | 0.60 |
| Discussion groups | 0.67 |
| Five minute paper | 0.66 |
| Video clips simulations | 0.61 |
| Students Satisfaction | 0.74 |
| Classroom environment | 0.71 |

Notes: *∝>*0.6 (M. Bhatti & Sundram, 2015)*

Table 2 below presents the characteristics of the respondents. In this study, the total number of male respondents came in at 80 (37.50 percent), while female respondents were at 133 (62.50 percent). From the results, it can be deduced that the female respondents are in the majority as compared to male respondents. Further, about 100 percent of respondents belonged to the age group of 18-28 years, and 100 percent of respondents' education is graduate. Moreover, 102 (47.80 percent) have completed their 1-2 semesters, whereas 111 (52.20 percent) have completed their 3-4 semesters. This proves that the respondents in the study belong to the actual target population (i.e., business students of higher education institutions).

**Table 2**

*Demographic profile*

| Demographics | No. of Students | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 80 | 37.5 |
| Female | 133 | 62.5 |
| **Age** | | |
| 18-28 years | 213 | 100 |
| 29-39 years | 0 | 0 |
| 40 and above | 0 | 0 |
| **Education** | | |
| Diploma | 0 | 0 |
| Graduates | 213 | 100 |
| Masters | 0 | 0 |
| Others | 0 | 0 |
| **No. of semesters completed** | | |
| 1- 2 years | 102 | 47.8 |
| 3-4 years | 111 | 52.2 |
| 4 years and above | 0 | 0 |

**Table 3**

*Descriptive Statistics and Correlations*

| Variables | Mean | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| Group work | 2.11 | 0.21 | | | | | | | |
| Role play | 2.50 | 0.42 | 0.21 | | | | | | |
| Clarification pauses | 2.97 | 0.27 | 0.29 | 0.22 | | | | | |
| Game show | 2.54 | 0.33 | 0.39 | 0.31 | 0.28 | | | | |
| Discussion groups | 2.52 | 0.29 | 0.31 | 0.45 | 0.24 | 0.37 | | | |
| Five minute paper | 2.47 | 0.47 | 0.22 | 0.40 | 0.29 | 0.22 | 0.44 | | |
| Video clips simulations | 2.99 | 0.40 | 0.41 | 0.33 | 0.44 | 0.34 | 0.47 | 0.33 | |
| Classroom environment | 2.70 | 0.27 | 0.47 | 0.37 | 0.47 | 0.28 | 0.31 | 0.27 | 0.38 |
| Students Satisfaction | 3.25 | 0.41 | 0.50 | 0.27 | 0.39 | 0.37 | 0.26 | 0.20 | 0.45 |

Notes: *p<0.05* (M. A. Bhatti et al., 2013)

**Table 4**

*Multiple Regressions*

| Independent Variables | Beta | t-value |
|---|---|---|
| Group work | 0.39 | 2.11 |
| Role play | 0.34 | 2.89 |
| Clarification pauses | 0.44 | 3.01 |
| Gameshow | 0.34 | 3.87 |
| Discussion groups | 0.47 | 3.88 |
| Five minute paper | 0.41 | 4.55 |
| Video clips simulations | 0.49 | 4.87 |
| Classroom environment | 0.40 | 4.10 |
| Business students Satisfaction | 0.37 | 4.99 |
| F-value | 51.0 | |
| Durbin Watson | 2.50 | |
| R Square | 0.58*** | |
| Adjusted R square | 0.71*** | |

****p<0.01; t-values>1.96* (M. A. Bhatti et al., 2013)

Table 3 presents the results of the mean and correlation analysis. The findings revealed that student satisfaction has the highest mean value of 3.25 and the variable of group work has the lowest mean, i.e., 2.11. Further, all the correlation coefficients presented in Table 3 are significant at a 5% level. Moreover, the regression results reported in table 4 explain that the relationship among independent variables (group work, role play, clarification pauses, game show, discussion groups, five-minute paper, video clips simulations) and business students' satisfaction is statistically significant with ($p<0.001$; M. A. Bhatti et al. (2013)). The regression results showed that 58.0 percent variation (R square 0.58) in business students' satisfaction could be explained by group work, role play, clarification pauses, game shows, discussion groups, five-minute papers, and video clip simulations. In addition, a bell shape histogram and P-P plots fulfilled the normality requirement of the sample. The Durbin-Watson coefficient of 2.50 was between the acceptable limits of 1.5 to 2.5.

