

## Original Article

# Study of Intrinsic, Extrinsic Motivation, Teaching Quality and Student Engagement among College Students of Sindh: An Empirical Analysis

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## Abstract

This empirical endeavour seeks to investigate the impact of intrinsic motivation, extrinsic motivation, and teaching quality on student level of engagement among the students enrolled in various colleges of Sindh, Pakistan, drawing upon the use of Perkrun's (2006) Control-Value Theory of Achievement Emotions and Motivation. The collected data were analysed using multiple linear regression analysis to test this research's hypotheses. This study's findings indicate that intrinsic and extrinsic motivation have a significant and positive impact on student engagement, which signifies the importance of internal and external rewards in enhancing the academic participation of the student. This study, however, through analysis, found that the teaching quality, contrary to the expectation, does not significantly impact the student's level of engagement. These results prompt a deeper investigation into the potential areas for enhancement in teaching methods and practices within the college setting. Besides enriching the understanding of the perplexing dynamics of determining the students' level of engagement in college settings, this study also emphasised the need for targeted interventions to enhance the teaching methodologies to improve the students' level of engagement. The explanation of the identified critical factors, this research also contributes to the continuous discourse on learning enhancement, leading to intelligent decision-making and strategic resourcefulness toward improving learning outcomes in Sindh.

**Keywords:** CVTAE, Motivation, Student Engagement, Sindh Colleges

## 1. INTRODUCTION

Modern research practices on educational discourse have drawn tremendous attention to student engagement. It has been studied as the most crucial research construct. Student engagement is the exhibition of active involvement in the learning process, motivation to participate, and commitment towards academic excellence (Anand & Gupta, 2023). Engagement students exhibit curiosity, persistence, and motivation toward their educational pursuits, eventually leading to enhanced learning outcomes (Hofkens & Pianta, 2022). As the objective of educational institutions is to maximise student engagement, it becomes essential to investigate the factors that influence this phenomenon.

Among several precursors of student engagement, intrinsic and extrinsic motivation, coupled with teaching quality, emerged as essential dimensions worthy of investigation. Students' inherent intention to employ him/herself for his/her innate contentment or satisfaction with enthusiastic curiosity and interest constitutes intrinsic motivation (Ryan & Deci, 2000). On the other hand, extrinsic motivation emerges from exterior factors such as grades, social recognition, and rewards, which makes the students enthusiastically involved in activities to win tangible outcomes or avert punishment (Deci & Ryan, 1985). The effectiveness of instructional methods, clarity of interaction, and capability to develop a supportive and positive learning environment constitute the teaching quality (Darling-Hammond, 2006).

The interplay between intrinsic and extrinsic motivation coupled with quality teaching shapes a versatile framework that frames students' level of engagement towards learning progression. The



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### How to cite:

Khuhro, N. (2024). Study of Intrinsic, Extrinsic Motivation, Teaching Quality and Student Engagement among College Students of Sindh: An Empirical Analysis. *Siazga Research Journal*, 3(2), 129-136.

<https://doi.org/10.58341/srj.v3i2.56>

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existence of intrinsic motivation triggers authentic desire, interest, curiosity and a sense of autonomy. Extrinsic motivation, conversely, refers to the efforts towards achieving rewards and grades, which may impact students' attitudes toward acquiring desired outcomes (Deci, Koestner, & Ryan, 1999)—result-oriented teaching practices aimed at student-centred approaches. Supportive interaction and constructive feedback have been studied as consistent associates of higher student engagement (Fredricks et al., 2004).

The importance of intrinsic and extrinsic motivation, along with teaching quality, in examining students' level of engagement has triggered this study to explore their interplay in the educational context. By investigating empirical findings and theoretical frameworks, this research seeks to explore the complex interaction between these variables of interest in predicting students' level of engagement. Analysing how intrinsic and extrinsic motivation and teaching quality impact students' engagement levels is significant for educational practices, content design, and teaching approaches.

Moreover, as teachers and educational managers endeavour to promote students' level of engagement and enhance rational experiences, it becomes essential to single out the practical strategies and interventions offered through empirical evidence. By outlining the subtle interplay of intrinsic and extrinsic motivation, teaching quality and students' level of engagement, this study seeks to contribute to the persistent investigations of effective educational practices and student-centred approaches towards teaching-learning. Keeping this in view, the following objectives have been articulated to substantiate this study empirically.

### **Objectives of study**

- To investigate the impact of intrinsic motivation on student engagement
- To study the impact of extrinsic motivation on students' level of engagement
- To study the impact of teaching quality on students' level of engagement

### **Scope of the study**

This study is intended to explore the impact of intrinsic and extrinsic motivation and teaching quality on college students' level of engagement in Sindh, Pakistan. The research focuses on understanding how these variables of interest affect the level of engagement in learning progression within the diversified socio-cultural context of Sindh.

