

Artificial Intelligence in Latin American Universities: Emerging Challenges

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Abstract. The integration of artificial intelligence in Latin American universities has raised ethical challenges among faculty members. Understanding and addressing these challenges is crucial for a successful implementation of artificial intelligence in the educational context. This study was conducted using a descriptive-explanatory quantitative approach, incorporating the opinions of 665 university professors from Latin America. Data was collected through surveys, with a Cronbach's alpha coefficient of 0.91. Analysis of the data revealed a range of ethical concerns among the educators regarding the utilization of artificial intelligence in education. These concerns vary in magnitude and nature, but they reflect a clear need to address and understand the ethical implications of artificial intelligence in the educational sphere. The adoption of artificial intelligence in Latin American higher education has raised ethical concerns. These concerns, while valid, should not be insurmountable barriers but points of reflection to optimize the integration of artificial intelligence in education. The study provides an essential overview for institutions, educators, and developers looking to implement AI in higher education, emphasizing the urgency of addressing these ethical challenges in an anticipatory and strategic manner.

Keywords. Artificial intelligence, ethical challenges, higher education, teacher perceptions, educational technology, pedagogical innovation.

1 Introduction

The constant emergence and evolution of technology in our daily lives have shaped a new reality teeming with both opportunities and challenges. Within this technological landscape, artificial intelligence (AI) has established itself as one of the most significant and transformative advancements of the 21st century.

AI has emerged as a transformative force in countless sectors, redefining the way we interact with technology and ourselves. Higher education, recognized as an essential cornerstone in the development of future leaders and professionals, has not been immune to this phenomenon, especially in the Latin American region [26].

Advanced tools, such as ChatGPT, appear to be the promising future of education [29-28]. However, their integration prompts important inquiries concerning ethics, discrimination, and privacy [25].

While there is positive evidence, such as the improvement in student motivation and performance through AIBO robots [3], the implementation of AI varies from one country to

another, with Argentina and Brazil leading the forefront [5].

The recent COVID-19 pandemic has catalyzed virtual teaching, enabling the use of AI to assess students' emotional states in real-time and make pedagogical adjustments [21-34]. Additionally, research focused on specific domains, including law [46-48], and advanced techniques like Deep Learning, have showcased AI's ability to predict academic success [49].

However, with these advancements, concerns about ethical responsibility [64], security [18], and gender biases [2] arise. Taheri and Aguayo [58] also propose a reevaluation of educational paradigms. Vivanco et al. [67] highlight innovations in AI, while Villamor [66] and Rosano and Corona [54] call for accountability in automated decision making.

In this ever-evolving landscape, a significant gap remains in understanding the ethical challenges of AI from the perspective of university faculty. Gómez [26] and Leal [35] in their study seek to fill that void, exploring and unraveling the ethical implications associated with the use of tools like ChatGPT in higher education.

Beyond investigating its application in specific areas such as journalism, mathematics, and other professional fields, this research endeavors to furnish a framework for an ethical and effective implementation of AI in higher education. Higher education serves as a pivotal force in shaping future leaders and professionals.

In this scenario, the integration of AI promises to revolutionize teaching, personalize learning, and enhance administrative efficiency. However, along with these advantages, significant ethical challenges arise, including concerns about privacy, bias, and discrimination.

It is imperative to understand and address these challenges during the integration of AI into the educational domain. By doing so, we not only optimize the educational experience with advanced technology but also ensure that it is carried out in alignment with our ethical and social values.

Therefore, it is paramount to scrutinize AI in education, especially tools like ChatGPT, from an ethical and pedagogical perspective.

1.1 Artificial Intelligence in Higher Education

The Emergence of Artificial Intelligence (AI) has redefined the contemporary educational landscape. Amid the COVID-19 pandemic, the relevance of AI in the educational sphere solidified, assisting and enhancing learning in challenging contexts [56]. Notably, emerging technological tools such as Augmented Reality and Virtual Reality have transcended classrooms, finding relevance in cultural spaces like museums, offering a new dimension to the interpretation and understanding of heritage [13].

