Using Deep Learning Strategy to Implement AI Tools Fusion in Academics

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Abstract

The advancement of artificial intelligence (AI) in the field of education system has revolutionized traditional education paradigms. The ability of language models to process human language has revolutionized the field of artificial intelligence. The fusion of deep learning and cognitive science is getting attention in the academic system. The absence of structured policies and lack of AI fusion strategies in academics disrupt traditional teaching classrooms resulting in misuse and resistance in adoption of AI. This marks the importance of preparation of AI policies for effective implementation of AI tools in teaching and learning. This paper highlights the importance of framing the guidelines for organized and practical implementation of AI fusion in academics. This study bridges the gap by developing a standardized framework to transform normal classrooms into dynamic data driven platforms promoting professional development for teachers and empowering students with digital literacy and autonomous learning. The study examines predictive performance using deep learning strategies to extract key features of teaching, learning and cognitive and predicts the impact of AI in sustainable teaching. The highest importance scores range from 0.89 to 0.94, which indicates the importance of selected key features in models' predictions. The highest mean score of 4.5 of the model establishes satisfaction of teachers and students with policy objectives. The results of the study indicate that integration of deep learning cognitive strategy along with clear policies framework help in achieving higher adoption and performances rates of AI in sustainable classrooms when compared with traditional teaching strategies with minimal AI-integration.

Keywords: Artificial Intelligence; Sustainable Learning; Deep Learning; AI-Powered Education; Digital Learning

1. Introduction

The influence of artificial intelligence has gained attention in every field especially the education sector as it offers numerous innovative teaching and learning strategies such as intelligent tutoring systems, adaptive learning systems and so on. However, irrespective of its potential advantages, AI fusion in academics poses significant risks due to lack of standard policy framework, adequate training and security concerns. One of the main benefits of AI in education is its potential to promote personalized learning. AI analyses students learning pattern, customizes the content dynamically to match students' level, and thus optimizes classroom engagement. AI fusion such as language translation tools, text to speech and speech to text tools engages and supports students who need special attention [11]. Learning AI tools enables teachers to develop teaching materials, course content, assessments and other virtual teaching aids. At risk, students can be identified and can be timely intervened using predictive analysis. Furthermore, AI powered agents, avatars and other AI tools automate teaching and administrative tasks through features like chatbots. AI powered learning experiences and gamification tools add higher level of learning as it ensures education outside classrooms and supports learning at the convenience of the students. Although AI integrated lessons mark the new era of modern education system in transforming students learning and educators teaching methods, its effectiveness depends on how institutions handle its integration into academics [3]. Table1 depicts the function of AI in education.

DOI: https://doi.org/10.54216/FPA.210119
Received: February 22, 2025 Revised: May 29, 2025 Accepted: July 12, 2025

Table 1: The Function of Artificial Intelligence in the Academic and Education

Category	Details / Key Points
Role of AI in Education	Widely recognized across sectors, notably in education, supports innovative and sustainable teaching methods.
Innovative AI Strategies	Intelligent tutoring systems, adaptive learning platforms, predictive analytics for student performance.
Benefits of AI in Learning	Promotes personalized learning by analysing student behaviour, dynamically adapts content to learner's pace.
Support for Special Needs	Incorporates tools such as speech-to-text, text-to-speech, and translation to aid diverse learners
Assistance for Educators	Enables development of teaching materials and assessments, automates repetitive tasks through AI agents and chatbots
Monitoring and Feedback	Tracks student progress, offers real-time feedback, identifies at-risk students for timely intervention
Classroom Engagement	Gamified learning and AI-powered experiences enhance student involvement- encourages learning beyond the classroom.
Sustainability Contributions	Promotes inclusive learning environments, supports data-driven decisions- simulates real-world sustainable scenarios
Empowerment of Learners	Encourages independent learning- builds global competencies through smart classrooms.
Challenges of AI Integration	Lack of clear institutional policies- need for teacher training, concerns over data privacy and overdependence.
Research Objectives of the Study	Propose structured guidelines for AI tool usage understand cognitive responses from both teachers and students, prevent misuse or over-reliance on AI tools.

