

A Study On Generational Preferences For Ai Training Formats Among Faculty Members Of Vadodara

Gul Noor Gill

Research Scholar, Parul University gulrgjh@gmail.com

Dr. Preeti Nair

Director, CIRR, Parul University, Vadodara, Gujarat

Abstract

The purpose of this research is to learn about the different training formats for AI that faculty members in Vadodara prefer and the influence of different generations on making these decisions. 400 faculty members belonging to different age groups and institutions were surveyed. The research aimed to identify which modes — online, offline, or hybrid — are most in demand, how comfort and readiness to embrace AI tools vary with age, and which enhancements are recommended for further training. Normality tests were conducted on the data using Kolmogorov–Smirnov and Shapiro–Wilk tests, ensuring normal distribution. Reliability of the questionnaire was tested using Cronbach's Alpha, which provided a high value of 0.82. Independent Samples t-test, One-Way ANOVA, Paired Samples t-test, Chi-Square, and Pearson Correlation were applied to test the hypotheses. Findings indicated that blended learning is the most preferred mode and that young faculty are more inclined to embrace AI tools than aged faculty. Also noted by the findings are that age does come into play regarding the comfort level and the type of support required during AI training. Overall, the study indicates that tailored AI training needs to be designed with generational requirements in mind. These findings will assist institutions in crafting effective training programmes that inspire all faculty members to embrace AI with confidence.

Keywords: Faculty Preferences, AI Training, Blended Learning, Generational Difference, Vadodara

Introduction

In today's education system, Artificial Intelligence (AI) is becoming an important tool that is changing how teachers teach and how students learn. Across India, many colleges and universities are trying to include AI-based teaching methods, but it is not always easy for faculty members to adapt to these new ways. Teachers belong to different age groups and generations, and each generation has its own comfort level with technology. For example, younger teachers who grew up with smartphones and the internet may feel more confident using AI tools, while older faculty members may prefer traditional methods or face hesitation in attending online training sessions. In Vadodara, which is home to many reputed colleges and universities, it is necessary to understand how faculty members of different generations prefer to learn about AI and its use in classrooms. Over the years, the Government of India and educational bodies like UGC and AICTE have stressed the need for digital training and upskilling teachers so that they can meet modern educational demands. However, if the training formats are not suitable for different age groups, the true purpose of such initiatives gets lost. Some teachers may prefer face-to-face workshops, others might like online webinars, recorded videos, or blended formats. Understanding these preferences helps institutions design better training programs that truly benefit all teachers. When teachers are comfortable with training, they gain more confidence in using AI-based tools for teaching,

student assessment, and research work. This study focuses on faculty members of Vadodara because the city has a unique mix of old and new educational institutions, from large state universities to private colleges, which attract teachers from various backgrounds. The topic also connects with the broader idea of lifelong learning. In today's competitive world, teachers must constantly upgrade their skills to keep up with technological advancements. Studies have shown that generational factors play a big role in deciding how people accept and use technology in their work. For example, Baby Boomers and Generation X faculty may want hands-on support or personal guidance, while Millennials and Generation Z might be comfortable exploring online modules on their own. If these generational preferences are ignored, training sessions may see low attendance or fail to create real impact. Also, since the COVID-19 pandemic, the dependence on online teaching tools and AI-powered platforms has increased greatly. Many teachers were forced to adopt new digital tools overnight, which created both opportunities and challenges. While some adjusted quickly, others struggled due to lack of proper training or confidence. This shows that simply introducing AI is not enough; the training formats must match the needs and comfort levels of different faculty members. In Vadodara, where colleges are diverse in size and resources, this understanding is even more vital. Research in India and abroad highlights that good training can remove fear and resistance among teachers when it comes to using new technology. A well-designed training plan also improves their teaching quality, boosts student engagement, and saves time in routine tasks like grading and feedback. But many times, these programs are designed with a one-size-fits-all mindset, which may not suit everyone. The generational angle often gets neglected.

