



**BEYOND THE MERIT TRAP: INTRINSIC
MOTIVATION AS THE MEDIATOR BETWEEN
STUDENT AGENCY AND ACADEMIC PERFORMANCE
IN PAKISTANI HIGHER EDUCATION**

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Abstract

This correlational study investigated the relationship between student agency, intrinsic motivation, and academic performance among 150 undergraduate and postgraduate students (N = 150) at a public sector university in Pakistan. Data were collected using the Academic Self-Regulation Questionnaire (SRQ-A) and Academic Motivation Scale (AMS). Pearson correlations revealed significant positive relationships between student agency and academic performance ($r = .42, p < .001$), intrinsic motivation and academic performance ($r = .41, p < .001$), and student agency and intrinsic motivation ($r = .68, p < .001$). Mediation analysis confirmed that intrinsic motivation partially mediates the relationship between agency and performance. Regression analysis demonstrated that psychological factors (agency and motivation) explained significantly more variance in university performance ($R^2 = .20$) than prior Intermediate scores ($R^2 = .04$). The study challenges the "merit trap" in Pakistani higher education, suggesting that fostering learner autonomy and intrinsic interest is more viable than relying solely on past metrics.

Keywords: *Student Agency, Intrinsic Motivation, Academic Performance, Higher Education, Pakistan, Self-Determination Theory*

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1. Introduction

The aim of present study is to find out the relationship between student agency and academic performance with mediating role of intrinsic motivation among university students in Pakistan.

The landscape of higher education globally is increasingly focused on fostering graduates who are not only knowledgeable but also proactive, self-regulated, and capable of navigating complex challenges. In this context, the traditional model of passive knowledge transmission is being supplanted by paradigms that emphasize the learner's active role in their educational journey. Central to this shift is the concept of student agency, which represents an individual's capacity to initiate intentional and purposeful actions that influence their learning processes and academic environment (Bandura, 2006).

While academic performance has long been the primary metric of student success, its determinants are multifaceted and extend beyond mere intellectual ability. In the specific context of Pakistan, the higher education system often operates within a "merit trap," where admission and success are predicted heavily based on prior standardized testing (e.g., Intermediate/F.Sc scores) (Ali & Haider, 2018). However, researchers are now exploring critical psychological factors which may better underpin achievement in the complex, unstructured environment of a university.

The theoretical underpinnings of this inquiry are rooted in Social Cognitive Theory, particularly the work of Albert Bandura (2001). Bandura defined agency as the human capability to exert influence over one's own functioning and the course of environmental events. Within an educational context, this translates to a student's perceived and actual ability to control their learning, set goals, and persist in the face of challenges.

However, the capacity to act (agency) must be fueled by the desire to act. This study posits that intrinsic motivation, the drive to engage in an activity for its inherent satisfaction, serves as the psychological mechanism that translates agency into performance. According to Self-Determination Theory (SDT), when students feel a sense of agency (autonomy), they are more likely to experience their education as self-determined, which fosters intrinsic motivation (Ryan & Deci, 2000).

Despite the robust theoretical support for these constructs in Western literature, there is limited research on how they operate within the specific context of Pakistani public sector universities. These institutions are often characterized by large class sizes and rigid curricula, environments that can stifle autonomy. Therefore, this study seeks to investigate the relationship between student agency and academic performance in this context, specifically testing the mediating role of intrinsic motivation and comparing the predictive power of these psychological factors against traditional merit scores.

2. Literature Review

2.1. The "Merit Trap" in Pakistani Higher Education

The Pakistani education system has historically been predicated on a rigid meritocracy defined almost exclusively by standardized testing and rote memorization. As noted by Ali and Haider (2018), this "merit trap" creates a bottleneck where students are filtered into higher education institutions based on their ability to reproduce information in Intermediate (F.Sc/F.A.) examinations rather than their aptitude for critical inquiry or independent thought. This system assumes a linear relationship between secondary school grades and university success. However, the transition from the highly structured, teacher-centered environment of secondary schools to the relatively unstructured, learner-centered environment of universities often leads to a phenomenon known as the "freshman shock." High achievers in the Intermediate system often struggle when faced with the autonomy required in higher education because their prior success relied on external regulation (parental pressure, fear of failure) rather than internal agency or intrinsic motivation.