This study proposes guided usage of fusion of AI Tools (AIT) across different levels by preparing guidelines and to provide a standard structure in adopting AIT in teaching and to prevent over dependence or avoidance of using AI tools in classrooms. This study explores deep learning strategies to enhance AIT teaching by understanding cognitive features of students and teachers' behaviours at undergraduate levels.

2. Literature Review

There have been several research studies related to the implementation of AI tools in education. AI tools powered education has transformed traditional pedagogical strategies by ensuring interactivity and providing personalisation and engaging learning experiences. Studies present that intelligent tutoring systems are one of the prominent AI applications and use of robots help in personalised tutoring [10]. Tutoring systems adapt according to the learning pattern of students and thus offers personal instructions. Studies by Luclin et al. (2017) present AI tools potential in customised learning resulting in enhanced course outcomes [9]. Dynamic platforms such as adaptive learning algorithms have tremendous impact on content delivery, student engagement, student performance and feedback generation [2]. Researcher Sajja et al (2023) has developed an AI agent to support learning in personalized manner using natural language processor (NLP) [1]. Generative AI platforms such as AI chatbots also play an important role as it supports personalized learning by providing academic support outside classrooms. Studies explore that the integration of AI chatbots support computer science teaching and demonstrates pedagogical advantages [4] [14]. Studies by Ateeq et al. (2024) discusses the importance of AI tools in thesis writing and assignments, promoting academic success and reducing workload of faculty [5]. Studies also show that AI predictive learning platforms such as data mining tools contributes towards monitoring at-risk students progress and in providing timely feedback which helps students to focus on the area of improvement [6].

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Review studies on generative AI emphasises on adopting guided use of AI tools for dynamic teaching and learning experiences. Data mining and predictive tools make real time decisions, support, and enhance instructional strategies by educators. Studies say that using AI in Math and Computer Science classrooms disrupt classroom dynamics and interactions [12].

With increase in the use of AI, tools ethical and privacy concerns have also raised. Review studies on Generative AI in teaching emphasizes the need of guided structure and policies [7] to curb excessive use and emphasise on integrating AI powered tools to align with institutional goals [8]. Studies point out the importance of educators when compared to AI tools [15] dominance. As per studies, educators are optimistic about incorporating both human and machine intelligence [13]. Studies show influence of deep learning in online education [16]. However, even though AI tools support sustainable education there are challenges faced when it comes to its implementation as there are no standard guidelines to how to use it in classrooms.

3. Existing Educational Approach

In this modern world, teaching strategies have evolved from traditional to AI-integrated. Academic institutions are focussing on adopting strategies to promote inclusive learning practices and thus making AI integral part of education. Some of the common features of existing educational approaches and AI usage in classrooms are listed below:

1. Traditional Educational Guidelines:
- Standardized curriculum designed as per national accreditation standards
- Assessments prepared as per the blueprint
- Assessments are graded as per the rubrics and moderated by teachers
- Teachers play the role of central facilitator; prepares content and is the advisor of the class
- Structured curriculum for learning
- Time based and practices conventional lecture method
- Clear policies related to exam, integrity, classroom, student conduct etc.

2. AI-Based Educational Practices
- Typically, no standardized practices to use AIT included in the curriculum
- AI support tools used as per convenience for teaching and lacks pedagogy
- Assessment, evaluation, moderation mostly used as per choice
- Unstructured AI usage and classroom disruption
- Inconsistent and misused practices

To prepare students to be competent for a tech-driven future, AI literacy needs to be embedded into the course curriculum and implemented across various levels. In order, ensure smooth transition from traditional teaching practices to fusion AI integrated classrooms; educators are to be empowered to use AIT. To monitor the functions and to prepare necessary guidelines for the smooth functioning of the system, a dedicated committee consisting of a group of experienced educators is mandatory. The committee is responsible to develop policies, monitor its implementation, and protect data privacy and transparency of the system across all levels. Professional development training programs to introduce adaptive learning practices and to generate lesson related activities, student-grading system, grading system etc. are crucial for the smooth functioning of the system. Various training programs need to be given to explore new technologies that meets the pedagogical goals. Human effort is also needed in judging students in AI teaching classrooms; maintain ethics in assignment works and to provide personalised feedback. To promote digital skill and to foster high order thinking, students must be taught to analyse outputs generated by AI. Fusion of AIT to monitor and support at-risk students facilitate equity. In view of the shortcomings, focus is given on adopting deep teaching practices to improve the teaching efficiency in undergraduate level by constructing a clear framework combining policy guidelines with practice.

