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Original Research Article

THE STUDY OF THE IMPACT OF ARTIFICIAL INTELLIGENCE POWERED LEARNING AGENTS ON SUSTAINABLE DEVELOPMENT OF CREATIVE MIND OF STUDENTS

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Abstract :

In this papers, researchers have studied the use of AI in education has the potential to transform traditional learning methods and promote personalized and adaptable approaches. The study explores both the positive and negative effects of AI-powered learning agents on students' creative minds, focusing on their cognitive and educational growth. The positive effects include exploration of new ideas, sparks creativity, helps students develop specific creative skills like critical thinking, problem-solving, or divergent thinking.

Automation allows teachers to focus on innovative teaching methods, resulting in resource efficiency. The investigation also raises concerns about the potential negative effects of relying too heavily on technology in education. These concerns include issues with data security, the potential for inequalities in access to technology, and the possibility of neglecting the development of creative and critical thinking skills. This paper summarizes previous research and identifies gaps in current knowledge about the relationship between AI-powered learning systems and cognitive development. The study explores the complex factors that shape the educational landscape and provides insights for teachers, policymakers, and technologists on the potential benefits and challenges of integrating AI in education.

Keywords: *Artificial Intelligence, AI in education, student's development, Creative minds, sustainable development*

Introduction:

The increasing application of artificial intelligence (AI) for learning purposes has resulted in about a shift in the realm of education. AI is defined generally as "machine intelligence demonstrated by a non-living entity in comparison to natural intelligence demonstrated by humans and other living species."

Whereas the openings for AI are promising, understudies and educates may see the affect of AI frameworks adversely. For occasion, understudies may see unpredictable collection and examination of their information through AI frameworks as a protection breach, as outlined by the Facebook–Cambridge Analytics information embarrassment (Chan, 2019; Luckin, 2017). Development of artificial intelligence will affect many situations, from the restructuring of the social order in the broadest sense to the education and administration processes in classes and schools and colleges. Schools and colleges that are expected to adapt to the digital age.

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Research Objectives:

1. To examine the impact of AI on creative minds of students.
2. To highlight the willingness of teachers to use AI learning agents in educating youth.
3. To explore the need of AI intervention in education.

Review of Literature:

According to Rodrigo (2023), artificial intelligence (AI) is a branch of research in which computer systems are created to execute skills that are often associated with human beings. Some examples of these functions include recognizing faces or voices, playing chess, or driving a vehicle through traffic. AI in Education (AIED) is a term that describes the application of AI in educational settings with the goal of enhancing the teaching, learning, or overall educational experience According to Rodrigo (2023), artificial intelligence (AI) is a branch of research in which computer systems are created to execute skills that are often associated with human beings. Some examples of these functions include recognizing faces or voices, playing chess, or driving a vehicle through traffic. AI in Education (AIED) is a term that describes the application of AI in educational settings with the goal of enhancing the teaching, learning, or overall educational experience According to Rodrigo (2023), artificial intelligence (AI) is a branch of research in which computer systems are created to execute skills that are often associated with human beings. Some examples of these functions include recognizing faces or voices, playing chess, or driving a vehicle through traffic. AI in Education (AIED) is a term that describes the application of AI in educational settings with the goal of enhancing the teaching, learning, or overall educational experience According to Rodrigo (2023), artificial intelligence (AI) is a branch of research in which computer systems are created to execute skills that are often associated with human beings. Some examples of these functions include recognizing faces or voices, playing chess, or driving a vehicle through traffic. AI in Education (AIED) is a term that describes the application of AI in educational settings with the goal of enhancing the teaching, learning, or overall educational experience According to Rodrigo (2023), artificial intelligence (AI) is a branch of research in which computer systems are created to execute skills that are often associated with human beings. AI in Education (AIED) is a term that describes the application of AI in educational settings with the goal of enhancing the teaching, learning, or overall educational experience. It is conceivable that AIED will have a noteworthy impact on human cognition as well as the development of the brain.

Guidebots are AI-powered virtual entities that facilitate productive inquiry and are grounded on situated cognition (Johnson, 2003a). These guidebots facilitate a variety of learner-agent interactions, including as gestures as passionate and emotional allies, positive messages as motivational cues, and suggestions and feedback as cognitive support (Johnson, 2003a; 2003b).

Research methodology:

Both primary and secondary data was collected to study the impact of AI-powered learning agents on sustainable development of creative mind of students. A questionnaire was designed to gather the data with total sample of 55 respondents from various education centers.

