



Educators' digital competence and students' integrity in language education: Roles of self-efficacy and commitment

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Abstract

The landscape of language education is changing rapidly as technologies give learners greater leverage. This investigation explores the relationships between educators' digital competence, students' academic integrity, academic self-efficacy, and academic commitment. It also intends to discover the mediating roles of academic self-efficacy and academic commitment. Using a quantitative, cross-sectional research design and employing a parallel mediation analysis (Model 4), this paper surveyed 334 voluntary participants using a purposive sampling technique from a higher education institution in the Philippines with a structured research tool. The data gathering happened during the first semester of the academic year 2025-2026. Statistical analysis includes descriptive and inferential statistics, using SPSS 23, especially in the Process Macro model analysis. The investigation reveals that educators have a high digital competence. At the same time, students also reveal very high levels of academic integrity. The result also observed high academic self-efficacy and commitment among the students. Additionally, moderate to high correlations among these variables suggest interconnectedness within the educational context. The study also highlights significant indirect effects of digital competence on academic integrity via students' self-efficacy and commitment, underscoring the pivotal roles of students' beliefs and dedication in shaping ethical behavior. These results emphasize the reputation of fostering educators' digital skills and nurturing students' self-belief and commitment to uphold academic integrity in language education, promoting a positive learning environment conducive to academic success and ethical conduct.

Keywords: Academic commitment; Academic integrity; Academic self-efficacy; Educators' digital competence; Higher education institutions; Language education

1. Introduction

In the digital landscape of the 21st century, education systems worldwide are undergoing transformative shifts, particularly in language education. As Dancsa et al. (2023) mentioned, education today must create a new educational paradigm for the future workforce. The fusion of digital technologies in teaching and learning processes has not only reshaped instructional methodologies but also redefined the roles of educators and students alike. Nowadays, teachers are already employing digital technologies in their teaching (Sailer et al., 2021). As digital tools become increasingly integral to language instruction, educators' digital competence emerges as a crucial determinant of educational quality and student outcomes. Markauskaite et al. (2023) argued that the convergence of natural, human, and digital demands everyone to go beyond the great online transition and to reframe how we think about universities, teachers' roles, and their competencies in using digital technologies. Josue et al. (2023) stipulated that educational platforms have revolutionized the teaching-learning process in education. Digital competence encompasses a range of skills and knowledge that enable educators to effectively use technology to enhance learning, support communication, and uphold academic standards. Muammar et al. (2023) noted that digital competence has become a vital issue in academia owing to advances in communication tools.

Concurrently, the issue of academic integrity has gained heightened attention. According to Currie (2023), academic integrity in higher education has been challenged by advances in artificial intelligence. In language education, where assessments often involve written assignments, collaborative tasks, and digital submissions, maintaining academic integrity presents unique challenges. Hence, Balalle and Pannilage (2025) and Cotton et al. (2024) explored the challenges and opportunities of AI in academic integrity, noting a history of plagiarism and misconduct. Technological advancements, while offering new pedagogical opportunities, have also facilitated

academic dishonesty through easy access to translation tools, plagiarism, and contract cheating. Therefore, knowing the variables that influence students' academic integrity in digitally mediated language learning environments is pertinent. This idea was highlighted by Yusuf et al. (2024), who argued that the responsible use of AI tools can enhance learning processes. However, those concerns must be addressed through robust policies and responsive cultural expectations. Also, Yeo (2023) stipulated that as tools become widespread, teachers must find means to integrate them into the teaching process and offer suggestions for classroom practice.

One underexplored area in this context is the indirect influence of educators' digital competence on students' academic integrity. While a digitally competent educator can design more engaging, ethical, and transparent learning experiences, the mechanisms through which this competence translates into student behavior require deeper investigation. As Ostanina et al. (2023) stated in their paper, the role and importance of digital competence for future specialists must be defined. University professors also positioned themselves within the intermediate categories of digital competence (Moreira-Choez et al., 2024). On the other hand, Torres-Hernandez and Gallego-Arrufat (2022) also emphasized that training is essential for students in data protection and privacy, in the search for and use of internet images with authorship screening, and in the ethical and responsible use of technology. Two potential mediators in this relationship are academic self-efficacy and academic commitment. Academic self-efficacy refers to students' beliefs in their ability to perform academic tasks successfully. In the studies by Cinar-Tanriverdi and Karabacak-Celik (2023) and Supervia et al. (2022), academic self-efficacy was used as a mediator. Academic commitment reflects their dedication and emotional investment in their educational goals. Al-Qadri et al. (2024) and Worku and Gita (2024) employed academic commitment as a mediator in their studies. Both constructs are known to influence ethical academic behavior and may be shaped by educators' digital pedagogical practices.

Several local studies have explored key aspects of digital education and student behavior in language education. For example, Ballano et al. (2022) emphasized the critical role of digital competence, particularly in enhancing faculty performance. In terms of academic integrity, San Jose (2022) asserted that students understood its importance; however, Beruin (2022) highlighted that both internal and external factors, along with current educational approaches, can influence academic dishonesty, thereby compromising integrity. Additionally, Mamolo's (2022) quasi-experimental study found a decline in student self-efficacy over six weeks of synchronous online learning. When examining student loyalty, Ong et al. (2023) described it as a bond that fosters institutional commitment. Furthermore, Anog et al. (2024) identified a strong link between school commitment, student satisfaction, and retention.

In language education, where communication, expression, and creativity are central, students' self-efficacy and commitment can significantly shape their learning attitudes and ethical behavior. Educators who effectively leverage digital tools may foster more autonomous, confident, and committed learners, who are less likely to engage in dishonest practices. However, empirical research examining these mediating pathways remains limited, particularly within the context of language learning. Hence, this study aims to examine the intricate relationships and mediating roles of the variables under investigation.

This investigation seeks to fill this gap by exploring the relationships among educators' digital competence, students' academic integrity, and the mediating roles of academic self-efficacy and academic commitment. By investigating these dynamics, the research aims to contribute to an underexplored understanding of how digital pedagogy influences ethical student behavior in the language-learning context. The results are expected to provide valuable insights for educators, policymakers, and curriculum developers aiming to promote academic integrity through digital competence development and student empowerment. At the same time, the study can contribute to the growing literature of language education and its practical application into the digital age and to the language professionals to enhance their skills and capabilities in delivering quality teaching and learning experience to their students.

