

Learners' Autonomy: An Attribute of University Students

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Abstract

This study examined the level of learner autonomy among university students and investigated differences based on gender, academic discipline, and academic qualification. A quantitative descriptive survey design was employed, and data were collected from 1,230 university students in public sector universities of Punjab, Pakistan, using the Learner Autonomy Profile–Short Form (LAP-SF). The data were analyzed using descriptive statistics, an independent samples t-test, and a one-way ANOVA. The findings revealed that university students demonstrated a moderate level of learner autonomy, indicating partial development of autonomous learning behaviors. Gender-based analysis showed that female students had significantly higher learner autonomy than male students. Similarly, significant differences were found across academic qualifications, with MPhil students showing higher autonomy than BS and MA/MSc students. Discipline-wise results indicated that commerce students exhibited higher autonomy compared to science and arts students. The study concludes that learner autonomy varies across demographic and academic variables and highlights the need for instructional practices that foster autonomous learning, particularly among undergraduate students, male students, and learners in arts disciplines.

Keywords: Learners' autonomy, andragogy, self-directed learning, university students

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Cite this article:

Jehangir, M., & Akbar, R. A. (2025). Learners' autonomy: An attribute of university students. *Bulletin of Education and Research*, 47(3), 21-49.



Introduction

In the twenty-first century, higher education has increasingly emphasized the development of independent and self-regulated learners who can take responsibility for their own academic growth. This shift reflects a broader transformation in educational philosophy, where the focus of teaching has moved from knowledge transmission to the facilitation of lifelong learning skills. In this context, learner autonomy has emerged as a central construct in educational research and practice.

Learner autonomy refers to the learner's ability to take control of their own learning process, including setting goals, selecting learning strategies, monitoring progress, and evaluating outcomes (Holec, 1981; Little, 1991). It is widely regarded as a key attribute of successful learners, particularly in higher education, where independent learning is essential for academic achievement and professional development (Benson, 2007; Crome et al., 2019). Autonomous learners are typically characterized by motivation, initiative, and the ability to use available resources effectively to achieve learning goals (Confessore & Park, 2004).

The importance of learner autonomy is also supported by adult learning theories such as andragogy and self-directed learning, which emphasize that mature learners are responsible for their own learning decisions (Knowles, 1980; Merriam, 2001). From this perspective, autonomy is not only a skill but also a developmental process that is shaped by both cognitive and environmental factors.

Despite its importance, learner autonomy is still not fully developed in many educational contexts, particularly in teacher-centered systems. In Pakistan, the dominant instructional approach at the university level continues to rely heavily on lecture-based teaching, memorization, and examination-oriented learning (Akhter & Fatima, 2016). Such practices limit opportunities for students to engage in independent inquiry, critical thinking, and self-directed learning.

Although several studies have examined learner autonomy in language learning and specific academic contexts, there is still a lack of large-scale empirical evidence focusing on university students' overall autonomy across disciplines and demographic groups in Pakistan. In particular, limited research has explored how learner autonomy varies according to gender, academic discipline, and qualification level in public sector universities.

This gap is important because understanding students' autonomy levels can help educators and policymakers design instructional strategies that promote active learning and lifelong learning competencies. Therefore, there is a need to systematically assess learner

autonomy among university students in Pakistan and examine how it differs across key demographic variables.

Literature Review

Autonomy is derived from two Greek words: auto (self) and nomos (to govern, authority, or self-rule). It is widely understood to mean self-governance or self-determination (Manda-Taylor, 2015). It is difficult to define autonomy precisely because each expert in the area views it individually and subjectively (Little, 1996; Shih, 2020). John Dewey laid the foundation for the idea of learner autonomy in his publication, "Democracy and Education," in which he emphasized the importance of creating an organizational teaching environment that supports children's self-educational development rather than knowledge acquisition and subject matter. Nguyen (2014) described learner autonomy as a learner's desire and competence to take responsibility for, plan, execute, analyze, and assess their learning with tasks designed in discussion with assistance from the instructor.

According to Holec (1981), learner autonomy is defined as the ability to take control of one's learning, which he further describes as having and maintaining responsibility for all decisions about all aspects of that learning. Little (1991) defines autonomy as "the ability to maintain a sense of separation while engaging in critical thinking, decision-making, and self-directed action." Developing a specific psychological relationship with their learning process and information is implied and required. Confessore (1991) was the first to discuss learner autonomy in selecting gifted high school students for an early college summer arts program. He chose based on four criteria: desire, resourcefulness, initiative, and persistence.

Learners' autonomy is a person's ability to take charge of their learning and decide what they want to do (Confessore & Park, 2004). Confessore and Park (2004) defined learner autonomy as a state between two dysfunctional states: dysfunctional learner dependence occurs when the student needs extra help and direction, whereas dysfunctional learner independence occurs when the learner rejects any guidance or facility. The condition of functional learner autonomy, which is at the heart of this continuum, is one in which optimal learning can take place. The student can do independent research and request assistance when needed (Confessore & Park, 2004).

