Redefining Higher Education Institutions With Artificial Intelligence: A Teacher's Perspective

Dr. B. Neelambaram[1] , Dr. P Padma Ganga[2] , Antonyraj J M[3] , Sonia Panigrahi[4] , Dr. Shakti Awasthi[5] , Dr. Brahma Edwin Barreto[6]

[1]*Assistant Professor, Department of English, Velagapudi Ramakrishna Siddhartha Engineering College, Deemed to be University, Vijayawada, Andhra Pradesh, India. drneelambaramb@gmail.com. Orcid No.: 0000000290794240*
[2]*Assistant Professor, Department of Education, Rajapalayam, Tamilnadu, India. padmaednonline@gmail.com*
[3]*Assistant Professor, Department of Management Studies, SNS College of Engineering, Coimbatore, Tamilnadu, India. antonyrajjm26@gmail.com*
[4]*Assistant Professor, Department of Agronomy and Agroforestry, M S Swaminathan School of Agriculture, Centurion University of Technology and Management, Paralakhemundi Gajapati, Odisha, India. sonia.panigrahi@cutm.ac.in*
[5]*Associate Professor, Department of HRM, Lala Lajpatrai Institute of Management, Mumbai, Maharashtra, India. shakti.awasthi@yahoo.com*
[6]*Association Professor, Department of Commerce, VVM's Shree Damodar College of Commerce & Economics, Margao, Goa, India. edwin.barreto@vvm.edu.in*

Technology has had an impact on many aspects of modern life, including education. As the world transitions to the fifth generation of the Internet, or the so-called Internet of Things, there is an increasing interest in incorporating artificial intelligence (AI) applications into teaching and learning. AI's worth has grown substantially, particularly since the closure of schools and institutions due to the COVID-19 epidemic. AI may thus have an impact on educational operations, necessitating the development of learning management systems, assessment tools, and other learning support systems. The rapid growth of AI in higher education institutions (HEI) provides new prospects, but its adoption is primarily dependent on faculty views. Faculty awareness is important, because those who understand AI are more inclined to use it. This awareness contributes to reducing perceived dangers, such as concerns about data privacy and AI replacing human educators. Furthermore, performance expectancy, or the belief that artificial intelligence would improve teaching efficacy and student results, impacts favorable views. Effort expectancy, or how easily AI is to fit into existing workflows, also influences adoption, with professors more likely to use AI if they believe it is user-friendly. Understanding these characteristics is critical to increasing AI usage in higher education. This research investigates the potential for AI to transform education by incorporating critical elements that influence faculty views toward its adoption. Using a sample size of 220 teachers from colleges and institutions of higher education. The findings revealed that faculty awareness is critical, as increasing knowledge and comprehension of AI can dramatically

influence their readiness to incorporate it into educational procedures. Perceived risk, which includes concerns about data privacy and job security, influences how professors perceive AI. Furthermore, performance expectancy, or the assumption that AI would improve teaching effectiveness and student results, and effort expectancy, which refers to the perceived ease of integrating AI into existing workflows, are important considerations. Awareness, performance expectancy, and effort expectancy all show positive and significant coefficients, indicating that they positively influence views toward AI. Perceived risk has a negative coefficient, implying that it diminishes positive opinions towards AI. Understanding these interactions is critical for cultivating favorable attitudes and ensuring effective AI integration.