2.2. Student Agency: The Engine of Academic Engagement

In contrast to the passive learner model often encouraged by high-stakes testing, Student Agency represents the capability to originate and direct actions for given purposes. Bandura (2001) conceptualizes agency not as a fixed trait but as an emergent capability that allows individuals to influence their own functioning and life circumstances. In the context of Pakistani higher education, agency involves self-regulation, goal setting, and the strategic management of resources. Reeve and Tseng (2011) expanded this definition to include "agentic engagement," where students not only react to the learning environment but actively contribute to it by asking questions, expressing preferences, and modifying the instruction to meet their needs. For Pakistani students, exercising agency is often a counter-cultural act, requiring them to unlearn the passivity of their earlier schooling.

2.3. Intrinsic Motivation and Self-Determination Theory

While agency provides the "capacity" to act, intrinsic motivation provides the "energy" to sustain that action. Self-Determination Theory (SDT) posits that human beings have innate psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000). When these needs are met, students operate out of intrinsic motivation—learning for the sake of learning. However, the "merit trap" creates an environment of "controlled motivation," where students study to avoid shame or secure a job, rather than out of genuine interest. Taylor et al. (2014) found that while controlled motivation might produce short-term grades, only intrinsic motivation predicts long-term persistence and well-being. This study bridges these theories by proposing that agency (the feeling of control) is the precursor to intrinsic motivation (the feeling of interest), which ultimately drives performance.

2.4. Objectives

- To find out relationship between student agency and academic performance among university students.
- To examine the relationship between intrinsic motivation and academic performance.
- To investigate the mediating role of intrinsic motivation between student agency and academic performance.
- To compare the predictive power of psychological factors versus prior academic scores.

2.5. Hypotheses

- There is a significant positive relationship between student agency and academic performance.
- There is a significant positive relationship between intrinsic motivation and academic performance.
- Intrinsic motivation mediates the relationship between student agency and academic performance.
- Psychological factors (agency and motivation) are stronger predictors of university performance than prior Intermediate scores.

3. Materials and Methods

3.1. Sample and Sampling Strategy

The sample of present study consisted of students from Government College University Faisalabad ($N = 150$). Both undergraduate and postgraduate students were selected using a stratified convenience sampling technique to ensure representation across diverse faculties, including Arts & Social Sciences, Life Sciences, and Engineering.

3.2. Research Design

A quantitative, cross-sectional correlational research design was employed to assess the relationships between student agency, intrinsic motivation, and academic performance at a single point in time.

3.3. Inclusion Criteria

1. Those participants were included who were enrolled in 2nd semester or higher.
2. Students aged between 17 and 25 years were included.
3. Sampling population was only university students.

3.4. Exclusion Criteria

1. The participants above 25 and below 17 years of age were excluded.
2. First semester students who lacked CGPA were excluded.
3. Transfer students and those with incomplete academic records were excluded.

4. Instruments

4.1. Demographic Information

A demographic sheet was used to gather information on participant age, education level, faculty, and academic records.

4.1.1. Academic Self-Regulation Questionnaire (SRQ-A)

Student agency was measured using the Academic Self-Regulation Questionnaire developed by Ryan and Deci (2000). This 32-item scale assesses reasons for engaging in academic work. A Relative Autonomy Index (RAI) was calculated using the formula: $RAI = 2 \times \text{Intrinsic} + \text{Identified} - \text{Introjected} - 2 \times \text{External}$. The subscales demonstrated good reliability in this study ($\alpha = .77$ to $.80$).

4.1.2. Academic Motivation Scale (AMS)

Intrinsic motivation was assessed using the Academic Motivation Scale (College Version) by Vallerand et al. (1992). The study focused on the 12 items assessing three subtypes of intrinsic motivation. The scale demonstrated high internal consistency ($\alpha = .87$).

4.1.3. Rationale for Instrument Selection and Scoring Protocol

The selection of the SRQ-A and AMS for this study was driven by their robust psychometric properties and their alignment with the Self-Determination Theory framework. Specifically, the SRQ-A was chosen because it moves beyond a binary view of motivation (motivated vs. unmotivated) to a continuum of self-regulation. By calculating the Relative Autonomy Index (RAI), this study captures the *quality* of a student's motivation rather than just the *quantity*. The RAI formula weights autonomous behaviors positively (Intrinsic and Identified regulation) and controlled behaviors negatively (Introjected and External regulation). This is particularly pertinent in the Pakistani context, where societal pressures often conflate "working hard" (controlled motivation) with genuine agency.