In language teaching and tutoring, natural language processing tools like ChatGPT are emerging as pioneers, expanding the spectrum of pedagogical possibilities [14]. González [27] introduces the concept of neurodidactics, a field that bridges neuroscience and education. This convergence underscores how AI, through its capacity to interpret and adapt to individual needs, has the potential to democratize and personalize the learning experience.

However, with great advances come great responsibilities. UNESCO [62], while acknowledging the influence of AI, emphasizes the importance of personalized and efficient learning but also warns about inherent challenges such as biases and ethical implementation. Zhai [70] expands on this argument, asserting that tools like ChatGPT, though promising, require high-quality materials and well-prepared educators.

García et al. [24] corroborate this perspective by noting that the quality of AI-backed virtual education can match or even surpass traditional education. Finally, in the university sector, AI has emerged as a versatile and pervasive tool. For example, in journalism, it is being used to train students in crucial skills [26].

Modern pedagogical techniques, such as Problem-Based Learning (PBL) and gamification, have been revolutionized with the inclusion of AI, demonstrating the adaptability and versatility of this technology in various educational fields [45, 35, 69].

1.2 ChatGPT in Higher Education

ChatGPT, a language model developed by OpenAI and made available as open access, was launched

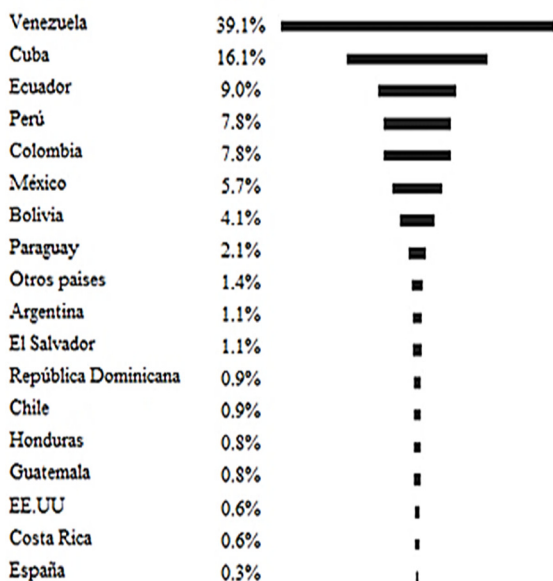


Fig. 2. Participation of teachers from Latin America and the Caribbean

suggests, identifying students in vulnerable situations early and enabling precise and timely interventions.

The educational landscape also expands into a holistic and continuous perspective. As noted by Romero and Romero [53], García [23], and Torres and Yucra [61], there is an expectation of interdisciplinary convergence, where AI acts as a bridge between disciplines, fostering continuous education that adapts to changes and demands in the professional and social environment.

On the other hand, emerging tools on the horizon, such as brain-computer interfaces mentioned by Valerdi et al. [63], could not only change but revolutionize our relationship with learning, allowing us to interact in previously unimaginable ways with educational systems.

Although the transformation promised by AI in higher education holds great promise, it is essential to maintain ongoing research and constant adaptation to these innovations.

In doing so, we ensure not only the effective implementation of these tools but also that the guiding principle remains high-quality and relevant education for the benefit of future generations.

1.5 Ethical Perspective of AI

The integration of AI in the field of education, particularly in higher education, has opened up a promising landscape in terms of personalized learning and administrative efficiency. However, its adoption has also triggered a series of ethical challenges. Concerns about data privacy, algorithmic bias, and the autonomy of the learning process have emerged strongly.

In this context, it is imperative that university institutions, when adopting AI-based solutions, balance technological innovation with a strong ethical commitment, thus ensuring an education that respects and promotes the rights and dignity of all involved.

Nuveo, an emerging Brazilian startup, highlights the need for strong digital ethics in its implementation of facial recognition technologies in the educational domain [7]. In parallel, Bujosa [9] and De Asis [16] concur on the need to establish ethical guidelines for the integration of AI in the legal domain, emphasizing the urgency of legislating ethical-legal principles.

Conversely, within the healthcare sector, AI has demonstrated revolutionary potential, from diagnosing heart diseases to managing biomedical data [20]. However, its rapid deployment in exigent scenarios, such as pandemics, highlights the imperative need for an ethical framework [12].