2. Literature Review

2.1. Educators' Digital Competence in Language Education

The literature reviewed collectively emphasized the critical role of educators' digital competence in language education in higher education. Basantes-Andrade et al. (2022) stress the need to integrate ICT with pedagogical-didactic, critical, and safe criteria. However, Basilotta-Gomez-Pablos et al. (2022) report a prevalent low-to-medium level of digital competence and gaps in specific evaluation competencies, underscoring the need for targeted training for language educators. De Obesso et al. (2023) highlight the positive correlation between professors' digital skills and student learning outcomes, emphasizing the impact of digital competencies on effective teaching practices. Liesa-Orus et al. (2023) and Inamorato dos Santos et al. (2023) note the low competence levels among lecturers and the need for improvement. Dias-Trindade and Albuquerque (2022) advocate for tailored digital competence training for university staff, which is crucial for enhancing language-teaching practices. Guillen-Gamez et al. (2022) identify significant differences in digital competence based on teaching experience, suggesting the need for continuous professional development. Cabero-Almenara et al. (2022) emphasize the vital role of digital competence in higher education and stress the need to address variations in digital skills among participants. Núñez-Canal et al. (2022) connect the digital transformation post-COVID to enhanced student learning outcomes through professors' digital skills, underlining the critical impact of digital competencies on language education in the evolving higher education landscape. These findings collectively highlight the imperative for language educators to develop and enhance their digital competencies to effectively navigate the digital landscape and optimize language teaching practices for student success in contemporary educational settings.

2.2. Students' Academic Integrity and Language Education

The amalgamation of literature reviews on academic integrity and language education reveals crucial insights. Privitera (2024) establishes a link between language proficiency and academic honesty, suggesting that higher proficiency may correspond to a better understanding of Western academic integrity norms. Asare et al. (2024) underline the multifaceted psychological, professional, and contextual factors shaping teachers' academic integrity, including teacher quality, instructional responsibility, institutional expectations, and technology-related practices. Khoo and Kang (2022) shed light on students' self-perception of readiness in various academic skills and the impact on educational engagement and language development. Caliskan and Razi (2025) stress the need for comprehensive training in academic integrity principles, plagiarism prevention, and ethical use of AI tools in academic writing. Hossain (2022) highlights gaps in academic integrity education for first-year students and limitations in their application of integrity principles. Perkins (2023) emphasizes that clarity in attributing AI tool usage is pivotal in determining academic integrity violations. Mulenga and Shilongo (2024) identify academic pressure, time constraints, and knowledge gaps as key factors contributing to plagiarism. Roe et al. (2023) raise concerns about the evolving nature of assistive writing technologies, which are outpacing the development of academic integrity policies. Karkoulou et al. (2025) underscore the dual role of AI tools: enhancing productivity while posing challenges to academic integrity. Sbaifi and Zhao (2022) discuss an increase in students' confidence in academic integrity and the appeal of new educational modules. Sullivan et al. (2023) depict a nuanced landscape of public discourse and university responses regarding academic integrity and technology, emphasizing the need for inclusive discussions and student perspectives in shaping academic integrity policies and practices in the digital age within language education contexts.

2.3. Students' Academic Self-Efficacy in Language Education

The synthesis of literature reviews on academic self-efficacy and its implications for language education underscores its multifaceted role in enhancing student outcomes. Wang et al. (2023) and Pan (2022) reveal that academic self-efficacy mediates students' attitudes toward internet use, perceptions of the educational situation, teacher support, and online learning engagement, and is

positively correlated with English language learning. Al-Qadri et al. (2024) and Bai et al. (2022) highlight the significant impact of academic self-efficacy on academic commitment, class engagement, and motivation, particularly in challenging English learning tasks. Mendoza et al. (2022) and Wu et al. (2022) emphasize students' emerging self-efficacy and their medium-to-high levels of self-efficacy in English learning. Zhang (2024) explores the influence of self-regulation strategies on motivation, self-efficacy, willingness to communicate, and creativity among Chinese EFL learners, underscoring their significant impact on English language learning outcomes. Huang and Wang (2023) demonstrate how academic self-efficacy mediated the relationship between teacher support and academic achievement, while Hitches et al. (2022) and Mao et al. (2023) discuss the differential experiences of stress and self-efficacy levels among female and younger students, as well as the predictive role of academic self-efficacy in university students' life satisfaction through positive relationships and psychological resilience. These findings collectively stress the pivotal part of academic self-efficacy in fostering student motivation, engagement, and success in English language learning contexts, highlighting its importance in shaping positive learning experiences and outcomes.

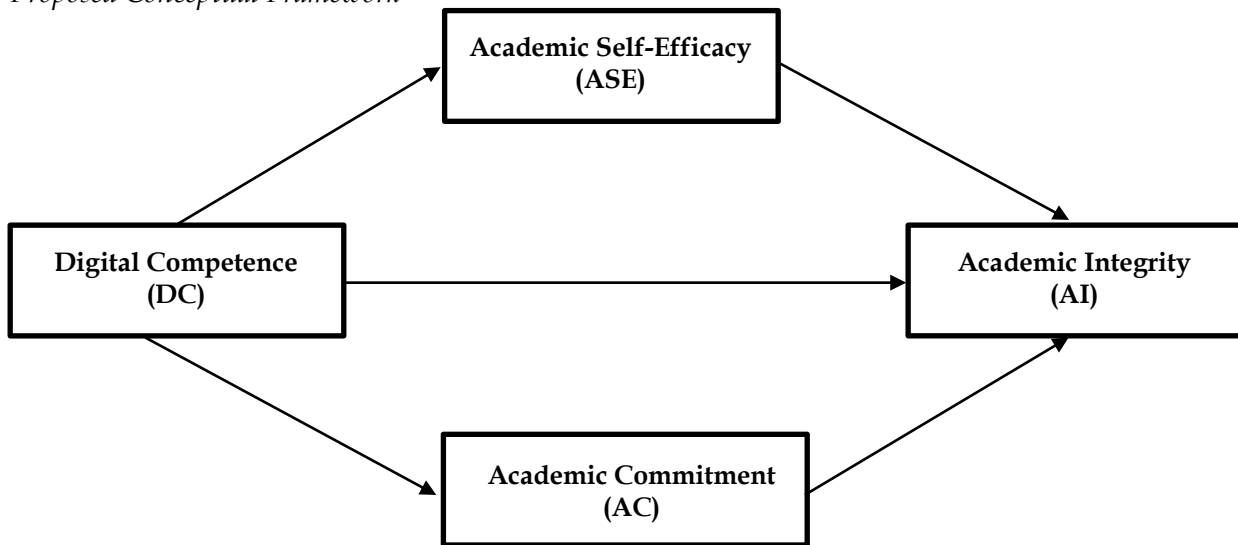
2.4. Students' Academic Commitment in Language Education

The synthesis of literature reviews on educator and student commitment in language education underscores their pivotal roles in fostering positive learning environments and outcomes. Shu (2022) highlights the importance of educator commitment in building emotional connections with schools, enhancing participation, and strengthening school communities. Al-Qadri et al. (2024) and Worku and Gita (2024) emphasize that academic commitment influences student learning outcomes and academic performance, and that it mediates the relationship between academic resilience and achievement. Elom et al. (2023) demonstrate the positive association between students' paramount satisfaction, academic psychological capital, and study commitment, suggesting that satisfaction and psychological factors enhance commitment to learning. Shafqat et al. (2024) and Samadieh et al. (2022) explore the impact of teachers' and students' commitment on academic excellence and university engagement, respectively, emphasizing its role in personality development and cognitive enthusiasm. Dandan et al. (2025) reveal the mediating role of commitment in reducing academic burnout and the significant relationship between leadership, commitment, and student well-being. Yildirim et al. (2024) demonstrate how student commitment mediates the link between life satisfaction and general well-being in higher education settings, highlighting the critical role commitment plays in shaping students' overall educational experiences and well-being in language education contexts.

