

The Reality of Academic Achievement Quality among Adolescents in the Digital Age: A Case Study of Taïbi Kacem Secondary School in Bouira Province, Algeria

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Abstract

This article examines academic achievement among adolescents in the context of digital education in Algeria, using Taïbi-Kacem Secondary School in Bir Ghbalou, Bouira Province, as a case-study setting. It combines a critical review of the original school-based study, whose field data mainly date from 2013–2015, with updated national education indicators publicly reported by Algeria's Ministry of National Education during the 2025–2026 school year. The Ministry reported approximately 12 million pupils nationally, 30,308 public educational institutions and 630,641 teachers; these figures provide national context but do not describe the current enrolment or digital resources of the case-study school. The original study reported psychosocial challenges, limited computer proficiency, low classroom use of digital tools, grade repetition and exclusion. However, its sample counts contain inconsistencies, and its school-level data cannot be treated as representative of 2025–2026. Accordingly, this manuscript distinguishes historical local findings from current national indicators and identifies the local administrative data needed for a valid update. It argues that technology can support learning only when accompanied by teacher training, reliable infrastructure, pedagogically purposeful use, psychosocial support and cooperation between schools and families. A new survey and verified school records for 2025–2026 are required before current local prevalence rates or changes in academic achievement can be claimed.

Keywords: academic achievement; adolescents; digital education; secondary school; Algeria; school climate; educational technology.

1. Introduction

Academic achievement is a multidimensional outcome shaped by students' prior knowledge, motivation, health and well-being, classroom practices, family support, school resources and

wider socioeconomic conditions. In digitally transforming education systems, access to devices and connectivity is only one component of educational opportunity; teachers' digital competence and the pedagogical integration of technology are also essential.

The source study, whose title is rendered in English here as **Academic Achievement Among Adolescents in the Digital Age in Algeria**, focuses on adolescents attending Taïbi-Kacem Secondary School in Bir Ghalou, Bouira Province. It discusses school anxiety, behavioural difficulties, family monitoring, grade repetition, exclusion and limited access to digital equipment. Its empirical observations, however, largely concern the 2013–2015 period. These data remain useful as historical evidence, but they cannot be represented as measurements for the 2025–2026 school year.

For national context, the Ministry of National Education reported approximately 12 million pupils, 30,308 public educational institutions, 671 private educational institutions and 630,641 teachers in February 2026. Its reported enrolment breakdown included 648,856 pupils in preparatory education, 5,292,086 in primary education, 4,117,086 in middle education and 1,789,815 in secondary education. These are national administrative figures, not measurements of Taïbi-Kacem Secondary School (Ministry of National Education, 2026a, 2026b).

1.1. Research problem and objectives

1.2. Research questions

- What psychosocial, family and school-environment factors were identified in the original case study?
- What current national education indicators are available for contextualizing the 2025–2026 school year?
- What school-level data are required to assess academic achievement and digital-learning conditions at Taïbi-Kacem Secondary School in 2025–2026?
- What practical measures could support achievement, student well-being and meaningful use of digital technology?

1.3. Working proposition

The study proceeds from the proposition that academic achievement is influenced by the interaction of psychosocial well-being, family engagement, teaching quality, school infrastructure and purposeful access to digital learning tools. This proposition requires testing with current, school-level data; it is not treated as a demonstrated causal relationship.

2. Method

2.1. Design

This manuscript uses a documentary case-study design. It analyses the supplied Arabic article as the primary source for the historical school case and incorporates current national indicators from official Ministry of National Education publications. Because no new 2025–2026 questionnaire dataset or current administrative records for Taïbi-Kacem Secondary School were supplied, the manuscript does not claim to present a newly conducted field survey.

2.2. Study setting and preserved figures

The original article describes Taïbi-Kacem Secondary School as established in 2004, with a reported site area of 15,142.39 m², 22 classrooms and six laboratories, as well as an auditorium, canteen, sports ground, teachers' room and administrative offices. It reported 638 pupils in the historical school profile, including 259 boys and 379 girls. These are figures from the original study, not verified 2025–2026 statistics.



Figure 1. Exterior view of Taïbi-Kacem Secondary School. Photograph reproduced from the supplied original article.