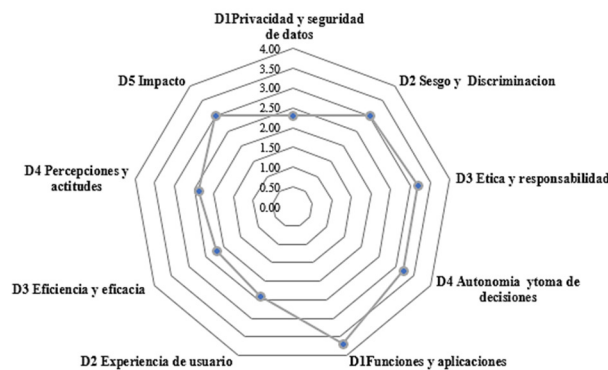
The interaction between humans and artificial intelligence has generated substantial discussions. In this regard, Leal [35] and Fernández [19] reaffirm the need to focus AI toward ethics and humanism, highlighting concepts such as transhumanism, bioethics, and the Charter of Fundamental Rights. García [25] and Hueso [31] emphasize the urgency of ethical governance, with the European Union striving to lead in this direction [33, 32].

Finally, literature, such as 'Más (que) humanos,' explores the potential role of AI in enhancing our ethical capacity, a topic subjected to rigorous analysis in reviews like that of Rueda [55].

With this background, a fundamental question arises: What are the ethical challenges associated with the use of ChatGPT from the perspective of university professors in Latin America? To answer this question, this study has the general objective of analyzing the ethical challenges associated with

Table 1. Average ethical challenges regarding the use of ChatGPT in higher education in Latin America

		N	Mín.	Max.	Half	Standard Deviation	Variance
Ethical Challenges	D1 Privacy and data security	665	1	4	2.32	1.056	1.115
	D2 Bias and Discrimination	665	1	5	3.00	1.431	2.047
	D3 Ethics and responsibility	665	1	4	3.18	1.014	1.029
	D4 Autonomy and decision making	665	1	5	3.21	1.496	2.238
Use of ChatGPT	D1 Functions and applications	665	1	5	3.67	1.405	1.974
	D2 User experience	665	1	3	2.39	0.726	0.527
	D3 Efficiency and efficacy	665	1	3	2.21	0.803	0.645
	D4 Perceptions and attitudes	665	1	3	2.38	0.728	0.529
	D5 Impact	665	1	4	3.03	1.062	1.129

**Fig. 3.** Mean of ethical challenges regarding the use of ChatGPT in higher education in Latin America

the use of ChatGPT from the perspective of university professors in Latin America.

Specifically, four specific objectives were formulated, aiming to determine data privacy and security, examine bias and discrimination in use, identify ethical concerns and responsibilities related to its use, and finally, determine autonomy and ethical decision-making in the classroom.

These research endeavors aim to provide an in-depth perspective on the role of ChatGPT in education and serve as a guide for future technological adaptations and implementations in the pedagogical field.

The justification for this study stems from the urgent necessity to understand the emergence of Artificial Intelligence in higher education, which has aroused both expectations and reservations. While tools like ChatGPT offer innovative pedagogical possibilities, ethical dilemmas also arise, from data privacy to potential biases in teaching.

As Latin America is rapidly adopting these innovations, it is crucial to understand how university professors in the region perceive and address these ethical challenges. Despite its relevance, there is a gap in the literature regarding this regional and practical perspective.

This research seeks to bridge that gap by providing insights that can guide educational policies and practices. Ultimately, the goal is to ensure that the implementation of AI is conducted ethically and in line with educational values. In a world where technology and ethics converge, this research holds significant importance for education adapted to the 21st century.