2.5. The Mediation Framework

Based on the aforementioned literature review, the current investigation hereby presents the proposed mediation framework based on Hayes' Process Macro Model 4 (See Figure 1 below). In the parallel mediation framework, the focus is on the relationship between educators' digital competence and students' academic integrity in language education, with students' academic self-efficacy and academic commitment serving as crucial mediators. Educators' digital competence is posited to influence students' academic integrity, with students' academic self-efficacy mediating by enhancing their belief in their ability to navigate digital tools ethically and academically. Furthermore, academic commitment serves as another mediator, shaping students' dedication to upholding academic integrity standards in digital contexts, thereby fostering a sense of responsibility and engagement in maintaining ethical academic practices. Together, these mediating factors underscore the intricate interplay among educators' digital competence, students' self-belief and commitment, and the promotion of academic integrity in language education settings.

Figure 1
Proposed Conceptual Framework



The study sought answers to the following research questions:

RQ 1) What is the level of digital competence of the educators and the students' academic integrity, academic self-efficacy, and academic commitment in language education?

RQ 2) Are there significant relationships between educators' digital competence and students' academic integrity, self-efficacy, and commitment in language education?

RQ 3) Does educators' digital competence influences students' academic integrity, self-efficacy and commitment in language education?

RQ 4) Do students' academic self-efficacy and commitment influence their academic integrity in language education?

RQ 5) Do students' academic self-efficacy and commitment mediate the relationship between educators' digital competence and students' academic integrity in language education?

3. Methodology

3.1. Research Design

The investigation employed quantitative research, in particular, a cross-sectional design using parallel mediation analysis with the aid of Hayes' Process Macro Model 4 (Igartua & Hayes, 2021) to analyze the unique relationships around the four significant study variables, namely, the educators' digital competence, the students' academic integrity, academic self-efficacy, and academic commitment in language education. Based on the ideas of Wang and Cheng (2020), a cross-sectional design examines the data from a sample population at a single point in time. In the mediation analysis, Process Macro is a bootstrapping statistical tool used to examine the effect of one or more mediating factors on the association between an independent and dependent variable (Igartua & Hayes, 2021). The use of a cross-sectional and mediation approach provided a snapshot of the relationships intended for the investigation's discovery of possible pathways linking educators' digital competence to students' academic integrity, with two mediating variables: students' academic self-efficacy and academic commitment in language education.

3.2. Participants

For the investigation, the population was students from a tertiary institution in Olongapo City, Philippines. They were chosen since the institution involved in the study harbor a good and quality standing in education practice in the city as well as exemplary performance in board examinations and in the ranking of universities and colleges in the region. Using a purposive sampling technique, 334 voluntary students participated in the online survey, which was conducted during the first semester of the 2025-2026 academic year at the participating institution. According to Sim et al., (2021), a minimum required sample size for simple to complex mediation

models ranged from 40 to 1,2010 for bootstrap method. Hence, 334 is considered sufficient for the investigation. To be part of the survey, one must fit the following criteria: a) a regular full-time student, b) enrolled during the academic year, c) a bona fide student of the participating institution, and d) willing to participate in the online survey. On the other hand, one can be excluded if they are: a) an irregular or part-time student, b) not enrolled in the current academic year, c) a student from another institution, or d) not willing to participate in the survey.

Moreover, the data collected from the students was kept strictly confidential and in accordance with ethical principles and protocols to safeguard the information obtained from them. The investigator first secured their consent before data collection, and participation was purely voluntary, as stipulated in the consent form. If a student refused to participate, they were free to do so without any repercussions, harm, or threats.

3.3. Measures

To gather the essential data for the investigation, four research instruments were adopted that particularly measured each variable of the study. For the first instrument, the study used the tool developed by Cattaneo et al. (2022), which assessed teachers' digital competence in vocational education. It has 10 subscales; each composed of 52 items. Each item is answered using a 5-point Likert scale to indicate the level of competence, from Not at all competent (1) to Highly competent (5). Reliability coefficients for the 10 subscales ranged from 0.736 to 0.916, indicating reliable to highly reliable coefficients. As for the second research instrument, the study adopted Ramdani's (2018) work, on which the author constructed and validated an academic integrity scale. It comprises 17 items across five subscales. The scale is based on using Likert guidance continuum from a response of Very Appropriate (5), Appropriate (4), Neutral (3), Inappropriate (2), and Very Inappropriate (1). In terms of reliability, it has an overall Cronbach's alpha of 0.866, indicating high reliability. For the third instrument, the study adopted the Dullas (2018) tool from his study, "The Development of Academic Self-Efficacy Scale for Filipino Junior High School Students." It is comprised of 62 items across four subscales. The items can be answered by a four (4) point Likert scale, (1) Strongly Disagree, (2) Disagree, (3) Agree, and (4) Strongly Agree. It also has an overall Cronbach's alpha coefficient of 0.95, indicating high reliability. Moreover, for the last instrument, the study adopted the Human-Vogel and Rabe (2015) tool to assess academic commitment among university students. The items' scale was rated on a 6-point Likert-type scale (1= strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree). It has five subscales and comprises 30 items, with a Cronbach's alpha coefficient ranging from .680 to .91, which is still considered reliable and acceptable as an instrument.

3.4. Statistical Analysis

The obtained data underwent statistical analyses, including both descriptive and inferential computations. For the descriptive analysis, the study used means and standard deviations to summarize and generalize findings across the four variables: educators' digital competence, students' academic integrity, self-efficacy, and commitment. Additionally, for the inferential analysis, the study first employed Pearson's correlation to examine the interrelationships among the four variables and, for the mediation analysis, used Hayes' PROCESS macro. PROCESS Macro is a widely used statistical tool created by Andrew Hayes for SPSS which simplify the complex mediation, moderation, and conditional process analyses by automating regression-based models, making it easier to estimate direct/ indirect effects and test interactions. Since the study employed a mediation analysis, the said tool is applicable. The IBM Statistical Package for the Social Sciences version 23 assisted with all necessary computations to ensure accurate and reliable data analysis.

3.5. Ethical Consideration

The study observed general ethical standards in the conduct of the investigation. For instance, prior to the actual data gathering, the proponent made sure to observe standard ethical protocol for the participants such as securing their consent first. The proponent made sure that the participants have read all the important matters and context of the investigation. The participants

were also informed that the online survey is purely voluntary and that no harm would be imposed if they choose not to participate. The proponent also observed strict Data Privacy as mandated by the law and confidential measures as prescribed by the institution.

4. Results

The primary purpose of the study is to analyze educators' digital competence, students' academic integrity, academic self-efficacy, and academic commitment in language education. At the same time, it aimed to examine the mediating role of academic self-efficacy and commitment in the relationship between educators' digital competence and students' academic integrity in language education. Table 1 present the study's findings.