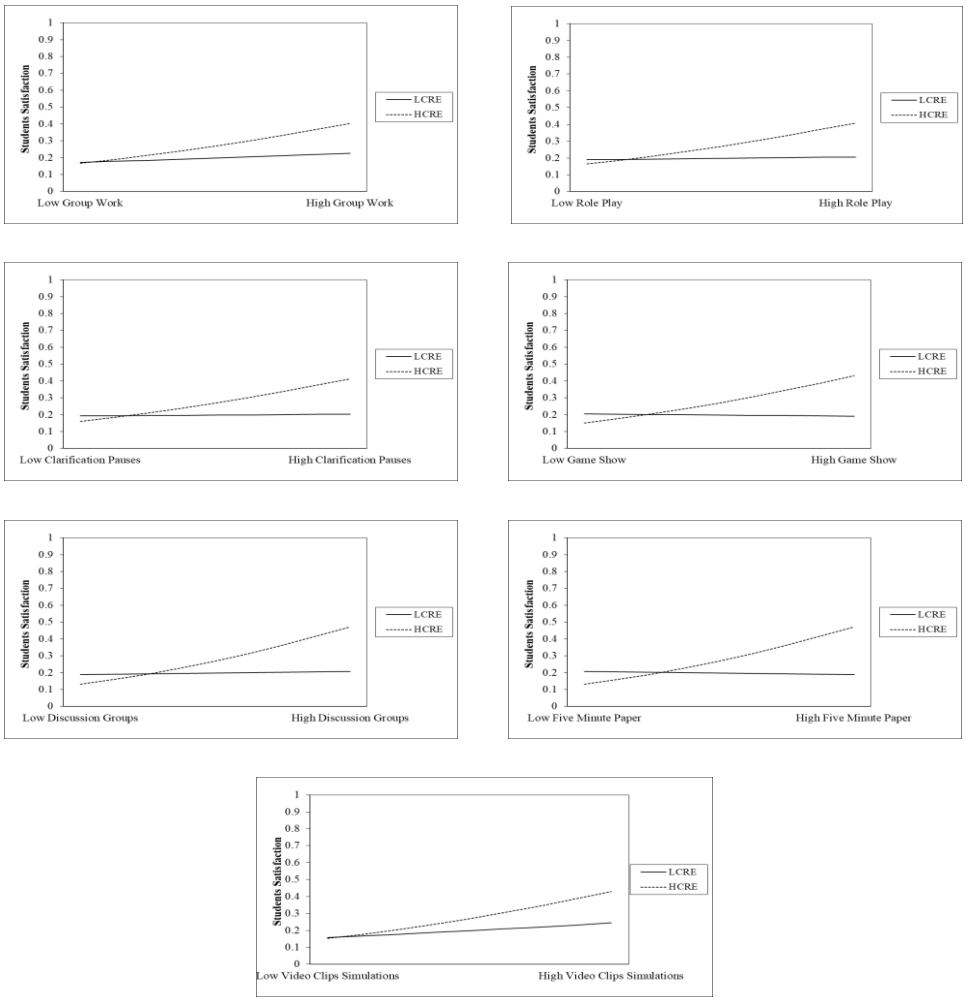


**Figure 2:** *Graphical representation of interaction effect of classroom Environment*

*Testing Moderating Role of Classroom Environment*

According to Baron and Kenny (1986), if moderating variables generate an interaction effect between independent and dependent variables, which is less than ($p < 0.01$), it means that negotiating impact is significant. Therefore, in this study, independent variables (group work, role play, clarification pauses, game show, discussion groups, five-minute paper, video clips simulations) and dependent variable (business students satisfaction) are significant ($\beta$=0.39, 0.34, 0.34, 0.34, 0.47, 0.41, 0.49, 0.40, $p < 0.01$) (group work, role play, clarification pauses, game show, discussion groups, five-minute paper, video clips simulations) respectively. As shown in Figure 2, the interaction effects of (group work, role play, clarification pauses, game show, discussion groups, five-minute paper, and video clips simulations) on business students' satisfaction generate values ($\beta$=0.22, 0.29, 0.31, 0.38, 0.41, 0.47, 0.22, 0.38, $p < 0.01$) which confirmed that classroom environment moderates the relationship between (group work, role play, clarification pauses, game show, discussion groups, five-minute paper, video clips simulations) and business students satisfaction.

