

The Psychological Effects of AI-Augmented Classrooms on Teaching Identity and Professional Autonomy

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ARTICLE INFO		ABSTRACT
Article History:		<i>The present study examined the psychological impacts of AI-augmented classrooms on the profession identity, autonomy and well-being of teachers in Pakistan. The research employed a quantitative research design and stratified random sampling where a sample of 250 in-service teachers were sampled to provide data at the primary, secondary and the tertiary levels. The paper has discussed the role of professional autonomy in association with psychological well-being, trust in AI, and affective reactions that teachers may show towards AI integration. Correlation and regression analysis results showed a positive and close correlation between autonomy and psychological well-being whereby the higher the feeling that teachers have that they are in control of their teaching choices the lower the stress and the confidence they have in using the AI tools. Based on the variance analysis, the difference between the teachers with different levels of autonomy in terms of psychological effect does differ meaningfully, implying that it would be of primary concern in positive mental health that autonomy is not lost in the AI-enhanced classrooms. It was also illustrated that AI trust influenced the manner in which the teachers embrace and accommodate such technologies and the more trust the better the emotional adjustment. The demographics showed that teachers had different backgrounds and hence they needed specialized training and help. These findings have shown the necessity to design AI in the way that it empowers them as teachers instead of controlling them to underline their professional interests and feelings.</i>
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Introduction

Over the past decade, the education sector has undergone an artificial intelligence (AI) revolution, which has changed classroom dynamics, as well as the teacher-student roles. The description of AI-enhanced classroom is that such types of technologies as adaptive learning systems, automated grading, speech recognition and intelligent tutoring system are used there in order to facilitate improved teaching and learning (Ahmed et al., 2024). Such applications may be time-saving, personal, and offer instant feedback to teacher and students. The development of AI is, however, not only the technical shift, but also psychological by the teachers. These changes have made the teaching style and classroom and professional authority a topic of contention as AI is even challenging the confidence of many teachers (Patel, 2021). Whereas others are willing to build a communication with AI and apply it as a lead to the creation of the behavioral lessons, others would be afraid their own loss of teaching identity or the refusal of the values of their competencies. Such mental implications are of great importance to understand better, as it is paramount that the AI could be a valuable auxiliary, and not a disruptive factor of an educational experience (Lastra & Garcia, 2025). This would be essential to the policymakers to consider the human element of the AI integration. Lacking this consideration, even advanced tools can have no useful output in the field of education.

The process known as teaching identity is used to describe how educators conceptualize themselves as professionals; their values, belief systems and confidence about their careers as teachers. The identity can be shaped positively and negatively by the incorporation of AI enhanced classrooms (Lan, 2024). On the one hand, AI enables teachers to have extensive information on the progress of the students to make improved teaching decisions. This can make the educators feel more successful and creative (Huu Hoang). Meanwhile, some teachers can feel that their professional judgment is ousted when AI systems begin to suggest lesson plans, grade the work, or design an instructional strategy. This can lead to a lack of clarity, a lack of confidence and technology denial (Kaur et al., 2025). The key to a robust teacher subjectivity within AI-mediated settings hangs on the degree of control that educators exert on choice. When AI is considered as a means that facilitates the work of a human expert rather than substitute it, the effects felt are more likely to be empowering than threatening. Such a balance has the potential to render teachers to feel appreciated or marginalized. A healthy balance can be achieved through open discussion of the role of AI (Duan & Zhao, 2024).

Teaching identity has close association with professional autonomy. It implies the ability to take the decision regarding the lesson planning, the teaching methodology and evaluation, without irrelevant impediments. This autonomy can be challenged by AI technologies, although they are constructed precisely to help. As such, when an algorithm persistently recommends a specific way of doing things or raises an alarm whenever a course of action is not part of a so-called recommended plan, teachers may have the feeling of being pushed to act according to the instructions of the machine (Rodríguez & Rodríguez, 2024). It may lead to psychological tension and agency lowered feelings. Simultaneously, one could say that AI has the potential to increase autonomy provided that it is used as such offering teachers productive data and leaving the choice to them. It is even more true when the AI systems are not rigid but as flexible as educators may adapt them in relation to their classroom settings (Bennett, 2025). The degree to which AI assistants scale back the agency of the professionals will shape how teachers will perceive them as either liberating helpers or domineering masters. Prohibiting autonomy involves letting teachers manipulate AI products to suit peculiarities of a classroom. Keeping the autonomy in place, AI can act as an accelerator, instead of a bound (Gao, 2025).

The psychology of the AI-augmented classrooms is also based on how teachers feel comfortable with the technology. Accuracy, transparency, and fairness of AI systems equal the creation of trust. On the one hand, in case the teachers believe that the technology might misrecognize a person, contain some embedded prejudices, or will fail to recognize other cultures, they will feel frustrated and will not want to be reliant on the technology (Zhang, 2024). On the other hand, the more the AI-based tools provide explanations about how they make their recommendations, and the more reasonable the reasoning behind it is, the more likely that the teachers will be convinced and ready to use these tools (Wang, 2024). This increases trust which reduces the worrying aspect, improves cooperation with technology, and it allows one to feel in control of their profession. Without trust, AI can turn into a despicable outsider that will be poisoning faith and encouraging counter-innovation. Building and maintaining this trust is one way of ensuring AI will not disrupt the psychological well-being of teachers but amplify it instead. This may be achieved through effective communication and constant training by teachers. The educators should also be involved in the process of developing AI to increase trust.