2 Methodology

2.1 Type and Design

The methodology implemented in this research sought to provide a comprehensive overview of the

Table 2. Level of knowledge of ChatGPT use by teachers' age and gender

		Knowledge level about ChatGPT					
		Hight	Medium	Under	No use	Total	
Age	20 - 29 años	N	3	3	10	17	33
		%	0.5%	0.5%	1.5%	2.6%	5.0%
	30 - 39 años	N	18	16	45	68	147
		%	2.7%	2.4%	6.8%	10.2%	22.1%
	40 - 49 años	N	20	28	55	105	208
		%	3.0%	4.2%	8.3%	15.8%	31.3%
	50 - 59 años	N	26	26	77	90	219
		%	3.9%	3.9%	11.6%	13.5%	32.9%
	Más de 60 años	N	4	8	19	27	58
		%	0.6%	1.2%	2.0%	4.1%	8.7%
Total	N	71	81	206	307	665	
	%	10.7%	12.2%	31.0%	46.2%	100.0%	
Sex	Masculine	N	45	49	141	215	450
		%	6.8%	7.4%	21.2%	32.3%	67.7%
	Femenine	N	26	32	65	92	215
		%	3.9%	4.8%	9.8%	13.8%	32.3%
	Total	N	71	81	206	307	665
		%	10.7%	12.2%	31.0%	46.2%	100.0%

ethical challenges faced by university teachers in Latin America, particularly in the area of Artificial Intelligence (AI) integration in the educational process.

The robust nature of the methodology used lays the foundation for future research and recommendations in this domain. The research adopted a mixed approach [30], amalgamating qualitative and quantitative techniques for data collection and analysis.

This combination resulted in a richer and more complete interpretation of the phenomenon under study. With a descriptive-explanatory scope, [6] the research not only detailed the inherent characteristics of the sample, but also sought to understand and explain the relationships between the different variables. A non-experimental design was selected for the study, allowing the subjects to be observed in their natural context, without any external interventions.

2.2 Subjects

The population [11] for this study included university teachers belonging to the Latin American and Caribbean Network of Scientific

Researchers (RED ICALC), with a specific inclusion of teachers from Cuba and the United States.

From this large population, a sample of 665 teachers was selected, ranging in age (from 20 to over 60 years old) and gender.

The survey reveals a predominance of teachers from Venezuela (39.1%) and Cuba (16.1%). Although Colombia and Peru have similar shares, Ecuador is slightly ahead. Despite the influence of Spain and the United States, their presence is low, with Mexico and Bolivia contributing around 5%.

Other Latin American countries range between 1% and 2.1%. A stratified probability sampling method was adopted to ensure fair and equitable representation, based on illegibility criteria such as gender, type of institution and employment status [41].

2.3 Instruments

The questionnaire was used as the primary instrument for data collection, focusing on the acquisition of quantitative data pertaining to the ethical challenges linked to AI in education. Semi-structured interview guides [11] were used to

Table 3. Ethical challenges regarding the use of ChatGPT in university education

		Use of ChatGPT							
		Efficiency of learning		Reliability of Information		Integration with Other Educational Resources		Total	
		N	%	N	%	N	%	N	%
Ethical Challenges	Concern about Bias and Discrimination	19	15.7%	21	12.7%	28	9.8%	78	11.7%
	Need for Regular Ethical Evaluations	30	24.8%	37	22.4%	74	25.8%	168	25.3%
	User in Ethical Use	40	33.1%	63	38.2%	113	39.4%	251	37.7%
	Regulation and Guidelines	32	26.4%	44	26.7%	72	25.1%	168	25.3%
	Subtotal	121	100.0%	165	100.0%	287	100.0%	665	100.0%

capture qualitative data, providing a detailed understanding of teachers' perspectives and experiences of AI in education [4].

The instruments were subjected to a validation process by experts in the field (11), ensuring high validity. Reliability was obtained through Cronbach's alpha coefficient, with values of 0.89 and 0.91 respectively. To facilitate data collection process, the digital tool Google Forms was utilized.

Data were analyzed using descriptive statistics, highlighting measures of central tendency (mean and median) and dispersion (variance and standard deviation). These metrics provided an overview of trends, such as average age of teachers, gender distribution and type of institution. In addition, inferential statistics were used to infer about the total population from the data collected from the objectives.

3 Results and Discussion

Digital tools, in particular ChatGPT, have revolutionized the way teaching and learning takes place in the classroom. However, with the power of these tools come ethical responsibilities and

concerns. These concerns not only have the potential to shape educators' perceptions of the tool, but can also influence the way they employ it.

