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Academic Adaptation Level of New University Students in the Light of Some Variables: A Study of a Sample of First-Year Students at M'sila University

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Abstract

The transition from secondary education to higher education represents a major academic and personal challenge for first-year undergraduate students. During this critical transition, students encounter new academic demands, independent learning practices, altered interpersonal networks, and institutional expectations. Academic adaptation plays a pivotal role in enabling students to engage effectively with university life. This study investigated the level of academic adaptation among first-year university students and examined whether academic specialization and gender significantly influence their adaptation levels. A descriptive research design was employed, encompassing a randomly selected sample of 391 first-year students across diverse faculties at M'sila University during the 2025/2026 academic year. Data were collected using the modified 59-item Henry Borow Academic Adaptation Scale, which evaluates six core dimensions: adaptation to curricula, goal maturity and level of ambition, personal effectiveness, study skills and habits, psychological health, and personal relationships. The scale demonstrated high internal consistency (Cronbach's $\alpha = .915$). Statistical analyses included descriptive statistics, one-way analysis of variance (ANOVA), and independent-samples t-tests.

The results revealed a moderate overall level of academic adaptation among participants ($M = 23.18$, $SD = 12.672$). "Study skills and habits" attained the highest mean score across the dimensions, whereas "personal relationships" recorded the lowest. While academic specialization yielded no statistically significant difference in the global adaptation level ($F = 1.908$, $p = .092$), significant variations were found across specific dimensions, including adaptation to curricula, personal effectiveness, psychological health, and personal relationships. Furthermore, gender differences were statistically significant in overall academic adaptation in favor of female students ($M = 24.78$, $SD = 12.805$ vs. $M = 22.01$, $SD = 12.470$; $p = .033$). The findings underscore the pressing need to enhance academic advising, psychosocial counseling, and orientation initiatives that facilitate social and academic integration during the first year of university.

Keywords: Academic Adaptation; First-Year Students; Academic Specialization; Gender Differences; Higher Education; Psychosocial Adjustment.

1. Introduction

Entering university represents a decisive life turning point and a stressful experience for many newly admitted students. While many transition successfully, others encounter academic, pedagogical, and psychological obstacles leading to underachievement, academic failure, and reduced satisfaction with the collegiate experience. Consequently, the level of academic adaptation serves as an essential predictor of students' academic success, psychological well-being, and personal development.

Empirical literature confirms that student academic adaptation is a fundamental determinant in pursuing various educational and vocational pathways. Students enrolled in academic tracks that do not align with their intrinsic capabilities, aptitudes, and

vocational interests often experience difficulties that negatively impact their scholastic achievement and retention (Tarzolt, 2009). Conversely, well-adapted students exhibit higher motivation, robust academic self-efficacy, decisive goal execution, and greater satisfaction with their institutions. As highlighted by Adem Esmael et al. (2018), first-year students encounter multi-layered adjustment problems, making efficient advisory mechanisms, extracurricular engagement, and targeted psychological counseling essential institutional requirements.

In its broad psychological connotation, adaptation refers to the continuous, dynamic equilibrium established between an individual and their social and educational environment. It entails behavioral and cognitive adjustments that allow the student to build constructive interpersonal ties and maintain internal harmony. Choosing this topic stems from its direct relevance to psychology and educational measurement, focusing on a vulnerable segment: newly enrolled first-year university students who frequently experience disengagement, weak motivation, and orientation conflicts.

1.1. Research Questions

- What is the overall level of academic adaptation among new students at M'sila University?
- Are there statistically significant differences in the level of academic adaptation attributable to the student's academic specialization?
- Are there statistically significant differences in the level of academic adaptation attributable to gender?

1.2. Study Hypotheses

1. **Hypothesis 1 (H₁):** The level of academic adaptation among first-year students at M'sila University is moderate.
2. **Hypothesis 2 (H₂):** There are statistically significant differences in the level of academic adaptation among new students attributable to academic specialization.
3. **Hypothesis 3 (H₃):** There are statistically significant differences in the level of academic adaptation between male and female students.