Table 1

Mean, Standard Deviation, Correlation, and Cronbach Alpha Results

Variable	Mean	SD	α	1	2	3	4
1) Digital Competence	4.05	0.719	.799	-			
2) Academic Integrity	4.31	0.657	.767	.637**	-		
3) Academic Self-Efficacy	3.43	0.458	.768	.514**	.684**	-	
4) Academic Commitment	3.42	0.498	.791	.472**	.484**	.755**	-

Note: ** $p < .01$

Table 1 presents the mean scores, standard deviations, and correlations for digital competence, academic integrity, academic self-efficacy, and academic commitment among participants. The mean score for digital competence was 4.05, indicating a high level of digital skills, while academic integrity scored a mean of 4.31, reflecting strong adherence to ethical principles. Academic self-efficacy had a mean of 3.43, suggesting a moderate level of self-belief in academic abilities, and academic commitment scored a mean of 3.42, indicating a moderate level of dedication to academic pursuits. The standard deviations for these variables were relatively consistent, ranging from 0.458 to 0.719. The Cronbach's alpha values were notably high, ranging from 0.767 to 0.799, indicating good internal consistency reliability for the measures. Moreover, the significant positive correlations among the variables underscore the interdependence and interconnectedness of digital competence, academic integrity, self-efficacy, and commitment within academic contexts, underscoring their importance for academic success and performance. The correlations among the variables were statistically significant at $p < .01$, with strong positive relationships observed between academic integrity and academic self-efficacy ($r = .637$), academic integrity and academic commitment ($r = .514$), and academic self-efficacy and academic commitment ($r = .684$). These results suggest a significant association between the variables, highlighting the importance of digital competence, academic integrity, self-efficacy, and commitment in academic settings.

In Table 2, the results of the parallel mediation model are presented, showing the path coefficients [β], standard errors [SE], t -values, and 95% confidence intervals for the relationships between digital competence [DC] and academic self-efficacy [ASE], academic integrity [AI], and academic commitment [AC], as well as the relationships between ASE, AC, and AI.

Table 2

Parallel Mediation Model

	β	SE	t	LLCI	ULCI
DC $\rightarrow$ ASE	0.3271	0.0300	10.912**	0.2681	0.3861
DC $\rightarrow$ AI	0.4189	0.0416	10.077**	0.3371	0.5007
DC $\rightarrow$ AC	0.3268	0.0335	9.7497**	0.2609	0.3928
ASE $\rightarrow$ AI	0.5002	0.0563	7.6601**	0.3717	0.6286
AC $\rightarrow$ AI	0.3112	0.0610	5.1006**	0.1912	0.4312

Note. ** $p < .01$; DC= Digital Competence; ASE= Academic Self-efficacy; AI=Academic Integrity; AC= Academic Commitment; Bootstrapping at 5,000 samples.

The paths from digital competence to academic self-efficacy ($\beta = 0.3271$, $SE = 0.0300$, $t = 10.912$, $p < .01$), digital competence to academic integrity ($\beta = 0.4189$, $SE = 0.0416$, $t = 10.077$, $p < .01$), and

digital competence to academic competence ($\beta = 0.3268$, $SE = 0.0335$, $t = 9.7497$, $p < .01$) are all statistically significant, indicating a substantial direct effect of digital competence on these variables. Additionally, the indirect effects of digital competence on academic integrity through academic self-efficacy ($\beta = 0.5002$, $SE = 0.0563$, $t = 7.6601$, $p < .01$) and digital competence on academic integrity through academic competence ($\beta = 0.3112$, $SE = 0.0610$, $t = 5.1006$, $p < .01$) are also significant, suggesting that academic self-efficacy and academic commitment partially mediate the relationship between digital competence and academic integrity. These findings highlight the complex interplay among digital competence, academic self-efficacy, academic integrity, and academic commitment in the educational context, underscoring their importance in shaping academic outcomes and behaviors.

Table 3

Indirect and Total Effects of Digital Competence, Academic Integrity, Academic Self-Efficacy, and Academic Commitment

	<i>Path</i>	β	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>
Via Academic Self-Efficacy	DC→ASE→AI	0.1636	0.0315	0.1054	0.2279
Via Academic Commitment	DC→AC→AI	0.1017	0.0344	0.0465	0.1786

Note. DC= Digital Competence; ASE= Academic Self-efficacy; AI=Academic Integrity; AC= Academic Commitment; Bootstrapping at 5,000 samples.

Table 3 presents the results of the indirect and total effects of academic self-efficacy and academic commitment on the relationship between digital competence and academic integrity. The path from digital competence to academic integrity via academic self-efficacy shows a significant indirect effect with a coefficient of 0.1636 ($SE = 0.0315$, 95% CI [0.1054, 0.2279]), indicating that academic self-efficacy partially mediates the relationship between digital competence and academic integrity. Similarly, the path from digital competence to academic integrity via academic commitment reveals a significant indirect effect with a coefficient of 0.1017 ($SE = 0.0344$, 95% CI [0.0465, 0.1786]), suggesting that academic commitment also partially mediates the association between digital competence and academic integrity. These findings underscore the importance of academic self-efficacy and commitment as mediators in explaining the impact of digital competence on academic integrity, highlighting the intricate relationships among these variables in the educational context.

Table 4

Model Summary

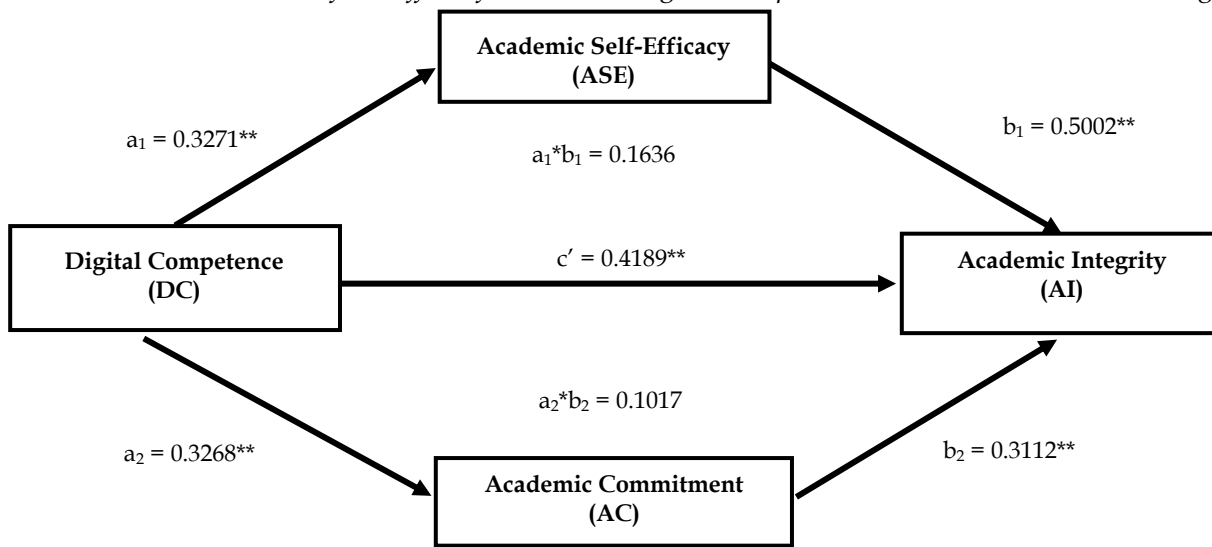
<i>Outcome Variable</i>	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>df</i>
Academic Self-Efficacy	.5138	.2640	119.0775**	1, 332
Academic Commitment	.4718	.2226	95.0557**	1, 332