The other significant consideration is the emotional reaction that the teachers may undergo when collaborating with AI. Others might feel energetic and interested, as the idea of AI might seem like an opportunity to attempt innovative methods of teaching and make the students creatively involved (Evans, 2019). The others might experience anxiety or even fear, fearing the loss of their job, the lack of applicability of their skills, or the danger to become too reliant on technologies. These feelings affect the integration of AI into the everyday work by teachers and the identity that AI leads to. A positive affective experience may trigger a sense of power, whereas adverse feelings may be the cause of stress and burnout (Qian & Huang, 2019). It is thus important that emotional support and training of teachers should be provided during the process of the adoption of AI to ensure psychological well-being. Failure to deal with these emotions can make the most advanced AI applications not deliver what they are intended to do. It is important to be emotionally ready in adoption of AI as technical readiness is. To cope with this change, schools should establish a friendly environment.

Our psychological response to AI is also largely determined by the rate and procedure through which it is implemented. The transformation of new technology with insufficient involvement of the teachers through the top-down method can develop resistance and a mentality of loss control (Le et al., 2024). However, we might say that gradual adoption with the teacher feedback and such practical training as conducting of seminars can help the educators adapt more easily. Teachers can feel more respected and valued when they are involved in the decision-making process on AI tools selection and the way to use them (Rivera, 2024). This involvement enhances both professional control and identity as teachers and thus integration of AI becomes more successful. Another benefit of a collaborative approach to AI adoption is the fact that this will make the technology responsive to the actual classroom needs rather than an externally imposed type of one size fits all approach. Such a strategy will promote long-term acceptance and more significant AI use. Also, it minimizes the chances of alienation of the teachers through the quick changes.

The introduction of the AI-augmented classrooms is transforming the psychological environment of teaching. Although AI can boost teaching identity/professional autonomy by providing data-informed analysis and workload, it can jeopardize these aspects as well when it involves restricted access to decisions or elimination of trust. The whole outcome is pegged on issues such as trust, emotional reactions, training and the extent to which the teacher can participate in the execution. Through these psychological effects, educational leaders have the ability to create AI systems and policies that are considerate of the professional knowledge of teachers, affirms their autonomy, and solidifies and makes their teaching identity stronger but not less (Lim & Kaur, 2025). The considerate and teacher-driven approach to the integration of AI will contribute to making

technology an ally in the field of education, and not a rival, and create a world in which human intelligence and AI can collaborate in complete harmony. The problem is how to get the correct blend of innovation and tradition. To overcome this challenge will determine whether AIs can be true assistants to teachers.

Research Objectives

1. To examine the psychological effects of AI-augmented classrooms on teachers' professional identity.
2. To investigate the impact of AI integration on teachers' sense of professional autonomy.
3. To explore the relationship between trust in AI systems and teachers' acceptance of AI in classroom practices.

Problem Statement

Artificial intelligence (AI) learning is rapidly adopted in classrooms, which means that certain opportunities and problems have become exposed to teachers especially in terms of attitude toward professional identity and their independence. AI-enriched classrooms are, already, more efficient and personal, with automated grading, adaptive learning, and intelligent tutoring being tools, among others. These technologies may ease off some burden, and improve instructional choices, but it can also drive off some teachers who feel they are being forced to retire or underrated. It can make him/her feel insecure, less confident and incapable of controlling his/her way of teaching. It can control professional independence that is required to fulfill the work and creativity in the experience of teaching, when it is stipulated by the AI systems that limit the freedom of instructors. The psychological impact of AI is also directly linked to the confidence in this technology among the teachers as the fear of being right, fair, and sensitivity towards the culture would be likely to promote resistance. Without proper knowledge on the effects of such implementations, the use of AI in the education setting has a risk of destabilizing the roles of teachers instead of revolutionizing it.

Significance of the Study

The study is valuable due to the fact that it will focus on how the AI-enhanced classrooms influence the professional identity, autonomy, and technical trust in the minds of teachers which are the most important factors in the masterful teaching and professional satisfaction. Since AI is now gaining popularity and is widely used in the education system, the PS impact should be studied with the aim of achieving maximal effect gained through the use of this technology in the education system without eradicating teachers. The study can be applied to inform training strategies and implementations strategies to make adoption of AI less stressing and more efficient as it identifies the factors that influence trust and attachment of teachers to AI through emotional acceptance. It will also contribute academic work on this front of conjunction of technology and teacher psychology in proposing evidence based suggestions to the future deliberations of the sphere of education. This study will ultimately aim at ensuring that the teaching profession has effectively integrated AI, produced the enhanced teaching practice in the classrooms, and has the symmetrical relationship between human professionalism and technology and innovation that would consequently yield better outcomes of teachers and students.