2.3. Historical study sample and measures

The original article states that a questionnaire was administered to 65 students from three classes and claims that this represented 10.80% of the school population. It discusses classroom anxiety, perceived causes of anxiety, violent behaviour, family difficulties, parental monitoring, computer proficiency, teachers' use of digital equipment, grade repetition and exclusion. The instrument, sampling procedure, response scales and validation process are not sufficiently documented in the supplied manuscript.

2.4. Current national indicators for 2025–2026

Indicator	Latest official figure located	Scope and interpretation
Pupils in Algeria's education system	Approximately 12 million	National total reported by the Ministry in February 2026; not a school-specific count.
Public educational institutions	30,308	National total reported by the Ministry; includes institutions across educational levels.
Private educational institutions	671	National total reported by the Ministry in February 2026.
Teachers	630,641	National total reported by the Ministry; not the staffing count for the case-study school.
Preparatory education enrolment	648,856	National administrative count reported in February 2026.

Primary education enrolment	5,292,086	National administrative count reported in February 2026.
Middle education enrolment	4,117,086	National administrative count reported in February 2026.
Secondary education enrolment	1,789,815	National administrative count reported in February 2026; not a count for the case-study school.
2026 baccalaureate candidates	876,201	National registration figure; includes enrolled and independent candidates.
Enrolled school candidates for the 2026 baccalaureate	588,615	National figure; not a school-specific candidate count.
Independent candidates for the 2026 baccalaureate	287,586	National figure.
Baccalaureate examination centres in 2026	2,973	National examination-administration figure; not a learning-outcome measure.

The latest national context located for this revision includes Ministry-reported enrolment by educational level and workforce/institution counts published in February 2026. A separate report on the 2026 baccalaureate examination stated that 876,201 candidates were registered, including 588,615 enrolled school candidates and 287,586 independent candidates, with 2,973 examination centres nationwide (Algerian Radio, 2026). These indicators describe national scale and examination administration; they do not provide a pass rate for the case-study school or evidence of local digital access.

2.5. Data quality and analytical approach

The source contains material inconsistencies that prevent uncritical reuse of its percentages. For example, it states that 65 students participated, but the anxiety section refers to 550 students while reporting 77% anxious and 15 students (23%) not anxious. The number 550 is incompatible with the stated sample and should not be silently corrected. The source also gives a total enrolment of 638, but grade-level figures of 196, 189 and 254 sum to 639. The claim that 65 students represent 10.80% of the school population is also inconsistent with a denominator of 638. These items require verification against original questionnaires and school registers.

The analysis is therefore descriptive and documentary. No causal inference, significance testing or trend comparison between the historical period and 2025–2026 is possible without harmonized data collected using comparable definitions.

2.6. Ethical considerations

The supplied source does not clearly document ethics approval, consent procedures, guardian consent for minors or confidentiality safeguards. The authors should provide accurate

statements about these procedures before journal submission. Any new 2025–2026 survey should obtain the required institutional permissions and informed consent.

3. Results

3.1. National education context

The Ministry’s February 2026 figures place the case study within a national system of approximately 12 million pupils, 30,308 public institutions, 671 private institutions and 630,641 teachers. The published breakdown listed 1,789,815 secondary pupils, approximately 15.1% of the sum of the four reported educational-level counts (11,847,843). The 2026 baccalaureate examination involved 876,201 registered candidates and 2,973 examination centres. These figures help contextualize the scale of secondary education but cannot be used to infer computer availability, connectivity, teacher training or academic outcomes at an individual school (Algerian Radio, 2026; Ministry of National Education, 2026b).

3.2. Historical school-level findings from the original article

Indicator in original article	Historical reported value	Status for this revision
School enrolment	638 pupils (259 boys; 379 girls)	Historical figure; verify and replace with 2025–2026 school register.
Students surveyed	65 students from three classes	Historical sample; no new 2025–2026 survey supplied.
Classroom anxiety	77%; denominator inconsistent in source	Do not report as a valid prevalence estimate until verified.
Tendency toward violent behaviour	14 students; 21.5%	Historical self-report; instrument and denominator need verification.
Family difficulties	14 students; approximately 22%	Historical self-report; do not generalize to current students.
Lack of regular parental monitoring	42 students; 64.6%	Historical self-report; requires current survey to update.
Computer proficiency	Approximately 85% reportedly lacked proficiency	Historical self-report; not a current digital-skills measure.
Teachers’ classroom use of digital tools	95% reportedly said teachers did not use digital tools	Historical student report; not a 2025–2026 technology audit.
Repeaters	53 students in 2014–2015	Historical administrative figure; obtain current school register.
Excluded students	98 in 2013–2014, including 76 in the final year	Historical administrative figure; definitions and current data required.