In Latin American university education, ChatGPT shows an ambivalent picture. Although there are concerns about privacy, with a mean of 2.32 on a scale of 1-4, teachers remain neutral about bias, with an average of 3 on a scale of 1-5.

The ethics of the tool are rated positively (3.18/4), but there is variability in opinions about its autonomy (3.21/5, standard deviation 1.496). Despite these reservations, teachers value the educational experience facilitated by ChatGPT, and their overall perception is favorable, predicting a promising future for the tool in academia.

In today's digital age, technological tools are reshaping the way we educate and learn. One such tool, ChatGPT, has gained prominence in the educational sphere, being hailed for its ability to interact in real time and provide answers based on a vast knowledge base.

However, with these emerging opportunities also come responsibilities and challenges. From the perspective of university teachers in Latin America, there is a need to analyze the ethical issues associated with its use.

Table 4. Data privacy regarding the use of ChatGPT in university education

		Concerns about bias and discrimination		Need for regular ethical evaluations		User perception of ethical usage		Regulation and ethical use guidelines		Total	
		N	%	N	%	N	%	N	%	N	%
D1: Data Privacy	Level of security	68	87.2%	65	38.7%	41	16.3%	0	0.0%	174	26.2%
	Level of concern for privacy	9	11.5%	85	50.6%	119	47.4%	17	10.1%	230	34.6%
	Level of user control	1	1.3%	16	9.5%	80	31.9%	40	23.8%	137	20.6%
	Security and privacy issues	0	0.0%	2	1.2%	11	4.4%	111	66.1%	124	18.6%
	Total	78	100.0%	168	100.0%	251	100.0%	168	100.0%	665	100.0%

In the study we present, we address crucial issues related to data privacy and security, explore possible biases and discriminations, identify the main ethical concerns, and examine how these tools impact autonomy and decision-making in the context of the university classroom.

Through this analysis, we aim to provide a comprehensive and critical view of the role of ChatGPT in Latin American higher education. In relation to Latin American teachers' knowledge levels regarding the use of ChatGPT in university teaching, interesting patterns emerge concerning gender and age.

Regarding gender, it becomes evident that male teachers exhibit a higher level of familiarity regarding the use of ChatGPT in university teaching compared to female teachers. 67.7% of male teachers possess some level of knowledge, while only 32.3% of female teachers have some level of knowledge.

In terms of age, a prevalent trend of higher knowledge can be observed among younger teachers. Those aged 20-29 exhibit a notably higher level of knowledge (3.1%) compared to teachers over 60 (0.6%).

Within the middle group, ages 30-59 demonstrate varying levels of knowledge, but in general, younger teachers tend to be more familiar with the use of ChatGPT in university teaching.

These findings underscore the importance of customizing training and technology promotion

strategies according to teachers' gender and age to ensure the effective adoption of ChatGPT in higher education. The study aimed to understand the perception of ChatGPT in education. A 12.8% perceive biases that could affect its use, while 35.9% believe it may complicate its integration with other media. From an ethical perspective, 44.0% consider ethical evaluations essential.

It is noteworthy that 45.0% emphasize the role of the educator or student in its ethical use. Finally, although only 11.9% believe regulations have direct impact on its utilization, a significant 42.9% view regulations as essential for integrating ChatGPT into education.

The perception of biases in ChatGPT moderately influences its educational use, with 12.8% feeling that it affects classes, and 35.9% believing it limits its integration with other media. It is crucial for 44.0% to conduct periodic ethical assessments. 45.0% emphasize the user's responsibility for its ethical use.

Although only 11.9% see guidelines as determinants in its use, 42.9% consider them essential for its educational integration. Within the Latin American educational context, there is a widespread concern about biases in tools like ChatGPT.