In this research, as part of pilot study, a set of standards are set by the committee and tested in different sections across different levels to assess its impact. Clear key areas along with its importance and concise breakdown is identified and included in the guidelines as part of AI educational framework. Feedback is gathered from students and academicians and validity and usefulness of the guidelines is evaluated. The committee conducts periodic meetings and improvements are applied based on the feedback obtained.

4. Proposed Framework

Teaching strategies have evolved from traditional to AI-integrated teaching. While AIT fusion poses several advantages, their implementation faces several challenges. To produce the best impact of AIT in sustainable classrooms, firstly, analysis of case study of exiting challenges faced in the classrooms are noted. Secondly, a structured policy is adopted, and the pilot program was tested on selected sections of undergraduate course in the

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university. Thirdly, feedback is collected from educators and students who were involved in the pilot program sessions. This research is an initiative as part of the observations of key gaps noticed in the existing curriculum in using AIT in classrooms. The key classroom observations noted are:

- Limited awareness of AIT-, which blocks educators from adopting AI teaching.
- Unproportioned usage of AIT across classrooms - some were overly depended on AI whereas others completely neglected and followed traditional methods instead.
- Issues related to ethics and lack of knowledge - providing inaccurate output.
- Lack of guidelines on pedagogical uses of AIT in curriculum.
- Misuse of automated suggestions by AIT affecting students' natural creativity thinking.

4.1 Current AIT Challenges

- An examination of a teaching case study conducted throughout five sections of an undergraduate foundation program course is the first step in the process of analysing the currently occurring challenges. A primary goal of this case study is to examine the many current instructional approaches and the challenges encountered when attempting to integrate artificial intelligence (AI) to the development of sustainable classrooms. Important aspects of sustainability, including environmental protection, digital citizenship, ethical technology usage, innovation, and related topics, are the primary emphasis of the research. Phase two involves gathering data from the five different sections of instructors in order to assess the current gaps and challenges encountered when integrating AI into the curriculum. This will make it possible to carry out studies. Asking teachers for their input is the best way to identify problems with both technological and pedagogical aspects of education. Another approach that might be utilised to identify significant gaps is to use classroom observations and student feedback. The contributions provided by students highlight the significance of growing artificial intelligence within the framework of sustainable learning. The results of the input might be used as a gauge for creating and implementing remedies to the issues. Here is a rundown of the most pressing problems identified, based on the feedback we got:

- Foundational students found it more challenging since the focus was on speculating about sustainable AI. People are anti-AI and there is not enough training. Teachers are wary of implementing AI into their lessons since they are not well versed in the technology. Some courses put too much stock on AI, while others preferred time-tested methods. Because of this, the distribution of AIT implementations was not uniform. Curriculum does not adequately address the lack of links between viable AI applications. Improper decisions caused by a lack of knowledge and ethical considerations. The integration of AIT into lesson planning is not
- well documented. Misusing AIT's pre-programmed concepts hampers students' natural capacity for original thought. The key AIT challenges faced by educators in the classrooms and their corresponding solutions are summarised in Table2.

- It will need a concerted effort on the part of legislators and teachers to address AIT-related problems in environmentally conscious classrooms and establish legislation that will help reduce the negative effects of the problems listed in Table 1. Here are the main points of AIT policy (AITP) that the committee has outlined:

- Make sure that AIT is integrated effectively by creating common guidelines. Consistent usage of AITs should be monitored. Provide people with information on how to utilise AI technologies. Ensure a seamless deployment of AIT in classrooms by providing the necessary technological infrastructure. Make everyone feel welcome. Make reasonable use of AIT by both students and teachers to avoid or overuse it, and utilise it as a support tool. Embrace and be current with AITs.