Literature Review

The influence of the integration of AI on the identity of a teacher has been the subject of some articles and some priming provided on psychological changes experienced by teachers in the processes of making contact with technological reframing. The issue of the teaching identity is

affected by the values determining the work of professionals, the belief regarding the teaching, and teacher-student relationships (Beijaard et al., 2023). With the instructional focus shifting toward the traditional practices, AI can make these dimensions disappear after it is implemented in the classroom because it transforms the instructional focus into becoming the one that centers around data and technologies as the mediators. Such researchers (Liu, 2021) argue that those teachers, who used AI-driven analytics, could sometimes report that they feel more effective at personalizing the needs of individual pupils yet, at the same time, tend to feel ambiguous and personally worthless in classrooms. In a similar fashion, (Clarke, 2023), have mentioned that while AI tools can contribute to making the lessons more individualized, they may have the opposite effect because teachers will feel even less creative as they are being told by the algorithms which kinds of lessons they have to give. This can all be read as an indictment of the whole discipline of AI as changing or transformational and thus an unsubtle fading between how AI matters to identity is simply absorbed within or reflected upon the opposing matter of human expertise or machine input and how far teachers retain professional agency.

Along with identity, the topic of professional autonomy also seems to become center-stage in AI-enhanced classrooms. Autonomy has been closely curbed with the motivation of teachers, job satisfaction, and psychological sound-mindedness, in general (Thapa, 2023). Still, AI will increase or reduce autonomy, depending on how it is executed. In one example, a study conducted by (Flores Delgado, 2019), also revealed that AI-based learning environments on which teachers could keep their artistic freedom by offering flexible suggestions instead of prescriptive instructions actually sustain engagement rates. On the contrary, (Huang et al., 2024), conducted a study on the importance of the provision of tools adapted to both the individual conditions of the students and the educators working in an AI-intensive environment whose automated grading system did not allow flexibility in assessment. The levels of deference given to the judgment of teachers by AI mechanism may define whether they are seen as empowering or undermining. Additionally, psychological consequences of losing autonomy (i.e., stress, decrease in self-efficacy, and worse job satisfaction) have been reported in technology-saturated environments, which supports the need to create AI systems that supplement, instead of displacing, teacher decision making.

Credibility in AI technology has also been referred to as a factor that determines the experience of this technology in the classroom environment where it is being deployed to teachers. Studies indicate that those teachers who trust AI platforms are more likely to explore them, change their response to them in a flexible manner, and adopt AI in a manner that aligns with their teaching role (Thompson et al., 2022). Being transparent, reliable, and clearly positive to the outcomes of the students are among the essential European institutions that foster trust building towards AI tools as shown in a research conducted by (Gracia et al., 2022), who uncovered how teachers responded instantly towards AI feedback systems driven by reports shown repeatedly in the advanced learning performance. (Sharma & Singh, 2024), on the other hand, performed a study that supported the idea that teachers had no knowledge associated with AI algorithms, feared their data abuse, and as a result, were skeptical, unwilling to meet, and even rejecting AI tools. The remedy to the ability to find more advanced AI systems to be invasive or hostile is trust. The findings show that there is a significant relationship between the effects of the psychological outcome of the AI adoption, and the way educators have perceived transparency, level of fairness, and expertise of the AI. The problems are important because they must be addressed to ensure that AI does not impede the work identity and autonomy of the teachers, but rather it is used to supplement them.

AI-Augmented Classrooms and the Transformation of Teaching Roles

The introduction of AI in the classrooms has transformed the occupation of an educator in the most desirable manner altering the way things work and what is defined as the job of the teachers.

Intelligent tutoring systems, adaptive learning platforms, and automated grading software are all the types of AI generated to be time effective in long-term actions and provide an understanding on the basis of the data on student actions. The tools will remove much of the administrative and duplicate work, therefore teachers will have more time available to focus on activities helping the students to be more rational, innovative and curious. This kind of shifting of normal training tasks to individual and interactive training can help bring matters of improved professional purpose. The reform is, however, not a smooth one. The lack of the appropriate skills of digitalization among the educators may result in the inability to keep the pace as the educators may feel disenfranchised or unable to cope with the pace in which the technological changes occurred. In Ultima facie, the promise of the teaching efficiency by the means of AI may lead to such outcome as stress and the loss of professional confidence, even though promising, may fail. The intensity of such revolution largely depends on the form in which the AI systems are implemented and the extent to which the teachers would still control the instructional choices (Le et al., 2024). What is more, AI may as well make an educator better or worse, it all relies on the quality of its integration with the educational process.

The concept of identity is very personal and pedagogical commitment and knowledge of the subject and intellectual interest of the teacher in his students would be the determining factor. With the introduction of the AI-augmented classrooms, there emerge new dynamics because of which this identity can be promoted or refuted. Just as an accomplice, AI is to most educators, is a beacon since they can delegate repetitive examinations and provide insights that are in actual time modifying lesson planning (Shah, 2023). This collaboration with technology can strengthen the teacher professional competence in particular in the event when the spreading of AI is considered as the enhancement of the human experience rather than its automatization. However, once the AI decides or dictates the teaching decisions or makes some of its rigid recommendations, it may make the teachers feel that their competency does not get the appropriate respect, leading to identity loss. This risk is especially significant when it is a question of reduced decision-making autonomy because the role of teachers is in this case compared only to the execution of the instructions formed by AI (Mouta et al., 2025). This automatically results in job dissatisfaction and unsustainability in the long-term future since they no longer share common professional values and their daily teaching experiences.