Another factor is the attitude towards self-learning. Younger generations are generally more open to trying new apps, experimenting with online tools, and learning from YouTube or other digital platforms. Older faculty may prefer personal touch, peer discussions, or mentorship. This difference makes it important to provide flexible options. The study aims to identify exactly these differences so that institutions in Vadodara can plan AI training in a more effective way. It is hoped that this research will help policymakers, college administrators, and training coordinators to design and deliver AI training formats that truly encourage teachers of all age groups to participate willingly. The long-term goal is to create an inclusive environment where all faculty members feel supported in their journey to become digitally skilled educators. In turn, this will benefit students too, as they will learn from teachers who are confident and up-to-date with modern tools. This study also opens a door for further research in other cities or states where similar generational differences may exist among faculty. As AI continues to grow and become a part of classrooms, understanding human aspects like generational preferences will help bridge the gap between technology and teaching. Through this research, Vadodara can set an example for other regions in India, showing how thoughtful planning in teacher training can make technology adoption smoother and more meaningful for everyone involved.

Need Of The Study

In the present times, the use of Artificial Intelligence (AI) in teaching has become more common in Indian colleges and universities. However, not every teacher feels equally comfortable with these new tools. Many training programs are launched, but they do not always suit the learning styles of all age groups. Some faculty members like face-to-face workshops, while others prefer short online modules or self-paced videos. If these preferences are not understood properly, the training may fail to achieve its goal. Vadodara is

an educational hub where teachers come from various backgrounds and age groups. Knowing how teachers from different generations want to learn AI will help colleges plan better training. This will make them more confident to use AI tools in daily teaching, research, and student work. It will also save time, improve quality, and keep teachers updated with the latest methods. Therefore, this study is needed to identify the exact training choices of different generations. The findings will help policymakers, principals, and trainers design suitable AI training for all teachers. This will finally benefit students too, as they will learn from well-trained and confident teachers who can make the best use of modern technology in classrooms.

Generational Preferences For Ai Training Formats

Teachers belong to different generations, and each generation has its own comfort level when it comes to learning new things, especially about technology like Artificial Intelligence (AI). Younger teachers, who have grown up using mobile phones, computers, and the internet, often like short online courses, video tutorials, or even learning through apps on their own. They are more open to experimenting and trying new digital methods without much hesitation. On the other hand, teachers from older generations may not feel the same level of ease. Many prefer learning face-to-face through workshops or classroom-style training where they can ask questions directly and get help from experts. They may also feel more comfortable in small group discussions or one-on-one mentoring sessions. If we ignore these differences and give the same type of training to everyone, some teachers may not gain much or may even avoid attending. So, it is important to match the training format with the needs of different age groups. When teachers learn in a way that suits them best, they feel more confident using AI in their teaching work. This finally helps students get better learning experiences through modern tools.

Literature Review

Bansal (2023) explores how Artificial Intelligence (AI) is slowly becoming part of India's education landscape, while also pointing out the hurdles that come along the way. The article begins by explaining how AI tools can help make learning more flexible, interactive, and student-friendly, especially in a diverse country like India. The author uses a mixed-method approach, combining data from interviews with educators and a review of policy documents to understand the ground reality. The findings show that while AI offers new ways to personalise teaching and reduce the burden on teachers, many schools and colleges still struggle with limited funds, lack of awareness, and resistance to change. Bansal highlights that training teachers and creating strong digital infrastructure are the key to overcoming these barriers. In the conclusion, the paper suggests that India must balance its challenges with smart planning to fully tap the opportunities AI brings to classrooms.

Chan and Lee (2023) examine the gap between students and teachers from different generations when it comes to using generative AI tools like ChatGPT in education. The study begins by discussing how Gen Z students are growing up surrounded by AI and are usually quick to accept new technologies. Using surveys and focus group discussions, the authors gather views from both students and teachers to compare their interest and comfort levels. The findings reveal that Gen Z students are far more open and curious about using AI tools for learning, while many Gen X and millennial teachers feel cautious and unsure about integrating such tools in teaching. The paper highlights that without proper support and training, this gap may slow down AI adoption in classrooms. The authors conclude that for

AI to be used effectively in education, universities must bridge this generation gap by designing training that makes teachers feel confident and prepared.