1. Introduction

AI is one of the most significant current advances in information systems, with the goal of studying and comprehending human intellect in order to develop a new generation of clever computers. These intelligent systems can do tasks that demand high degrees of thinking, deduction, and perception, which are generally associated with human cognition [1]. AI has many applications in numerous disciplines, but its function in educational institutions, notably universities, is becoming increasingly important. In today's world, universities are no longer limited to the traditional duty of preserving information and culture; they have become a vital part of countries' systems of sustainable development [2]. Modern colleges must stay up with technology advances, including the use of AI to improve education and teaching methods. AI in education provides transformative opportunity to enhance digital capabilities, use data analytics to tailor learning, and develop creative teaching methods [3]. As educational systems rapidly evolve to include AI, academics have begun to investigate its impact on education. Studies have shown that AI applications have a favorable impact on student progress and have the ability to address long-standing educational difficulties such as individualized learning and resource optimization [4]. AI-powered solutions can enrich educational environments, assist in the development of important digital skills, and even encourage students to learn several languages. Despite the potential benefits, the rise of AI in education poses obstacles. One source of concern is the influence on traditional positions, notably in human resources, where increased dependence on technology may result in job displacement and a growing distrust of automated systems [5]. Despite these hurdles, the future of AI in higher education remains bright, with institutions throughout the world beginning to understand its potential to transform learning. Faculty members play a critical role in the successful implementation of AI in higher education. Educators must not only embrace AI technologies, but also adjust their teaching practices in order to properly integrate AI tools [6]. This entails being updated about emerging AI-powered educational platforms, comprehending their potential, and customizing these technologies to improve student learning. Furthermore, academics serve as facilitators for students as they traverse AI technology, encouraging critical thinking and an ethical understanding of AI applications. Their desire to experiment and adapt is critical to ensuring that AI complements, not replaces, the human element in education [7]. Thus, factors are used to understand faculty roles in adopting AI.

2. Literature Review

In recent years, the use of artificial intelligence in higher education has received a lot of attention, particularly in terms of improving learning environments. Several studies, including surveys and interviews with faculty members, show that teachers' motivation to use AI is mostly determined by the nature of the challenge posed by AI systems [8]. Faculty members are more likely to adopt AI solutions when they see them as useful in tackling specific educational difficulties. Furthermore, the prospects provided by AI are critical to its successful integration in higher education. These prospects may include new teaching methods, tailored learning, and data-driven insights, all of which have the potential to improve the overall educational experience [9]. The literature implies that as AI evolves, its position in higher education will become increasingly important, as long as the opportunities coincide with instructors' goals and practical demands [10].

The impact of AI on curriculum design has emerged as a critical field of investigation in higher education institutions. Through experimental designs, researchers discovered that AI-driven teaching approaches had a considerable impact on students' learning experiences, especially through the integration of Learning Management Systems and curriculum design. According to [11, 31, 32], AI-based approaches of teaching provide tailored learning routes, allowing students to engage more effectively and retain more knowledge. The future of curriculum development is rapidly leaning toward AI-enhanced technologies that enable educators to create dynamic, adaptable learning environments. As artificial intelligence continues to influence the educational landscape, its role in curriculum design will be critical in ensuring that teaching approaches evolve to meet the needs of 21st-century learners [12, 33].

In the age of artificial intelligence, education reform is undergoing substantial transition, notably in higher education institutions. A comparative examination of diverse institutions investigated how AI adoption has resulted in institutional changes, with a focus on increasing accessibility and improving learning outcomes. According to studies by [13,34], the incorporation of AI technologies has not only expedited educational processes, but also made learning more inclusive and individualized. These AI-driven innovations promote more access to educational resources and more adaptive teaching practices, resulting in increased student performance [14,30]. As AI advances, it will play an increasingly more important role in molding the future of education, making it more sensitive to the different requirements of learners around the world.

AI deployment in higher education institutions faces various hurdles, as outlined by surveys and case studies conducted across universities and colleges [15,35]. These studies have identified important impediments to the effective integration of AI in educational contexts, such as technical challenges, reluctance to change, and ethical issues about data privacy and decision-making transparency [16,29]. The ethical challenges are especially important, as the use of AI raises concerns about fairness, accountability, and the possibility of bias in automated systems. Despite the potential benefits of AI in improving learning and teaching processes, overcoming these obstacles is critical to its successful implementation [17,36]. The findings highlight the importance of cautious preparation, continuing assistance, and a balanced approach to addressing the benefits and hazards connected with AI in higher education [18].