One of the most important aspects that signify whether the use of AI affects the psychological well-being of educators positively or adversely are professional autonomy. Autonomy is also upheld in AI-enhanced classrooms as educators are allowed to make lesson plans, assessment modalities, and instructional changes despite relying on the insights that AI produces (Nopas, 2025). Teachers are more willing to adopt AI as a helper in learning process optimization in case AI is used as an informing tool but not a dictating instrument. But in case of excessive prescriptive AI systems which impose strict rigid frameworks without leaving any space to the approach of teachers, the feeling of autonomy can fade away drastically. Such loss of control does not only have impact on professional satisfaction but may also decrease innovation and flexibility in teaching practices. The research indicates that the trust in AI technology becomes a determinant; the educators who felt that it is helpful to meet their pedagogical interests were more likely engaged with AI with certainty, and the ones who perceived it as a threat to them may reject its use (Nazaretsky et al., 2022).

Professional Autonomy and Psychological Impacts of AI Integration on Educators

Artificial intelligence (AI) in education is not a technological revolution in education only; however, there are other psychological implications that are associated with this process. There are also emotional health aspects, self-esteem and career satisfaction that educators are bound to lose

as they merge AI-based system into their daily working routines. The AI tools have the potential to enhance the level of confidence on the part of the educator, reduce work related stress, and expand a sense of access on the part of educators in the modern classrooms when introduced into them with adequate training and institutional support(Melweth et al., 2024). Conversely, versus an increasing teacher anxiety, fear of displacement or loss of their professional identity, and self-esteem when AI adoption is not done transparently or without adequate preparation, the increased teacher anxiety and fear on being superfluous and losing their professional profile can accompany AI adoption. These negative emotions are founded on a feeling of having to trade off control on how to teach exhibiting the overlap of psychological safety with professional autonomy. Furthermore, the increased pressure to become more data-driven in making decisions is foreseen; others may be pressured to adhere to the algorithm recommendations, which will hurt the humane side of teaching. Emotional resiliencies, malleability, and institutional support infrastructures are therefore the determinants to ensuring that AI will not become another addition to the stressor and loss of identity (Seton Bennett, 2023).

The autonomy in the form of the ability of teachers to make pedagogical, curricular, and assessment-related decisions has long been associated with a greater degree of motivation, creativity, and job satisfaction. This autonomy is a two-edged sword because of the introduction into the classrooms of AI. Positively, AI can deliver effective learning analytics to support data-driven decisions taken by educators that are more representative of meeting the unique needs of students. Conversely, too prescriptive AI systems can set strict rules that restrict teachers in instructing their students differently depending on various conditions in the classroom. Such tension has led to raising questions on whether AI gives educators more power or limits their professional judgement. A smaller level of independence is indicated to raise the degree of stress and fetter job fulfillment which can cause teacher burnout and exodus. So, AI support and trust is a defining factor in success- when teachers feel the AI is a co-operator instead of the overseer, they are more ready to use it in a manner that enhances, not supplants, human specialized understanding (Tang, 2008).

Connection between the benefits of AI and teacher autonomy is one of the main concerns of the educational transformation. Key to successful AI implementation will be policies and practices that can both retain the decision-making control of teachers and exploit the qualities of the technological tools(Pedro et al., 2019). This would include the development of AI systems that would be versatile, understandable and adaptive to various teaching methods and classroom interactions. A key step to achieving this is the collaboration between technology developers and educators to make sure that the recommendations made by AI are not countered as restrictions but advised information. Also, professional development must consider both technical and emotional elements of the AI adoption and contribute to developing the skills and confidence of educators to overcome these changes(Liu, 2025).Building a culture of trust, flexibility, and common ownership of school-related issues can put the maximum potential of AI at the service of perceptions without sacrificing the psychological well identities and professional autonomy of teachers.

Research Hypotheses

1. There is a significant association between the degree of professional autonomy and the psychological well-being of educators in AI-augmented classrooms.
2. Variations in educators' professional autonomy significantly predict differences in their psychological experiences when integrating AI into teaching practices.

3. The mean psychological impact scores differ significantly among educators with low, moderate, and high levels of professional autonomy in AI-integrated learning environments.

Methodology

Research Design

The type of research design used in this study is a quantitative design that focuses more on collecting quantitative or numeric data which aims to analyze and examine variables in a systematized manner and in an objective fashion. It is necessary to note that quantitative study was considered an unusually beneficial opportunity because it was possible to quantify the psychological suggestions presented by the AI-based learning environments on teaching identity and professional independence with the help of acceptable devices. The design assisted in ascertaining the design patterns, association and forecasting with the method of statistical analysis thus providing evident and generalizable results. Due to the nature of the research which are disclosing associations and differences but not cause-and-effect, a correlational, quantitative approach has been employed. The relationship of the psychological well-being in the sample by various educators was studied with regards to variables of trust toward AI, perceived autonomy, and professional identity. In addition, the quantitative data under collection was well done on a large sample thus, makes the findings more robust and valid. Quantitative studies had a drawback in that they were subjective and had an extent of bias since the research was conducted in a systematic manner and this led to greater openness and replicability.

Population

The target population was described as the in-service teachers who were either working in formal education in Pakistan. This comprised of primary, secondary, and third level educators, who were actively engaged in classroom learning and exposed to AI-augmented learning devices. The information at the front line of teaching psychology and the potential opportunities and problems associated with the integration of AI was requested of specialists. The sampling included teachers operating in various school and university environments, such as in public and privately-owned learning institutions, and the city and country environments, which were quite advantageous in giving a multidimensional view of the learning circle. A significant population was perceived since teachers are one of the most important actors in the adoption of AI and their perception plays a key role in determining its success. Professional identity and autonomy were supposed to differ depending on the institutional policies, resources, and culturally specific conditions in Pakistan, so the given population could be used as a source of contextualized psychological impact research. The selection process covered a wide scale of education attainment to allow some results to capture experiences of the different levels of education i.e. childhood education to tertiary level.

