

## Exploring Academic Performance among First- And Second-Generation Students: A Comparative Perspective

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### ABSTRACT

*This study compares the academic and behavioural performance of first-generation and second-generation students in public higher secondary schools in District Bhakkar, Pakistan. First-generation students are those whose parents have no formal education, while second-generation students have parents with at least a secondary education. A descriptive research design was used, with data collected through validated questionnaires from 15 principals and 120 teachers across 18 schools selected through stratified random sampling. The study examined ten variables: discipline, classroom behaviour, study habits, emotional stability, peer relations, teacher-student interaction, co-curricular involvement, parental involvement, communication skills, and academic achievement. Data were analysed using descriptive statistics (mean, percentage, standard deviation) and inferential statistics (independent samples t-test). Results showed that second-generation students consistently outperformed first-generation students across all domains. Teachers reported statistically significant differences between the two groups ( $p = 0.02$ ), while principals' perceptions, though positive, were not statistically significant. The findings highlight the critical role of parental education, family support, and home learning environment in shaping student success. The study recommends parental awareness programs, targeted mentoring for first-generation students, and equitable learning opportunities in schools. Future research should include larger sample sizes, student perspectives, and longitudinal designs to explore generational differences in academic performance further.*

**Keywords:** First-Generation Students, Second-Generation Students, Academic Performance, Parental Involvement, Comparative Study, Public Schools, Pakistan.

## INTRODUCTION

### **Exploring Academic Performance among First- and Second-Generation Students: A Comparative Perspective**

Higher education is widely regarded as a key driver of social mobility and economic development. However, not all students enter university with the same level of preparation, support, or understanding of academic expectations. One critical distinction that has gained increasing attention in educational research is whether a student is the first in their family to pursue higher education, referred to as first-generation students (FGS), or whether one or both parents have already completed a University degree, referred to as second-generation students (SGS) (Ishitani, 2006; Pascarella et al., 2004). This distinction often shapes students' academic experiences, performance, and persistence in significant ways

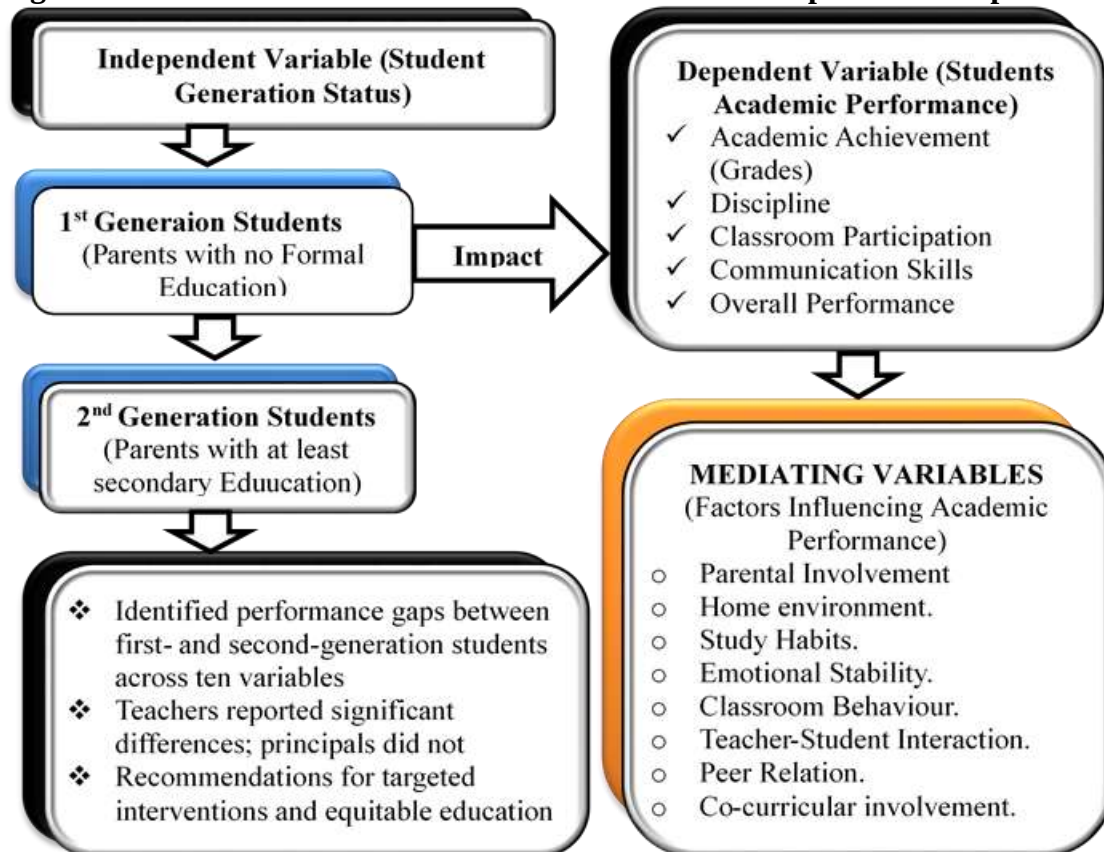
First-generation students typically lack the cultural and social capital that their second-generation peers acquire through parental guidance. They often enter university with less information about academic expectations, fewer financial resources, and limited family support for navigating institutional systems (Cataldi et al., 2018; Means & Pyne, 2017). As a result, they tend to have lower grade point averages, higher dropout rates, and lower engagement than continuing generation students (Gopalan & Brady, 2020; Pike & Kuh, 2005). Research across multiple countries has consistently shown that FGS face greater academic and social challenges, including difficulty in adjusting to university life, lower self-confidence, and a weaker sense of belonging (Terenzini et al., 1996; Stephens et al., 2012).