Note. ** $p < .01$

Table 4 presents the model summary for the outcome variables, academic self-efficacy, and academic commitment. For academic self-efficacy, the model shows a significant relationship ($R = 0.5138$), explaining 26.40% of the variance (R^2). The associated F (1, 332) value was 119.0775, indicating a highly significant model fit ($p < .01$). Similarly, for academic commitment, the model demonstrates a significant relationship ($R = 0.4718$), explaining 22.26% of the variance (R^2) in academic commitment scores. The F (1, 332) for academic commitment is 95.0557, also indicating a highly significant model fit ($p < .01$). These results suggest that the predictors in the model significantly contribute to explaining the variance in both academic self-efficacy and academic commitment among the participants (See Figure 2 for the parallel mediation model).

Figure 2

Parallel Mediation Model of the Effect of Educators' Digital Competence on Students' Academic Integrity



5. Discussion

In this investigation, the primary purpose was to determine the mediating roles of students' academic self-efficacy and academic commitment in the relationship between educators' digital competence and academic integrity in language education. The study found some interesting discoveries that can be used for future reference and knowledge generation.

The research found that educators possess a high level of digital competence, indicating their proficiency in using digital tools and technologies effectively in language education. This finding aligns with the earlier paper by De Obesso et al. (2023), which emphasized that educators' digital training was essential to improving a university's quality performance. This competence suggests that educators are equipped to leverage technology in their instructional practices, thereby facilitating enhanced learning experiences for students and promoting digital literacy in the educational setting. However, Liesa-Orus et al. (2023) also reported that perceptions of ICTs remained positive, but participants' competence was low; hence, these institutional and training challenges must be addressed. Thus, the amount of institutional support can affect academics' perceptions of their digital competence (Inamorato dos Santos et al., 2023). The profound consequences of the COVID crisis for the digital transformation of Higher Education provided evidence for the link between professors' digital skills and their impact on student learning (Núñez-Canal et al., 2022).

Students demonstrated a notably high level of academic integrity, reflecting a strong commitment to ethical behavior and honesty in their academic endeavors within the language education context. However, based on Perkins's (2023) investigation, the potential of AI tools to generate original, coherent text that can evade detection by existing detection methods and by trained academic staff alike has raised a primary academic integrity concern regarding students' use of these tools. Additionally, Mulenga and Shilongo (2024) highlighted the far-reaching consequences of this issue and the pivotal role of prevention and detection strategies, notably plagiarism-detection software such as Turnitin, Grammarly, and Copyscape, in the ongoing battle to preserve academic honesty and the sanctity of scholarly work. This finding underscores the value students place on upholding academic standards and integrity, showcasing a positive academic culture that prioritizes honesty, fairness, and ethical conduct in learning and assessment.

The study revealed that students reported a high level of academic self-efficacy, indicating their belief in their capabilities to succeed academically in language education. This result contrasts with a previous study by Hitches et al. (2022), which found a low level of academic self-efficacy among participants. Hence, support or intervention to improve their belief in their capabilities regarding

academic tasks needs to consider targeting specific groups of students. Carranza Esteban et al. (2022) also emphasized that men have higher academic self-efficacy than women. This self-belief suggests that students feel confident in their abilities to tackle challenges, engage in learning tasks effectively, and achieve academic success, which can positively impact their motivation, perseverance, and overall performance in their language studies.

Students also demonstrated a high level of academic commitment, highlighting their dedication and engagement in their language education pursuits. To support this finding, Samadieh et al. (2022) reported that students' academic engagement should increase in higher education, including their commitment and academic enthusiasm. Thus, cultivating conditions that foster life satisfaction and promote university commitment among students is an essential aspect of enhancing university students' overall well-being (Yildirim et al., 2024). This strong commitment suggests that students are actively involved in their learning, showing persistence, responsibility, and a sense of duty towards their academic responsibilities, which can contribute to their academic progress and success.

The moderate to high correlations among the variables indicate significant relationships between educators' digital competence, students' academic integrity, self-efficacy, and commitment. Gonzalez-Prida et al. (2024) and Javier-Aliaga et al. (2024) reported similar findings, in which digital competence correlated positively with academic self-efficacy. These correlations suggest that these factors are interrelated and influence one another within the language education context, underscoring the interconnected nature of educators' competencies and students' attitudes and behaviors towards learning and academic integrity.

The significant indirect effect from digital competence to academic integrity via academic self-efficacy underscores the role of students' self-belief in mediating the relationship between educators' digital competencies and students' adherence to academic integrity standards. Ibrahim and Aldawsari (2023), on the other hand, employed students' self-efficacy in their study and shared a partial mediation effect. This pathway highlights the importance of students' confidence in their abilities in shaping their ethical decision-making and commitment to academic honesty within language education. Somehow, this finding relates to the past study of Karkoulou et al. (2024), where they underscored the need for higher education institutions to carefully navigate the integration of AI tools like ChatGPT, for it calls for the formulation of clear policies and guidelines for their ethical and responsible use, along with comprehensive support and training.

Similarly, the significant indirect effect of digital competence on academic integrity via academic commitment underscores the influence of students' dedication and engagement on their adherence to academic integrity principles. A previous study by Eshet (2024) stipulates that higher education preparedness for academic integrity during emergencies remains a requirement, and ethical challenges should not be abandoned but instead addressed. This pathway underscores the role of students' commitment to their academic pursuits in fostering a culture of integrity and ethical behavior within the language education setting, showcasing the importance of students' proactive involvement and dedication to upholding academic standards.

6. Conclusions

In conclusion, this research sheds light on key aspects of the educational landscape. This investigation found that educators demonstrated a high level of digital competence, while students demonstrated very high levels of academic integrity, as well as high academic self-efficacy and commitment. The study also highlighted the interconnectedness of these variables, showing moderate to high correlations among them. There were also significant indirect effects from digital competence to academic integrity via academic self-efficacy and academic commitment. It stresses the mediating roles of students' self-belief and dedication in shaping their ethical conduct and commitment to academic standards. These findings underscore the importance of fostering educators' digital competencies and nurturing students' self-efficacy and commitment to upholding academic integrity in language education settings, ultimately contributing to a positive, ethical learning environment that supports students' academic success and growth.