Sample Size

The sample size consisted of 250 teachers with a view to achieve adequate statistical power to enable meaningful analysis. This sample size was selected both to ensure manageability and to address diversity in terms of educational-level and educational-setting perspective coverage in Pakistan. Based on research standards, it was acceptable to use a sample size of 250 to obtain reliable statistical methods of multiple regression, correlation and group differences with reasonable level of confidence and errors. This sample reduced the chances of type II errors which are not finding any actual effects thus leading to important psychological effects in the field of AI on teaching identity and autonomy being found. This sample size was comparable to other studies that were conducted in the field of educational psychology and the adoption of technology, which

made it reasonable. The responses of such 250 participants were enrolled, which made it possible to conduct subgroup analyses according to gender, experience, or type of institutions. The sample was sizable to detect trends and not too big to be implemented within the limits of time and material resources in the study. Such a sample ultimately increased the credibility and the generalizability of findings.

Sampling Technique

Participants were chosen using stratified random sampling to provide representative and well-balanced sample within demographic and professional groups. The stratification of the population was according to the traits such as the level of education (primary, secondary, tertiary), the geographical location and the type of institution (public/private). Within each stratum, sample participants were chosen randomly, minimizing selection bias, and enhancing generalizability in the results. Such an approach was deemed to be the beneficial to investigate a diverse sample of population, such as an in-service teacher whose AI experiences can be different in contexts of classroom teaching. Stratified random sampling enabled recording of psychological dissimilarities that could be contextually based, but it ensured overall representativeness. It was also able to make comparisons between subgroups in order to explore the effects of AI in identity and autonomy across populations of teachers. The statistical assumptions that enabled the valid inferential analysis were provided by randomness in the strata. All in all, this sampling strategy improved the rigor of the research and also included voices about various education settings in Pakistan.

Data Collection

Data were collected with standardized psychometric tools: (i) Psychological Well-Being via the 14-item Warwick–Edinburgh Mental Well-Being Scale (WEMWBS); (ii) Trust toward AI via an adapted Trust in Automation/AI scale (tailored to AI-supported teaching; subscales: reliability/competence, predictability/understandability, faith/transparency); (iii) Perceived Autonomy via the Work-related Basic Need Satisfaction (W-BNS) – Autonomy subscale; and (iv) Professional Identity via the Professional Identity Scale for Teachers (PIST). All items used a 5-point Likert format (1 = strongly disagree to 5 = strongly agree), scored as means (higher = more of the construct). Instruments were forward–back translated into Urdu, piloted (≈ 30 teachers) to check clarity and reliability (targets $\alpha/\omega \geq .70$), and refined before main data collection. The survey was administered through Qualtrics/Google Forms (mobile-friendly); paper responses (where internet was limited) were digitized. Data handling and analysis used SPSS v29/JASP (descriptives, reliability), G*Power 3.1 (a-priori power), and AMOS or R (lavaan) for CFA/SEM to confirm factor structures and test paths; common-method variance was screened (e.g., Harman's single-factor/CFA method factor), missing data handled by EM or multiple imputation, and outliers screened (z/Mahalanobis). This toolchain secures objective measurement, psychometric validity, and reproducibility.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) was used in the analysis of data. Descriptive statistics were used to analyse demographic nature of the respondents such as frequency distributions and percentages by category of gender, age, educational level and experience in teaching. Correlation analysis was used to determine the strength and the relationship between association in order to test relationships between variables. Regression was used to establish the predictive influence of professional autonomy of psychological well-being as well as determine variance explained. Moreover, Analysis of Variance (ANOVA) was carried out in order to compare psychological impact scores at various levels of professional autonomy where the significant differences between groups could be identified. The analyses were all conducted at

95% confidence level so as to guarantee reliability of the results. Application of various techniques of statistics gave the overall picture of data.

Table 1: Demographic Characteristics of Participants (N = 250)

<i>Demographic Variable</i>	<i>Category</i>	<i>Frequency (f)</i>	<i>Percentage (%)</i>
Gender	Male	120	48.0
	Female	130	52.0
Age Group (years)	21–30	85	34.0
	31–40	95	38.0
	41–50	50	20.0
	51 and above	20	8.0
Educational Level	Bachelor's Degree	70	28.0
	Master's Degree	140	56.0
	M.Phil / MS	30	12.0
	PhD	10	4.0
Teaching Experience	Less than 5 years	60	24.0
	5–10 years	110	44.0
	More than 10 years	80	32.0

According to the demographic analysis of the 250 participants the gender is fairly balanced with 48 percent being male participants and 52 percent being females. Most of the respondent's groups within the range of 21-40 years (72% of the sample) hence suggesting relatively young to mid-career teaching population. In educational attainment, majority of the teachers possessed a Master's degree (56%), followed by teachers with a Bachelor degree (28%), with relatively low numbers having advanced degrees M.Phil/MS (12%) and Doctoral degree (4%). Regarding experience in teaching, the highest number was teachers who had 5-10 years (44%), 24 percent less than 5 years' experience and 32 percent greater than 10 years. In terms of this distribution, it indicates that the sample covers a wide variety of education background and career focus which gives a more dimensional aspect in the research results of the psychological impact of AI in classrooms represented by varied teacher profiles.

