

STUDENT ENGAGEMENT IN CLASSROOMS: A STUDY OF COGNITIVE AND BEHAVIORAL ENGAGEMENT ACROSS DIFFERENT SUBJECT AREAS

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ABSTRACT

The purpose of the study is to explore “Student Cognitive and Behavioral Engagement and Related Predictors in Classroom”. The objectives of the study are to investigate the perceptions of students regarding different forms of classroom engagement and to find out the classroom predictors related to students regarding different forms of engagement in the classroom. A quantitative research design is used. The data was collected through questionnaire. Through random sampling technique, a sample size of 60 students from both genders was taken from Education, Psychology & Sociology Departments at University of Malakand. For data analysis SPSS (Statistical Package for the Social Science) Version 23 and descriptive statistics (Frequency, Percentage, Mean and Standard deviation) was used. It was found from the results that most students show both Cognitive and Behavioral Engagement form in classroom. It was found that students predict classroom climate, instructor behavior and course content are predictors of student engagement in classroom. It was concluded that majority of students show both Cognitive and Behavioral Engagement form and also predict that classroom climate, teacher behavior and course content affect their engagement form in the classroom. On the basis of results the study recommended that teacher create positive classroom environment, provide a democratic environment in classroom where students feel comfortable participating in the classroom, provide opportunities to every students to maximize their engagement in classroom, use students centered teaching methods, engage all students in classroom through group discussion, communication, cooperative learning and helps students in their learning tasks during class and to deliver the course contents through technology to develop communication skills of the students and the university should provide continuous teacher training for professional development of teacher.

Keywords: Cognitive, Behavioral, Engagement, Predictors, Classroom Management

Introduction

The term “engagement” often refers to participation, intervention, and mutuality, and is largely synonymous with personal involvement in specific activities (Learning and Instruction, 28(1), 12-23). Additionally, “engagement” is sometimes used interchangeably with terms such as “active,” “attention,” and “effort” to describe the energy invested in the workplace and the relationship between a person and an activity. Student participation, therefore, takes on diverse forms and is often described in ways that suggest it is linked to a sense of competence, effectiveness, and belonging to both the teacher and the classroom (Anderman, L. H., 2013). Similarly, some researchers argue that student participation is optimized when classroom conditions satisfy students’ needs for competence, autonomy, and belonging. Furthermore, participation is described as a magnet that attracts and holds students’ attention (Auster, C. J., & MacRone, M., 1994).

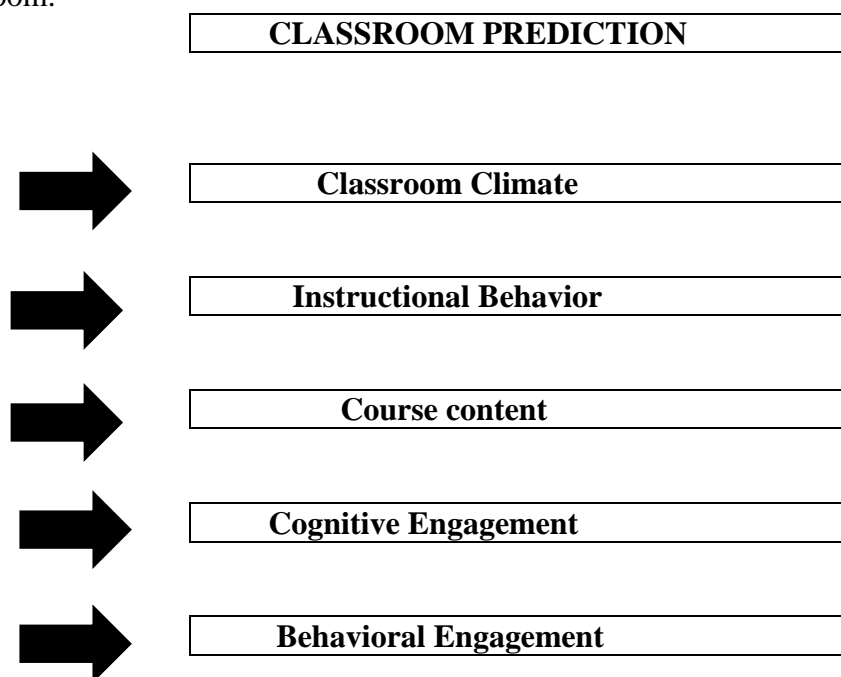
Student participation is often defined as a precise concept, though not always concisely articulated. The National Student Participation Survey defines it as the intersection of time and energy students devote to healthy learning activities. Examining various definitions of participation provided by different researchers reveals a common focus on indicators of positive participation, which can be categorized into different dimensions