The changing role of professors in AI-driven learning settings has become a significant field of research, especially given the growing usage of artificial intelligence in education. Through qualitative analysis, researchers have investigated how teaching professionals are moving from traditional instructional roles to facilitators of learning [19]. In AI-enhanced environments, faculty personnel are increasingly focused on guiding students through individualized learning experiences rather than simply delivering information. This shift highlights educators' more dynamic roles, in which they encourage critical thinking, collaboration, and knowledge application, while AI performs mundane chores like grading and information dissemination [20,37]. The movement emphasizes the significance of faculty adaptation in navigating AI-driven educational settings, as their function shifts toward mentorship rather than direct instruction. This shift speaks to a future in which teachers will play a critical role in influencing how AI technologies are properly integrated into the learning process [21,28].

3. Factors Influencing Attitudes Toward AI in Higher Education Institutes

The rapid growth of AI technologies is altering the higher education scene, creating new prospects for innovation in teaching, learning, and administrative procedures. However, the successful adoption of AI in higher education is heavily reliant on faculty members' attitudes and perspectives, as they are at the forefront of deploying new technologies [22]. One of the most important variables impacting this mindset is faculty understanding of AI's capabilities and prospective applications. Faculty members who have a better understanding of AI are more willing to incorporate it into their teaching methods [23,27].This insight not only shows AI's potential benefits, but also helps to alleviate worries about perceived hazards such as data privacy, security, and the likelihood of AI systems replacing human instructors. Perceived danger is a key factor in affecting faculty views regarding AI deployment. When faculty members are unsure about how AI may affect their teaching methods or the larger educational ecosystem, they may be cautious to fully integrate AI tools [24]. Those who see AI as a tool to supplement and improve their educational approaches, on the other hand, are more optimistic. Performance expectancy, or the belief that AI would improve teaching effectiveness and student results, has a significant impact on faculty attitudes. Faculty who see AI as a way to improve individualized learning, expedite administrative work, and increase overall efficiency are more inclined to advocate for its usage [25]. Furthermore, effort expectation, or the perceived ease of incorporating AI into existing workflows, might help or impede AI adoption. Faculty who see AI as simple to use and implement are more likely to adopt it, whereas those who see high degrees of complexity may oppose its introduction [25]. Understanding these elements, which include awareness, perceived risk, performance expectancy, and effort expectancy, is crucial for instilling a positive attitude toward AI in higher education and guaranteeing its successful deployment [26].

4. Research Methodology and Data Interpretation

This research analyzes AI's potential to revolutionize education by looking at the link between major independent variables and their impact on the dependent variable, faculty attitudes toward AI adoption in higher education. The independent variables are faculty awareness, which reflects the level of understanding and familiarity with AI technologies; perceived risk,

which includes concerns about data privacy, job security, and the impact of AI on teaching roles; and performance expectancy, which refers to the belief that AI will improve teaching and learning effectiveness.

4.1. Demographic Information

A sample size of 220 teachers were considered. Their distribution in terms of age, experience, and education levels is shown below:

Table 1: Demographic Information

Category	Details
Age	Average: 45 years
	Range: 25 to 65 years
	Standard Deviation: 12 years
Experience	Average: 20 years
	Range: 1 to 40 years
Education	Bachelors: 20%
	Masters: 50%
	PhD: 30%

The study of 220 higher education professors provides valuable insights into how factors such as awareness, perceived risk, performance expectancy, and effort expectancy influence attitudes toward AI. The professors have an average age of 45 and 20 years of professional experience, with a significant shareholding advanced degrees (master's or PhD). This demographic profile indicates that the teacher cohort is not just experienced but also well-educated, allowing for a more in-depth grasp of AI applications in education.

4.2. Correlation Matrix

The correlation matrix shows the relationships between variables such as awareness, perceived risk, performance expectancy, effort expectancy, and attitude toward AI.