Table 2: AIT fusion challenges and solutions

Challenges	Solutions
1. Limited technical skills and selection of appropriate AIT fusion	- make a list of appropriate AIT- toolkit valuable for teaching
	- conduct AIT orientation workshops
2. Promote balanced use of AIT across classrooms	- share standardized teaching lesson plans across all sections with AIT used for teaching to unify teaching; prepare AI examples
	- indicate amount of time allocated to use AI in each session

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3. Issues related to ethics and misuse of AIT	- include a chapter in the course handbook to educate on AI ethics at the introductory level
	- include limits to use AIT to avoid overdependence and create awareness to check AI outputs for correctness
4. Use AIT fusion in assessments	- Automate testing and grading process
	- Generate AI-driven feedback for autonomous learning
5. Develop monitoring frameworks and gather feedback	- develop monitoring frameworks to check balanced use of AIT in classrooms
	- gather feedback from class observations, students and teachers; note the gaps and refine practices

4.2 AIT Policy Formation

A dedicated AI implementation committee (AIIC) consisting of members especially with published work in AI education or with related scholarly work experiences are chosen to develop concrete AIT guidelines. Some of the roles and functioning nature of members are listed below:

- Student Liaison- to obtain views from learners' perspectives through student representatives
- AI Advisor- to plan and chart out AI apps aligned to meet the objectives of the curriculum
- IT Team- for AIT fusion and implementation; design teacher-assisted support system
- AI Planner- for planning, preparing, validating guidelines; refer feedback, and refine guidelines as per need
- AI Implementer- to create a framework to monitor and observe AIT classroom sessions to ensure its practical implementation

The proposed AI Fusion Tools Policy Guidelines (AIFTPG) are developed, approved and as a first step towards implementation is tested in a controlled way for its effectiveness.

4.3 AITPG Pilot Program

To test the impact of AITPG to promote sustainable academic platform, a pilot program is implemented and tested in five sections. Fig. 1 shows data collection and resources.

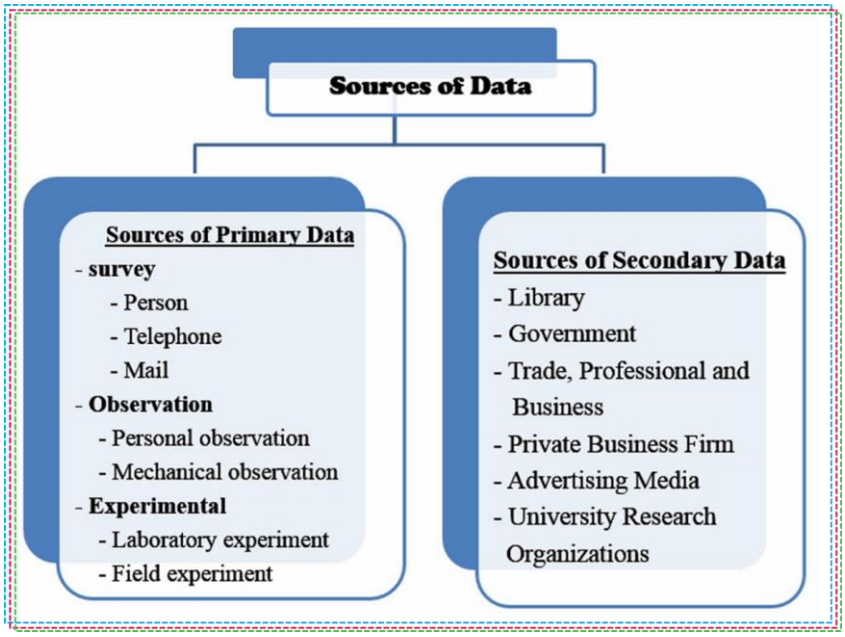

Figure 1. Data Collection and Resources

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4.3.1 *Data source and Data collection*