(Bensimon, E.M., 2009). This study explores different forms of student participation, emphasizing two primary components: behavioral and cognitive skills. Behavioral participation refers to active involvement in academic, social, and co-curricular activities within the classroom. In the context of multidimensional participation, a critical aspect is evaluating whether students are fully engaged in both the academic content and the activities offered by the classroom, teachers, and course materials (Christenson, S.L., Reschly, A.L., & Wylie, C., Eds., 2012).

Behavioral participation refers to various student learning behaviors, such as maintaining focus, making an effort, following rules, and engaging in positive interactions with teachers and peers. Cognitive interaction, on the other hand, depends on the student's investment in teaching and learning (Conner, T., 2011). A cognitively engaged learner demonstrates thoughtfulness and strategic learning, willingly putting in the effort required to understand complex ideas or master challenging skills (Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H., 2004).

Conceptual Framework

The conceptual framework of the study highlights three key classroom predictors: classroom climate, instructor behavior, and course content. It explores how these predictors are interconnected and how they influence students' cognitive and behavioral engagement in the classroom.



Objectives:

- (i). To investigate the perceptions of students regarding different forms of classroom engagement.
- (ii). To find out the classroom predictors related to students regarding different forms of engagement in the classroom.

Research Questions

- (i) To what extent students remain engaged in different forms of engagement in the classroom?
- (ii) What classroom predictors might affect student's different forms of engagement in the classroom?

Literature Review

The concept of student participation, introduced around 29 years ago, refers to meaningful engagement throughout the learning environment (Hackling, Byrne, Gower, & Anderson, 2015). It encompasses the relationships among students, schools, classrooms, teachers, peers, education, and the curriculum. Student engagement is typically categorized into two dimensions: behavioral and cognitive. Behavioral participation involves students actively engaging in academic and co-curricular activities, while cognitive participation reflects their thinking processes and motivation to master challenging skills (Hattie & Anderman, 2013). Student participation theory emphasizes that the more students attend and engage in class, the more they learn and experience personal growth. Meaningful participation helps students develop a sense of belonging with their peers, teachers, and classrooms while offering diverse learning and development opportunities. The time and effort students invest in meaningful educational activities are strong indicators of their academic and professional success. Institutions where students actively participate in a variety of activities contributing to valuable outcomes are often considered higher in quality compared to those where student involvement is minimal (Kraft & Dougherty, 2013).

Cognitive interaction is an aspect of engagement that relies on the student's investment in teaching and learning. A cognitively engaged learner is thoughtful, strategic, and willing to put in the effort required to understand complex ideas or master difficult skills. Research on cognitive sharing focuses on the extent to which students invest in learning and their willingness to do extra work to achieve better academic outcomes. The cognitive dimension introduces the concept of investment as a critical component of partnership. Cognitive participation involves students' thinking processes and their determination to grasp complex ideas and master challenging skills. Cognitively engaged students fully invest themselves in the learning process, striving to exceed basic requirements. Since participation has two dimensions, students learn effectively when they are behaviorally involved in learning tasks, enjoy the process, and actively contribute ideas that motivate them to deepen their understanding (Kuh, 2001). In general, the dimensions discussed encompass the concept of participation, which extends beyond simple or superficial involvement. It requires logical thinking, emotional engagement, and active involvement. This approach facilitates measuring and evaluating student participation. Students focus on tasks, persevere through challenges, and engage in intentional learning, positive emotions, deep information processing, and collective activities as part of their participation and mindset.

Behavioral participation refers to engagement based on active involvement in academic, social, and co-curricular activities within the classroom. Within the framework of multidimensional participation concepts, it serves as a critical aspect for assessing whether students are fully engaged in both the academic and extracurricular opportunities provided by the classroom, teachers, and course content. Behavioral participation encompasses various student learning behaviors, such as maintaining focus, putting in effort, adhering to rules, and engaging in positive interactions with teachers and peers (Kuh, 2009).