### **Ethical Contemplation**

This research endeavour adheres to ethical norms for research which involve human participation. The consent was sought before obtaining any response, the participants were ensured that their response would solely be used for this research purpose only, and confidentiality was also ensured.

## **2. THEORETICAL FRAMEWORK & LITERATURE REVIEW**

The acrobatic participation, curiosity, commitment, and enthusiasm towards learning are the exhibitions of students' level of engagement. The students' engagement has been studied as a critical precursor of academic excellence and contentment among college students (Barrett & Hardy, 2023). Concerning the perspective colleges in Sindh, Pakistan, comprehending the variables that impact students' level of engagement, including intrinsic extrinsic motivation and teaching quality, is pivotal for enhancing academic outcomes and improving the quality of learning experiences. Using the Control-Value Theory of Achievement Emotions and Motivation, this systematic review explores how these variables of interest form student engagement among the students of colleges in Sindh, Pakistan.

### **Control-Value Theory of Achievement Emotions and Motivation (CVTAE)**

According to Perkrun (2006), this theory suggests that persons' affective exhibitions and persuasions are affected by their perception of control over educational results and the subjective assessment of the importance or the value of the tasks. This theory postulates that the students' level of engagement in educational endeavours is affected by their beliefs regarding their capability to control their performance outcomes and their sensitivities attached to the assignment's relevance or value towards their intended ambitions. While CVTAE, Garn et al. (2017), through path analysis, found that emotional engagement was the determinant of control and extrinsic value appraisal. However, their study focused on students enrolled in universities. Applying the CVTAE model ..... identified the significant difference between intrinsic and extrinsic values. Thus, the theory was substantiated (Simonton & Garn, 2020). It was established that the CVTAE can integrate various research constructs and assumptions from the perspective of diversified

theoretical approaches in the educational context. Several perspectives of the CVTAE have been found consistently validated in quantitative and qualitative studies (Pekrun et al., 2007). In the Pakistani context, the concurrent effects of negative, positive, deactivating, and activating accomplishment using CVTAE were documented while studying university students' academic satisfaction and performance (Iqbal, Khan, & Ikramullah, 2023). However, this study uses the CVTAE model and has investigated the college education context of Sindh, Pakistan.

### **Intrinsic and Extrinsic Motivation**

Internal factors such as interest, inquisitiveness, and satisfaction are the exhibitions of intrinsic motivations (Valerio, 2012). It has a significant role in inculcating a sense of academic engagement among students while involving learning activities (Ryan & Deci, 2000). Once learners perceive the academic assignments congruently with their interests and targets, they are more likely to actively participate in academic activities and excel in their performance (Handayani, 2017). Extrinsic motivation focuses on external reward in terms of grades, recognition or social appreciation, which eventually causes the students to exhibit the phenomenon in his/her behaviour. However, it may not essentially foster his/her engagement level or learning excellence (Deci et al., 1999). While studying the level of engagement among high school students, Nayir (2017) found a significant favourable influence of motivation on their performance. However, the study also found a significant difference among male and female students.

### **Teaching Quality**

The effectiveness of instructional methods, clarity of interaction, and the capability to develop a positive, supportive learning environment constitute the teaching quality (Darling-Hammond, 2006). Through the perspective of CVTAE, students' feelings about teaching quality can influence their emotional experiences and level of persuasion in the classroom. Once the students' perception is established regarding the level of teachers' knowledge, support and responsive attitude towards their academic needs, they are more likely to perceive in control of their learning and feel the academic assignments as valuable and relevant (Tze, Parker, & Sukovieff, 2021). In the Pakistani context, Ibad (2016) found reciprocal perceptions about the teachers' ability and student level of engagement and motivation. The professional competency of the faculty members has also been studied as a significant predictor of students' academic performance (Ibad & Sharjeel, 2021). However, both studies have focused on students and faculty engaged in universities. Therefore, this study focuses on college students in Sindh.

Several empirical findings have been documented regarding the impact of intrinsic extrinsic motivation and teaching quality on students' level of engagement. For instance, Hu and Kuh (2002) concluded that the perception of teaching significantly influences the student's level of engagement and academic assignments. Likewise, the student conducted by Fredricks et al. (2004) found that intrinsic motivation was a positive predictor of students' engagement level, whereas extrinsic motivators such as rewards, grades, and social recognition had a weaker influence on students' level of engagement.

Based on the literature, the following hypotheses have been formulated for this study to test:

- H1: Intrinsic motivation has a significant effect on students' engagement
- H2: Extrinsic motivation has a significant effect on students' engagement
- H3: Teaching quality has a significant effect on students' engagement

## **3. METHODOLOGY**

### **Research Design**

The quantitative research design has been applied to study the impact of intrinsic extrinsic motivation and teaching quality of students' level of engagement among the students of colleges in Sindh, Pakistan. A cross-sectional survey was employed to gather the data from the students.