1.3. Research Objectives

- Assess the general level of academic adaptation and its specific sub-dimensions among first-year students.
- Determine the impact of gender on the academic adaptation profile of first-year students.
- Examine the effect of academic specialization (faculty affiliation) on academic adaptation.

1.4. Significance of the Study

Theoretical Significance: The study provides an empirical and psychometric addition to educational psychology literature in Algeria, highlighting the multidimensional structure of student adjustment.

Practical Significance: It informs university leadership, academic advisors, and student counseling units on how to formulate targeted orientation and psychological accompaniment programs to foster student retention and well-being.

2. Conceptual Framework and Operational Definitions

Academic Adaptation: Defined as the extent to which a student successfully accommodates the academic, psychological, and social demands of the university environment (Al-Sawat & Al-Mashikhi, 2011). It reflects their capacity to define goals, organize study habits, utilize institutional resources, and maintain psychological balance.

General Adaptation: Shaffer (1961) posited that adaptation is the process by which a living organism maintains a balance between personal needs and environmental conditions. Eysenck (1972) viewed adaptation as a state where individual needs and environmental demands reach full, harmonious satisfaction. Smith (1961) emphasized that effective adaptation is both realistic and satisfying, minimizing long-term tensions, frustrations, and anxieties.

Operational Definition: In the present study, academic adaptation is operationally defined as the total score obtained by the participant on the modified Henry Borow Academic Adaptation Scale across its six sub-dimensions.

3. Literature Review

The academic adjustment of university students has been widely investigated across global and regional contexts. Researchers generally conceptualize it as a multidimensional construct encompassing academic, social, personal-emotional, and institutional dimensions.

In the Algerian context, Shathan, Lakhdar, and Ben Lakhal (2019) examined academic adjustment among 100 students at Djelfa University. Their findings indicated a high overall adjustment level, with no statistically significant differences according to gender, academic department, or residence. However, their sample was limited to a single faculty and was not restricted to first-year students.

Adem Esmael et al. (2018) investigated first-year adjustment at Madawalabu University in Ethiopia using the Student Adaptation to College Questionnaire (SACQ) (N = 422). They identified adjustment problems in 30.1% of the cohort, with female students exhibiting a significantly higher vulnerability to adjustment challenges.

Puthanikar (2016) explored adjustment among 160 postgraduate students in India, reporting that science students achieved higher overall adjustment compared to social science students, while gender differences varied across disciplines.

Qualitative findings by Sevinç and Gizir (2014) at Mersin University revealed that first-year students experience multifaceted transitional barriers—such as loneliness, homesickness, interpersonal friction with faculty, and leisure management

difficulties—which directly affect their sense of belonging and academic persistence.

Obi (2012) assessed 498 first-year students in Nigeria, finding high adjustment overall alongside significant gender differences, and demonstrating that structured academic advising significantly improves adjustment trajectories.

4. Methodology

4.1. Research Design

This study utilizes a descriptive-analytical method, which systematically investigates phenomena in their natural context, quantifies relationships between variables, and interprets underlying psychometric patterns (Badawi, 1997).

4.2. Spatial, Temporal, and Human Scope

- **Human Scope:** First-year undergraduate students at Mohamed Boudiaf University of M'sila (N = 391).
- **Geographical Scope:** M'sila University campus, Algeria.
- **Temporal Scope:** Conducted during December and January of the 2025/2026 academic year.

4.3. Sample Characteristics

The research sample comprised 391 male and female students selected via stratified random sampling across six faculties.

Variable	Category	Frequency (N)	Percentage (%)
Faculty / Specialization	Faculty of Science	44	11.3%
	Faculty of Mathematics and Computer Science	62	15.9%
	Faculty of Technology	61	15.6%
	Faculty of Economic Sciences	51	13.0%
	Faculty of Letters and Languages	82	21.0%
	Faculty of Humanities and Social Sciences	91	23.3%
Gender	Male	225	57.5%
	Female	166	42.5%
Total Sample Size		391	100.0%

4.4. Measurement Instrument

The study utilized a modified version of the Henry Borow Academic Adaptation Scale, consisting of 59 dichotomous items (Yes = 1 point, No = 0 points) distributed across six structural dimensions.