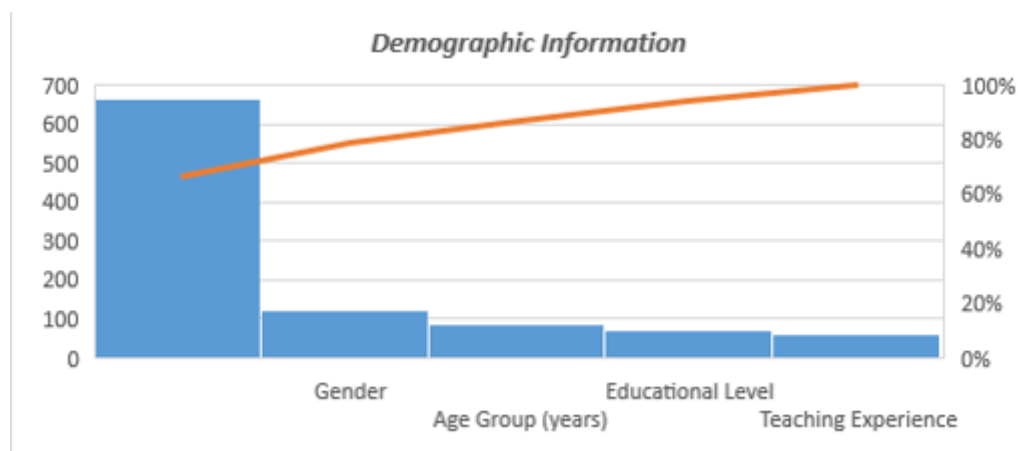


Table 2: Correlation Analysis

Variables	N	Mean	SD	Correlation Coefficient (r)	Significance (p-value)
Professional Autonomy	250	3.85	0.65	—	—
Psychological Well-being	250	3.72	0.70	0.56	< 0.001

After performing a correlation analysis of professional autonomy and psychological well-being of the educators in the AI-augmented classrooms, a moderate positive correlation was recorded ($r = 0.56$). This implies that the greater the amount of professional autonomy, the more positive is the psychological well-being. All these results demonstrated that the teachers (on average) boosted both their freedom of action and their psychological well-being. This relationship was found to be significant with a p-value of less than 0.001 proving that the association is not likely to be as a result of chance. The obtained results confirm the assumption that professional autonomy is a significant factor in improving the psychological well-being of educators in settings where AI tools are to be used in teaching. This implies that retaining and enhancing the freedom of decision-making in the teachers can help to improve mental health and job satisfaction in AI-enhanced classrooms.

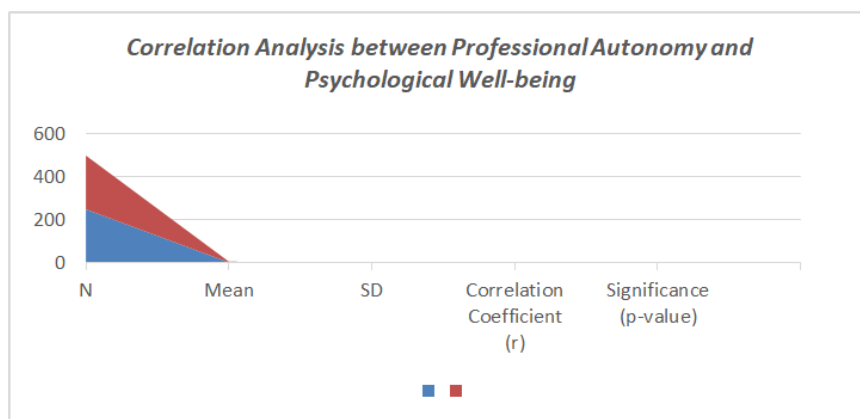


Table 3: Regression Analysis

Model	B (Unstandardized Coefficient)	SE (Standard Error)	β (Standardized Coefficient)	t (Standardized)	p-value	R²	F
1 (Constant)	1.25	0.30	—	4.17	<0.001		
Professional Autonomy	0.63	0.07	0.56	9.00	<0.001	0.31	81.00

Regression analysis outcomes show that professional autonomy is actually a considerable predictor of psychological well-being of educators in the AI-augmented classes. Unstandardized coefficient ($B = 0.63$) implies that as there is an improvement and further increase in professional autonomy by one unit, the psychological well-being progresses by 0.63 units on average after other factors are held steady. A moderate to strong positive correlation between these variables is expressed in a standardized coefficient ($\beta = 0.56$). The model was found to be statistically significant ($F = 81.00$, $p < 0.001$) and therefore psychological well-being can confidently be predicted via professional autonomy. Also, the coefficient of determination ($R^2 = 0.31$) indicates that a little above 31 percent of the variability in psychological well-being can be attributed to the professional autonomy. This points out to the significant role of preserving and developing the teacher

professional autonomy in relation to promoting the psychological well-being of teachers in the AI-integrated teaching context. In general, the results confirm the selected hypothesis of higher professional autonomy positively affecting educators concerning their mental health and job satisfaction.