Attributes and characteristics of learners are often called "learner autonomy" (Derrick & Carr, 2003). Confessore and Park (2004) described functional learner autonomy as the competence and desire to choose and influence learning experiences. The learner may work individually or collaboratively with others. Additionally, the level to which an individual engages in functional learner autonomy is measured by how the learner optimizes the learning process through the efficient and appropriate use of their own and

others' resources (Ng & Confessore, 2011). Desire, resourcefulness, initiative, and persistence are all personality attributes connected with autonomous learning. Desire is defined as the degree to which an individual engages in deliberate action. It shows how adults can use influence (freedom, power, and change) over their own lives (Meyer, 2001). Resourcefulness is identified as a learner's intention to be resourceful (Carr, 1999). It is connected with the learner's traits to anticipate future benefits of learning, prioritize learning over non-learning activities, postpone immediate satisfaction of completing other activities, and overcome obstacles in education (Ishaq et al., 2022; Myartawan et al., 2013; Liando & Lumettu, 2017).

The initiative is a set of behavioral intentions that includes goal-directedness, action orientation, perseverance in overcoming obstacles, an active approach to problem-solving, and self-starting (Ponton, 1999). Persistence is the behavior of continuing activity in the face of difficulties or conflicting objectives (Derrick, 2002). Learner autonomy is a relatively recent idea in the canon of adult learning theory (Ng et al., 2011). The idea of autonomy (Knowles, 1980; Merriam and Caffarella, 1999) belongs to the character trait of self-directed learning. SDL's objective is to assist learners in developing autonomy during the learning process.

Studies Related to Learners' Autonomy

Myartawan et al. (2013) investigate the relationship between learner autonomy and English proficiency in Bali, Indonesia. The sample included 120 students, and the analysis of multiple linear regression reported a strong effect. significant and positive relationship between learner autonomy and English proficiency. Ng et al. (2011) investigated the current state of learners' abilities to interpret lifelong learning. The Learner Autonomy Profile was used as a data collection tool. The findings revealed a significant positive relationship between the LAP score and the students' academic performance. Palmer (2003) investigated the connection between workplace manifestations of desire, resourcefulness, initiative, and perseverance and learning conditions. The findings revealed that participants have a strong desire to assert control over learning resources and have control over their own learning.

Shahzad et al. (2021) examined the effectiveness of utilizing learner autonomy in English language classrooms at the university level in Pakistan. The study was descriptive and qualitative. According to the findings, teachers were well aware of the concept of learner autonomy. Teachers used these practices in the classroom in a direct or indirect manner. Yasmin and Sohail (2017) conducted a qualitative study to elucidate the strategies that were used by teachers to enhance autonomy in English language classes in Punjab, Pakistan. Findings showed that teachers prefer to use a teacher-centered approach when students prefer the role of facilitator over that of counselor or resource.

Research on learner autonomy has consistently highlighted its importance in promoting academic success, language proficiency, and lifelong learning. Collectively, previous studies suggest that autonomous learners are more likely to take responsibility for their learning, demonstrate self-regulatory behaviors, and achieve better educational outcomes.

Several studies have examined the relationship between learner autonomy and academic achievement. For instance, Myartawan et al. (2013) found a significant positive relationship between learner autonomy and English language proficiency among students in Bali, Indonesia, indicating that students who assume greater responsibility for their learning tend to achieve higher levels of language competence. Similarly, Ng et al. (2011), using the Learner Autonomy Profile (LAP), reported a significant positive association between learner autonomy and academic performance, suggesting that autonomy contributes to students' readiness for lifelong learning and academic success. Taken together, these studies provide empirical evidence that learner autonomy is closely linked with positive educational outcomes.

Beyond academic performance, researchers have also explored the behavioral characteristics associated with learner autonomy. Palmer (2003) examined the relationship between learning conditions and workplace manifestations of desire, resourcefulness, initiative, and persistence. The findings revealed that learners with greater autonomy demonstrated a stronger willingness to control learning resources and direct their own learning processes. These findings support the view that learner autonomy encompasses not only academic achievement but also self-directed learning behaviors and personal responsibility.

In the context of language education, learner autonomy has been recognized as an essential component of effective teaching and learning. Shahzad et al. (2021) investigated the implementation of learner autonomy practices in university-level English language classrooms in Pakistan and found that teachers were generally aware of the concept and incorporated autonomy-supportive practices in their instruction. However, awareness of learner autonomy does not necessarily translate into fully autonomous classroom environments. Supporting this view, Yasmin and Sohail (2017) reported that English language teaching in Punjab remained largely teacher-centered despite efforts to promote learner autonomy. Their findings further revealed that students preferred teachers to assume the role of facilitators rather than traditional knowledge transmitters, highlighting the challenges associated with shifting from teacher-centered to learner-centered approaches.

Overall, the reviewed studies demonstrate that learner autonomy is positively associated with academic achievement, language proficiency, self-directed learning

behaviors, and lifelong learning readiness. However, the literature also suggests that the implementation of learner autonomy in educational settings, particularly within the Pakistani higher education context, remains inconsistent. While several studies have explored learner autonomy in language learning environments, limited research has examined the overall level of learner autonomy among university students across different demographic and academic characteristics. This gap provides the rationale for the present study.

Theoretical framework of the study

The social cognitive theory supports learner autonomy. Bandura's Social Cognitive Theory (1986) posits that humans are motivated to participate in diverse activities by cognitive processes that use their actions or observations of other people's behaviors. The social cognitive theory identifies five human strategies that enable performance-related mechanisms: symbolic thinking, foresight, vicarious learning, self-regulation, and self-reflection (Bandura, 1986).