However, the relationship between generational status and academic performance is not deterministic. Some studies indicate that when first-generation students receive adequate support, such as mentoring, bridge programs, or strong parental encouragement, they can perform as well as or even better than their second-generation counterparts (Sadaf et al., 2024; Zulfiqar et al., 2023). Protective factors such as parental involvement, autonomy support, and extrinsic motivation have been shown to positively influence academic achievement among FGS (Lautenbach & Jenßen, 2023; Froggè & Woods, 2018). Conversely, second-generation students, despite their advantages, do not always outperform first-generation students on every measure. The impact of parental education varies across contexts and is moderated by factors such as ethnicity, socioeconomic status, and the specific indicators of success used (Alessandrini, 2024; Duong et al., 2016; Loyalka et al., 2024).

In Pakistan, public school students come from vastly different home backgrounds. Some children grow up with parents who never attended school, while others have parents with some formal education. These differences often manifest in the classroom. Children of less-educated parents often receive little academic support at home and struggle to meet school expectations independently. Conversely, children whose parents have completed at least a secondary education typically receive more guidance and encouragement, which fosters greater confidence and academic readiness. Despite these observable differences, most research on first- and second-generation students has been conducted in Western contexts, such as the United

States and Europe. Very little is known about how these dynamics operate in Pakistan, where the education system, family structures, and social values are distinct. This gap in local knowledge makes it difficult for Pakistani universities to design targeted interventions for students who need them most.

**Figure#1: First & Second-Generation Students: A Comparative Perspective**



## Theoretical Framework

To understand the differences in academic performance between first- and second-generation students, this study draws on five interconnected theoretical perspectives:

**Social and Cultural Capital Theory (Bourdieu, 1986):** This theory explains how family background provides (or fails to provide) the cultural knowledge, language skills, and social networks that facilitate academic success. Second-generation students typically inherit cultural capital aligned with academic norms, whereas first-generation students must acquire it through effort and external support.

**Tinto's Student Integration Theory (1975, 1993):** Tinto argues that student persistence depends on academic and social integration into the institution. Second-generation students, familiar with higher education through their parents, often

integrate more easily, whereas first-generation students may struggle, leading to lower performance and higher attrition.

**Expectancy-Value Theory of Motivation (Eccles et al., 1983; Eccles & Wigfield, 2002):** This theory posits that academic performance is influenced by students' expectations of success and the value they place on academic tasks. First-generation students often have lower academic self-efficacy and less clear expectations, while second-generation students benefit from stronger academic self-concepts, supported by family role models.

**Student Involvement Theory (Astin, 1984, 1999):** Astin suggests that learning and development depend on the quality and quantity of student involvement in academic and co-curricular activities. Second-generation students tend to show higher involvement due to greater confidence and institutional knowledge, whereas first-generation students may limit their involvement due to external obligations.

**Academic Adjustment Theory (Baker & Siryk, 1984):** This theory focuses on students' ability to cope with academic demands, manage stress, and adapt to new learning environments. First-generation students often experience greater academic stress and slower adjustment, while second-generation students adjust more quickly due to prior exposure and parental guidance.

Together, these theories provide a comprehensive framework for understanding how background variables, motivation, engagement, and adaptation interact to shape academic performance among first- and second-generation students.