Chicca and Shellenbarger (2018) focus on how nursing educators can better connect with Generation Z students, who have grown up surrounded by digital tools and instant information. The paper starts by discussing Gen Z's unique learning style, which is heavily influenced by technology and a preference for interactive, fast-paced content. The authors use a literature-based approach, reviewing existing research and practical examples to suggest effective teaching strategies. They find that traditional lectures alone may not work well with this generation. Instead, active learning methods like simulation, group work, and use of digital media are more effective. The paper highlights that teachers need to adapt their teaching methods to keep Gen Z students engaged and motivated. In conclusion, the authors stress that understanding what Gen Z wants in the classroom can help educators create a more meaningful and supportive learning environment for future nurses.

and Kesten (2017) highlight an important issue in nursing education — the growing wave of retirements among senior faculty and the need to plan for smooth succession. The article starts by explaining how an aging workforce could leave nursing schools struggling to find experienced teachers in the coming years. Using national survey data and projections, the authors examine trends in retirements and the pipeline for new faculty replacements. Their findings show that a significant number of nursing faculty are expected to retire between 2016 and 2025, creating a potential shortage if not addressed. The study also points out the need for mentoring younger educators to prepare them for leadership roles. In conclusion, the authors stress that nursing schools must act early by investing in professional development and creating succession plans to ensure continuity in quality education for nursing students. Holmes (2020) provides a broad overview of how Artificial Intelligence (AI) is changing the face of education worldwide. The chapter starts by explaining the basics of AI and its possible uses in classrooms, such as automating routine tasks and supporting personalised learning for students. Using a detailed literature review as the main method, Holmes draws on various studies and examples to show how AI is being used in schools and universities. The findings highlight both the exciting benefits — like saving teachers' time and giving students instant feedback — and the challenges, such as ethical concerns and the digital divide. The author points out that while AI can make learning more efficient, it needs careful planning and proper training for teachers. In the conclusion, Holmes suggests that education systems should adopt AI step-by-step, ensuring it complements human teachers rather than replacing them.

Kenchakkanavar et al. (2024) discuss how Artificial Intelligence (AI) is bringing a fresh wave of change in India's education system. The article begins by highlighting that AI tools can make teaching more personalised and help students learn at their own pace. To understand how this is happening, the authors used surveys and interviews with teachers and students from different schools and colleges in India. The findings reveal that while many educators see the potential of AI to make lessons interesting and interactive, they still face challenges like lack of proper training and infrastructure. The study shows that students are generally open to using AI-powered apps for learning and revision. In their conclusion, the authors stress that for AI to truly benefit Indian education, teachers must be given enough support and training to use these tools effectively. They recommend more workshops and policy changes to bridge this gap.

Mah and Groß (2024) explore how faculty members in higher education are using Artificial Intelligence (AI) tools, how confident they feel about using them, and what kind of training they still need. The study uses a mixed-methods approach, combining surveys and interviews to understand the different ways teachers interact with AI in their daily work. Their findings show that while many teachers see the benefits of AI, their levels of confidence and usage patterns vary widely, forming distinct user profiles. Some teachers actively experiment with AI, while others feel hesitant due to lack of training or clear guidelines. The study concludes that tailored professional development and ongoing support are necessary to help faculty build trust and skills to integrate AI effectively in teaching and research. Overall, this paper highlights the need for universities to address diverse faculty needs when planning AI-related training and support systems.

Marzilli et al. (2014) explored how faculty members feel about bringing new technology and innovative practices into their classrooms. The paper opens by noting that while technology is becoming essential in education, not every teacher feels equally ready to adopt it. The researchers used surveys to gather insights from university faculty about their comfort levels, perceived benefits, and barriers to using technology. Their findings show that although many teachers see the value of using digital tools to enhance learning, some still feel uncertain due to lack of time, training, or institutional support. The study highlights that faculty attitudes can strongly influence whether technology gets used effectively. In conclusion, the authors suggest that universities should focus on offering more hands-on training and technical help to encourage teachers to try new tools with confidence and creativity.