SCT asserts human behavior is deliberate and affected by the environment and cognition. Modeled as intentional behavior and autonomous learning, its enactment must be congruent with social cognitive theory. Therefore, autonomous learning is an intentional process that results in resourcefulness (Carr, 1999), initiative (Ponton, 1999), and persistence (Derrick, 2001) in learning. This agency is based on the learner's ideas and attitudes, which influence behavior (Ajzen & Fishbein, 1975). Autonomous learning occurs when the environment, the person, and their actions interact, promoting self-motivated personal growth. Social cognitive and autonomous learning theories support anticipating outcomes, setting objectives, organizing activities, and monitoring feedback. These cognitive processes include the bidirectional interaction of environment, person, and behavior. Autonomous learners are influenced by their environment and behaviors (Poton & Rhea, 2006).

Conceptual Framework of the Study

The present study is guided by the learner autonomy framework developed by Confessore and Park (2004). This framework was selected because it conceptualizes learner autonomy as a multidimensional construct comprising desire, resourcefulness, initiative, and persistence, which can be measured empirically through the Learner Autonomy Profile–Short Form (LAP-SF) used in this study.

Although scholars such as Henri Holec, David Little, Phil Benson, and Rebecca Oxford have made significant contributions to the theoretical understanding of learner autonomy, their frameworks primarily focus on conceptual and language-learning perspectives. In contrast, Confessore and Park's framework provides a comprehensive and

measurable model suitable for assessing the level of learner autonomy among university students and examining differences across demographic and academic variables.

According to this framework, learner autonomy consists of four dimensions: desire (motivation to learn), resourcefulness (effective use of learning resources and strategies), initiative (proactive engagement in learning), and persistence (sustained effort toward learning goals). Together, these dimensions form the overall construct of learner autonomy investigated in the present study.

Research Objectives

The present study aims to:

1. Determine the level of learner autonomy among university students.
2. Examine differences in learner autonomy based on gender.
3. Investigate differences in learner autonomy across academic disciplines (faculties).
4. Analyze differences in learner autonomy based on academic qualification.

Research questions

The following research questions are based on the above objectives:

1. What is the level of learner autonomy among university students?
2. Are there any significant differences in learner autonomy based on gender?
3. Are there any significant differences in learner autonomy across academic disciplines?
4. Are there any significant differences in learner autonomy based on academic qualification?

Research Methodology

This section presents the research design, population, sampling, data collection instrument, pilot testing, and data collection technique.

This study adopted a quantitative descriptive survey research design because it is suitable for collecting standardized data from a large sample and for examining both the level of learner autonomy and differences across selected groups. The design allowed the researchers to analyze numerical data using descriptive statistics to determine the level of learner autonomy and inferential statistics (t-test and ANOVA) to examine differences based on demographic and academic variables.

Research Design and Sampling

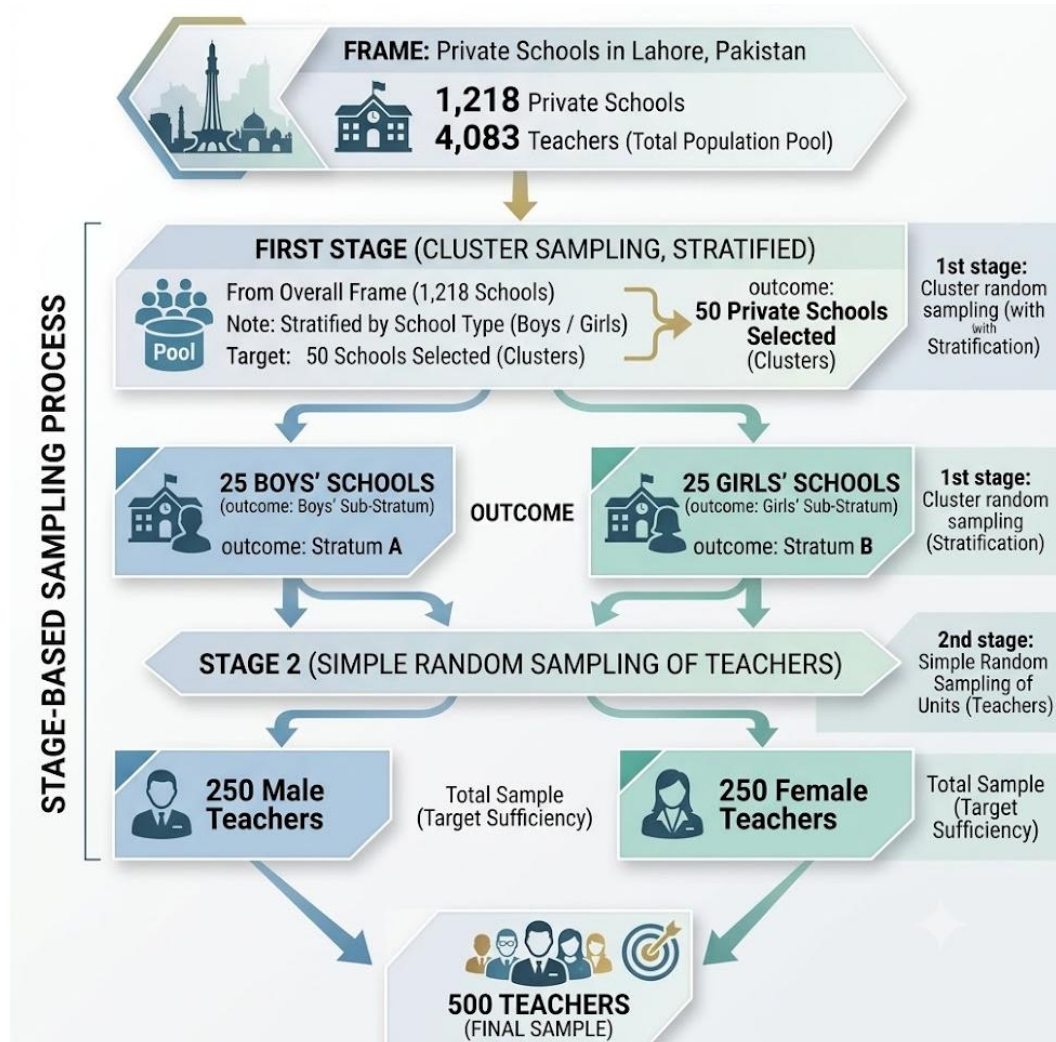
This study adopted a quantitative descriptive survey research design to systematically collect numerical data from a large sample of university students. The design was appropriate because it allowed the researchers to determine the level of learner autonomy and examine statistically significant differences across gender, faculty, and academic qualification.