Furthermore, while English is the official medium of instruction in Pakistani universities, cultural nuances in interpreting psychological terms can pose validity threats. To mitigate this, the instruments were not merely administered; a rigorous protocol was followed where researchers remained present to clarify idiomatic expressions. This ensured that items like "I go to university because I would feel guilty if I didn't" (Introjected Regulation) were understood in the context of local familial expectations, thereby enhancing the ecological validity of the data collected.

4.1.4. Academic Performance

Performance was measured as the student's current Cumulative Grade Point Average (CGPA), obtained via self-report. Intermediate Achieved Scores were also collected.

4.2. Procedure

Data collection was executed over a period of four weeks at Government College University Faisalabad. Prior to data collection, formal administrative approval was secured from the Heads of Departments of the respective faculties. To address potential ethical concerns, a strict protocol of informed consent was followed. Researchers visited selected classrooms during scheduled free periods to minimize disruption to academic activities.

The participants were first briefed on the objectives of the study, specifically the goal of understanding psychological drivers of success beyond mere grades. They were explicitly assured that their responses would remain anonymous and would have no bearing on their current academic standing or course grades. This assurance was crucial to mitigate the "social desirability bias" common in collectivist cultures, where students might otherwise feel compelled to present themselves as "perfect" students. The questionnaires were administered in English, as it is the medium of instruction at the university level. However, researchers were present on-site to clarify any ambiguities regarding specific items in the SRQ-A or AMS scales. The average completion time was approximately 15–20 minutes. Out of 165 distributed questionnaires, 150 were returned fully completed, yielding a response rate of 90.9%.

4.3. Statistical Analysis

Data analysis was conducted using IBM SPSS Statistics. Pearson correlations were used to test relationships. Mediation was tested using Baron and Kenny (1986) causal steps approach. Regression analysis compared predictive power of psychological factors versus prior scores.

5. Results and Discussion

Table 1: *Descriptive Statistics for Key Study Variables (N=150)*

Variable	M	SD	Min	Max
Student Agency	4.07	2.81	1.50	9.80
Intrinsic Motivation	3.58	0.76	1.80	5.20
Academic Performance (CGPA)	3.10	0.45	2.10	4.00

Table 2: *Correlation between Student Agency, Intrinsic Motivation and Academic Performance*

Variable	1	2	3
1. Student Agency (RAI)	—	.68**	.42**
2. Intrinsic Motivation		—	.41**
3. Academic Performance (CGPA)			—

** $p < .001$

Student agency has significantly positive correlation with academic performance ($r = .42$) and intrinsic motivation ($r = .68$). Intrinsic motivation has also significantly positive correlation with academic performance ($r = .41$), results are significant at level of 0.001.

Table 3: *Mediation Analysis Predicting Academic Performance from Student Agency and Intrinsic Motivation*

Predictor	Academic Performance
	B
Step 1: Student Agency	.419**
Step 2: Student Agency + Intrinsic Motivation	.264*
Intrinsic Motivation	.226*
Total R ²	.203

* $p < .05$, ** $p < .001$

5.1. Interpretation of Mediation Analysis

To rigorously test Hypothesis 3 regarding the mediating role of intrinsic motivation, a hierarchical regression analysis was performed following the causal steps approach outlined by Baron and Kenny (1986). The analysis proceeded in three distinct steps. In the first step, Student Agency was entered as the sole predictor of Academic Performance. The results indicated a strong, significant direct effect ($\beta = .419$, $p < .001$), confirming that students who exercise greater agency tend to achieve higher grades.

In the second step, the mediator (Intrinsic Motivation) was added to the model. Crucially, the introduction of the mediator caused the beta coefficient for Student Agency to drop from .419 to .264, although it remained statistically significant ($p < .05$). This reduction in predictive strength is the hallmark of partial mediation. It suggests that while Student Agency does directly influence performance (perhaps through better organization or study skills), a significant portion of its impact is transmitted indirectly by fueling a student's intrinsic interest in the subject matter. Essentially, agency acts as a catalyst that ignites intrinsic motivation, which in turn drives superior academic performance.

Table 4: *Comparative Predictive Power of Psychological Factors vs. Prior Scores*

Predictor	R ²
Agency and Motivation	.203
Intermediate Scores	.042

Regression analysis demonstrated that psychological factors accounted for 20.3% of variance in CGPA, while Intermediate scores explained only 4.2%.

The primary objective of this research was to challenge the purely meritocratic focus of the Pakistani higher education system by highlighting the role of student agency and intrinsic motivation. The results unequivocally support the proposed model.