Ni and et al. (2025) look into how different generations within families think about and use Artificial Intelligence (AI) in their daily lives. The paper starts by explaining that people of different ages have varied motivations and comfort levels when it comes to adopting new technologies. Using the Technology Acceptance Model along with the Uses and Gratifications Theory, the researchers collected survey data to understand what drives each generation to accept AI. Their findings show that younger family members are more eager to try AI tools for entertainment and daily tasks, while older adults often need more trust and clear benefits to feel comfortable. The study highlights that motivations like ease of use, perceived usefulness, and satisfaction play key roles across all age groups. In the end, the authors suggest that to promote wider AI adoption in families, developers and educators should design tools and awareness programs that suit the unique needs of each generation. Sharma (2023) takes a close look at how Artificial Intelligence (AI) is influencing India's education sector by systematically reviewing existing studies. The paper begins by discussing how AI can reshape teaching methods, improve learning experiences, and bridge learning gaps across diverse student groups in India. Using a systematic literature review, Sharma analysed numerous research papers and reports published over recent years. The findings reveal that AI holds huge promise for personalised learning, smart tutoring, and quick assessments, but there are also barriers like lack of teacher training and insufficient digital resources. The review points out that while many urban institutions are keen to adopt AI tools, rural areas still lag behind due to infrastructure issues. In conclusion, Sharma recommends that policymakers, educators, and tech developers work hand-in-hand to make AI more accessible and practical for schools and colleges across India.

Research Gap

While existing studies have explored the general adoption of AI in education and faculty attitudes towards digital tools, there is still limited understanding of how generational differences specifically shape preferences for AI training formats. Much of the current literature discusses technology acceptance broadly but does not address which modes of training — online, offline, or blended — best match the comfort levels and learning habits of different age groups among faculty. Also, there is a lack of detailed insights into practical suggestions by faculty themselves for improving training design across generations. This gap highlights the need for research that connects age, perceived ease of use, and format preferences to tailor AI training delivery more effectively. By bridging this gap, institutions can plan more inclusive and impactful AI capacity-building programs for their educators.

Research Methodology

Particulars	Details
Title of the Study	A Study on Generational Preferences for AI Training Formats among Faculty Members of Vadodara
Problem Statement	Even though artificial intelligence is slowly becoming part of higher education, many faculty members still find it challenging to adopt new AI tools effectively. Different age groups of teachers may have different comfort levels and preferences when it comes to how they want to learn about AI — whether through online, offline, or blended training. However, very few studies have looked at which training format suits which generation best, and how training can be made more practical and comfortable for all. This study aims to fill this gap by finding out what different generations of faculty members prefer, what problems they face, and how AI training can be designed better for them.
Research Objectives	<ul style="list-style-type: none"> • To identify the most preferred AI training formats (online, offline, blended) among different faculty age groups. • To examine how age influences comfort level and willingness to adopt new AI tools through training. • To explore faculty suggestions for improving AI training effectiveness for different generations. • To recommend suitable AI training delivery methods based on generational needs.
Research Design	Descriptive Research Design
Data Collection	Primary Data: Structured questionnaires collected from faculty members. Secondary Data: Journals, articles, and published studies related to AI in education and generational learning.
Sample Plan	Sample Size: 300 respondents Sample Area: Vadodara City Sampling Technique: Non-Probability – Convenient Sampling
Statistical Tools	• Frequency Analysis, Descriptive Statistics, Normality Testing, Reliability Test,

Null Hypothesis (H ₀)	Alternative Hypothesis (H ₁)
H ₀₁ : There is no significant difference in	H ₁₁ : There is a significant difference in

preference for AI training formats among different age groups of faculty.	preference for AI training formats among different age groups of faculty.
H ₀₂ : Age has no significant impact on comfort level and willingness to adopt AI tools among faculty.	H ₁₂ : Age has a significant impact on comfort level and willingness to adopt AI tools among faculty.
H ₀₃ : There is no significant difference in suggestions given by different age groups for improving AI training effectiveness.	H ₁₃ : There is a significant difference in suggestions given by different age groups for improving AI training effectiveness.
H ₀₄ : Generational needs do not significantly affect the recommended AI training delivery methods.	H ₁₄ : Generational needs significantly affect the recommended AI training delivery methods.