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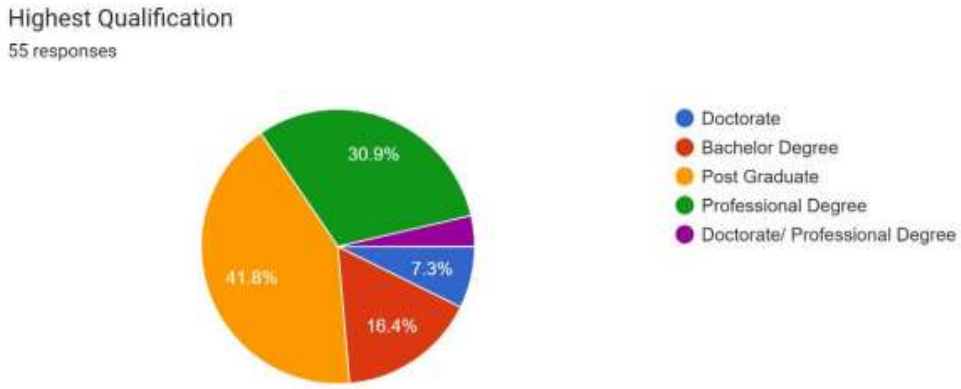
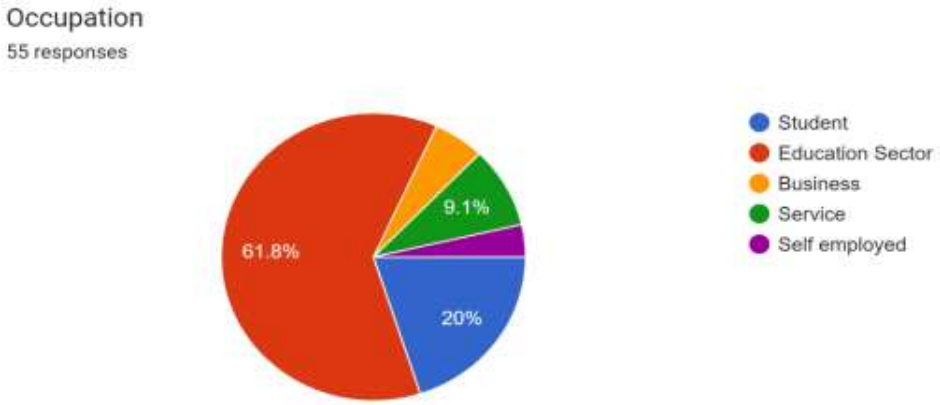
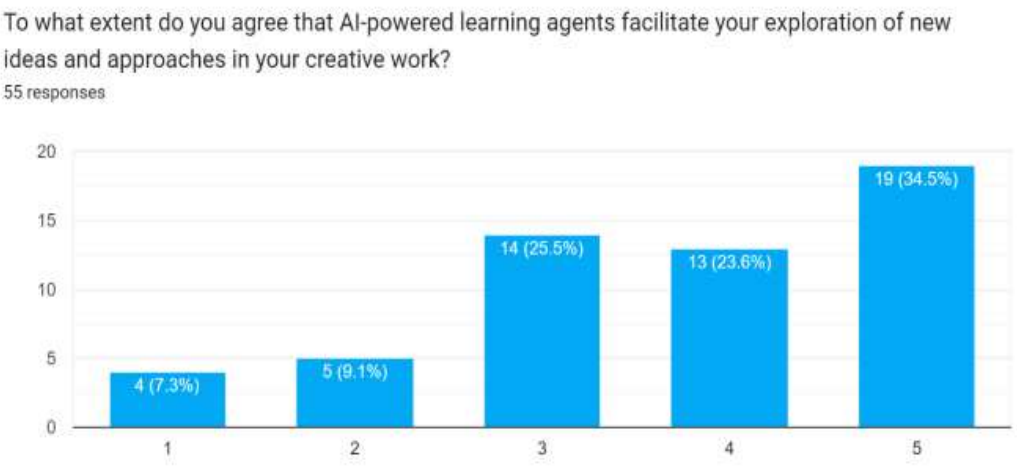
Result and discussion:



The above data indicates that 41.8% Respondents are Post Graduate, 30.9% have a professional Degree, 16.4% possess Bachelor Degree, 7.3% have done Doctorate and 3.6% have both Doctorate and Professional Degree.