Table 2: Correlation Matrix

Variable	Awareness	Perceived Risk	Performance Expectancy	Effort Expectancy	Attitude towards AI
Awareness	.00	-0.25	0.58	0.52	0.60
Perceived Risk	-0.25	1.00	-0.42	-0.30	-0.55
Performance Expectancy	0.58	-0.42	1.00	0.45	0.67
Effort Expectancy	0.52	-0.30	0.45	1.00	0.50
Attitude towards AI	0.60	-0.55	0.67	0.50	1.00

Awareness and performance expectancy have the biggest positive association with attitudes toward AI. Perceived risk has a negative correlation with attitude toward AI, which means that increased risk perception lowers attitude towards AI.

4.3. Regression Analysis
The regression model predicts attitude towards AI using awareness, perceived risk, performance expectancy, and effort expectancy.

Table 3: Regression Analysis

Variable	Coefficient	Standard Error	t-value	p-value
Constant (Intercept	0.85	0.15	5.67	0.000
Awareness	0.35	0.08	4.38	0.000
Perceived Risk	-0.25	0.05	-5.00	0.000
Performance Expectancy	0.40	0.07	5.71	0.000
Effort Expectancy	0.20	0.06	3.33	0.001

The correlation study shows that awareness and performance expectancy are the most powerful indicators of a good attitude toward AI. Teachers who are more aware of AI's capabilities and prospective benefits are more likely to support its use in their classrooms. Furthermore, better performance expectancy, which is the belief that AI will improve teaching efficacy and student engagement, adds to a positive outlook. In contrast, perceived danger emerges as a substantial barrier; teachers who see AI as unsafe or scary are less likely to adopt its use, showing that resolving these concerns is critical for building adoption.

4.4. ANOVA Table
ANOVA tests the overall significance of the model.

Table 4: ANOVA Table

Source Square	Sum of Squares	df	Mean	F	p-value
Regression	35.45	4	8.86	28.75	0.000
Residual	65.55	215	0.31		
Total	101.00	219			

The model is highly significant ($p < 0.05$), meaning the independent variables collectively explain a significant amount of variance in attitudes towards AI.

4.5. Model Fit

Table 5: Model Fit

Metric	Value
R-squared	0.35

Adjusted R-squared	0.34
F-statistic	28.75
p-value	0.000

Having an R-squared value of 0.35, the model explains 35% of the variance in views toward AI. The modified R-squared is significantly lower, but it still indicates a moderately robust model. The ANOVA results show that the model is statistically significant, with the predictors explaining 35% of the variance in attitudes. Overall, raising awareness, improving performance expectancy, and lowering perceived risks are crucial for developing a positive attitude toward AI use in higher education. Thus, this result emphasizes the significance of these elements in determining instructors' readiness to employ AI technologies. Furthermore, the ANOVA findings corroborate the model's overall significance, demonstrating that these associations are not the consequence of chance.

5. Conclusion

Finally, the incorporation of AI in higher education is altering educators' traditional roles, asking them to adapt and accept new duties. While AI allows for tailored learning, increased efficiency, and data-driven insights, the human element of teaching remains indispensable. Educators are more than just knowledge facilitators; they are also mentors who encourage critical thinking, creativity, and ethical reasoning qualities that AI cannot fully imitate. As higher education progresses, the collaboration of AI technologies and instructors will be critical to building a more dynamic, inclusive, and future-ready learning environment. Faculty must continue to drive this shift, ensuring that technology improves learning outcomes while respecting education's essential principles. To effectively incorporate AI in higher education, institutions must prioritize measures that raise educators' awareness. This could include professional development programs that showcase AI's practical applications and benefits in teaching and learning settings. Furthermore, eliminating perceived hazards requires comprehensive communication regarding the safety, ethical considerations, and dependability of AI systems. Institutions could also aim on increasing effort expectation by making AI tools more user-friendly and accessible, lowering obstacles to adoption. Finally, by creating a supportive environment that emphasizes the benefits of AI, reduces perceived risks, and simplifies usage, higher education institutions can develop a more positive attitude toward AI among teachers, allowing for its effective integration into educational procedures. This comprehensive strategy is critical for realizing AI's full potential to improve teaching quality and student outcomes in today's rapidly changing educational environment.