Dimension	Operational Description	Items (N)
1. Adaptation to Curricula	Measures academic satisfaction, conviction in the chosen major, enjoyment, and perceived value of courses.	07
2. Goal Maturity & Ambition	Evaluates student awareness of academic objectives and alignment with future career plans.	09
3. Personal Effectiveness	Measures time management, efficiency in daily planning, and execution of academic responsibilities.	11

Dimension	Operational Description	Items (N)
4. Study Skills & Habits	Measures the adoption of sound study habits, summarization, note-taking, and library usage.	13
5. Psychological Health	Evaluates self-confidence, stress tolerance, and emotional coping abilities in facing challenges.	11
6. Personal Relationships	Assesses peer collaboration, social interaction, and constructive engagement with faculty members.	08
Total Scale Items		59

4.5. Psychometric Properties

Construct validity and internal consistency were examined through a pilot study of 30 students at Blida-2 University. Inter-dimension correlations with the total score ranged between .800 and .906 ($p < .01$). Reliability assessment yielded high consistency across all sub-scales and the overall instrument.

Scale Dimension	Number of Items	Cronbach's Alpha (α)
Adaptation to Curricula	07	.895
Goal Maturity and Level of Ambition	09	.842
Personal Effectiveness	11	.735
Study Skills and Habits	13	.833
Psychological Health	11	.674
Personal Relationships	08	.759
Overall Academic Adaptation Scale	59	.915

5. Results

5.1. Verification of the First Hypothesis (H_1)

To verify the first hypothesis ("The level of academic adaptation of the study sample is moderate"), descriptive statistics (means, standard deviations, and ranks) were calculated across all dimensions.

Dimension	Min	Max	Mean (M)	SD	Rank	Level
Study Skills & Habits	0	12	4.87	2.899	1	Moderate
Psychological Health	0	10	4.28	2.637	2	Moderate
Personal Effectiveness	0	10	4.20	2.634	3	Moderate

Dimension	Min	Max	Mean (M)	SD	Rank	Level
s						
Goal Maturity & Ambition	0	9	3.76	2.468	4	Moderate
Personal Relationships	0	8	3.06	1.940	5	Low
Adaptation to Curricula	0	7	3.01	1.926	6	Moderate
Total Scale Score	5	49	23.18	12.672	—	Moderate

The overall mean score (M = 23.18, SD = 12.672) falls within the moderate range, thereby confirming the validity of Hypothesis 1.

5.2. Verification of the Second Hypothesis (H₂)

A one-way ANOVA was conducted to test for differences across academic specializations.

Dimension / Source	Sum of Squares	df	Mean Square	F-Value	Sig. (p)
Adaptation to Curricula (Between / Within)	41.523 / 1405.413	5 / 385	8.305 / 3.650	2.275	.047*
Goal Maturity & Ambition (Between / Within)	62.828 / 2312.573	5 / 385	12.566 / 6.007	2.092	.066
Personal Effectiveness (Between / Within)	116.188 / 2589.649	5 / 385	23.238 / 6.726	3.455	.005**
Study Skills & Habits (Between / Within)	67.264 / 3210.343	5 / 385	13.453 / 8.339	1.613	.155
Psychological Health (Between / Within)	106.904 / 2605.710	5 / 385	21.381 / 6.768	3.159	.008**
Personal	42.781 /	5 / 385	8.556 / 3.700	2.312	.043*

Dimension / Source	Sum of Squares	df	Mean Square	F-Value	Sig. (p)
Relationships (Between / Within)	1424.621				
Total Scale (Between / Within)	1514.414 / 61108.328	5 / 385	302.883 / 158.723	1.908	.092 (ns)

Note: * $p < .05$, ** $p < .01$, ns = not significant. The global score showed no statistically significant differences ($p = .092$), but specific dimensions exhibited significant disciplinary variations.