The above pie data chart shows that Majority i.e. 61.8% of the Respondents are from Education sector, 20% are Student, 9.1% are in service.



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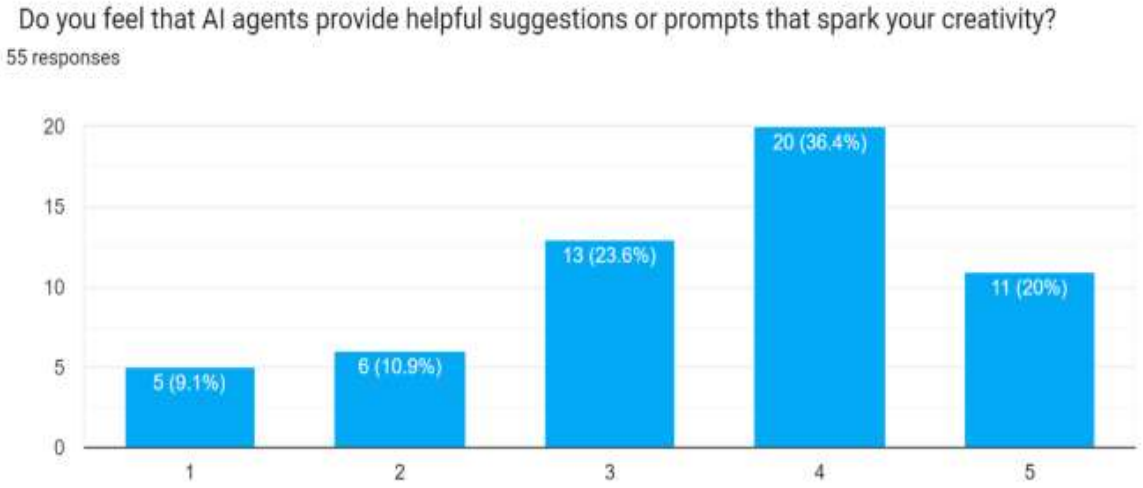
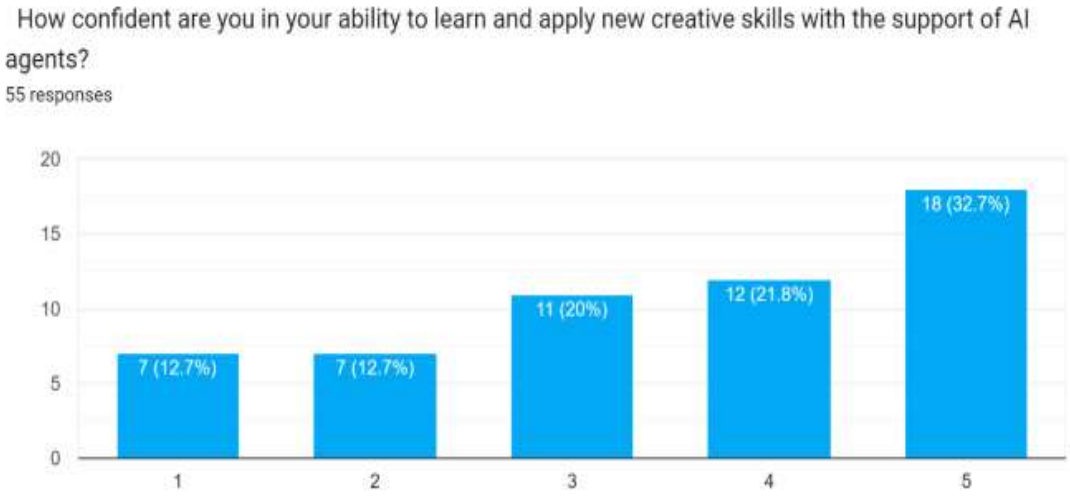
The above data indicates that 34.5% respondents strongly believe that AI will help in the exploration of new ideas and approaches in creative work 23.6% are positive 25.5% are not very sure 9.1% are having very less interest while 7.3% are sure that AI can not in exploration of new ideas and approaches in creative work.



The above histogram data indicates that 20% respondents strongly believe that AI agents provide helpful suggestions or prompts that spark the creativity 36.4% are positive 23.6% are not very sure 10.9% are having very less interest while 9.1% are sure that AI can not provide helpful suggestions or prompts that spark the creativity.