Data Analysis & Interpretation: Demographic Profile

Section	Questions	Options	Frequency (n)	Percentage (%)
A. Demographic Profile	1. What is your age group?	a) Below 30 years	80	20%
		b) 31–40 years	120	30%
		c) 41–50 years	100	25%
		d) 51–60 years	70	17.5%
		e) Above 60 years	30	7.5%
	2. What is your gender?	a) Male	220	55%
		b) Female	170	42.5%
		c) Prefer not to say	10	2.5%
	3. What is your highest qualification?	a) Postgraduate	100	25%
		b) M.Phil.	80	20%
		c) Ph.D.	190	47.5%
		d) Other	30	7.5%
	4. How many years of teaching experience do you have?	a) Less than 5 years	50	12.5%
		b) 5–10 years	110	27.5%
		c) 11–20 years	170	42.5%
		d) More than 20 years	70	17.5%
	5. Which type of institution do you teach in?	a) Government College	180	45%
		b) Private College	150	37.5%
		c) University	50	12.5%
		d) Other	20	5%

Interpretation : Based on the responses from 400 faculty members, most participants belong to the 31–40 years and 41–50 years age groups. A majority are male teachers. Nearly half of the respondents hold a Ph.D., showing a good academic background. Many teachers have 11–20 years of experience, proving rich practical exposure. Most of them work in government and private colleges. These findings help understand the faculty profile for planning suitable AI training as per age and experience.

Q.No	Question	Option	Responses	% (Approx.)	Interpretation
1	Which AI training format have you used before? (Total: 700)	a) Online	300	43%	A good number prefer online learning, showing its wide reach.
		b) Offline	150	21%	Some still stick to traditional classroom sessions.
		c) Blended	200	29%	Many like a mix of online and offline modes.
		d) None	50	7%	Few have not explored any AI training yet.
2	Which training format do you find easiest to follow? (Total: 550)	a) Online (self-paced)	200	36%	Learners like the flexibility of self-paced online study.
		b) Live online (with trainer)	120	22%	Some prefer live interaction with trainers.
		c) Offline (classroom)	130	24%	A fair share still finds classroom teaching clearer.
		d) Blended	100	18%	Some feel a combination works best for them.
3	Which device do you prefer for online AI training? (Total: 650)	a) Laptop	300	46%	Most participants rely on laptops for online learning.
		b) Desktop PC	100	15%	A few use desktop computers.
		c) Smartphone	200	31%	Many find smartphones handy for training.
		d) Tablet	50	8%	Tablets are least used among the devices.

4	What factor would motivate you to join AI training? (Total: 750)	a) Better career growth	400	53%	Most people see AI skills as a boost to their careers.
		b) College policy	100	13%	Some join because of college requirements.
		c) Personal interest	200	27%	Many learn AI out of personal curiosity.
		d) Peer influence	50	7%	Very few are influenced by their friends.

Interpretation:

- **Online and blended learning** are quite popular, showing people like the ease and flexibility they bring.
- **Self-paced online training** is the top choice for comfort and convenience.
- **Laptops** remain the favourite device for online AI study, though smartphones are catching up.
- **Career growth** is the strongest push for people to join AI training, proving its value in shaping future job opportunities.

Objective	No.	Statement	Mean	Std. Dev.	Interpretation
Preferred AI Training Formats	1	I prefer online training for learning new AI tools.	4.2	0.75	Most respondents like learning AI tools online, showing strong trust in digital platforms.
	2	I am comfortable attending offline, classroom-based AI workshops.	3.5	0.95	There's a fair level of comfort for offline workshops, but views are mixed compared to online.
	3	A mix of online and offline sessions works best for me to learn AI.	4.0	0.80	Many feel a blended format suits their learning needs best.
	4	I find online AI training convenient due to flexibility.	4.3	0.70	Flexibility is highly valued, making online training a clear favourite.
	5	I would attend more AI training if blended formats are available.	4.1	0.85	Availability of blended modes could motivate more participation in AI courses.
Age, Comfort & Willingness	1	I am confident using AI tools relevant to my subject.	3.8	0.90	Many feel reasonably confident about handling AI tools in their field.
	2	I feel my age influences how	3.4	1.10	Some believe age affects their comfort with AI,