## Statement of the Problem

Despite growing awareness of the challenges faced by first-generation students, there is a notable absence of empirical research comparing first- and second-generation students in Pakistan. The existing literature is predominantly Western and may not fully capture the unique dynamics of Pakistani public schools, where teaching philosophies, parental involvement, and socioeconomic conditions differ significantly. This study, therefore, aims to compare the academic performance, engagement, and adjustment of first- and second-generation students in Pakistani public secondary schools to inform evidence-based support strategies.

## Objectives of the Study

The main objectives of this study were:

To investigate the performance of first- and second-generation learners

To compare the performance of first-generation and second-generation learners

## Significance of the Study

This study contributes to the limited body of knowledge on generational differences in academic performance within non-Western settings, particularly in Pakistan. The findings will help educators, policymakers, and school administrators design targeted interventions such as mentoring programs, academic advising, and parental engagement initiatives to support first-generation students who lack familial academic guidance. By identifying specific gaps in discipline, study habits, emotional

stability, and classroom participation, the study provides practical insights for improving instructional strategies and student support systems. Furthermore, it emphasises the critical role of parental involvement and teacher-student relationships in shaping academic success. Ultimately, this research aims to promote educational equity, reduce performance disparities, and improve retention and learning outcomes in Pakistani public schools.

## Research Gap

Despite growing international literature on first-generation and second-generation students, most studies have been conducted in Western contexts such as the United States, Europe, and Australia, where family structures, educational systems, and cultural expectations differ substantially from those in Pakistan (Pascarella et al., 2004; Stephens et al., 2012; Duong et al., 2016). While existing research has extensively documented the academic challenges faced by first-generation students—including lack of familial academic support, financial constraints, and difficulty navigating institutional systems—comparative studies that directly contrast the performance of first- and second-generation students within the same institutional settings remain limited (Cataldi et al., 2018; Ishitani, 2006). Moreover, few studies have examined how psychosocial variables such as motivation, self-efficacy, sense of belonging, and study habits interact with generational status to influence academic outcomes (Gopalan & Brady, 2020; Means & Pyne, 2017). In Pakistan, there is a notable absence of empirical research comparing these two groups in public secondary schools, where socioeconomic disparities and varying levels of parental education are particularly pronounced (Sadaf et al., 2024). The present study addresses this gap by conducting a comparative analysis of first- and second-generation students' academic performance, engagement, and learning support within the Pakistani context, thereby contributing context-specific evidence to inform equitable educational policies and targeted interventions.

## Research Methodology

The study adopted a descriptive research design to examine differences in performance between first-generation and second-generation students. This design was selected because it evaluates the phenomenon's current state. Descriptive designs have been widely applied in educational research where the primary objective is to identify patterns, similarities, and differences across groups within real-life educational settings (Creswell & Creswell, 2018).

## Population of the Study

The population comprised 18 public higher secondary schools, 160 subject specialists, and 18 principals in District Bhakkar. The student sample included first-generation students (parents with no formal education) and second-generation students (parents with at least secondary education). Stakeholders reported on student performance (Creswell, 2014).

**Table#1: Population of the Study**

| District       | # of Higher       |        | Stakeholders |        |          |        |
|----------------|-------------------|--------|--------------|--------|----------|--------|
|                | Secondary Schools |        | Principals   |        | Teachers |        |
|                | Male              | Female | Male         | Female | Male     | Female |
| <b>Bhakkar</b> | 10                | 08     | 10           | 08     | 90       | 70     |
| <b>Total</b>   | 18                |        | 18           |        | 160      |        |

### Sample and Sampling Technique

The sample was selected through stratified random sampling based on school type (boys/girls) to ensure proportional representation and reduce bias. The sample size was determined using the Krejcie and Morgan (1970) formula, yielding 18 schools (10 boys, 8 girls). Teachers and principals were selected based on availability. This procedure enhanced the reliability and external validity of the study (Cohen, Manion, & Morrison, 2018).

**Table#2: Sample Size**

| District       | # of Higher       |        | Stakeholders |        |          |        |
|----------------|-------------------|--------|--------------|--------|----------|--------|
|                | Secondary Schools |        | Principals   |        | Teachers |        |
|                | Male              | Female | Male         | Female | Male     | Female |
| <b>Bhakkar</b> | 10                | 08     | 09           | 06     | 65       | 55     |
| <b>Total</b>   | 18                |        | 15           |        | 120      |        |

### Data Collection Procedure

The researcher personally visited the higher secondary schools and collected the relevant data. For this purpose, the researcher administered two questionnaires to each respondent (the Principal and the subject specialist) to enable a more meaningful comparison. Data collection was initiated only after obtaining formal consent from the relevant educational authorities and school administrations. The objective of the study was explained to the participants, and informed consent was appropriately obtained. Teachers and principals distributed the questionnaires during instructional hours.