7. Limitations and Future Directions

The current study has offered some valuable insights into the association between the educators' digital competence and the students' academic integrity, self-efficacy, and commitment. However, like any other research, it also has its own limitations and setbacks. First, the use of cross-sectional design, although, the result of the study is quite informative, the research design restricted the ability to infer the causality among the variables involved in the investigation. Longitudinal studies could provide a deeper understanding on how these relationships evolved overtime. Secondly, the investigation relied on self-reported data (survey), which might be subjected to social desirability bias, hence future research should incorporate qualitative techniques such as interview or focus group discussion to enrich the findings and validate the quantitative results. Third, the sampling technique (purposive sampling) and the focus to one higher education institution in the country limited the generalizability of the results. Expanding the sample to include multiple institution across different regions or provinces could offer a broader perspective. Fourth, the use SPSS and Process Macro model, although, it may offer a robust process, it may not capture the more complex nonlinear relationships or contextual nuances. Future studies may employ advanced statistical modelling techniques such as the Structural Equation Modeling (SEM), to explore deeper interdependencies between variables. Lastly, as the digital education landscape continues to evolve, it would be better for future investigations to explore emerging technologies such as AI-based educational tools and their impact on both teaching practices and students' ethical and academic development.

Data availability: Data produced or examined during this study are available from the author upon request.

Declaration of interest: The author declares no conflict of interest.

Ethics statement: Ethics committee approval was not obtained for this study because the institution does not have an established Ethics Review Board at the time of the research and was in the process of forming an Institutional Review Board. Nevertheless, the study was conducted in accordance with fundamental ethical principles. Informed consent was obtained from all participants prior to data collection, and participants were informed of the study's purpose, procedures, and their right to withdraw at any time without penalty. In addition, appropriate measures were taken to ensure the confidentiality and privacy of participant data.

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References

- Al-Qadri, A. H., Mouas, S., Saraa, N., & Boudouaia, A. (2024). Measuring academic self-efficacy and learning outcomes: the mediating role of university English students' academic commitment. *Asian-Pacific Journal of Second and Foreign Language Education*, 9(1), 35. <https://doi.org/10.1186/s40862-024-00253-5>
- Anog, A., De Vera, J. V., & Peteros, E. D. L. (2024). Examining teacher retention through the lens of job satisfaction and commitment in a Philippine private school. *International Journal of Learning, Teaching and Educational Research*, 23(9), 242-264. <https://doi.org/10.26803/ijlter.23.9.13>
- Asare, B., Welcome, N. B., & Arthur, Y. D. (2024). Investigating the impact of classroom management, teacher quality, and mathematics interest on mathematics achievement. *Journal of Pedagogical Sociology and Psychology*, 6(2), 30-46. <https://doi.org/10.33902/jpsp.202426232>
- Bai, B., Nie, Y., & Lee, A. N. (2022). Academic self-efficacy, task importance, and interest: relations with English language learning in an Asian context. *Journal of Multilingual and Multicultural Development*, 43(5), 438-451. <https://doi.org/10.1080/01434632.2020.1746317>
- Balalle, H., & Pannilage, S. (2025). Reassessing academic integrity in the age of AI: A systematic literature review on AI and academic integrity. *Social Sciences & Humanities Open*, 11, 101299. <https://doi.org/10.1016/j.ssaho.2025.101299>
- Ballano, V. O., Mallari, N. T., & Sebastian, R. R. R. (2022). Understanding digital literacy, digital competence, and pedagogical digital competence: implementing online teaching for Filipino tertiary educators during COVID-19. In Ł. Tomczyk, & L. Fedeli (Eds.), *Digital Literacy for Teachers* (pp. 391-409). Springer. https://doi.org/10.1007/978-981-19-1738-7_19

- Basantes-Andrade, A., Casillas-Martin, S., Cabezas-Gonzalez, M., Naranjo-Toro, M., & Guerra-Reyes, F. (2022). Standards of teacher digital competence in higher education: A systematic literature review. *Sustainability*, 14(21), 13983. <https://doi.org/10.3390/su142113983>
- Basilotta-Gómez-Pablos, V., Matarranz, M., Casado-Aranda, L. A., & Otto, A. (2022). Teachers' digital competencies in higher education: a systematic literature review. *International Journal of Educational Technology in Higher Education*, 19(1), 8. <https://doi.org/10.1186/s41239-021-00312-8>
- Beruin, L. (2022). Influencing factors and current approaches to academic dishonesty in the philippines during COVID-19 pandemic: an overview. *Journal of Learning Theory and Methodology*, 3(3), 116-124. <https://doi.org/10.17309/jltm.2022.3.03>
- Cabero-Almenara, J., Gutiérrez-Castillo, J. J., Guillén-Gámez, F. D., & Gaete-Bravo, A. F. (2023). Digital competence of higher education students as a predictor of academic success. *Technology, Knowledge and Learning*, 28(2), 683-702. <https://doi.org/10.1007/s10758-022-09624-8>
- Çalışkan, M. B., & Razi, S. (2025). Investigating Academic Integrity Needs of English Language Learners in Higher Education. *ELT Research Journal*, 14(1), 23-46. <https://doi.org/10.71362/eltrj.1654675>
- Carranza Esteban, R. F., Mamani-Benito, O., Caycho-Rodriguez, T., Lingán-Huamán, S. K., & Ruiz Mamani, P. G. (2022). Psychological distress, anxiety, and academic self-efficacy as predictors of study satisfaction among Peruvian university students during the COVID-19 pandemic. *Frontiers in Psychology*, 13, 809230. <https://doi.org/10.3389/fpsyg.2022.809230>
- Cattaneo, A.A.P., Antonietto, C., & Rauseo, M. (2022). How digitalised are vocational teachers? Assessing digital competence in vocational education and looking at its underlying factors. *Computers & Education*, 176, 104358. <https://doi.org/10.1016/j.compedu.2021.104358>
- Çınar-Tanrıverdi, E., & Karabacak-Çelik, A. (2023). Psychological need satisfaction and academic stress in college students: mediator role of grit and academic self-efficacy. *European Journal of Psychology of Education*, 38(1), 131-160. <https://doi.org/10.1007/s10212-022-00658-1>
- Cotton, D. R., Cotton, P. A., & Shipway, J. R. (2024). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in education and teaching international*, 61(2), 228-239. <https://doi.org/10.1080/14703297.2023.2190148>
- Currie, G. M. (2023, September). Academic integrity and artificial intelligence: is ChatGPT hype, hero, or heresy? *Seminars in Nuclear Medicine*, 53(5), 719-730. <https://doi.org/10.1053/j.semnuclmed.2023.04.008>
- Dancsa, D., Štempeľová, I., Takáč, O., & Annuš, N. (2023). Digital tools in education. *International Journal of Advanced Natural Sciences and Engineering Researches*, 7(4), 289-294. <https://doi.org/10.59287/ijanser.717>
- Dandan, X., Qiumei, W., & Dongdong, W. (2025). A study on the relationships among teacher leadership and medical students' professional commitment and academic burnout. *BMC Medical Education*, 25(1), 241. <https://doi.org/10.1186/s12909-025-06689-8>
- de Obesso, M. D. L. M., Núñez-Canal, M., & Pérez-Rivero, C. A. (2023). How do students perceive educators' digital competence in higher education? *Technological Forecasting and Social Change*, 188, 122284. <https://doi.org/10.1016/j.techfore.2022.122284>
- Dias-Trindade, S., & Albuquerque, C. (2022). University teachers' digital competence: A case study from Portugal. *Social Sciences*, 11(10), 481. <https://doi.org/10.3390/socsci11100481>
- Dullas, A.R. (2018). The development of academic self-efficacy scale for Filipino junior high school students. *Frontiers in Education*, 3, 19. <https://doi.org/10.3389/educ.2018.00019>
- Elom, C. O., Okolie, U. C., Abonyi, S. O., Ekeh, D. O., & Umoke, C. C. (2023). Students' satisfaction with their academic majors and study commitment: The mediating role of academic psychological capital. *Psychology in the Schools*, 60(8), 2919-2931. <https://doi.org/10.1002/pits.22896>
- Eshet, Y. (2024). Academic integrity crisis: Exploring undergraduates' learning motivation and personality traits over five years. *Education Sciences*, 14(9), 986. <https://doi.org/10.3390/educsci14090986>
- González-Prida, V., Chuquin-Berrios, J. G., Moreno-Menéndez, F. M., Sandoval-Trigos, J. C., Pariona-Amaya, D., & Gómez-Bernaola, K. O. (2024). Digital competencies as predictors of academic self-efficacy: Correlations and implications for educational development. *Societies*, 14(11), 226. <https://doi.org/10.3390/soc14110226>
- Guillén-Gámez, F. D., Cabero-Almenara, J., Llorente-Cejudo, C., & Palacios-Rodríguez, A. (2022). Differential analysis of the years of experience of higher education teachers, their digital competence, and use of digital resources: Comparative research methods. *Technology, Knowledge and Learning*, 27(4), 1193-1213. <https://doi.org/10.1007/s10758-021-09531-4>
- Hitches, E., Woodcock, S., & Ehrich, J. (2022). Building self-efficacy without letting stress knock it down: Stress and academic self-efficacy of university students. *International Journal of Educational Research Open*, 3, 100124. <https://doi.org/10.1016/j.ijedro.2022.100124>