In response to methodological considerations regarding variability among universities (e.g., size, geographic location, and academic orientation), a multi-stage stratified random sampling technique was employed rather than assuming institutional equivalence. Stratification was used to ensure that the sample adequately represented the diversity of higher education institutions within Punjab province.

In the first stage, Punjab province was divided into three geographical zones—East, North, and South (Shaheen, 2013; Bank, 2015)—which served as strata for ensuring regional representation. In the second stage, a list of all public general-type universities was obtained from the Higher Education Commission (HEC) website, and six universities (two from each zone) were selected through simple random sampling within each stratum. This approach reduced selection bias and ensured that institutions from different geographic and institutional contexts were included in the study sample.

In the final stage, student records (including name, gender, academic level, faculty, and email) were obtained from the selected universities to facilitate the administration of the research instrument. This procedure ensured access to a broad and diverse student population across multiple institutions, strengthening the generalizability of the findings.

Figure 1
Sampling framework



Data Collection Instrument

The Learner Autonomy Profile–Short Form (LAP-SF), developed by Confessore and Park (2004), was used to measure university students' learner autonomy. This instrument was selected because it provides a validated and multidimensional measure of learner autonomy that is suitable for large-scale survey research and aligns with the objectives of the present study, which focus on determining levels of learner autonomy and examining group differences.

Although the long form of the scale provides a more detailed assessment and is often used in experimental or diagnostic studies, it is less suitable for large-sample survey designs due to its length and administration time. In contrast, the LAP-SF offers a practical and efficient alternative while retaining the core theoretical dimensions of learner autonomy, making it appropriate for cross-sectional research involving a large number of respondents.

The questionnaire consists of 66 items across four dimensions: desire, resourcefulness, initiative, and persistence. Each dimension captures key motivational, cognitive, and behavioral aspects of learner autonomy.

The original response format ranges from 0 (Never) to 10 (Always). For ease of comprehension and response consistency among participants, it was adapted to a five-point Likert scale ranging from 1 (Never) to 5 (Always).

The LAP-SF has demonstrated strong psychometric properties in previous studies, with reliability coefficients ranging from .95 to .98, along with established evidence of validity, making it a reliable instrument for assessing learner autonomy in higher education contexts.

Pilot Testing

The instrument used in this study (LAP-SF; Confessore & Park, 2004) is a previously validated scale; therefore, it was not re-validated in terms of construct validity. However, a pilot study was conducted to ensure its contextual suitability, clarity, and reliability for the present research population, as measurement tools may perform differently across cultural and educational contexts.

The pilot study was conducted with a sample of 100 university students selected through convenience sampling from public universities in Punjab, who were similar in academic level, discipline distribution, and demographic characteristics to the target population. This ensured that the pilot group was comparable to the final study sample, allowing an accurate assessment of item clarity and response behavior.

The sample size of 100 was considered sufficient for pilot testing because the purpose was not hypothesis testing or validation of the construct but rather to examine internal consistency reliability and identify any ambiguities in the instrument items before large-scale administration.

Cronbach's alpha was calculated to assess reliability, yielding a value of 0.95, indicating excellent internal consistency for the study population. Based on expert review and pilot results, the instrument was deemed appropriate for full-scale data collection without further modification.

Data Collection

The questionnaire was uploaded to Google Forms to collect the data online because face-to-face data collection from the students was impossible due to the COVID-19 pandemic and the closure of universities. The questionnaire link in Google Forms was shared with the students through email. As the students filled in the questionnaire, the responses were recorded in the Google Form and exported into a Microsoft Excel file to analyze the data accordingly. The researchers finally sent an email of thanks to all the participants who completed the questionnaire.

Results and Findings

This section presents the results and findings of the study, in which the data are presented in the given tables.

Table 1

Descriptive statistics of the desire to learn

Scale	<i>N</i>	<i>M.P.I.</i>	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Skew.</i>	<i>Kurt.</i>
Circumstances	1230	4.00	12.02	2.62	3-15	-.72	-.19
Expression	1230	4.06	12.17	2.76	3-15	-.98	.53
Group identity	1230	3.90	11.72	2.40	3-15	-.60	.06
Growth and balance	1230	4.03	12.09	2.31	3-15	-.70	.26
Emotional tendency	1230	3.85	11.54	2.40	3-15	-.29	-.40
Communication skills	1230	3.51	10.54	2.76	3-15	-.14	-.33
Change skills	1230	3.61	10.84	2.84	3-15	-.19	-.74
Desire to learn	1230	3.85	80.92	12.78	21-105	-.54	.94

Table I presents the descriptive statistics for the “Desire to Learn” dimension and its sub-factors. The results indicate that students show a moderate to relatively high level of desire to learn, with variation across sub-components.