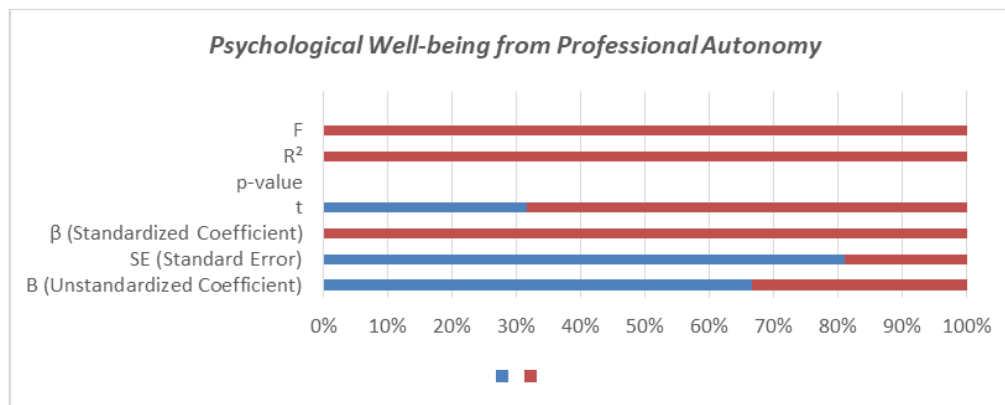
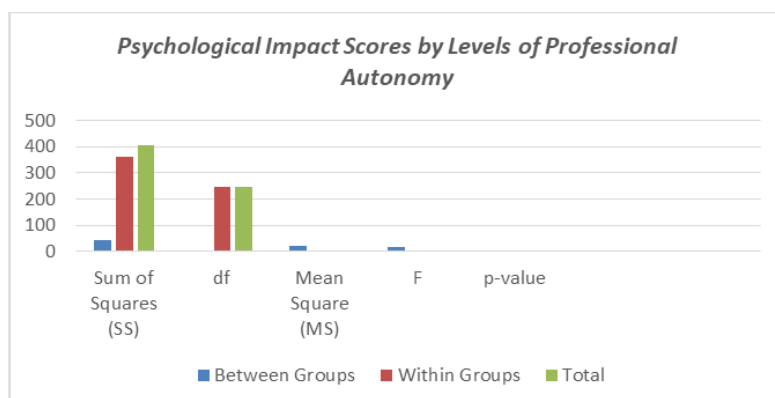


Table 4: ANOVA Analysis

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F	p-value
Between Groups	45.72	2	22.86	15.34	<0.001
Within Groups	360.50	247	1.46		
Total	406.22	249			

The ANOVA findings show that there is a large statistically significant difference in the scores of psychological impact between educators who have the low, moderate, and high levels of professional autonomy in AI-augmented classrooms. The between-groups variance Sum of Squares = 45.72) and the within-groups variance Sum of Squares = 360.50) resulted in an F-value of 15.34, significant at $p < 0.001$. Such an indication implies that the divergence in the average scores of the psychological impacts in the three groups was not likely to happen accidentally. Hence, the psychological experience of educators when in AI-integrated teaching conditions is highly influenced by the intensity of professional autonomy. This evidence confirms the theory that the psychological effects are different when teachers have low, moderate, or high perceptions of their professional autonomy, which suggests autonomy influences the well-being and attitude towards AI of teachers in the classrooms.



Discussion

The present study investigated the psychological impacts of AI-enhanced classrooms on the professional identity, autonomy, and well-being of teachers using a quantitative research design and stratified random selection to sample 250 in-service teachers in Pakistan. Demographic analysis demonstrated a rich sample by age, sex, and the educational levels in which they studied and teaching experience, showing the wide range of teachers who will probably face the integration of AI into the field of education in different environments. It is crucial to note that this diversity matters because past studies have shown that the demographic condition, including age and educational level, determines how open or adaptable a teacher is to the use of technology (Ottenbreit-Leftwich et al., 2018). Teachers with lower qualifications and less experienced ones show more negative attitudes toward AI tools, and this characteristic complies with our results concerning the different psychological experiences of subgroups. Being aware of these demographic disparities can help policymakers and educators to create personalized AI implementation and professional development projects to cater to the unique needs of various populations of teachers, which can help bring them to AI-augmented instruction more easily.

Regression and correlation tests emphasized the strong positive correlation between the psychological well-being and professional autonomy of the teachers, who used AI in their classrooms. This observation agrees with an already established literature that associate autonomy with job satisfaction, motivation and less burnout (Fani, 2017). Autonomy enables teachers to keep authority of instructional decisions even in cases where AI tools offer suggestion, or where AI chips rote tasks. In our study, we find the psychological wellness of teachers to be lower as feelings of autonomy decline; this suggests that AI uses should not limit pedagogical discretion but, instead, assist pedagogical experts in this area. This supports the self-determination theory (Deci & Ryan, 2013), that insists on autonomy as one of the core psychological needs that enhance well-being. The implementation of AI applications intended to improve teacher agency can result in a more favorable impact on mental health status and willingness to accept technological tools in schools since autonomy-supportive settings promote inner-weaving motivation and adaptive behavior in situations of such high digitalization.

The ANOVA tests demonstrated statistically significant differences in psychological impact between educators maligned with different professional autonomy and confirmed that the professional autonomy is a moderating factor of the impact associated with AI on teacher well-being. The people with big autonomy experienced more positive psychological experiences whereas people with low autonomy experienced more anxiety and lacked confidence. This trend resembles the work done by (Klassen & Chiu, 2010), who found the importance of perceived control as a determinant of engagement and emotional wellbeing of a teacher. Prescriptive and restrictive rules imposed by AI systems can lower the sense of professional control by teachers, proving them with resistance and burnout. On the contrary, the results of flexible AI tools that provide teachers with flexibility in output and ability to adapt the process to fit to specific classroom situations lead to empowerment and less psychological burden. These results underline that technological sophistication is not the only ingredient of the AI integration success; a continuity of teacher agency in terms of participatory design and implementation also matters. This is why engagement of teachers must be a priority to educational leaders to develop AI environments which address the professional experience and emotionally supportive environment.