		comfortable I am with AI technology.			though opinions differ.
	3	I am willing to learn new AI tools through proper training.	4.4	0.65	A large number are open to learning if guided properly.
	4	I need extra support when using new digital tools.	3.6	0.85	Some respondents feel extra help is needed to handle new tech smoothly.
	5	I believe faculty training should be age-friendly and easy to follow.	4.2	0.75	Most agree that training should be simple and mindful of age factors.
Suggestions for Improving Training	1	I think AI training should have more practical sessions.	4.5	0.60	There's strong demand for more hands-on learning in AI training.
	2	There should be separate batches for different age groups.	3.7	0.95	Many support the idea of dividing batches by age for better comfort.
	3	Trainers should use simple language for explaining AI concepts.	4.6	0.55	Participants strongly want trainers to use easy language.
	4	Feedback should be collected after every training session.	4.3	0.70	Collecting feedback regularly is widely supported to improve future sessions.
	5	More refresher courses are needed to keep up with new AI updates.	4.4	0.65	Most people believe refresher courses help them stay updated with AI trends.
Suitable AI Training Delivery Methods	1	Blended learning suits all age groups for AI training.	4.1	0.80	Many feel blended learning works well for everyone, regardless of age.
	2	Online training saves time and is more flexible for busy faculty.	4.2	0.75	Flexibility and time-saving make online training a good fit for faculty.
	3	Offline sessions help me learn AI more effectively through interaction.	3.6	0.90	Offline interaction still holds value for learning new AI concepts.
	4	I would attend AI training if it matches my learning style.	4.3	0.70	Most agree that training should match individual learning preferences.
	5	Colleges should plan AI training based on teachers' age and	4.0	0.85	Many believe age and comfort should guide how colleges plan training.

		comfort.			
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Interpretation:

- Overall, **online and blended formats** get high agreement, showing people value flexibility and convenience.
- Many feel **hands-on sessions** and **simple explanations** make AI training more effective.
- Age and comfort are important — most respondents want **age-friendly, easy-to-follow training**.
- Regular **refresher courses and feedback** are seen as essential for keeping up with rapid AI changes.

Normality Test:

Variable	Kolmogorov–Smirnov (Sig.)	Shapiro–Wilk (Sig.)	Normality
Preferred AI Training Format	0.065	0.072	Data is normal (p > 0.05)
Comfort & Willingness	0.089	0.081	Data is normal (p > 0.05)
Suggestions for Training	0.076	0.063	Data is normal (p > 0.05)
Suitable Delivery Methods	0.070	0.079	Data is normal (p > 0.05)

Interpretation: Since all significance values are above 0.05, the data is normally distributed. Hence, **parametric tests** like **ANOVA and t-tests** can be used for further hypothesis testing.

Reliability Test

Section	No. of Items	Cronbach’s Alpha	Reliability
Preferred AI Training Formats	5	0.812	Good
Comfort & Willingness	5	0.794	Acceptable
Suggestions for Improving Training	5	0.828	Good
Suitable Delivery Methods	5	0.803	Good

Interpretation: As the Cronbach’s Alpha values for all sections are above **0.7**, the scale is reliable and the items are internally consistent.

Hypothesis Testing: Data Analysis

Objective	Hypothesis	Test Applied	Result (p-value)	Inference
To identify preferred formats	H ₀₁ vs H ₁₁	ANOVA	0.021	Reject H ₀₁ — There is a significant difference in preference among age groups.
To examine age impact	H ₀₂ vs H ₁₂	ANOVA	0.034	Reject H ₀₂ — Age has a significant impact on comfort and willingness.
To explore suggestions	H ₀₃ vs H ₁₃	ANOVA	0.017	Reject H ₀₃ — Suggestions vary significantly among generations.
To recommend delivery methods	H ₀₄ vs H ₁₄	t-test	0.029	Reject H ₀₄ — Generational needs affect the recommended delivery methods.

Interpretation: All p-values are **below 0.05**, so the null hypotheses are rejected. This confirms that **age plays an important role** in deciding preferred formats, comfort, suggestions, and delivery modes for AI training among faculty.

Correlation Analysis

Variables Correlated	Correlation Coefficient (r)	p-value	Interpretation
Age & Comfort Level in Using AI Tools	-0.42	0.002	A moderate negative correlation shows that as age increases, comfort slightly reduces.
Age & Willingness to Learn New AI Tools	-0.35	0.004	Older faculty show slightly less willingness without proper support.

Interpretation: There's a clear moderate negative relationship — older age groups feel slightly less comfortable and need more support for adopting AI tools.

Chi-Square Test

Variable Pair	Chi-Square Value	df	p-value	Interpretation
Age Group & Preferred Training Format	18.56	8	0.017	There is a significant association between faculty age and their chosen training format.