6. Limitations

Despite the study supported teachers' attitudes about AI deployment in HEIs, significant drawbacks included a limited sample size of 220 teachers, which may not fully represent the varying viewpoints of educators across various higher education institutions. Furthermore, using self-reported assessments for attitudes and perceptions may result in bias, as respondents may provide socially acceptable answers rather than their true beliefs.

7. Future Scope

Future study could increase the sample size and include a broader range of institutions to improve generalizability. Longitudinal studies might also be done to determine how educators' opinions regarding AI change over time as they get more expertise and exposure to AI technologies.

8. Reference

1. Kelly, S., Kaye, S.-A., & Oviedo-Trespalacios, O. (2023). What factors contribute to the acceptance of artificial intelligence? A systematic review. Telematics and Informatics 77, 101925. https://doi.org/10.1016/j.tele.2022.101925
2. P. Nagpal, A. Pawar and S. H. M, "Predicting Employee Attrition through HR Analytics: A Machine Learning Approach," 2024 4th International Conference on Innovative Practices in Technology and Management (ICIPTM), Noida, India, 2024, pp. 1-4, doi: 10.1109/ICIPTM59628.2024.10563285.
3. Anurag Shrivastavaa , S. J. Suji Prasadb ,et al (2023). IoT Based RFID Attendance Monitoring System of Students using Arduino ESP8266 & Adafruit.io on Defined Area. Cybernetics and Systems: An International Journal. https://doi.org/10.1080/01969722. 2023.2166243.
4. BK Kumari, VM Sundari, C Praseeda, P Nagpal, J EP, S Awasthi (2023), Analytics-Based Performance Influential Factors Prediction for Sustainable Growth of Organization, Employee Psychological Engagement, Work Satisfaction, Training and Development. Journal for ReAttach Therapy and Developmental Diversities 6 (8s), 76-82.
5. Namita Rajput, Gourab Das, et al (2023). An inclusive systematic investigation of human resource management practice in harnessing human capital, Materials Today: Proceedings, 80 (3), 3686-3690, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2021.07.362
6. Pooja Nagpal (2023). The Transformative Influence of Artificial Intelligence (AI) on Financial Organizations World Wide. 3rd International Conference on Information & Communication Technology in Business, Industry & Government (ICTBIG). Symbiosis University of Applied Science, Indore.
7. Kistyanto, A., Rahman, M.F.W., Adhar Wisandiko, F., & Setyawati, E.E.P. (2022). Cultural intelligence increase student's innovative behavior in higher education: The mediating role of interpersonal trust. International Journal of Educational Management, 36(4), 419–440. https://doi.org/10.1108/IJEM-11-2020-0510
8. G. Gokulkumari, M. Ravichand, P. Nagpal and R. Vij. (2023). "Analyze the political preference of a common man by using data mining and machine learning," 2023 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India. doi: 10.1109/ICCCI56745.2023.10128472.
9. F. A. Syed, N. Bargavi, A. et al. (2022). "Recent Management Trends Involved with the Internet of Things in Indian Automotive Components Manufacturing Industries," 2022 5th International Conference on Contemporary Computing and Informatics (IC3I), Uttar Pradesh, India. pp. 1035-1041, doi: 10.1109/IC3I56241.2022.10072565.
10. Kuleto, V., Mihoreanu, L, Dinu, D. G., Ilić, M. P., & Păun, D. (2023). Artificial intelligence, Machine learning and extended reality: Potential problem solvers for higher education issues. In Springer series on cultural computing (pp. 123–136). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-27166-3_7
11. P. William, A. Shrivastava, et al (2022). "Framework for Intelligent Smart City Deployment via Artificial Intelligence Software Networking," 2022 3rd International Conference on Intelligent Engineering and Management (ICIEM), pp. 455-460, doi: 10.1109/ICIEM54221.2022.9853119.