During the duration of this research project, the purpose is to gather input from educators, students, and members of the AITPG committee about the influence that AITPG has on the process of teaching and learning. The participants are students who are presently enrolled in a course that is designed to provide an introduction to information technology. The AITPG pilot sessions were tried with five distinct sections of the undergraduate information technology course, with each batch consisting of 25 students.
The sessions were conducted in order to evaluate the effectiveness of the AITPG. In addition, learning management system (LMS) plugins for Google Classrooms, Net School Support, and Moodle are used in order to keep track of the conduct of students during the course of the academic year. Students who access AI courses are subject to monitoring by the system, which not only keeps track of what they do but also evaluates how well they do in those courses. Artificial intelligence does an examination of the data and displays any caution flags or problems that it discovers on the dashboards that are used by the instructors. There is a possibility that educators will find that these insights aid them in modifying their approach to teaching or their use of artificial intelligence.

4.3.2 *Questionnaire*

Utilising a predefined questionnaire, an assessment of the *AIFTPG* deep teaching approaches was carried out in order to evaluate their effectiveness. For example, the following are some of the subjects that are covered in the course: The results of the poll, as well as the objectives of the AIFTPG, the involvement of the class, and the evaluation of the assessment, are also covered. Formal questionnaires will be sent to those participants who have voluntarily provided their agreement to take part in the research investigation. Out of a total of sixty surveys, a recovery rate (RR) of 91.67% indicates the percentage of surveys that were successfully recovered as authentic as compared to the entire number of surveys. This demonstrates a very high level of participation on the part of the individual.

Recovery rate is calculated as RR = (R/D)*100.

4.3.3 *AIFTPG Design*

As per AIFTPG, teachers are given training on basic concepts of AI and real-life applications. Each teaching session started with an introduction to AI and its applications. Ethical concerns such as plagiarism, data piracy and so on were addressed in the introductory level. Hands on practical sessions were conducted to use AI tools such as ChatGpt, MS Copilot and other Generative platforms.

The fundamental goal of this study is to develop and test a hybrid class flow that integrates traditional pedagogical practices with AI tools in a way that piques students' interest while keeping them from noticing the transition. Instructors may avoid coming out as robotic by using phrases like "Let us explore more" instead than "This is AI." Like a calculator or dictionary, AI may be useful learning tools. It can also be utilized to make the lesson more immersive. Instructors, not AI, are the centre of attention. For every class, a unique lesson plan is created based on the AIFTPG. The following sections make up the plan: objectives, lesson introduction, Q&A, activity, feedback, and assignment. Table 3 shows the AIFTPG lesson plan in action.

Table 3: AITPG teaching plan

Teaching Plan

Teacher Action	**Traditional**	**AI Enhancement**	**Student Experience**
Greets students, state objectives	- Talks or use white board or digital board (Google Jamboard) or ppt slides		
Lesson Introduction	- Introduce topic in story telling manner - Ask personalized questions	- Use AI-powered interactive lesson slides or video (Edpuzzle/Khan Academy, Curipad, Magic Canva etc.) with interactive quizzes, polls using apps like Curipod	- Interactive and not passive (as questions adapt to how students answer)

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Discussions/ Question and Answer session	- Class discussion - Open ended questions	- Use generative AI chatbots to help students look for answers for their doubts - Use Moodle H5p - Use Google Socratic - Shy students can post query thru Padlet/ Mentimeter platforms	- More engaging - AI is used as study buddy; not replacing teacher
Activity	- Give worksheet	- Exercises using platforms like Quillionz or DreamBox or IXL (for Math)	- Adjusts difficulty level as per need and hence enhances student engagement
Feedback	- Give verbal feedback	- Use AI dashboard, Google forms AI scoring or Edpuzzle like platforms to answer AI generated feedback questions - Customize the feedback to give a blend of human touch with AI feedback	- Gives insight of how much student understood the topic and who needs help
Assignment (optional)	- Worksheet	- Research activity using AI tutor (chatbot/ ChatGPT/Perlexity)	- Students are encouraged to complete the assignment using AIT

4.3.4 *AIFTPG cognitive model*

One of the main objectives of AIFTPG cognitive model is to apply a deep learning model to predict student-learning outcomes using inputs such as:

Behavior of students identifies performance analysis, including learning ability, gadget use, and assessment score, among other things. Monitors tips used to solve issues, information retention, and attention given. Cognitive behavior is also included in this category. The behavior of the teacher includes making recommendations for the most successful AI techniques to use in lectures, assessing the efficacy of teaching, and providing feedback at the appropriate time. For improving student learning, cognitive nature, and teacher behavior, a neural network model called a hybrid LSTM (long-term short memory) neural network model (HLSTM) is used. Data from the actual world is used to train the network model. The HLSTM model consists of the following components: the input layer, which is where data from students (Xs), instructors (Xt), and cognitive behaviors (Xc) are supplied and standardized. For the purpose of input, features from each category are gathered and collected.