All research procedures were conducted with strict confidentiality and participant anonymity. Participants were promised that the data gathered would be used only for academic purposes. Ethical issues were strictly addressed in accordance with the research guidelines.

### Data Analysis Techniques

Descriptive statistics used to analyse the data were the mean, percentage, coefficient of variation (CV), and standard deviation. Inferential statistics (independent samples t-test) were applied to compare the perceptions of first- and second-generation students.

**Table#3: Stakeholder Perceptions of the overall performance of First and Second-generation Students**

| Stakeholders | Students Generation | Overall Performance of First & Second-Generation Students |      |    |      |    |      |    |      |     |     | Total |
|--------------|---------------------|-----------------------------------------------------------|------|----|------|----|------|----|------|-----|-----|-------|
|              |                     | SA                                                        |      | A  |      | N  |      | DA |      | SDA |     |       |
|              |                     | N                                                         | %    | N  | %    | N  | %    | N  | %    | N   | %   |       |
| Principals   | 1 <sup>st</sup>     | 4                                                         | 30.0 | 5  | 26.7 | 3  | 20.0 | 2  | 13.3 | 1   | 6.7 | 15    |
|              | 2 <sup>nd</sup>     | 6                                                         | 30.0 | 5  | 26.7 | 2  | 13.3 | 1  | 6.7  | 1   | 6.7 | 15    |
| Teachers     | 1 <sup>st</sup>     | 37                                                        | 30.0 | 36 | 28.3 | 21 | 17.5 | 15 | 12.5 | 11  | 9.2 | 120   |
|              | 2 <sup>nd</sup>     | 52                                                        | 30.0 | 36 | 28.3 | 15 | 12.5 | 10 | 8.3  | 7   | 5.8 | 120   |

Note: SA = Strongly Agree, A = Agree, N = Neutral, DA = Disagree, SDA = Strongly Disagree

Table 3 presents stakeholders' general attitudes toward the performance of first- and second-generation students. Principals had a positive attitude towards second-generation students on overall performance, with 40.0% strongly agreeing and 33.3% agreeing that these students perform better. In contrast, for first-generation students, 26.7% strongly agreed, and 33.3% agreed. Neutral and disagreement responses were relatively lower for second-generation students. Likewise, teachers' attitudes toward second-generation students were also more positive. The majority of teachers strongly agreed (43.3%) and agreed (30.0%) that second-generation students perform better overall, compared to 30.8% strongly agreeing and 30.0% agreeing for first-generation students. Disagreement and strong disagreement were more prevalent among first-generation students.

**Table#4: Comparisons of Stakeholder Perceptions of the overall performance of First and Second-generation Students**

| Stakeholders | Students Generation | Discipline Numbers | Comparison |         |               |              |          |               |              |          |
|--------------|---------------------|--------------------|------------|---------|---------------|--------------|----------|---------------|--------------|----------|
|              |                     |                    | Mean 'X'   | S.D 'S' | Qualification |              |          | Stakeholders  |              |          |
|              |                     |                    |            |         | t. calculated | t. tabulated | P. value | t. calculated | t. tabulated | P. value |
| Principals   | 1 <sup>st</sup>     | 15                 | 3.60       | 1.18    | 1.24          | 2.05         | 0.22     | 1.32          | 2.02         | 0.19     |
|              | 2 <sup>nd</sup>     | 15                 | 3.93       | 1.06    |               |              |          |               |              |          |
| Teachers     | 1 <sup>st</sup>     | 120                | 3.69       | 1.22    | 2.25          | 1.98         | 0.02*    |               |              |          |
|              | 2 <sup>nd</sup>     | 120                | 4.14       | 1.08    |               |              |          |               |              |          |

\*Note:  $p < 0.05$  (Significant)

Table 4 presents the inferential analysis of the overall performance of first- and second-generation students. Principals' perceptions of second-generation students ( $M = 3.93$ ,  $SD = 1.06$ ) were slightly higher than those of first-generation students ( $M = 3.60$ ,  $SD = 1.18$ ). The calculated  $t$  (1.24) was lower than the tabulated  $t$  (2.05), and the  $p$ -value (0.22) was greater than 0.05, indicating that the difference was not statistically significant. Similarly, the stakeholder comparison revealed no significant difference, as the calculated  $t$ -value (1.32) was lower than the tabulated value (2.02), with a  $p$ -value of 0.19.