Among the sub-factors, Expression, Growth and Balance, and Circumstances show comparatively higher mean scores, while Communication Skills and Change Skills are relatively lower. This suggests that students are stronger in motivational and attitudinal aspects of learning, but comparatively weaker in some skill-based components.

The skewness and kurtosis values fall within the acceptable range (± 1), indicating that the data are approximately normally distributed and suitable for further parametric analysis.

Table 2*Descriptive statistics of resourcefulness*

Scale	<i>N</i>	<i>M.P.I.</i>	<i>M</i>	<i>SD</i>	Range	Skew.	Kurt.
Learning priority	1230	4.10	12.31	2.58	3-15	-.74	-.15
Deferring gratification	1230	3.86	11.59	2.70	3-15	-.59	-.11
Resolving conflict	1230	4.06	12.20	2.66	3-15	-.29	-.57
Future orientation	1230	3.88	11.64	2.74	3-15	-.44	-.54
Planning	1230	3.75	11.25	2.80	3-15	-.24	-.84
Evaluating alternatives	1230	3.61	10.84	3.27	3-15	-.61	-.35
Anticipating consequences	1230	3.75	11.25	2.64	3-15	-.42	-.30
Resourcefulness	1230	3.81	80.09	14.64	21-105	-.29	-.01

Table 2 presents the descriptive statistics for the “Resourcefulness” dimension and its sub-factors. The results indicate that students demonstrate a moderate level of resourcefulness, with variation across different components of the construct.

Among the sub-factors, Learning Priority shows the highest mean score, followed by Resolving Conflict, while comparatively lower mean values are observed for Evaluating Alternatives and Planning. This suggests that students are relatively stronger in prioritizing learning and managing conflict situations, but comparatively less developed in analytical and planning-related aspects of resourcefulness. The overall mean score of the resourcefulness dimension reflects a generally moderate level of resourceful behavior among students.

Furthermore, skewness and kurtosis values for all variables fall within the acceptable range of ± 1 , indicating that the data are approximately normally distributed and suitable for parametric statistical analysis.

Table 3*Descriptive statistics of initiative*

Scale	<i>N</i>	<i>M.P.I.</i>	<i>M</i>	<i>SD</i>	Range	Skew.	Kurt.
Goal directedness	1230	3.90	11.71	2.81	3-15	-.60	-.35
Action orientation	1230	3.76	11.28	2.85	3-15	-.43	-.78
Overcoming obstacles	1230	3.70	11.10	2.98	3-15	-.45	-.46
Active approach	1230	3.75	11.27	2.67	3-15	-.43	-.40
Self-starting	1230	3.74	11.23	2.58	3-15	-.31	-.37
Initiative	1230	3.77	56.59	11.36	15-75	-.32	-.10

Table 3 presents the descriptive statistics for the “Initiative” dimension and its sub-factors. The results indicate that students exhibit a moderate level of initiative, with relatively small variation across the subcomponents. Among the sub-factors, goal directedness shows the highest mean score, followed by action orientation and active approach, while self-starting and overcoming obstacles show comparatively lower but closely aligned mean values. This suggests that students are relatively more goal-focused, but slightly less strong in taking independent action and overcoming challenges.

The overall mean score of the initiative dimension reflects a generally moderate level of initiative among the respondents. In addition, skewness and kurtosis values for all variables fall within the acceptable range of ± 1 , indicating that the data are approximately normally distributed and appropriate for parametric statistical analysis.

Table 4

Descriptive statistics of persistence

Scale	<i>N</i>	<i>M.P.I.</i>	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Skew.</i>	<i>Kurt.</i>
Volition	1230	3.76	11.29	2.73	9-45	-.25	-.69
Self-regulation	1230	3.87	11.61	2.66	3-15	-.46	-.53
Goal maintenance	1230	3.95	11.85	2.75	3-15	-.55	-.45
Persistence	1230	3.86	34.76	7.05	3-15	-.35	-.24

Table IV presents the descriptive statistics for the “Persistence” dimension and its sub-factors. The results indicate that students demonstrate a moderate level of persistence, with relatively close mean values across the sub-dimensions. Among the sub-factors, goal maintenance shows the highest mean score, followed by self-regulation, while volition records the comparatively lowest mean score. This suggests that students are relatively stronger in maintaining learning goals, but slightly less consistent in sustaining volitional effort over time.

The overall mean score of the persistence dimension reflects a generally moderate level of persistence among respondents.

During the interviews, parents were highly unified regarding the function of education in low-income households. However, these discussions also revealed several challenges that hinder the achievement of these educational goals. This discussion narrows down to these challenges with regard to the demographics of the affected households and finances.

Table 5*Overall descriptive statistics of the learner autonomy scale*

Scale	<i>N</i>	<i>M.P.I.</i>	<i>M</i>	<i>SD</i>	Range	Skew.	Kurt.	Level
Desire to learn	1230	3.85	80.92	12.78	21-105	-.54	.94	Medium
Resourcefulness	1230	3.81	80.09	14.64	21-105	-.29	-.01	Medium
Initiative	1230	3.77	56.59	11.36	15-75	-.32	-.10	Medium
Persistence	1230	3.86	34.76	7.05	3-15	-.35	-.24	Medium
Learner Autonomy	1230	3.82	252.5	41.77	66-330	-.38	.48	Medium

Table 5 presents the overall descriptive statistics of the Learner Autonomy Scale and its four dimensions. The results indicate that students demonstrate a moderate level of overall learner autonomy. Among the four dimensions, Persistence shows the highest mean score, followed closely by Desire to Learn, while Resourcefulness and Initiative show relatively lower but comparable mean values. This pattern suggests that students are comparatively stronger in sustaining effort and motivation, whereas relatively less strength is observed in proactive and strategic learning behaviors.