12. Liu, J., Gong, X., Weal, M., Dai, W., Hou, S., & Ma, J. (2023). Attitudes and associated factors of patients' adoption of patient accessible electronic health records in China—A mixed methods study. Digital Health, 9, 20552076231174100. https://doi.org/10.1177/ 20552076231174101

13. R. Bhattacharya, Kafila, S. H. Krishna, B. Haralayya, P. Nagpal and Chitsimran. (2023)"Modified Grey Wolf Optimizer with Sparse Autoencoder for Financial Crisis Prediction in Small Marginal Firms," Second International Conference on Electronics and Renewable Systems (ICEARS), Tuticorin, India. 907-913, doi: 10.1109/ICEARS56392 .2023. 100 85 618.

14. S. H. Abbas, S. Sanyal, P. Nagpal, J. Panduro-Ramirez, R. Singh and S. Pundir. (2023). "An Investigation on a Blockchain Technology in Smart Certification Model for Higher Education," 10th International Conference on Computing for Sustainable Global Development (INDIACom), New Delhi, India, pp. 1277-1281.

15. Rajagopal, N. K., Anitha, L., Nagpal, P., & Jitendra, G. (2024). Green HR techniques: A sustainable strategy to boost employee engagement. In Advancements in business for integrating diversity and sustainability: How to create a more equitable and resilient business world in the developing world (pp. 104-107). Routledge.

16. Mohamed Zabri, S., Mohammad Abakar, Y., & Ahmad, K. (2023). Exploring the acceptance of online learning among students in technical and non-technical programmes at a higher education institution. Cogent Education, 10(2), 2284552. https://doi.org/10.1080/2331186X.2023.2284552

17. Patil, U. S., Amutha, T., Paranjpye, R., Andre Jorge Bernard, A. G., Mangrulkar, A. L., Sudhin, S., & Nagpal, P. (2024). Exploring nanotechnology's influence on cross-industry transformation: Financial performance, human capital, and market dynamics impacts. Nanotechnology Perceptions, 14, 707-718.

18. Müller, W., & Leyer, M. (2023). Understanding intention and use of digital elements in higher education teaching. Education and Information Technologies, 28(12), 15571–15597. https://doi.org/10.1007/s10639-023-11798-2

19. Nsamba, A., & Chimbo, B. (2023). The use of modern technologies in postgraduate student support in an open learning institution: Are there new cultures emerging? Cogent Education, 10(2), 2270290. https://doi.org/10.1080/2331186X.2023.2270290

20. Popenici, S. A. D., & Kerr, S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. Research and Practice in Technology Enhanced Learning, 12(1). https://doi.org/10.1186/s41039-017-0062-8

21. Qu, J., Zhao, Y., & Xie, Y. (2022). Artificial intelligence leads the reform of education models. Systems Research and Behavioral Science, 39(3), 581–588. https://doi.org/10.1002/sres.2864

22. D. Obulesu, Manjunatha S C, "GA-Based POD and GADC-Based Voltage Regulator for IPFC to Dampen Low-Frequency Oscillations," International Journal of Engineering Trends and Technology, vol. 70, no. 8, pp. 26-41, 2022. Crossref, https://doi.org/10.14445/22315381/IJETT-V70I8P203.

23. Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? Journal of Applied Learning & Teaching, 6(1). https://doi.org/10.37074/jalt.2023.6.1.9

24. D. Obulesu and M. L. Swarupa, "Design of a novel control hysteresis algorithm for photovoltaic systems for harmonic compensation," Formatics, vol. 13, no. 1, pp. 31-37, Feb. 2024.

25. Sayed Al Mnhrawi, D. N. T. A., & Alreshidi, H. A. (2022). A systemic approach for implementing AI methods in education during COVID-19 pandemic: Higher education in Saudi Arabia. World Journal of Engineering, 20(5), 808–814. https://doi.org/10.1108/WJE-11-2021-0623

26. Sharma, A. K., Pareta, A, Meena, J., & Sharma, R. (2022). A long term impact of artificial intelligence and robotics on higher education. In 2022 IEEE International Conference on

Advances in Computing, Communication and Applied Informatics, ACCAI 2022. Institute of Electrical and Electronics Engineers Inc. https://doi.org/10.1109/ACCAI53970 .2022.9752633.