In contrast, teachers found a statistically significant difference in overall performance between first- and second-generation students. First-generation students had a mean score of 3.69 ( $SD = 1.22$ ), while second-generation students obtained a mean score of 4.14 ( $SD = 1.08$ ). The calculated  $t$ -value (2.25) exceeded the tabulated  $t$ -value (1.98), and the  $p$ -value (0.02) was less than 0.05, suggesting a statistically significant difference.

## Research Findings

### Descriptive Performance

Overall performance was perceived more positively for second-generation students.

**Principals:** Strongly agree rose from 26.7% (first) to 40.0% (second); Agree remained unchanged at 33.3%; neutral and disagreement were lower for second-generation students.

**Teachers:** Strongly agree increased from 30.8% to 43.3%; Agree remained unchanged at 30.0%; disagreement was higher for first-generation students.

### Inferential Performance

**Principals' perception:** Difference (first  $M = 3.60$ , second  $M = 3.93$ ) was **not significant** ( $t = 1.24$ ,  $p = 0.22$ ).

**Teachers' perception:** Difference (first  $M = 3.69$ , second  $M = 4.14$ ) was **significant** ( $t = 2.25$ ,  $p = 0.02$ ).

**Stakeholder comparison:** Not significant ( $t = 1.32$ ,  $p = 0.19$ ).

## Research Discussion

The findings of this study consistently show that second-generation students outperform first-generation students across all measured domains, including academic performance, discipline, classroom behaviour, study habits, emotional stability, peer relationships, teacher-student interaction, co-curricular participation, parental involvement, and communication skills. Principals and teachers reported higher agreement and strong agreement for second-generation students on every variable. These results align with previous research demonstrating that students from

educationally aware families benefit from greater academic support, clearer expectations, and stronger motivation (Jeynes, 2022; Zhang et al., 2021). The consistent advantage of second-generation students suggests that parental education and family educational history provide a cumulative benefit that extends beyond academics, shaping students' overall behaviour, social skills, and emotional adjustment.

The significant differences in teachers' perceptions across most variables, particularly discipline, classroom behaviour, study habits, and academic performance, highlight the critical role of family background in shaping school readiness and engagement. Teachers, who observe students daily, clearly distinguished between the two groups. These findings are consistent with Schmid and Garrels (2021), who found that parental educational support positively influences students' discipline and responsibility, and with Xiong et al. (2021), who reported that parental involvement enhances academic engagement and motivation. Similarly, the greater emotional stability and stronger peer relationships observed among second-generation students support the work of Yau et al. (2022) and Liu and Leighton (2021), who emphasised that supportive family environments foster emotional resilience, confidence, and positive social interactions.

Overall, the results underscore the importance of parental education, family support, and a positive home learning environment as key determinants of student success. The cumulative advantages of second-generation students across all domains indicate that generational status is not merely an academic variable but a comprehensive factor influencing students' holistic development. These findings have important implications for Pakistani public schools, where first-generation students often lack familial academic guidance. Interventions such as parental awareness programs, mentoring initiatives, and school-based support systems are needed to bridge this gap and ensure equitable educational outcomes for all students, regardless of their family background.

## Research Conclusions

**Objective 1:** First-generation students were perceived by principals and teachers as having lower performance in discipline, classroom behaviour, study habits, emotional stability, peer relationships, communication skills, and academic achievement compared to second-generation students. This is attributed to limited parental awareness, lack of academic support at home, and fewer learning resources.

**Objective 2:** Second-generation students consistently outperformed first-generation students across all academic, behavioural, and social indicators. They exhibited better discipline, classroom participation, study habits, communication skills, emotional stability, and co-curricular involvement. This advantage is linked to higher parental involvement, educational awareness at home, and supportive learning environments.

## Recommendations

**Parental Awareness and Involvement:** Schools should organise regular parent awareness programs and encourage active parental participation in school meetings

and learning activities, particularly for first-generation learners who lack academic support at home.

**Targeted Academic and Emotional Support:** Teachers should provide additional mentoring, counselling, and differentiated instruction to first-generation students to minimise learning gaps, improve study habits, and enhance emotional stability and confidence.

**Equitable Learning Opportunities:** Schools must ensure equal access to co-curricular activities, communication skill development, and study skills programs for both first- and second-generation students, without any bias or differentiation.

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