5.3. Verification of the Third Hypothesis (H₃)

An independent samples t-test was conducted to examine gender differences across the dimensions and total score.

Dimension	Male (N=225) M (SD)	Female (N=166) M (SD)	t-Value	Sig. (p)	Direction
Adaptation to Curricula	2.77 (1.945)	3.34 (1.857)	2.909	.004	Females
Goal Maturity & Ambition	3.62 (2.481)	3.95 (2.444)	1.327	.185	—
Personal Effectiveness	4.07 (2.629)	4.37 (2.639)	1.138	.256	—
Study Skills & Habits	4.58 (2.703)	5.27 (3.110)	2.267	.024	Females
Psychological Health	4.15 (2.653)	4.46 (2.614)	1.156	.248	—
Personal Relationships	2.82 (1.917)	3.39 (1.928)	2.893	.004	Females
Total Scale Score	22.01 (12.470)	24.78 (12.805)	2.136	.033	Females

The results reveal statistically significant gender differences in global adaptation ($p = .033$) and across curriculum adaptation, study habits, and relational integration, all favoring female students.

6. Discussion

The empirical findings provide nuanced insights into the adaptation profiles of first-year university students. The observed moderate level of global adaptation indicates that while students generally manage the academic transition, they experience difficulties adjusting to autonomous learning, institutional norms, and expanded social environments. This aligns with Adem Esmail et al. (2018) and Sevinç and Gizir (2014), who emphasized that university adjustment extends beyond academic coursework to encompass psychological resilience and social networking.

The dimensional hierarchy reveals that students manage study skills and habits relatively well ($M = 4.87$), while interpersonal adaptation remains notably weak ($M = 3.06$). This divergence suggests that students rely heavily on preexisting secondary-school study mechanics but struggle to build new peer networks, engage with academic staff, and establish institutional belonging.

Regarding academic specialization, the lack of significant differences in global adaptation ($p = .092$) aligns with Shathan et

al. (2019), demonstrating that first-year students encounter shared institutional transition hurdles regardless of disciplinary affiliation. Nonetheless, faculty-level variations in sub-dimensions (curricula, effectiveness, mental health) reflect pedagogical differences across academic tracks.

The significant gender differences favoring female students across overall adaptation, study habits, and relational integration corroborate findings by Obi (2012). This pattern may reflect gender-differentiated approaches to academic planning, help-seeking behavior, and collaborative peer engagement.

7. Conclusion and Recommendations

7.1. Conclusion

First-year students at M'sila University display a moderate level of academic adaptation, with marked unevenness across specific domains. While students possess foundational study competencies, relational and interpersonal integration presents a notable challenge. Academic specialization does not differentiate overall adaptation, whereas gender exerts a significant influence in favor of female students. Higher education institutions must adopt integrated academic, counseling, and social support models to ease transition challenges.

7.2. Recommendations

1. **Strengthen Induction and Orientation:** Institutionalize structured first-year transition programs providing transparent information on academic curricula, assessment regulations, and campus resources.
2. **Expand Academic Advising and Counseling Services:** Ensure accessible, continuous psychosocial and academic counseling to detect adaptation difficulties early and foster realistic goal-setting.
3. **Promote Interpersonal and Peer Integration:** Establish peer-mentoring schemes, student clubs, and collaborative learning environments to reduce social isolation and strengthen institutional belonging.
4. **Foster Pedagogical Dialogue:** Enhance student-faculty interaction and provide faculty development on active, supportive teaching strategies.
5. **Optimize Orientation and Major Selection:** Incorporate diagnostic aptitude and interest assessments to assist secondary graduates in making informed degree choices.
6. **Implement Multidimensional Diagnostics:** Evaluate student adjustment using granular, multidimensional scales rather than single global indicators to guide targeted interventions.
7. **Future Research Directions:** Conduct longitudinal studies examining psychological resilience, socio-economic factors, and residential status, incorporating post-hoc analyses across specific disciplinary groups.

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