In the above data 32.7% respondents strongly believe that with the support of AI agents one can apply new creative skills to his ability 21.8% are positive 20% are not very sure 12.7% are having very less interest while 12.7% are sure that AI agents cannot help him apply new creative skills to his ability.

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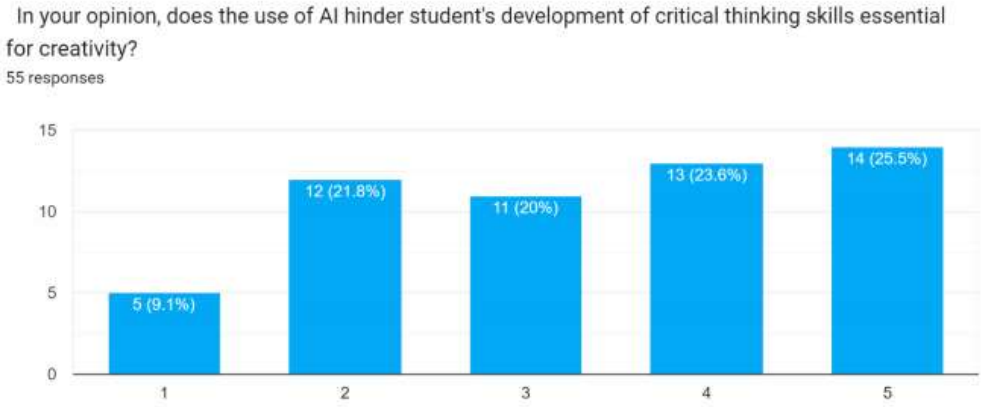
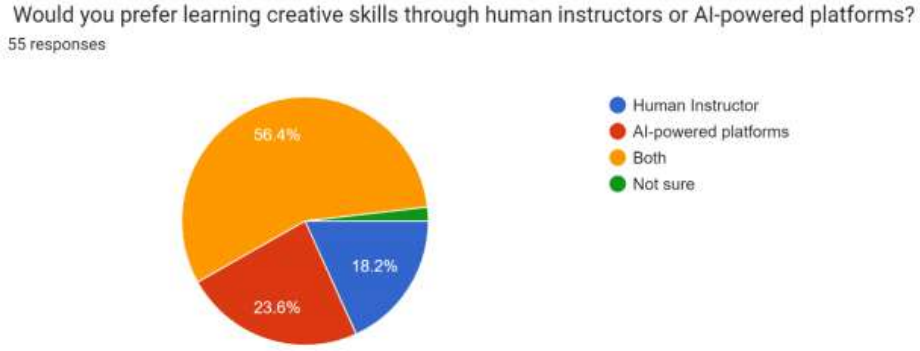
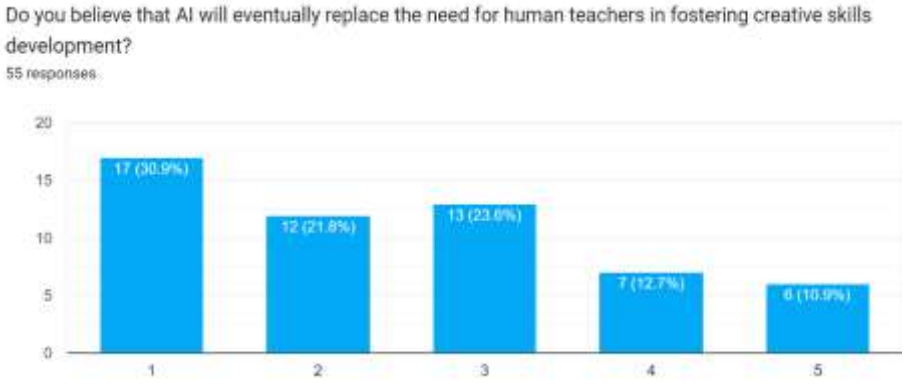


According to above histogram data 25.5% respondents strongly believe that the use of AI hinder the students development of critical thinking skills 23.6% are positive 20% are not very sure 12.7% are having very less interest while 12.7% are sure that AI agents hinder the students development of critical thinking skills.



According to above pie chart data 56.4% respondents will prefer both AI-powered platforms and human instructor for learning creative skills 23.6% are willing to learn from AI-powered platforms 18.2% will prefer Human Instructor while 1.8% are not sure.