Nearly everyone (92.3%) acknowledges the necessity of a regulatory framework to address these biases. Although the importance of ethical reviews (45.2%) and user education (20.3%) in

Table 5. Bias and discrimination regarding the use of ChatGPT in higher education

	Concerns about bias and discrimination		Need for regular ethical evaluations		User perception of ethical usage		Regulation and ethical use guidelines		Total		
	N	%	N	%	N	%	N	%	N	%	
D2: Bias and discrimination	Perpetuation of bias	72	92.3%	47	28.0%	14	5.6%	0	0.0%	133	20.0%
	Capacity to reduce bias	5	6.4%	76	45.2%	51	20.3%	0	0.0%	132	19.8%
	Detect biases	0	0.0%	42	25.0%	104	41.4%	6	3.6%	152	22.9%
	Design responsibility	1	1.3%	3	1.8%	62	24.7%	33	19.6%	99	14.9%
	Responsibility of users	0	0.0%	0	0.0%	20	8.0%	129	76.8%	149	22.4%
	Total	78	100.0%	168	100.0%	251	100.0%	168	100.0%	665	100.0%

mitigating biases is recognized, a significant proportion (41.4%) believes that detecting biases largely depends on the ethical use by the user.

However, the greatest responsibility lies with the designers and administrators of these tools, according to 76.8% of the respondents. Upon analyzing the collected data, it was determined that 68.2% of the teachers perceive ChatGPT as a catalyst for enhancing the quality of education, while 15.5% remain neutral on the matter. However, 16.3% feel that it has not had a significant impact.

Furthermore, 82% believe that, with proper training, tools like ChatGPT could revolutionize traditional pedagogy. It is worth noting that 72.5% of the participants emphasized the importance of continuous access to updates and training on this technology for its optimal use in the classroom.

Technological advancements in education have catapulted tools like ChatGPT to the center of the pedagogical debate. An overwhelming 95% of teachers emphasize the urgency of regulations addressing the impact of ChatGPT on student autonomy, while only 2.8% believe that students are already using it ethically.

Although there is confidence in ethical use by educators (10%) and students (41.4%), 38.1% highlight the need for constant ethical assessments for teachers. Despite an approval

rate of 83.3% regarding the existing regulations governing decision-making with ChatGPT, only 25.5% consider that it is respected in practice, showing a mismatch between norms and reality.

4 Discussion and Conclusions

In the Latin American educational context, the application and perception of tools like ChatGPT have been the subject of scrutiny and debate. Our objectives were focused on understanding the interaction of this emerging technology with the involved stakeholders, breaking down its impacts, advantages, and challenges from pedagogical, technical, and ethical perspectives.

The perception of ChatGPT in education highlights concerns about biases and its integration with other educational media.

Despite its recognized benefits, ethical evaluation and educational mediation are essential for its optimal use. These findings align with the research by Flores and García [22] on ethics in educational AI and with Mosquera et al. [40], which examines the fusion of AI and ICT in music education.

However, Brochado [8] presents a different angle, focusing on the ethical dilemmas when AI reaches human-level efficiency. Parga [42] emphasizes that AI, including tools like ChatGPT, should

Table 6. Ethics and responsibility regarding the use of ChatGPT in higher education

	Concerns about bias and discrimination		Need for regular ethical evaluations		User perception of ethical usage		Regulation and ethical use guidelines		Total		
	N	%	N	%	N	%	N	%	N	%	
D3: ethics and responsibility	Ethical challenges for teaching	59	75.6%	14	8.3%	0	0.0%	0	0.0%	73	11.0%
	Ethical user use	14	17.9%	46	27.4%	13	5.2%	0	0.0%	73	11.0%
	Ethical use guidelines	5	6.4%	85	50.6%	86	34.3%	3	1.8%	179	26.9%
	Ethical use regulation	0	0.0%	23	13.7%	152	60.6%	165	98.2%	340	51.1%
	Total	78	100.0%	168	100.0%	251	100.0%	168	100.0%	665	100.0%

Table 7. Autonomy and decision-making regarding the use of ChatGPT in higher education