The overall mean score of learner autonomy reflects a medium level of autonomy among university students. This indicates that while learners exhibit a reasonable degree of autonomy, there is still room for improvement across all dimensions to reach a higher level of independent learning behavior.

In addition, skewness and kurtosis values for all variables fall within the acceptable range of ± 1 , indicating that the data are approximately normally distributed and suitable for parametric statistical analysis.

Research Question 2

Is there any difference in learner autonomy based on demographic variables?

Table 6*The difference in learner autonomy based on gender*

Scale	Gender	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Desire	Male	78.62	13.15	1228	4.20	.97
	Female	81.92	12.49			
Resourcefulness	Male	76.89	15.31	1228	5.12	.18
	Female	81.49	14.12			
Initiative	Male	54.32	12.45	624.42	4.40	.00
	Female	57.58	10.70			
Persistence	Male	33.79	7.88	613.12	2.97	.00
	Female	35.18	6.62			
Learners' Autonomy	Male	243.62	45.75	624.31	4.61	.00
	Female	256.16	39.32			

Table 6 presents the results of an independent samples t-test examining differences in learner autonomy based on gender. The findings show a mixed pattern of results across the dimensions of learner autonomy. For Desire to Learn and Resourcefulness, the differences between male and female students are not statistically significant, indicating that both groups demonstrate similar levels of motivation and resource-based learning behavior.

However, statistically significant differences are observed in Initiative, Persistence, and the overall learner autonomy score, where female students consistently show higher mean scores compared to male students. This indicates that female students demonstrate comparatively stronger proactive learning behavior, greater persistence, and higher overall autonomy. Overall, the results suggest that while some dimensions of learner autonomy do not vary significantly by gender, female students exhibit significantly higher levels of autonomy in key behavioral components and in overall learner autonomy.

Research Question 3

Are there any significant differences in learner autonomy across academic disciplines?

Table 7*Faculty-wise mean and standard deviation scores of learner autonomy*

Scales	Faculty	N	M	SD
Desire	Science	215	81.46	13.27
	Arts	903	80.37	12.65
	Commerce	112	84.31	12.36
Resourcefulness	Science	215	79.58	13.57
	Arts	903	79.32	14.73
	Commerce	112	87.31	14.03
Initiative	Science	215	56.78	09.93
	Arts	903	56.27	11.43
	Commerce	112	58.79	13.04
Persistence	Science	215	34.39	6.42
	Arts	903	34.43	07.11
	Commerce	112	38.12	06.93
Learner autonomy (total)	Science	215	252.20	39.27
	Arts	903	250.37	41.70
	Commerce	112	268.54	43.77

Table 7 presents the faculty-wise mean and standard deviation scores of learner autonomy and its dimensions among university students. The findings indicate noticeable differences across academic faculties, with students from the Faculty of Commerce consistently showing higher mean scores compared to students from Science and the Arts. Across all four dimensions—Desire to Learn, Resourcefulness, Initiative, and Persistence—commerce students demonstrate comparatively higher mean values. In particular, the highest scores are observed in resourcefulness and overall learner autonomy for commerce students, suggesting stronger academic engagement, planning ability, and self-directed learning behavior in this group. Science and arts students show relatively similar patterns across most dimensions, with only minor variations in their mean scores. However, both groups consistently score lower than Commerce students across all dimensions of learner autonomy.

Overall, the total learner autonomy score indicates that students from the Faculty of Commerce exhibit the highest level of autonomy, followed by Science and Arts students. These results suggest that faculty affiliation is associated with differences in learner autonomy, with Commerce students demonstrating comparatively stronger autonomous learning tendencies.

Table 8*Difference in learner autonomy scores based on faculty*

Subscales	Source	SS	df	MS	F	P
Desire	Between Groups	1629.50	2	814.75	5.023	.007
	Within Groups	199010.88	1227	162.19		
Resourcefulness	Between Groups	6436.96	2	3218.48	15.37	.00
	Within Groups	256976.84	1227	209.44		
Initiative	Between Groups	664.13	2	323.06	2.51	.082
	Within Groups	157886.24	1227	128.68		
Persistence	Between Groups	1392.03	2	696.02	14.31	.00
	Within Groups	59691.30	1227	48.65		
LA (Total)	Between Groups	32859.49	2	17429.75	9.55	.00
	Within Groups	2110993.88	1227	1720.45		

Table 8 presents the results of a one-way ANOVA examining differences in learner autonomy across academic faculties. The findings indicate significant differences among faculties in most dimensions of learner autonomy.

Specifically, statistically significant differences are observed in Desire to Learn ($p = .007$), Resourcefulness ($p < .001$), Persistence ($p < .001$), and overall Learner Autonomy ($p < .001$), indicating that students from different faculties differ significantly in these aspects. However, no statistically significant difference is found in Initiative ($p = .082$), suggesting that this dimension of learner autonomy is relatively consistent across faculties.

Overall, the results show that faculty affiliation has a significant effect on most components of learner autonomy, except for initiative. These findings suggest that while students differ in motivational and self-regulatory aspects of learning across faculties, their level of initiative remains comparatively similar.