The above data states that 30.9% respondents believe that AI can never replace the need for Human teachers

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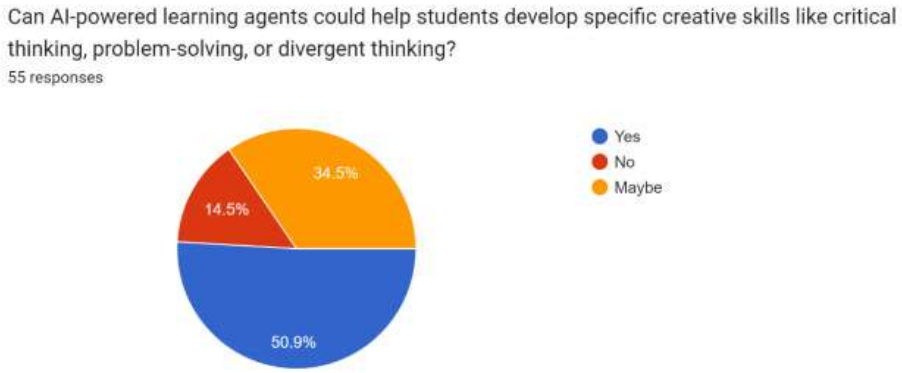
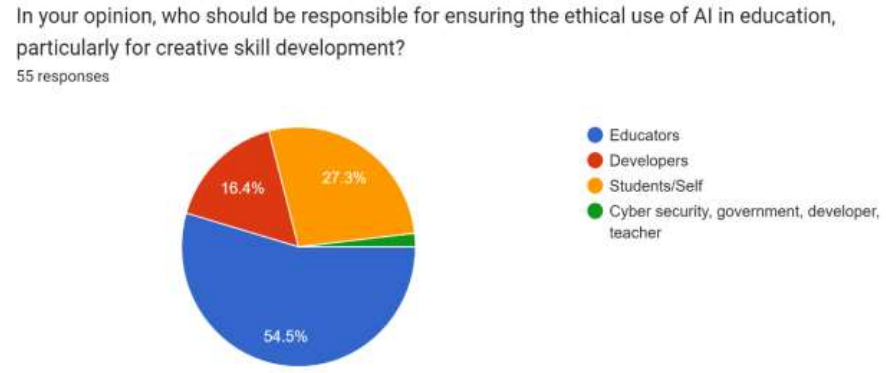
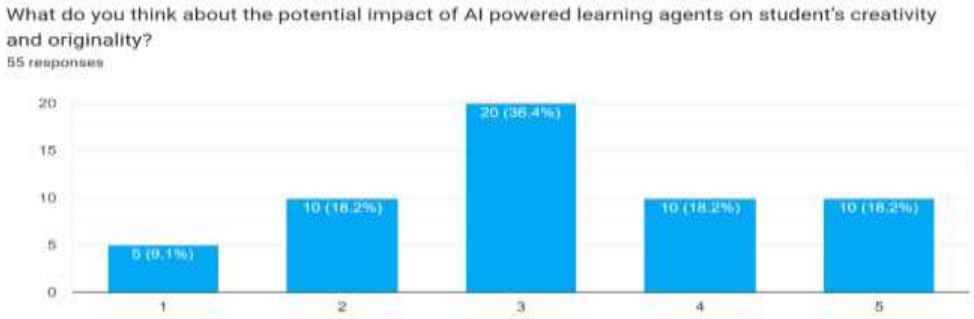
21.8% are positive for Human teachers 23.6% are not very sure 12.7% are positive for AI while 10.9% are sure that AI will eventually replace the need for Human teachers.



Above pie data charts suggests that 50.9% respondents believe that AI-powered learning agents could help students develop specific creative skills like critical thinking, problem solving, or divergent thinking 34.5% are not sure while 14.5% are negative about it.



Above data chart suggests that 54.5% respondents believe that educators are responsible for ensuring the ethical use of AI in education, particularly for creative skill development 27.3% believe that its the user himself and 16.4% responders believe that its the duty of Developers while 1.8% believe that all i.e. Teacher, Developer, and government are responsible.