- Hossain, Z. (2022). University freshmen recollect their academic integrity literacy experience during their K-12 years: Results of an empirical study. *International Journal for Educational Integrity*, 18(1), 4. <https://doi.org/10.1007/s40979-021-00096-4>
- Huang, L., & Wang, D. (2023). Teacher support, academic self-efficacy, student engagement, and academic achievement in emergency online learning. *Behavioral Sciences*, 13(9), 704. <https://doi.org/10.3390/bs13090704>
- Human-Vogel, S., & Rabe, P. (2015). Measuring self-differentiation and academic commitment in University students: A case study of education and engineering students. *South African Journal of Psychology*, 45(1), 60–70. <https://doi.org/10.1177/0081246314548808>
- Ibrahim, R. K., & Aldawsari, A. N. (2023). Relationship between digital capabilities and academic performance: the mediating effect of self-efficacy. *BMC nursing*, 22(1), 434. <https://doi.org/10.1186/s12912-023-01593-2>
- Igartua, J. J., & Hayes, A. F. (2021). Mediation, moderation, and conditional process analysis: Concepts, computations, and some common confusions. *The Spanish Journal of Psychology*, 24, e49. <https://doi.org/10.1017/SJP.2021.46>
- Inamorato dos Santos, A., Chinkes, E., Carvalho, M. A., Solórzano, C. M., & Marroni, L. S. (2023). The digital competence of academics in higher education: is the glass half empty or half full? *International Journal of Educational Technology in Higher Education*, 20(1), 9. <https://doi.org/10.1186/s41239-022-00376-0>
- Javier-Aliaga, D., Silva Neyra, O. R., Calizaya-Milla, Y. E., & Saintila, J. (2024). Academic self-efficacy and digital competence in a sample of university students. *Contemporary Educational Technology*, 16(4), ep540. <https://doi.org/10.30935/cedtech/15601>
- Josué, A., Bedoya-Flores, M. C., Mosquera-Quíñonez, E. F., Mesías-Simisterra, Á. E., & Bautista-Sánchez, J. V. (2023). Educational Platforms: Digital Tools for the teaching-learning process in education. *Ibero-American Journal of Education & Society Research*, 3(1), 259-263. <https://doi.org/10.56183/iberoeds.v3i1.626>
- Karkoulia, S., Sayegh, N., & Sayegh, N. (2025). ChatGPT unveiled: Understanding perceptions of academic integrity in higher education-A qualitative approach. *Journal of Academic Ethics*, 23(3), 1171–1188. <https://doi.org/10.1007/s10805-024-09543-6>
- Khoo, E., & Kang, S. (2022). Proactive learner empowerment: towards a transformative academic integrity approach for English language learners. *International Journal for Educational Integrity*, 18(1), 24. <https://doi.org/10.1007/s40979-022-00111-2>
- Liesa-Orus, M., Lozano Blasco, R., & Arce-Romeral, L. (2023). Digital competence in university lecturers: A meta-analysis of teaching challenges. *Education Sciences*, 13(5), 508. <https://doi.org/10.3390/educsci13050508>
- Mamolo, L. A. (2022). Online learning and students' mathematics motivation, self-efficacy, and anxiety in the "new normal". *Education Research International*, 2022(1), 9439634. <https://doi.org/10.1155/2022/9439634>
- Mao, Y., Xie, M., Li, M., Gu, C., Chen, Y., Zhang, Z., & Peng, C. (2023). Promoting academic self-efficacy, positive relationships, and psychological resilience for Chinese university students' life satisfaction. *Educational Psychology*, 43(1), 78-97. <https://doi.org/10.1080/01443410.2022.2138830>
- Markauskaite, L., Carvalho, L., & Fawns, T. (2023). The role of teachers in a sustainable university: From digital competencies to postdigital capabilities. *Educational Technology Research and Development*, 71(1), 181–198. <https://doi.org/10.1007/s11423-023-10199-z>
- Mendoza, L., Lehtonen, T., Lindblom-Ylänne, S., & Hyytinen, H. (2022). Exploring first-year university students' learning journals: Conceptions of second language self-concept and self-efficacy for academic writing. *System*, 106, 102759. <https://doi.org/10.1016/j.system.2022.102759>
- Moreira-Choez, J. S., Zambrano-Acosta, J. M., & López-Padrón, A. (2024). Digital teaching competence of higher education professors: self-perception study in an Ecuadorian university. *F1000Research*, 12, 1484. <https://doi.org/10.12688/f1000research.139064.2>
- Muammar, S., Hashim, K. F. B., & Panthakkan, A. (2023). Evaluation of digital competence level among educators in UAE higher education institutions using digital competence of educators (DigComEdu) framework. *Education and information technologies*, 28(3), 2485–2508. <https://doi.org/10.1007/s10639-022-11296-x>
- Mulenga, R., & Shilongo, H. (2024). Academic Integrity in Higher Education: Understanding and Addressing Plagiarism. *Acta Pedagogica Asiana*, 3(1), 30–43. <https://doi.org/10.53623/apga.v3i1.337>
- Núñez-Canal, M., de Obesso, M. D. L. M., & Pérez-Rivero, C. A. (2022). New challenges in higher education: A study of the digital competence of educators in COVID times. *Technological Forecasting and Social Change*, 174, 121270. <https://doi.org/10.1016/j.techfore.2021.121270>
- Ong, A. K. S., Prasetyo, Y. T., Dangaran, V. C. C., Gudez, M. A. D., Juanier, J. I. M., Paulite, G. A. D., Yambot,