These values are retained to preserve the original study's empirical content, but they are explicitly labelled historical. They should not be presented as current rates or used to claim improvement or deterioration during 2025–2026.

3.3. Preserved photographic evidence



Figure 2. Classroom furniture and room condition photographed in the original study. The photograph is historical and does not document the school's condition in 2025–2026.



Figure 3. Classroom furniture and room condition photographed in the original study. The photograph is historical and does not document the school's condition in 2025–2026.

3.4. School-level statistics needed for the 2025–2026 update

The current local indicators below were not available in the supplied source or in the official national **releases** reviewed for this manuscript. They must be obtained from the school administration, the Directorate of Education of Bouira or a new field survey.

Required 2025–2026 indicator	Preferred source	Recommended reporting
Total enrolment by grade and sex	School register	Counts and percentages; date of extraction.
Annual promotion, repetition and dropout/exclusion	Official school records using clearly defined categories	Counts, denominators and rates by grade and sex.

Baccalaureate candidates and pass rate	Official school results and national examination records	Candidates, successful candidates, pass rate and comparison period.
Functional computers, internet access and classroom equipment	Physical inventory and infrastructure audit	Number functional, student-to-device ratio, connectivity and downtime.
Teachers trained in digital pedagogy	Staff training records	Number and percentage trained; type and date of training.
Student digital skills and learning-platform use	Validated questionnaire or practical assessment	Instrument, sample, response rate and item-level results.
Student well-being and school climate	Ethically approved questionnaire and counselling records in aggregate	Validated scales, anonymization and clear limitations.

4. Discussion

The original case study highlights a broad understanding of academic achievement: students' learning cannot be separated from emotional well-being, family circumstances, teacher–student relationships and school resources. Its historical reports of anxiety and limited parental monitoring point to issues worth investigating, but inconsistencies in the sample counts mean that the reported percentages should not be treated as reliable prevalence estimates without checking the underlying records.

The historical report also describes limited computer proficiency and little classroom use of digital tools. Such observations align with the broader principle that digital education requires more than equipment: functioning infrastructure, maintenance, teacher training, relevant learning content and a clear pedagogical purpose are all needed. However, no current school audit was provided, so the manuscript cannot conclude that these limitations persist in 2025–2026.

The updated national figures provide context but do not resolve the local evidence gap. National enrolment, institution and teacher totals cannot serve as proxies for school-level outcomes. A valid 2025–2026 analysis must use current administrative records and, if digital skills or psychosocial factors are being studied, a newly administered and documented instrument.

4.1. Recommendations

- Obtain and verify the school's 2025–2026 enrolment, staffing, grade repetition, attendance, dropout/exclusion and baccalaureate results.
- Conduct a dated inventory of computers, projectors, connectivity, electricity reliability and maintenance needs.
- Assess students' digital skills and teachers' digital-pedagogy training using clearly described measures.

- Integrate digital tools into specific learning objectives rather than treating device availability as an outcome in itself.
- Strengthen school counselling, anti-bullying and conflict-resolution measures, while protecting students' privacy.
- Create accessible communication channels between teachers and families and offer practical guidance on supporting learning at home.
- Repeat measurements annually using consistent definitions so that changes over time can be evaluated responsibly.

5. Conclusion

This revised article places the historical case of Taïbi-Kacem Secondary School within the current national education context reported for 2025–2026, while distinguishing verified national totals from historical local observations. The original article raises relevant questions about adolescent well-being, family engagement, classroom climate and digital education, but it does not provide valid current school-level statistics. The central conclusion is therefore methodological as well as educational: a credible assessment of academic achievement in 2025–2026 requires updated school records, a transparent sampling strategy, consistent indicators, ethical safeguards and a documented evaluation of digital infrastructure and pedagogical use.

Once these records are supplied, the historical baseline can be compared with 2025–2026 data to assess change. Until then, no claim should be made that anxiety, repetition, exclusion, digital skills or examination outcomes have improved or worsened at this school.

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