	Concerns about bias and discrimination		Need for regular ethical evaluations		User perception of ethical usage		Regulation and ethical use guidelines		Total		
	N	%	N	%	N	%	N	%	N	%	
D4: Autonomy and decision making	Impact on student autonomy	74	94.9%	49	29.2%	7	2.8%	0	0.0%	130	19.5%
	Freedom of the educator	4	5.1%	64	38.1%	25	10.0%	0	0.0%	93	14.0%
	Freedom of the student	0	0.0%	45	26.8%	104	41.4%	6	3.6%	155	23.3%
	Freedom of use	0	0.0%	9	5.4%	51	20.3%	22	13.1%	82	12.3%
	ChatGPT compatibility and decision making	0	0.0%	1	0.6%	64	25.5%	140	83.3%	205	30.8%
	Total	78	100.0%	168	100.0%	251	100.0%	168	100.0%	665	100.0%

prioritize humanism and fundamental rights. In summary, ChatGPT has transformative potential in education, but its adoption in Latin America requires proactively addressing ethical and technical concerns, emphasizing proper training

for its implementation. Incorporating ChatGPT into education has brought forth ethical and bias concerns.

Despite its limited adoption, there is a pronounced need for ongoing ethical evaluations

and active user engagement to ensure its proper application. This perspective aligns with the study by Rebolledo and Abufarde [48], where they optimized processes through simulation, emphasizing the importance of continuous assessment.

Tocto et al. [60] also employed AI, in this case, to predict student graduation, showcasing the analytical potential of such tools. In contrast, Piteira et al. [44] present a divergent perspective, stating that AI itself poses ethical dilemmas, focusing on the moral issues of "thinking" machines and citing research by ACM and IEEE.

Concerns regarding biases in ChatGPT within the Latin American educational context emphasizes the necessity for both regulations and ethical education. This viewpoint resonates with Torres and Yucra [61], who identified negative perceptions among students towards virtual classes.

Vlasova et al. [68] underscores the importance of preparing educators in AI usage, proposing an adaptive training system, highlighting the necessity of user training. Conversely, Solé [57] demonstrates a discrepancy between ethical self-regulation and legal regulation of AI, with the US and the EU adopting divergent approaches. The variety of these approaches underscores the urgency of a transdisciplinary perspective to address ethics and regulation in AI.

The growing demand for regulations surrounding technologies like ChatGPT in education reflects an increasing ethical awareness. While the community values the potential of these tools, it recognizes that the human dimension is vital.

Rodríguez [50, 51] advocates for the development of sustainable AI, considering its environmental and cultural impact, drawing inspiration from ethics of responsibility and care. In contrast, Cantarini [10] advocates for a "poietic" relationship with AI, departing from linear paradigms and promoting symbiotic coexistence and technodiversity.

Despite the differences, both research studies emphasize the interconnection between ethics and technology. Ethics and technology in education are inextricably linked. Guidelines should empower and educate users, recognizing the centrality of ethics and humanity in the era of AI. ChatGPT, with

its promising educational potential, highlights the necessity for regulations to safeguard student autonomy in light of ethical concerns. Vásquez et al. [65] show parallel concerns in the Chilean legal context, highlighting challenges in implementing educational programs that combine artificial intelligence and law.

While both of Vásquez's studies coincide in recognizing challenges related to technology adoption in conventional sectors, García [25] presents another dimension by discussing AI self-programming and its unpredictable outcomes. This factor further underscores the urgency of ethical controls.

In summary, while technology like ChatGPT can transform education, it is imperative to have regulations that ensure its ethical use, striking a balance between innovation and human values. Neglecting to effectively address these identified concerns could lead to an educational landscape characterized by biases, compromised privacy, and restricted student autonomy.

While our sample is representative, it is not all-encompassing. Perceptions and experiences may diverge depending on specific contexts, and our research may not capture all perspectives within the diversity of Latin American educational environments. It is imperative that future research delve into qualitative methods and explore the long-term impact of tools like ChatGPT, assessing how they influence educational outcomes and student well-being.

5 Conclusion

The incorporation of advanced tools like ChatGPT in Latin American university education holds significant potential. However, the findings reveal shared concerns among educators regarding inherent biases and ethical implications of the technology. While a strong demand for clear regulations and consistent ethical assessments is perceived, there is also a recognition of collective responsibility, both from those designing these tools and from end-users. Ultimately, to fully harness the benefits of ChatGPT, it is essential to balance technological innovation with ethical imperatives, ensuring inclusive and empowering education for all.

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