- R. X. R., Persada, S. F. P., Nadlifatin, R., & Ayuwati, I. D. (2023). Determination of loyalty among high school students to retain in the same university for higher education: An integration of Self-Determination Theory and Extended Theory of Planned Behavior. *Plos One*, 18(11), e0286185. <https://doi.org/10.1371/journal.pone.0286185>
- Ostanina, A., Bazyl, O., Tsviakh, O., & Dovzhuk, N. (2023). Formation of digital competence in higher education students as a basis for the transformation of education of the future. *Futurity Education*, 3(1), 139-149. <https://doi.org/10.57125/FED.2023.25.03.10>
- Pan, X. (2022). Exploring the multidimensional relationships between educational situation perception, teacher support, online learning engagement, and academic self-efficacy in technology-based language learning. *Frontiers in Psychology*, 13, 1000069. <https://doi.org/10.3389/fpsyg.2022.1000069>
- Perkins, M. (2023). Academic Integrity considerations of AI Large Language Models in the post-pandemic era: ChatGPT and beyond. *Journal of University Teaching and Learning Practice*, 20(2), 1-24. <https://doi.org/10.53761/1.20.02.07>
- Privitera, A. J. (2024). Is there a foreign language effect on academic integrity? *Higher Education*, 88(2), 609-626. <https://doi.org/10.1007/s10734-023-01134-5>
- Ramdani, Z. (2018). Construction of academic integrity scale. *International Journal of Research Studies in Psychology*, 7(1), 87-97. <https://doi.org/10.5861/ijrsp.2018.3003>
- Roe, J., Renandya, W. A., & Jacobs, G. M. (2023). A review of AI-powered writing tools and their implications for academic integrity in the language classroom. *Journal of English and Applied Linguistics*, 2(1), 3. <https://doi.org/10.59588/2961-3094.1035>
- Sailer, M., Murböck, J., & Fischer, F. (2021). Digital learning in schools: What does it take beyond digital technology?. *Teaching and Teacher Education*, 103, 103346. <https://doi.org/10.1016/j.tate.2021.103346>
- Samadieh, H., Sadri, M., & Akbarimoqadam Kakhki, M. (2022). The mediating role of Agentic engagement in the relationship between academic enthusiasm and commitment to the university. *Rooyesh-e-Ravanshenasi Journal*, 10(12), 191-202. <http://frooyesh.ir/article-1-3140-en.html>
- San Jose, A.E. (2022). Academic Integrity of Students during the COVID-19 Pandemic: A Mixed Method Analysis. (2022). *European Journal of Education and Pedagogy*, 3(4), 97-103. <https://doi.org/10.24018/ejedu.2022.3.4.400>
- Sbaffi, L., & Zhao, X. (2022). Evaluating a pedagogical approach to promoting academic integrity in higher education: An online induction program. *Frontiers in Psychology*, 13, 1009305. <https://doi.org/10.3389/fpsyg.2022.1009305>
- Shafqat, S., Zafar, J. M., & Bhadroo, M. H. (2024). Identification of university teachers' academic commitment in personality development towards academic excellence. *Annals of Human and Social Sciences*, 5(1), 502-509. [https://doi.org/10.35484/ahss.2024\(5-1\)45](https://doi.org/10.35484/ahss.2024(5-1)45)
- Shu, K. (2022). Teachers' commitment and self-efficacy as predictors of work engagement and well-being. *Frontiers in Psychology*, 13, 850204. <https://doi.org/10.3389/fpsyg.2022.850204>
- Sim, M., Kim, S. Y., & Suh, Y. (2022). Sample Size Requirements for Simple and Complex Mediation Models. *Educational and psychological measurement*, 82(1), 76-106. <https://doi.org/10.1177/00131644211003261>
- Sullivan, M., Kelly, A., & McLaughlan, P. (2023). ChatGPT in higher education: Considerations for academic integrity and student learning. *Journal of Applied Learning & Teaching*, 6(1), 31-40. <https://doi.org/10.37074/jalt.2023.6.1.17>
- Supervía, U. P., Bordás, S. C., & Robres, Q. A. (2022). The mediating role of self-efficacy in the relationship between resilience and academic performance in adolescence. *Learning and Motivation*, 78, 101814. <https://doi.org/10.1016/j.lmot.2022.101814>
- Torres-Hernández, N., & Gallego-Arrufat, M. J. (2022). Indicators to assess preservice teachers' digital competence in security: A systematic review. *Education and information technologies*, 27(6), 8583-8602. <https://doi.org/10.1007/s10639-022-10978-w>
- Wang, Y., Yasmin, F., & Akbar, A. (2023). Impact of the internet on English language learning among university students: mediating role of academic self-efficacy. *Frontiers in Psychology*, 14, 1184185. <https://doi.org/10.3389/fpsyg.2023.1184185>
- Wang, X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, 158(1), S65-S71. <https://doi.org/10.1016/j.chest.2020.03.012>
- Worku, B.N., & Gita, D. U. (2024). Students' academic culture: the mediating role of academic commitment in the relationship between academic resilience and academic performance of university students. *Cogent Education*, 11(1), 2377004. <https://doi.org/10.1080/2331186X.2024.2377004>
- Wu, X., Yang, H., Liu, J., & Liu, Z. (2022). English use anxiety, motivation, self-efficacy, and their predictive

- effects on Chinese top university students' English achievements. *Frontiers in Psychology*, 13, 953600. <https://doi.org/10.3389/fpsyg.2022.953600>
- Yeo, M. A. (2023). Academic integrity in the age of Artificial Intelligence (AI) authoring apps. *Tesol Journal*, 14(3), e716. <https://doi.org/10.1002/tesj.716>
- Yıldırım, M., Olcay, Z. F., Akin, G. C., & Taşdemir, D. Ç. (2024). Exploring the mediating role of student commitment in the relationship between life satisfaction and general well-being in university students. *Environment and Social Psychology*, 9(5), 2177. <https://doi.org/10.54517/esp.v9i5.2177>
- Yusuf, A., Pervin, N., & Román-González, M. (2024). Generative AI and the future of higher education: a threat to academic integrity or reformation? Evidence from multicultural perspectives. *International Journal of Educational Technology in Higher Education*, 21(1), 21. <https://doi.org/10.1186/s41239-024-00453-6>
- Zhang, T. (2024). Effects of self-regulation strategies on EFL learners' language learning motivation, willingness to communication, self-efficacy, and creativity. *BMC psychology*, 12(1), 75. <https://doi.org/10.1186/s40359-024-01567-2>