Hypothesis 1 assumed that there would be a notable correlation between student agency and academic performance. Indeed, the findings support the hypothesis ($r = .42, p < .001$). This confirms that agency is a practical driver of academic outcomes in the Pakistani context.

According to Hypothesis 2, intrinsic motivation would be significantly related to academic performance. The results confirmed this relationship ($r = .41, p < .001$), aligning with previous research that intrinsically motivated students engage in deeper learning.

Hypothesis 3 proposed that intrinsic motivation mediates the relationship between agency and performance. The mediation analysis revealed this partial mediation, indicating that agency boosts intrinsic motivation, which then drives academic performance.

Hypothesis 4 stated that psychological factors would be stronger predictors than prior merit scores. The stark difference in predictive power (20.3% vs 4.2%) strongly supports this hypothesis, challenging the "merit trap" in Pakistani education.

This finding represents a significant indictment of the reliance on prior standardized testing as the sole predictor of university potential. The fact that Intermediate scores explained only a negligible 4.2% of the variance in university CGPA suggests that the skills required to excel in the Intermediate system (often rote memorization and adherence to rigid templates) do not translate effectively to the university environment, which demands critical thinking, self-regulation, and autonomy.

In contrast, the psychological model (Agency and Motivation) explained nearly five times the variance (20.3%). This indicates that a student's current psychological

state—specifically their belief in their ability to control their learning (agency) and their internal interest in the subject (intrinsic motivation)—is a far more potent driver of success than their past academic history. This aligns with the meta-analysis by Richardson et al. (2012), which identified psychological correlates like self-efficacy and motivation as medium-to-large predictors of GPA, often outperforming background variables. For the Pakistani context, this suggests that 'low achievers' from the Intermediate system can become 'high achievers' in university if they are provided with an environment that fosters agency, whereas 'high achievers' may falter if they lack these psychological resources.

6. Conclusion

Results from the statistical analysis discovered that student agency and intrinsic motivation are significantly linked to academic performance in Pakistani university students. The capacity for self-directed action (agency) enhances performance partly by fostering intrinsic interest in learning. Crucially, current psychological engagement proves to be a far better predictor of university success than prior standardized test scores from the Intermediate system.

6.1. Limitations and Future Directions

While this study provides compelling evidence challenging the "merit trap," several limitations must be acknowledged to contextualize the findings. First, the study employed a cross-sectional correlational design. While the mediation analysis suggests a directional flow from Agency → Motivation → Performance, we cannot rule out bidirectional causality. It is plausible that high academic performance also reinforces a student's sense of agency, creating a positive feedback loop. Future research should employ longitudinal designs to track these variables from the freshman year through graduation to establish definitive causal pathways.

Second, the reliance on self-reported CGPA introduces the potential for response bias. Although anonymity was assured to reduce social desirability bias, students may still unintentionally overreport their grades to align with their self-concept. Future studies would benefit from obtaining verified academic records directly from university registrar offices, subject to ethical clearance.

Third, the sample was restricted to a single public sector university in Faisalabad. Public sector institutions in Pakistan often differ culturally and resource-wise from private sector universities. Consequently, the findings may not be fully generalizable to the private sector, where student agency might manifest differently due to different institutional support structures. To build a more comprehensive model of student success in Pakistan,

future researchers should aim for a multi-site study comparing public and private universities across different provinces.

6.2. Implications for Policy and Practice Pedagogical Shifts in Higher Education

The findings of this study necessitate a paradigm shift in university pedagogy. If student agency and intrinsic motivation are the primary drivers of performance, then university curricula must be redesigned to support these constructs. Moving away from the 'banking model' of education, where knowledge is deposited into passive students, universities should adopt 'Autonomy-Supportive Teaching' (AST). This involves minimizing coercive deadlines, providing meaningful rationales for assignments, and allowing students choices in how they demonstrate their learning. For example, allowing students to choose between a written report and a presentation can enhance their sense of agency, thereby fueling intrinsic motivation.

6.3. Reforming Admissions Criteria

On a policy level, the negligible predictive power of Intermediate scores (4.2%) challenges the validity of current admission criteria. While it is impractical to discard academic records entirely, policymakers should consider a more holistic admissions process. This could include 'non-cognitive' assessments that measure a student's resilience, adaptability, and motivation. If a student demonstrates high agency but average Intermediate scores, they may effectively be a 'better bet' for university success than a student with high scores but low agency. Institutions could pilot entrance interviews or personal statements designed to assess the applicant's intrinsic interest in their chosen field, moving beyond the 'merit trap' to identify students with the psychological capacity to thrive.

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