Research indicates that students' behavioral engagement is strongly associated with higher academic achievement and classroom retention. As a mediator between the learning environment and desired educational outcomes, behavioral participation can be enhanced by improving aspects of the learning setting. Studies on participation aim to identify the determinants of student engagement in the classroom, introducing the concept of behavioral participation to encapsulate student involvement in academic and social activities, which are crucial for academic success. For instance, students who follow behavioral norms and avoid negative or disruptive behaviors can be considered active participants in the behavioral

dimension (Liu & Lerner, 2011).

A classroom environment that supports student participation provides students with substantial help and high expectations from teachers and peers during the learning process. Factors such as reliability, a sense of belonging, fairness, stability, motivational elements, and an engaging atmosphere are closely tied to student satisfaction. A positive classroom environment fosters learning by promoting fairness, mutual respect, security, and positive communication (Martin & Torres, 2010). The classroom environment is encapsulated by the "4Cs" concept: Culture, Community, Curriculum, and Co-curriculum. Teachers play a pivotal role in shaping how students perceive their educational environment. Research consistently highlights the importance of teacher support and encouragement in fostering active student participation.

To enhance positive participation, teachers address academic and social barriers by creating opportunities and implementing effective teaching and learning strategies. Teacher support significantly influences student participation, which in turn enhances their engagement and performance. Educators must understand students' attitudes and beliefs that impact their participation and success in the classroom. Social learning theory identifies three interconnected components that shape student participation: individual components (such as self-esteem, self-confidence, and attitudes), behavioral components (such as performance or responses to situations), and environmental components (such as feedback from peers, parents, and teachers). These components collectively suggest that self-esteem, performance, and external feedback influence student participation (Nunn, 1996).

Roorda, Koomen, Spilt, and Ort (2011) concluded that teacher behaviors such as offering praise, personally engaging with students, and fostering a supportive classroom environment are among the most significant factors promoting active student participation. Course content criteria provide valuable feedback to measure and improve student investment in learning, as they reflect the structure, teaching methodology, and design of a course. These criteria emphasize the importance of creating participation benchmarks aligned with course content, demonstrating that teachers use various methods to assess class participation. Unlike the common focus on institutional participation indicators, these measures evaluate student attendance and behavioral and cognitive responses to teaching strategies.

The Classroom Survey of Student Engagement evaluates student perceptions of engagement with course content (Smallwood & Ouimet, 2009). This survey measures how frequently students participate in various educational activities related to course material. Course content plays a crucial role in fostering student involvement, often incorporating comprehensive information and addressing frequently asked questions. It assesses whether the approach is traditional or innovative. Learning outcomes and student participation are strongly influenced by the quality and type of course content delivered in the classroom.

A preliminary student participation report concluded that students' engagement in academic work, knowledge production, and cognitive development is essential. Similarly, the National Survey of Student Engagement (NSSE) reached a related conclusion, highlighting that extensive research shows the importance of student effort and active involvement in educational and course activities. These factors are the strongest predictors of academic achievement and personal development (Smith, Ito, Gruenewald, & Yeh, 2010).

Methodology

Research questions

- To what extent students remain engaged in different forms of engagement in the classroom?
- What classroom predictors might affect student's different forms of engagement the

classroom?

Participants

All students of social science discipline at University of Malakand constituted the population of the study. Sixty students constituted the sample size of the study with the following divisions. Twenty students both male and female of Department of Education, Twenty students both male and female of Department of Psychology & Twenty students both male and female of Department of Sociology.

Data Collection and Analyses

The Questionnaire was used to collect data from students of Education, Psychology and Sociology departments at University of Malakand by the researcher. Before data collection, the researcher gave clear instructions to the participants for data collection. The researcher visited to above mentioned departments for data collection.

Ethical standards are essential for conducting research studies to keep participants away from ethical harassment. Since the study participants were university students, the following ethical considerations were taken into account:

- Get permission from the Head of Departments to collect data.
- Confidentiality was maintained; the data collected from the participants was used exclusively for research purposes.
- The participants names, address and contact number were strictly kept confidential.
- The researcher maintained the department's norms, rules, and regulations.

After data collection through questionnaire, the researcher used SPSS (Statistical Package for the Social Science) version 23 for data analysis process. Descriptive statistics (frequency, percentages, mean and standard deviation) was used for the analyses of data of all questions.

Findings

➤ It was found that the majority of the students 40(66%) were agreed that they form new questions in their mind as they joined class and some of the students 39(65%) were also agreed that they participate in the class by asking questions. The highest mean score was 2.0 for the item "I search for information from different places and think about how to put it together" which shows the maximum level of observance among the 06 items. On other hand, the lowest mean score was 1.6 for the item "I stayed engaged in my class by actively listening to what was discussed" which shows the minimum level observance among 06 items.