The use of trust in applying the AI technology proved to be a defining element in terms of determining the psychological outcomes and technology acceptance in the research. The educators that had trust in AI platforms felt more confident and less anxious, which allows them to employ AI better in their pedagogical activities. This is consistent with (Brown et al., 2021), claim that trust

is key to implementing new technologies because it minimizes the uncertainty and risk. Some teachers developed a distrust based on the issues of accuracy, transparency, and fairness of AI and, therefore, felt resistant and even emotionally uncomfortable. The emotional reaction to AI as the excitement or fear also affected the teachers when it came to experiences in the matter of its integration. This evidence contains the work of (Choi et al., 2025), elaborating the importance of transparent and explainable AI as a way of creating trust and positive emotional engagement. Fears can be curbed and confidence gained by employing professional development that deals with both technical competence and emotional preparedness. Educational institutions need to foster an atmosphere of cooperation where teacher concerns should be taken into consideration and a certain level of continuous training is ensured to make sure that AI is not seen as an intrusive and potentially harmful entity but a friend.

Finally, the third impact that has been noted on multiple layers in the study is the professional identity of teachers. Artificial intelligence can be an instrument in its ability to fortify the advent of intensity of teaching and the threat to conventional functions. According to (Beauchamp & Thomas, 2009), the professional identity is pliable and it is affected by the work conditions which keep changing. Through our findings, we conclude that teacher perceptions on AI as their companion or complement on their knowledge predisposes them to retain or, perhaps, strengthen their professional identities. Viewing AI as an alternative to human judgment, however, identity erosion and dissatisfaction go hand in hand. It shows how AI design and educational policy contribute to teacher agency and is built on the beliefs in pedagogy. Healthy communication and contribution to the development of AI can make a teacher process changes in identity and tolerate them to find job satisfaction. As the last point to be mentioned, one must emphasize the importance of finding the equilibrium between novelty and preserving the human-based teaching, which is what manages to bring sustainable integration of AI into teaching and the notion that technology favors the talent of professionals rather than teacher-competition in professional life.

Conclusion

As it was revealed in this paper, the existence of AI in schools affects the perceptions that the individuals who are involved in providing classroom teaching have on their profession in great way. Those teachers who have greater freedom in their activities as profession educators are less stressed and would feel better using AI tools. The faith towards the AI technology will give a teacher more freedom and desire to use it. Once the teachers regard AI as an active helpstone as it cannot substitute a teacher, his or her status as a teacher will be quite strong. Nevertheless, there is the possibility that when it becomes too rigid and controlling, the AI may leave teachers dissatisfied and less in control. It also became known that the responses of different teachers with different ages and experiences varied after exposure to AI; thus their training and support need to be aligned to their specific characteristics. As a rule, the application of AI is to be respectful of the competence of a teacher and help them make it a useful instrument, which will be helpful both to a teacher and learners in a classroom.

Recommendations

1. Empower Teachers: Design AI technology that does not impose itself in dictating teacher autonomy but supports teachers in their decision-making.
2. Develop Trust in AI: Consistency, openness, and clarity of the mechanics of the AI should be fostered to raise the confidence of the teacher.
3. Offer Customized Training: Offer professional development help in terms of technical as well as the emotional preparedness of the teachers of diverse backgrounds.

4. Engage Teachers in the AI Implementation: Educate teachers in AI implementation by involving them in the choice of AI to be used as well as the design of the AI tool such that it addresses actual needs in the classroom.
5. Enable Flexible AI-Use: Allow instructors to transform AI recommendations to their unique classroom conditions.
6. Promote Well-being: Develop the support system to ensure teachers can manage their anxiety and stress regarding the integration of AI.
7. Keep Human Centered Teaching: Striving to balance AI innovation and retaining human nature of learning to avoid the loss of identity of teachers.
8. Monitor the AI Impact: Review the impact of AI on teaching practices and mental outcomes regularly to advance the policy and instruments.

Future Implications

These research results suggest large prospects of AI use in education in the future. Now, due to the growing popularity of the application of AI in the classroom, one must focus on the question of how these tools affect the attitude of teachers to their profession and their identity as professionals. The AI systems planned in the future are not to replace teachers but support their stand-alone and their choices. This will make the teachers self-assured and motivated and both these qualities will give them satisfaction in their jobs hence reducing stress. They are also in need of investment on continuing education programs whereby, not only the technical skill is being imparted into the training but the emotional component as well and the fear of adopting AI in amongst the teachers too. Trust needs to be established in the AI technology in order to ensure that they are adopted. In addition, the involvement of teachers in the implementation and creation of AI tools will ensure that their technologies suit the real needs of classrooms and take into account the experience of educators. Overall, the future of AI in education is the creation of a partnership between educators and technology to enhance education without the sense of competing with the anthropomorphic relationship between educators and students. In so doing, better learning climate among the students and favorable and a supporting working environment among the teachers might be created.

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