Table 9

Difference in Learner Autonomy based on Faculty (Post Hoc)

Dependent Variable	Faculty	Faculty	Mean Difference	<i>p</i>
Desire	Arts	Commerce	-3.95	.006
Resourcefulness	Arts	Commerce	-7.99	.000
	Science	Commerce	-7.74	.000
Persistence	Arts	Commerce	-3.69	.000
	Science	Commerce	-3.73	.000
Learner Autonomy	Arts	Commerce	-18.16	.000
	Science	Commerce	-16.34	.002

Table 9 presents the results of Tukey's post hoc test conducted to determine the specific group differences in learner autonomy among academic faculties following significant ANOVA results. The findings indicate that students from the Faculty of Commerce differ significantly from those in the Faculties of Arts and Science across most dimensions of learner autonomy.

In the Desire to Learn dimension, students from the Faculty of Commerce scored significantly higher than those from the Faculty of Arts. Similarly, in Resourcefulness, significant differences were observed between Commerce students and both Arts and Science students, with Commerce students demonstrating higher mean scores. In the Persistence dimension, commerce students also showed significantly higher scores compared to both other faculties.

At the overall level of learner autonomy, commerce students significantly outperformed students from both arts and science faculties, indicating a consistent pattern across dimensions.

Overall, the post hoc analysis confirms that students from the Faculty of Commerce exhibit significantly higher levels of learner autonomy compared to their counterparts in Arts and Science, thereby reinforcing the results of the ANOVA analysis and highlighting meaningful disciplinary differences in learner autonomy.

Research Question 4

Are there any significant differences in learner autonomy based on academic qualification?

Table 10*Qualification-wise mean and standard deviation scores of learner autonomy*

Scales	Qualification	<i>N</i>	<i>M</i>	<i>SD</i>
Desire	BS	790	80.48	12.13
	MA/MSc	226	79.12	15.48
	MPhil	214	84.42	11.27
Resourcefulness	BS	790	78.34	14.34
	MA/MSc	226	81.12	17.30
	MPhil	214	85.47	10.71
Initiative	BS	790	55.92	11.28
	MA/MSc	226	56.35	13.04
	MPhil	214	59.28	09.18
Persistence	BS	790	34.08	06.94
	MA/MSc	226	35.17	08.36
	MPhil	214	36.80	5.32
Learner autonomy (total)	BS	790	248.83	40.02
	MA/MSc	226	251.7	51.85
	MPhil	214	265.97	32.56

Table 10 presents the descriptive statistics of learner autonomy across different academic qualification levels. The findings indicate clear differences in learner autonomy based on academic qualification, with MPhil students consistently demonstrating higher mean scores across all dimensions.

Across the subscales of Desire to Learn, Resourcefulness, Initiative, and Persistence, MPhil students exhibit higher mean values compared to BS and MA/MSc students. In particular, the highest scores are observed among MPhil students in resourcefulness and overall learner autonomy, suggesting stronger self-directed learning skills and academic engagement at higher qualification levels.

In comparison, BS and MA/MSc students show relatively lower and comparable mean scores across most dimensions, indicating moderate levels of learner autonomy.

Overall, the total learner autonomy score shows that MPhil students have the highest level of learner autonomy, followed by MA/MSc and BS students. These results suggest that learner autonomy tends to increase with higher academic qualification levels, reflecting greater academic maturity and independent learning capacity among postgraduate students.

Table 11*Difference in learner autonomy scores based on qualification*

Subscales	Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>
Desire	Between Groups	3496.64	2	1748.32	10.88	.00
	Within Groups	197143.73	1227	160.67		
Resourcefulness	Between Groups	8845.35	2	4422.68	21.32	.000
	Within Groups	254565.44	1227	207.42		
Initiative	Between Groups	1913.22	2	956.61	7.94	.001
	Within Groups	156619.15	1227	127.64		
Persistence	Between Groups	1294.32	2	647.16	13.28	.000
	Within Groups	57789.02	1227	48.73		
LA (Total)	Between Groups	49566.79	2	24743.40	14.52	.000
	Within Groups	2094286.58	1227	1706.84		

Table 11 presents the differences in learner autonomy across students' academic qualification levels (BS, MA/MSc, and MPhil). The findings indicate that learner autonomy differs significantly across qualification groups in all dimensions. Overall, a clear pattern emerges showing that students at higher qualification levels demonstrate comparatively stronger learner autonomy across all components, including desire to learn, resourcefulness, initiative, persistence, and overall autonomy. In contrast, BS and MA/MSc students show relatively lower and closely aligned levels of learner autonomy.

Among the dimensions, greater variation is observed in resourcefulness and persistence, suggesting that advanced academic study is more strongly associated with improvements in students' ability to manage learning resources and sustain effort toward academic goals.

In summary, the results indicate that learner autonomy tends to improve with academic progression, with postgraduate students demonstrating higher levels of autonomous learning behaviors compared to undergraduate students.