The college students of various academic programs across different colleges in Sindh constitute the population of the study. A stratified random sampling technique was employed to ensure the representation of intermediate and undergraduate students. The sample size for this study was determined using the Raosoft online calculator, which returned 330 for the indefinite population. An adapted data collection instrument was used for data collection. The Academic Motivation Scale (AMS) is the college version of Vallerand et al. (1992) for measuring intrinsic and extrinsic motivation levels among students. In order to measure teaching quality, the scale of Molina et al. (2020) was adopted to collect the data for this research. The scale of Appleton et al. (2006) was used to measure student engagement levels.

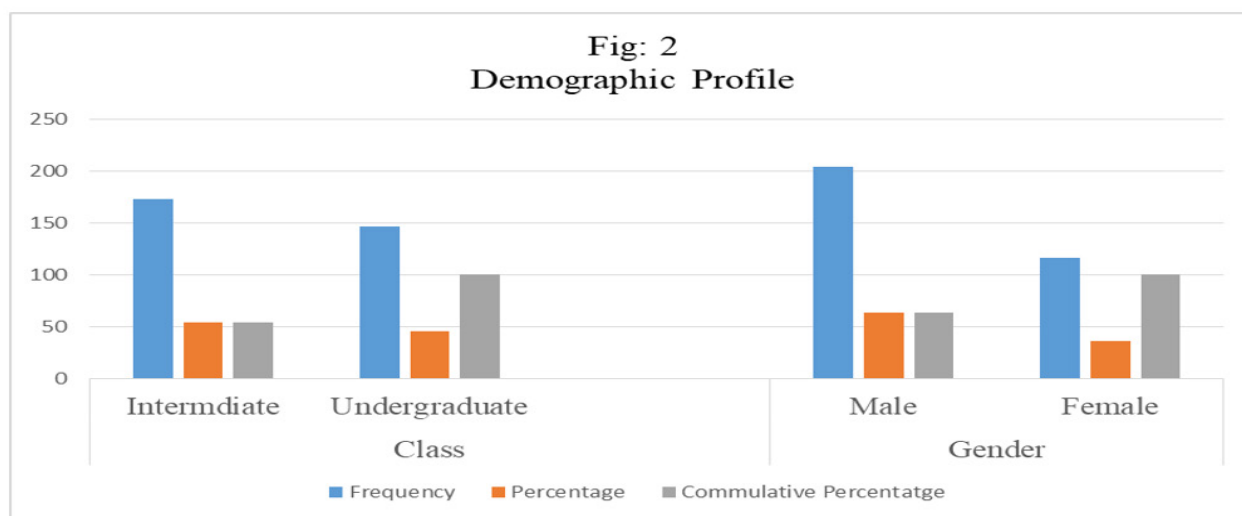
## Data Analysis and Results

Descriptive statistics have been calculated to summarise the demographic profile of the sample. The demographic profile summary is shown in Table No. 1, and a graphical representation is in Fig No. 2. Inferential statistics using Multiple Linear Regression analysis have been computed to investigate the impact of intrinsic extrinsic motivation and teaching quality on student engagement level. The results of the analysis are depicted in Table 3. In order to measure the internal consistency among items of each construct, the reliability statistics were performed using Cronbach's alpha reliability statistics and the results are presented in Table No. 2.

**Table 1**  
**Demographic Profile**

	Variable	Frequency	Percentage	Commulative Percentatge
<b>Class</b>	Intermdiate	173	54.1	54.1
	Undergraduate	147	45.9	100
<b>Gender</b>	Male	204	63.8	63.8
	Female	116	36.2	100

Table No. 1, shown above, represents the summary of the demographic profile of the respondents for this study. The table highlights that 54.1 per cent of the participants were intermediate-level students, whereas 45.9 per cent of the respondents were undergraduate students. The data is also presented in a graphical format, as shown in Fig 2.



## Reliability Statistics

**Table 2**  
**Reliability Statistics**

Variables	Items	Cronbach' Alpha
Intrinsic Motivation	5	0.760
Extrinsic Motivation	6	0.821
Teaching Quality	8	0.921
Student Engagement	6	0.789

Table 2 above shows the reliability statistics for each variable of interest in this research. Cronbach's Alpha coefficients are highlighted, exhibiting higher values confirming the robust internal consistency of the measurement scale used for collecting data for this research. The Cronbach's Alpha for intrinsic,



extrinsic motivation, teaching quality and student engagement shows ( $\alpha = 0.760, 0.821, 0.921, 0.789$ ) respectively. These results suggest that the data collection instrument used in this research has significant levels of reliability for assessing the relevant constructs.