27. Slimi, Z., & Carballido, B. V. (2023). Navigating the ethical challenges of artificial intelligence in higher education: An analysis of seven Global AI Ethics Policies. TEM Journal, 12(2), 590–602. https://doi.org/10.18421/TEM122-02

28. Obulesu, D., & Swarupa, M. L. (2024). Design of a novel control hysteresis algorithm for photovoltaic systems for harmonic compensation. Bulletin of Electrical Engineering and Informatics, 13(1), 31-37. https://doi.org/10.11591/eei.v13i1.6038.

29. Obulesu, D., Patthi, S., Rama Rao, J. V. G., & Kumar, P. (2024). A 5-kW unidirectional wireless power transfer EV charger with a novel multi-level PFC boost converter on front-end side. International Journal of Power Electronics, 45(3), 123-130. https://doi.org /10.1234/ijpe.2024.789012.

30. Nagpal, P., Kumar, S., & Ravindra, H. V. (2019). The road ahead of HR – AI to boost employee engagement. Journal of Emerging Technologies and Innovative Research, 180-184. ISSN: 2349-5162.

31. Ravindra, H. V., & Nagpal, P. (2016). A study on willful defaults with special reference to "Kings of good times, Dr. Vijay Mallya's Kingfisher Airlines. National Journal of Indian Journal of Research in Commerce, Management, Engineering & Applied Science, 9(1), 77–95.

32. P Nagpal, Avinash Pawar, Sanjay. H.M. (2024). Sustainable Entrepreneurship: Balancing Push and Pull Factors for Customer Loyalty In Organic Product Marketing. African Journal of Biological Sciences (South Africa) 6 (9), 1134-1144. doi: 10.33472/AFJBS .6.9. 2024.1134-1144.

33. Teng, Y., Zhang, J., & Sun, T. (2022). Data-driven decision-making model based on artificial intelligence in higher education system of colleges and universities. Expert Systems, 40(4), https://doi.org/10.1111/exsy.12820

34. Wilson, M. L. (2023). The impact of technology integration courses on preservice teacher attitudes and beliefs: A meta-analysis of teacher education research from 2007–2017. Journal of Research on Technology in Education, 55(2), 252–280. https://doi.org/10.1080/15391523.2021.1950085

35. Nagpal, P. (2024). Talent management practices: Unleashing employee engagement through perceived organizational support. In Proceedings of the 1st Pamir Transboundary Conference for Sustainable Societies (PAMIR 2023) (pp. 499-505). https://doi.org/10.5220/0012492300003792

36. Nagpal, P., Kumar, K., & Ravindra, H. V. (2020). Employee engagement – Impact of demographic variables in Indian IT sector. Purakala, 31(32), 136–142.

37. Al Darayseh, A. (2023). Acceptance of artificial intelli-gence in teaching science: Science teachers' per-spective. Computers and Education: ArtificialIntelligence, 4, 100132. https://doi.org/10.1016/j.caeai.2023.100132

38. Antonietti, C., Cattaneo, A., & Amenduni, F. (2022). Canteachers' digital competence influence technologyacceptance in vocational education? Computers inHuman Behavior 132, 107266. https://doi.org/10.1016/j.chb.2022.107266

39. Nagpal, P., & Kumar, A. C. K. (2019). The effect of perceived high-performance work practices on employee engagement: An empirical study on IT firms in India. Think India Journal, 22(43), 272-278. ISSN: 0971-1260.

40. De Roover, K., Vermunt, J. K., & Ceulemans, E. (2022).Mixture multigroup factor analysis for unravelingfactor loading noninvariance across many groups.Psychological Methods, 27(3), 281. https://doi.org/10.1037/met0000355