- Xs=x1s, x2s,….xts
- Xc=x1c, x2c,….xtc
- Xt=x1t, x2t,….xtt

For the aim of accomplishing the extraction of essential information, the hidden layer is designed to make use of a network of neurones that are completely linked with one another. The RELU-triggered function is applied at the end of each related layer in order to ensure that the output is consistent across all of the layers that are connected to one another. This happens in order to guarantee that the output is consistent. Adam optimization is used for updating the weights (W) since it has the capacity to avoid overfitting and automatically adjust the training parameters via its utilization. With this capability, Adam optimization is utilized. Due of this, the thick layer is biased, which is also known as bh. This is due of the condition described above. Utilizations that were put into action include:

- After time T, hidden layer state hfs = [hts|| htc|| htt]
- Dense layer (non-linear transformation) hresult=ReLU(Wh hfs + bh)

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- Output layer - maps the predicted value to predicted value of teaching. The model uses deep layer with ReLU function to predict.
- Multi class prediction output (y) = Softmax(Wo hresult + b0)

Table 4: Predicting student performance.

Category	***Feature***	***Prediction***
Student Learning	Amount of time spent	15 hours/week, 10 hours/week
	AI/LMS engagement	50 interactions/week, 20 interactions/week
	Assessments (quizzes, exams, etc.)	Quiz Scores: 85%, Assignment Scores: 90%
Cognitive Behavior	Hint used to solve problems	5 hints/week, 12 hints/week
	Content retention, quiz retakes, revisiting lessons	Revisits content after 1 week, rarely revisits
	Self-analysis, notes review	Structured study schedule, sporadic studying
Teacher Feedback	Feedback timing on assignments or assessments	Feedback given in 48 hours, 5 days for feedback
	AITPG teaching model	Inquiry-based, Lecture-based
	AIT usage	Frequent use of AI for quizzes, no AI tools
Performance Labels	Progress or At-Risk	On-Track, At-Risk

4.4 AIFTPG Feedback

In order to determine whether the AIT fusion was successfully implemented, we would want to get feedback on the AIFTPG model from which we may draw conclusions. It is recommended that the policy guidelines refrain from referring to the sessions as artificial intelligence sessions. This is the primary purpose of the recommendations. This is of utmost significance when taking into consideration the significance of the educator's participation in the curriculum development process. Information collection was done with the intention of achieving a more profound level of knowledge, and this objective was realised via the use of assessment evaluation, classroom observation, and feedback from faculty members. In addition to clearly identified key themes, the proposals, which are a component of the educational framework for artificial intelligence, contain a short explanation of the importance of those topics. These ideas are a part of the framework.

5. Results and Discussion

This section presents analysis of case studies from five sections of IT undergraduate course. Results of the survey presented are from five sections of IT undergraduate course. The preliminary study reports following insights regarding existing teaching strategies:

Due to lack of consistency in the implementation of AIT in the classroom, teachers were dissuaded from giving their pupils with access to it. This was a consequence of the lack of consistency. There is a general perception among educators that an over dependence on technology that makes use of artificial intelligence has resulted in a loss in the originality of these youngsters by causing them to become less creative. The method in which teachers use artificial intelligence technology is not consistent, which leads to variations in both the success rate and the level of engagement in the classroom from one part to the next. This is because of the lack of consistency in the way that teachers utilise the technology. The pace at which artificial intelligence was implemented was slowed down because of the growing ethical concerns of students.

During the training, learning rate and epochs are adjusted number of times to enhance model performance. AIFTPG cognitive model helps to provide teachers make personalized teaching decisions as per the learning ability

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of students' cognitive skills. Table 4 summarizes the importance of score and the category of each feature to deep learning prediction.