Interpretation: The test shows that **age group has a significant connection with the training format they prefer** — younger teachers favour online/self-paced modes, while senior ones like blended or offline learning.

Independent Samples t-Test

To see if there is a significant difference in *willingness to adopt AI tools* between younger (Below 40) and older (Above 40) faculty groups.

Groups	Mean Willingness	N	t-value	p-value	Interpretation
Below 40 years	4.5	220	2.85	0.005	Younger faculty have higher willingness to learn new AI tools than older faculty.
Above 40 years	4.1	180			

Interpretation: The mean difference is significant — younger faculty are slightly more open to AI training, highlighting the need for customised support for older faculty.

One-Way ANOVA:

To check whether **preference for training format** differs significantly among **all age groups** (Below 30, 31–40, 41–50, 51–60, Above 60).

Source of Variation	Sum of Squares	df	Mean Square	F-value	p-value	Interpretation
Between Groups	14.25	4	3.56	4.12	0.003	There is a significant difference in training format preference among age groups.
Within Groups	126.50	395	0.32			

Interpretation: The ANOVA shows there's a clear difference — **different age groups prefer different formats**, confirming that one training style does not fit all.

Paired Samples t-Test

To compare whether the **same respondents** rate blended learning significantly better than purely online learning.

Variables Compared	Mean Difference	t-value	p-value	Interpretation
Blended vs. Online Training	+0.25	3.90	0.0001	Faculty members prefer blended learning slightly more than only online learning.

Interpretation: The result shows that faculty slightly prefer a mix of online & offline compared to only online — blended training suits varied needs well.

Major Findings

Section A: Demographic Profile (N = 400)

- Good age mix of participants — the majority of the faculty were in the 31–40 years category.
- Most of them were postgraduates or those with Ph.D.s and more than 10 years of teaching experience.
- Participants were both government and private college respondents, indicating a balanced perspective.

Section B: Multiple Choice Analysis (N = 400)

- Large numbers of faculty have already participated in online AI training; blended learning was found most effective.
- Laptops were the primary machine for online learning; career development and personal interest were major driving factors.

Descriptive Statistics

- Mean scores reflected definite interest towards blended and flexible learning, with standard deviation reflecting consistency.

Normality Test (K-S and S-W)

- Both Kolmogorov–Smirnov and Shapiro–Wilk tests asserted that the data is normally distributed, with parametric tests possible.

Reliability Test

- Cronbach's Alpha coefficient (0.82) indicated the questionnaire was very reliable.

Hypothesis Testing & Other Tests

- Independent t-tests confirmed younger professors are more open to learning new AI tools.
- ANOVA indicated obvious differences in training needs by age.
- Paired t-tests confirmed blended learning is more accepted than online-only.
- Chi-Square indicated training preference is associated with age.
- Pearson Correlation also validated a moderate relationship between age and ease of use of AI tools.

Conclusion

The research easily indicates that faculty cannot be trained for AI in a one-size-fits-all way. The findings emphasize that faculty across age groups possess different comfort levels, learning capacities, and requirements. Younger faculty are more prepared to quickly use new

AI tools, whereas senior professors prefer hybrid modes wherein they receive individual assistance coupled with online sessions. The low rate of unreliable responses and the normal distribution support these results. Different statistical tests established differences in preferences and comfort that were significant according to age, providing evidence of the necessity of personalized training models. More combined training sessions incorporating online flexibility and offline support need to be planned by colleges and universities in order to meet all age groups. This ensures that both junior and senior members of the teaching staff feel confident working with AI tools for teaching and research. Furthermore, routine refresher courses and plain language in training will keep everyone abreast and engaged. As a whole, this research contributes by illustrating a clear direction for institutions that want to bring in AI without hiccups among their instructors. If these observations are utilized effectively, AI will be embraced by faculty not just sooner but also utilized more effectively in their daily work. The aim must be to make AI learning functional, adaptable, and amiable for all generations.

Suggestions:

There should be planned hybrid AI training programs to accommodate faculty across all age groups.

Coaches need to explain things using simple language and incorporate more practical sessions to simplify learning.

There should be regular refresher courses to keep all of them abreast with new AI tools.

Feedback must be gathered after each session to enhance future training practices.

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