Table 3

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.383	3	15.794	63.844	.000 <sup>b</sup>
	Residual	78.176	316	.247		
	Total	125.559	319			

a. Dependent Variable: Student\_Engagement

b. Predictors: (Constant), Teaching\_Quality, Intrinsic\_Motivation,

Table No. 3 given above for this research shows that the overall regression model (including Intrinsic, Extrinsic Motivation, and Teaching Quality) is statistically significant ( $p < 0.001$ ), confirming that these predictors collectively explain a significant amount of variance in student engagement.

Table 4

**Coefficients**

Hypothesis	Independent Variables	Coefficients	t-Statistics	Sig Value	Remarks
H1:	Intrinsic_Motivation	0.110	3.072	0.002	Supported
H2:	Extrinsic_Motivation	0.461	13.786	<0.001	Supported
H3:	Teaching_Quality	0.008	0.265	0.791	Rejected

Focusing on the given results highlighted in Table No. 4 may be interpreted as:

Hypothesis 1: was proposed as the positive impact of intrinsic motivation on student engagement is supported, exhibiting significant positive ( $\beta, 0.110$ ,  $t$ -value=3.072  $p$ -value, 0.002), it confirms that every single unit change in intrinsic motivation causes 0.110 units change in student engagement holding other factors constant.

Hypothesis 2: was proposed as the positive impact of extrinsic motivation on student engagement is supported, exhibiting significant positive ( $\beta, 0.461$ ,  $t$ -value 13.786,  $p$ -value, 0.001), it confirms that every single unit change in extrinsic motivation causes 0.461 units change in student engagement holding other factors constant.

Hypothesis 3: was formulated to investigate the impact of teaching quality on the student is not supported, as the statistics in table No. 4 shows that ( $\beta, 0.008$ ,  $t$ -value 0.265,  $p$ -value, 0.791). It confirms that these research findings concern that teaching quality does not impact student engagement. Intrinsic and extrinsic motivation significantly impact student engagement levels, whereas teaching quality does not significantly impact student engagement.

**Discussion**

This empirical endeavour investigates the impact of intrinsic and extrinsic motivation and teaching quality on students' level of engagement among students enrolled in various colleges in Sindh, Pakistan. The study's objective has been valued through Perkrun's (2006) Control-Value Theory of Achievement Emotions and Motivation. The research results exhibited the significant positive influence of intrinsic and extrinsic motivation on students' level of engagement. The results authenticate the significance of internal drive and external rewards in improving student participation. However, against anticipations,

the results did not find any impact on the teaching quality of students' level of engagement, which triggers further exploration into the potential areas of improvement in pedagogical approaches in the colleges of Sindh.

The findings highlighted the interplay of complex dynamics in shaping students' engagement levels and emphasised the need for customised intervention to improve the teaching methodologies, which would further enhance the motivation level of students.

#### 4. CONCLUSION

This research adds value to the existing literature on education, student engagement, motivation, and teaching qualities in college settings in Sindh. By investigating the influence of intrinsic and extrinsic motivation and teaching quality on student engagement, the research sheds light on the intricacies of educational dynamics and highlights improvement areas. The intrinsic extrinsic motivation exhibited a significant positive impact on students' level of engagement, whereas the teaching did not impact student engagement. The findings suggest the need for intervention to improve teaching practices and methodologies.

The results emphasise the significance of addressing both internal and external elements to enhance the students' level of engagement, which eventually may cause an improvement in learning outcomes. The study further suggests targeted intervention intending to improve teaching approaches so that students' level of motivation and quality education may be imparted in the colleges of Sindh, Pakistan.

#### Limitations

Even though valuable value addition findings have been explored through this research, some limitations should also be acknowledged.

- The data collected for this study is self-reported, which may be the subject of inaccuracies and subjective biases.
- The research only focused on students in various colleges in Sindh, Pakistan, which may limit its generalizability.
- Moreover, this study did not consider socioeconomic differences, which may significantly influence students' level of engagement.

#### Future Research

The CVTAE offers a valuable foundation for understanding how intrinsic and extrinsic motivation and teaching quality affect the students' engagement level. By investigating students' perception of control and value concerning academic assignments, teachers and policy managers can formulate strategies to foster students' level of engagement and improve meaningful learning experiences in colleges of Sindh via the following:

- The longitudinal research design can be applied to conclude robust results
- The Qualitative approach may employed to investigate the more profound insights into the objectives of the research
- A comparative study may be conducted to evaluate the socioeconomic difference and their impact on the students' level of engagement
- The study may be conducted to suggest faculty development initiatives so that the teaching quality and practices may be enhanced, which can cause an improvement in the motivation level of student and their active participation towards learning outcomes.

#### Competing Interests

The author did not declare any competing interest.

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