Table 4: Importance score of AIFTPG cognitive model.

Feature	Category	Importance Score	Impact
Learning ability	Student	0.93	High
Time spent	Student	0.91	High
Assessment score	Student	0.78	Moderate
Hints used	Cognitive behavior	0.72	Moderate
Feedback	Teacher	0.89	High
Concept retention	Cognitive behavior	0.79	Moderate
AITPG model teaching style	Teacher	0.94	High

AITPG training, learning capacity, time spent, and feedback are the qualities that provide the most accurate forecasts, as shown by the significance score in Table 5. These characteristics are the ones that produce the most correct predictions. The AIFTPG cognitive model has been shown to have a strong impact (0.94, 0.93, 0.91, and 0.89 correspondingly) on student engagement, instructional efficiency, autonomous learning, and the effect of AIT feedback on students' learning.

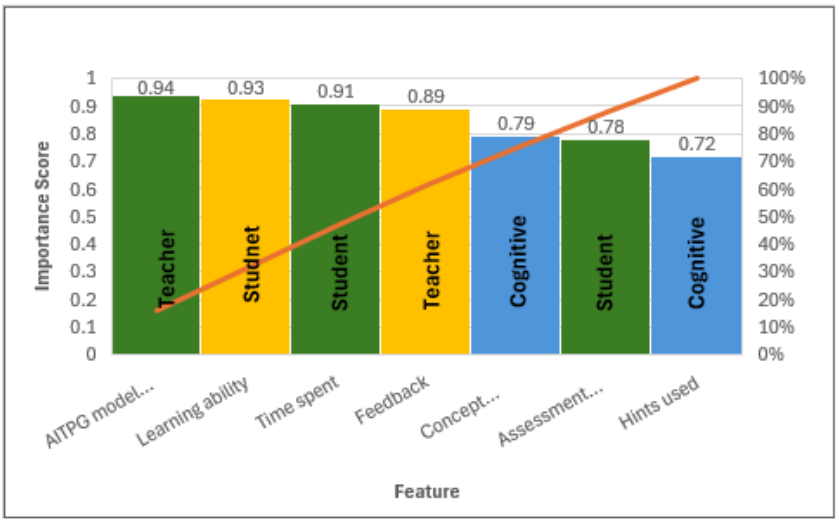

Figure 2. Impact of AIFTPG cognitive model

This has been demonstrated via a number of studies. The scores of 0.79 and 0.72 for idea retention and suggestions employed, respectively, are regarded to be moderate and are greatly affected by the memory of prior educational knowledge. The former score is believed to be more significant than the latter. A score of 0.80, which is regarded to be rather high, was obtained because of attending the examination. The findings demonstrate a high rate of achievement when compared to past teaching techniques that made just a limited degree of use of artificial intelligence. This is because the results reveal that the accomplishment rate is high. Figure 5 displays the results of the cognitive behavior, student, and instructor deep learning feature scores. These scores were obtained by analysis. The height of the bar is a representation of the extent of the significance of the discoveries that were anticipated to be found. Table 5 summarizes an overview of the AITPG results and highlights the impact of effectiveness in the form of star ratings. The ratings represent the average of scores gathered from classroom observations, teacher and student feedback survey reports. Each category rated feedback on a scale of 1 to 5 star ratings. The individual scores were averaged to ensure balanced evaluation form educators and student perspectives. An average rating of 5.0 translates to 5 stars in the acceptance scale.