➤ It was found that the majority of the students 45(75%) were agreed that they participate in the class by speaking and some of the students 38(63%) were also agreed that they participate in the class by responding to the questions. The highest mean score was 2.4 for the item "I do not want to stop working at the end of class" which shows the maximum level of observance among the 06 items. On other hand, the lowest mean score was 1.7 for the item "I feel interested in the class" which shows the minimum level of observance among 06 items.

➤ It was found that the majority of the students 36(60%) were agreed that they feel comfortable in their class by participating and some of the students 32(53%) were also agreed that their instructor is judgmental during class discussion. The highest mean score was 2.8 for the item "my instructor did not treat each student equally in the class" which shows the

maximum level of observance among the 06 items. On other hand, the lowest mean score was 2.0 for the item “I feel comfortable participating orally in class” which shows the minimum level of observance among 06 items.

➤ It was found that the majority of the students 34(57%) were agreed that their teacher helps their students in their tasks during class. Some of the students 33(55%) were agreed that they their teacher keep engage all students in the classroom. The highest mean score was 2.1 for the item “teacher arranged group discussion in the class.” which shows the maximum level of observance among the 06 items. On other hand, the lowest mean score was 1.8 for the item “teacher helps their students in their tasks during class.” which shows the minimum level of observance among 06 items.

➤ It was found that the majority of the students 40(67%) were agreed that their course design help them to understand the course contents. Some of the students 37(62%) were also agreed that they have become more confident with the course to pursue further learning. The highest mean score was 2.1 for the item “the course me to use computer for presenting information” which shows the maximum level of observance among the 06 items. On other hand, the lowest mean score was 1.8 for the item “during learning the contents I have developed the ability to efficiently communicate with others” which shows the minimum level of observance among 06 items.

Discussions and Conclusions

In this study it was found that students show positive responses about Cognitive and Behavioral engagement in classroom. Which indicate both Cognitive and Behavioral engagement forms of students in Classroom. The findings are conformity similar with the study of where they found that students show both Cognitive and Behavioral forms of engagement during teaching learning process and also suggested that they are important for students in the class. According to my research, mostly students use both Cognitive participation (silent, thinking, listening & asking) and behavioral participation (oral, discussion, speaking & responding) in their classes. Students who speak mostly in the classes and have confidence are behavioral engaged, while students who speak less in class are cognitive engaged. Thus both Cognitive and Behavioral form of participation are significant important for students to engage them in teaching learning process. While the studies show that students were behavioral disengage due to online and virtual mode of learning.

In current study it was found that perception of the students about classroom climate show that classroom climate affect their engagement form in classroom. So the most students show that classroom climate as a significant predictor of student engagement in classroom. The findings are conformity similar with the study where they found that the classroom environment as an important predictor of students engagement in classroom. Studies indicate that classroom climate supports student participation when students receive substantial help and high expectations from teachers and peers throughout the learning process. Classroom factors such as, a sense of belonging, fairness, stability, motivational factors and an attractive environment are closely related to student participation and satisfaction. Thus the classroom climate plays an important role to engage students.

The study found that perception of the students about instructor behavior show that instructor behavior affects their engagement form in classroom. So the most students show that instructor behavior as a significant predictor of student engagement in classroom. The findings are conformity similar with the study where they found that the instructor behavior as an important predictor of students engagement in classroom. According to the studies the methods of teaching and communication between teachers and students should inspire students to participate in discussion and learning. They concluded that the students

participation were more active when they characterized by good instructions and supportive atmosphere were the most important indicators of student participation in classroom.

The current study investigated that perception of the students about course content show that course content affects their engagement form in classroom. So the most students show that course content as a significant predictor of student engagement in classroom. The findings are conformity similar with the study. Studies have found that course content is an important predictor of students' engagement in the classroom. After the resulting it was concluded that mostly students engaged in various learning activities in classroom through course content. The energy and time students spend on course content is the best predictor of student's engagement in classroom.

It was concluded that majority of students show positive perceptions towards Cognitive and Behavioral engagement in classroom and majority of students show positive perceptions towards classroom climate, instructor behavior and course content. Thus the majority of students predict that classroom climate, instructor behavior and course content play an important role to engage students in classroom. These predictors also affect students' engagement forms in classroom.

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