## Discussion

The primary objective of educational institutions is to improve students' skills, knowledge, and ability (Madani, 2019). To attain this objective, educational institutions employ various strategies, one of the most difficult being selecting proper teaching and learning methods. Educational institutions have struggled to meet this problem since they understood that practical teaching and learning strategies play a crucial role in maximizing students' performance and happiness (Rebele & Pierre, 2019). Researchers and academic experts have investigated numerous teaching and learning strategies and discovered that the active learning strategy significantly impacts students' positive outcomes, including improved performance and satisfaction. Academics have investigated the effect of active learning on student results in various fields, including science, engineering, art, and technology, but business students have been the subject of very little study. Therefore, this study explored the effect of active learning on business students' satisfaction and the moderating influence of the classroom setting (Betti et al., 2022).

This study found that active learning approaches positively affect the satisfaction of business students, but the classroom environment moderates the association between functional learning approaches and business student satisfaction. This study found that group work positively affects business student satisfaction. One possible explanation for this result is that when students engage in group work activities, they take control of their learning process and become more involved in learning, encouraging them to explore the knowledge in different directions. In contrast, when students sit in a classroom and listen to conventional lectures with little participation, engagement, and control over their own learning process, they have less say in the process. In addition, when students take charge of their learning process and engage in learning activities, the classroom environment plays an important role; if the classroom environment is not conducive to learning, students will not be able to maximize their learning, resulting in lower levels of satisfaction. These findings are comparable to other research findings, such as Dilmaç (2021)'s discovery that students in the 21st-century desire to be active learners and assume responsibility for their education. Consequently, students must understand how, why, and what they should learn. According to previous research, active learning strategies significantly influence student outcomes such as improved performance, achievement, and happiness (Ng et al., 2020; Orak & Demirci, 2018; Rodríguez et al., 2019).

Like group work, various active learning strategies such as role-play, clarifying pauses, game shows, discussion groups, five-minute papers, and video clip simulations significantly boost student learning and happiness. These results concur with those of Azzimonti et al. (2021) and Betti et al. (2022), who discovered that students appear to be happier in an active learning environment. For instance, when students participate in role-play activities or video clip simulations, they can visualize the real environment of a particular activity, which further engages them in the learning process and allows them to gain practical insight about that task, resulting in improved performance outcomes. In addition, explanation pauses and the five-minute paper aid students in comprehending the concepts and learning how to apply them in the real world. Compared to passive learning methods, such as traditional lectures, in which students primarily rely on one-way communication and less interaction, these tiny practices play an essential role and help students psychologically prepare for the job.

Consequently, the findings of this study imply that, like other fields such as science, medicine, engineering, and technology, active learning is essential for business students to achieve optimal performance and education. This study's most important finding is that simulation using video clips has the most significant impact on the happiness of business students. This may differ from other disciplines. However, it is vital to note that business students view simulation video clips as their primary source of education.

## Conclusion, Implications, and Limitations

In Saudi Arabia, this study aims to investigate the impact of using an active learning strategy on students' levels of satisfaction with the moderating function that the classroom environment plays among business students. According to the regression analysis findings and the correlation analysis, an active learning approach positively influences the level of satisfaction experienced by business students. Furthermore, the results support the moderating role that classroom environment plays in the relationship between an active learning approach and students' satisfaction levels.

The findings of this study present many theoretical and practical implications. From a theoretical implications' perspective, this study's findings strengthen the body of knowledge by examining the effects of the active learning approach on business student satisfaction. Therefore, it can be said that the active learning approach is suitable for engineering, science, and technology students and vital for business students. In addition, findings of this study support the concept of classroom environment and explain that classroom environment moderate the relationship between active learning approach and students satisfaction. These findings are helpful to explain the importance of classroom environment. In contrast, from a practical perspective, this study's results will be useful for researchers and academicians to promote an active learning approach in the university setting for business students. Another practical implication of this study is creating a classroom environment that supports an active learning approach for higher student satisfaction. Finally, findings of this study will be helpful for academicians involved in course design, they can incorporate more active learning techniques in the course teaching/learning approach.

There are several limitations of this research that open the avenues for future research.

Firstly, data collection in this study was limited to one university, which hindered the generalization of these findings on a larger scale. Future research should expand the target population and collect data from multiple universities to generalize the findings better. Secondly, data was analyzed using SPSS, which may not provide -depth results, especially for testing the moderating effects of the classroom environment. Future research should use smart PLS for better results and in-depth findings. Finally, gender and years of education might influence the students'' tendency toward learning. This study did not consider gender and university study years during analysis. Future research should explore the role of gender and years of education in the university, the tendency to use an active learning approach, and the level of satisfaction among business students.

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