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Table 5: AIFTPG outcomes

Key Objectives	*Outcomes*	*Observed Effectiveness out of 5*
1. Balanced use of AI tools in classrooms	- Most effective - Balanced AI fusion across all sections	5
2. AI support tool in teaching	- The moto let us explore more gave hybrid touch gave importance to teacher	4.5
3. Teacher AI training need	- Positive result - AI support motivated and enhanced the confidence as AI Teachers	5
4. Ethical concerns training	- Increased awareness - Increased responsibility and care to protect ethics	4
5. AIT benefits in assessments	- Better grades and improved performance of students as compared to earlier methods - Good attendance rate for assessments; earlier students were afraid and stayed absent for assessments	4
6. AITPG Feedback	-Students appreciated teachers for the lively and informative class sessions and felt motivated for staying up to date with current trend as compared to earlier methods - Personalised feedbacks generated by AIT were seriously taken by students and helped them understand their area of improvement	4.5
Total Mean:		4.5

The highest rating 5 obtained for policy objective 1 and 3 ensures consistent fusion of AI tools in all sessions. The mandatory AI training given to educators helped in enhancing the confidence and competence level of teachers, which resulted in producing better results as compared to earlier methods. This has resulted in innovation and better student understanding of the subject. Policy objective 2 score of 4.5 states proportionate use of fusion of AI tools in classrooms against overdependence or avoidance of tools. Students are also able to evaluate AI results and accept or reject results. This helps to develop the critical thinking and creativity among students. Policy objective 4 and 5 secured 4 out of 5 that establishes boundaries on using AI-generated work reinforcing academic integrity. It highlights better grades and improved performance of students compared to earlier teachings. Policy objective 6 with a score of 4.5 shows satisfaction of teachers and students with AITPG implementation. The personalised feedback generated by AIT motivated students to focus in the areas they should improve. Fig 2 displays the observed AITPG effectiveness out of 5.

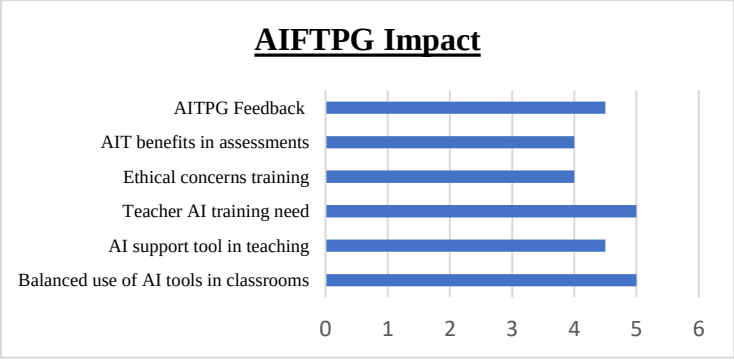

Figure 3. Impact of AIFTPG

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The correlation analysis of impact of AIFTPG policy in figure 2 suggests that a well-framed guideline in curriculum provides support to educators and at the same time enhances student engagement and performances that is one of the main objectives of education.

The results of the pilot program also emphasize that a structured policy helps in standardizing the AIT fusion lesson plans, AI tools, AI usage, AI related training, AI ethical guidelines which results in enhancing the confidence level of teachers in teaching. This clearly shows the policies high effectiveness.

The pilot experiment results show that forming a dedicated AI committee for the implementation of AI fusion into curriculum and forming structured guidelines with well-defined policies display an outstanding impact in educational organisation. The committee's effort at coordinating and addressing concerns played a crucial role in integrating standard well-formed strategies.

The results of this study also show that the average mean of the feedback survey of the participated sections achieve higher adoption rates, higher assessment performance and class engagement when compared with existing strategies.

6. Conclusion

This study uses cognitive deep learning to predict teaching efficiency and understanding of the students. The teaching strategies, assessments and feedback can be adjusted by the system to get better results.

The results suggest that by framing clear AIFTP guidelines and its proper implementation optimised teaching standards and promoted autonomous learning among students. Features like student engagement and assessments shows strong impact of fusion of AIFTPG framework. The results of the pilot program also emphasize that a structured policy helps in standardizing the AIT fusion lesson plans, AI tools, AI usage, AI related training, AI ethical guidelines which results in enhancing the confidence level of teachers in teaching. This clearly shows the policies high effectiveness. The study also highlights the importance of how systematic planning plays crucial role at formulating policy and ensures effective and ethical use of fusion of AIT in classrooms.

The outcomes of this research can be a model and can be used for broader implementation across other levels of the education industry.

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DOI: https://doi.org/10.54216/FPA.210119
Received: February 22, 2025 Revised: May 29, 2025 Accepted: July 12, 2025