Table 12*Difference in Learner Autonomy based on Qualification (Post Hoc)*

Dependent Variable	Qualification	Qualification	Mean Difference	<i>p</i>
Desire	BS	MPhil	--3.94	.000
	M.A./M.Sc.	MPhil	-5.29	.000
Resourcefulness	BS	MA/MSc	-2.78	.02
	BS	MPhil	-7.13	.00
	MA/MSc	MPhil	-4.35	.005
Initiative	BS	MPhil	-3.36	.00
	MA/MSc	MPhil	-2.93	.01
Persistence	BS	MPhil	-2.72	.00
	MA/MSc	MPhil	-1.64	.03
Learner Autonomy	BS	MPhil	-17.14	.00
	MA/MSc	MPhil	-14.20	.001

Table 12 presents the results of Tukey's post hoc test used to identify specific group-wise differences in learner autonomy across academic qualification levels. The findings show a consistent and clear pattern of differences across groups, particularly highlighting the role of academic progression. Across all dimensions of learner autonomy—desire to learn, resourcefulness, initiative, persistence, and overall autonomy—MPhil students consistently differ significantly from both BS and MA/MSc students, with higher levels of learner autonomy observed among MPhil students. This indicates that postgraduate students demonstrate stronger motivational, cognitive, and self-regulatory learning characteristics.

In contrast, differences between BS and MA/MSc students are comparatively limited and less consistent, suggesting relatively similar levels of learner autonomy at these two academic stages.

Overall, the post hoc results confirm that the most substantial differences in learner autonomy exist between MPhil students and the other qualification groups, indicating that higher academic advancement is associated with greater development of autonomous learning behaviors.

Discussion

The findings revealed that university students demonstrated a moderate level of learner autonomy, with all four dimensions (desire, resourcefulness, initiative, and persistence) showing relatively similar mean scores. This indicates that students possess a reasonable

level of awareness and inclination toward autonomous learning; however, autonomy is not yet fully developed or consistently practiced within the institutional learning environment.

This result suggests that while students are cognitively and motivationally prepared for autonomous learning, institutional practices may still reflect traditional, teacher-centered approaches that limit full learner independence. Similar patterns have been reported in previous studies conducted in Pakistani higher education contexts, where students show awareness of autonomy but limited opportunities to practice it in structured learning environments (Aslam, 2019; Yasmin & Sohail, 2019). These studies collectively suggest that learner autonomy is still in a transitional stage, where awareness is higher than actual implementation.

The results indicated a statistically significant difference in learner autonomy based on gender, with female students demonstrating higher levels of autonomy than male students. This finding suggests that female students are more engaged in self-regulated and independent learning behaviors in the university context. This outcome is consistent with several previous studies reporting higher autonomy among female learners in academic settings (Razeq, 2014; Hanbay, 2013; Naegele & Keer, 2013). These studies generally suggest that female students tend to exhibit greater academic responsibility, consistency, and engagement in learning tasks. However, contrasting findings also exist, reporting no significant gender differences (Pan & Gauvain, 2012; O'Reilly, 2014), indicating that gender effects may be context-dependent and influenced by cultural and educational environments.

The findings further revealed that learner autonomy increases with academic progression, with MPhil students demonstrating higher autonomy compared to MA/MSc and BS students. This suggests that learner autonomy develops progressively as students advance in their academic journey and gain more exposure to independent learning tasks. This finding aligns with previous research indicating that autonomy develops gradually through academic experience, exposure to research-based learning, and increased responsibility in higher education (Cottrell, 2000; Lengkanawati, 2017; Asghar & Yasmin, 2019). More advanced learners are generally more capable of goal-setting, planning, and self-regulation. However, some studies contradict this trend and suggest that autonomy does not automatically develop with academic level, particularly in environments where teacher-centered instruction dominates (Alrabai, 2017; Asiri & Shuki, 2018).

Discipline-wise Differences in Learner Autonomy: The results also showed significant differences across academic disciplines, with commerce students demonstrating higher levels of learner autonomy compared to science and arts students. This may indicate

that discipline-specific teaching approaches and academic requirements influence the development of autonomous learning behaviors. These findings are consistent with But et al. (2020), who reported variations in learner autonomy across academic streams in Pakistani universities. Similarly, Alkan and Arslan (2019) found significant differences in autonomy levels across academic departments, suggesting that disciplinary context plays an important role in shaping students' learning behaviors and independence.

Conclusion

The present study aimed to examine the level of learner autonomy among university students and to investigate differences based on gender, academic qualification, and discipline. The findings concluded that students demonstrated a moderate level of learner autonomy, indicating that while learners possess awareness and potential for autonomous learning, it is not yet fully developed within the university context.

In terms of gender differences, female students exhibited higher levels of learner autonomy compared to male students. Furthermore, results revealed that learner autonomy increased with academic progression, as MPhil students showed higher levels of autonomy than MA/MSc and BS students. Discipline-wise, commerce students demonstrated higher learner autonomy compared to students from science and arts disciplines.

Overall, the study highlights that learner autonomy varies across demographic and academic variables and suggests the need for educational practices that further support and strengthen autonomous learning skills among university students.

Recommendations

1. Since the overall level of learner autonomy was found to be moderate, university teachers should adopt instructional strategies that actively promote self-directed and autonomous learning, such as project-based learning, reflective tasks, and independent assignments to further strengthen students' autonomy.
2. As female students demonstrated higher levels of learner autonomy than male students, targeted academic support and engagement strategies should be developed to enhance autonomy skills among male students, particularly in areas of initiative and persistence.
3. Considering significant differences across academic disciplines, especially lower autonomy levels among arts students compared to commerce and science students, discipline-specific interventions should be introduced to promote learner autonomy in less autonomous fields.
4. Since MPhil students showed higher autonomy than BS and MA/MSc students, autonomy-building strategies should be integrated at earlier stages of higher

education to ensure that learner autonomy develops progressively from the undergraduate level onwards.

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