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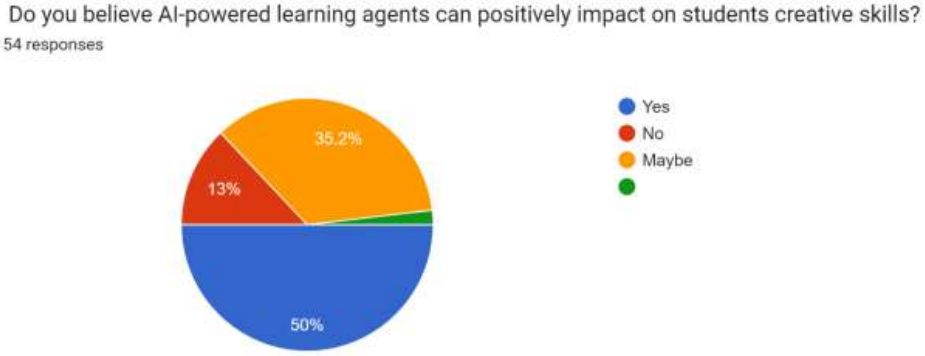
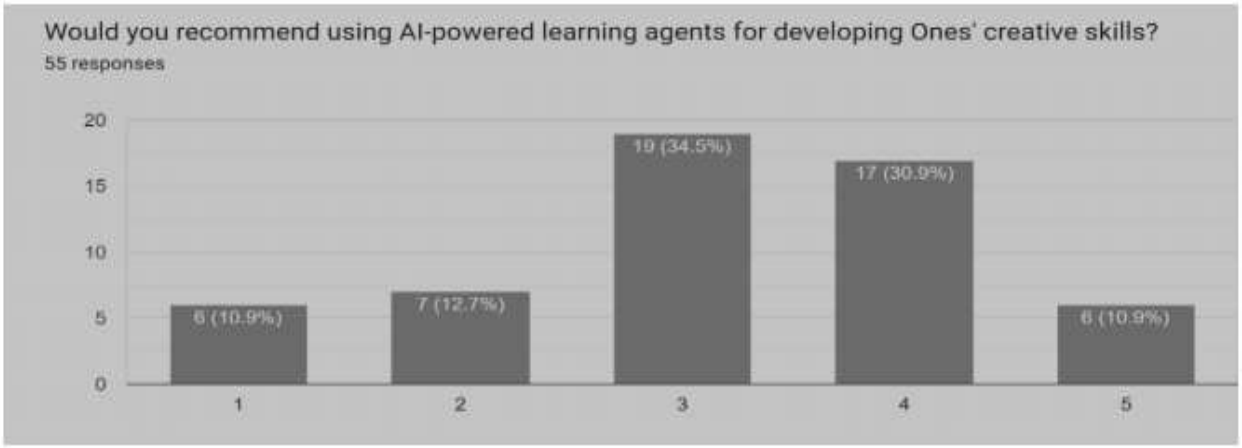
The above histogram data suggests that 18.2% responders are sure that AI powered learning agents positively affect the creativity and originality of student 18.2% are positive about it while 36.4% are neutral while 18.2% respondents are negative about it and 9.1% respondents believe that AI powered learning agents negatively affect the creativity and originality of student.



The above data reflects that 50% respondents believe that AI-powered learning agents can positively impact on students' creative skills 35.2% are not sure while 13% believe that AI powered learning agents cannot positively impact on students' creative skills and 1.8% have some other thoughts.



The above data suggests that 10.9% strongly agree that they will recommend using AI-powered learning agents for developing ones' creative skills 30.9% are positive about it 34.5% are neutral 12.7% are negative about recommending AI-powered learning agents for developing ones' creative skills 10.9% respondents strongly disagree for the same.

Conclusion:

There should be certain estimation framework when utilizing AI in educating youth. Applications or frameworks created with respect to AI in education ought to be tested with pilot applications and coordinates into the system according to their result.

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A teacher can use these AI agents to automatically send out test dates and assignment information to all of the students at once. They can also contribute to raising the standard of instruction by getting student input.

Our exploration of AI-powered learning agents has revealed a double-edged sword - a potent tool capable of both igniting and extinguishing the spark of creativity in students. To claim definitive victory or pronounce inevitable defeat would be a disservice to the complexity of the issue. Instead, we must embrace the nuanced reality, acknowledging both the opportunities and challenges posed by AI in education.

The key lies in achieving a synergistic relationship between human and artificial intelligence. We must leverage the strengths of each, recognizing that AI's analytical prowess and personalized learning capabilities can be potent allies to educators, not replacements. Human teachers, with their empathy, critical thinking, and passion for learning, remain irreplaceable guides in fostering creativity and building well-rounded individuals.

Technology should not dictate the future of creativity; it should serve as a brush, not a blueprint. By navigating the AI labyrinth with prudence and foresight, we can unlock its potential to augment, not extinguish, the creative spark within each student. Let us envision a future where AI becomes a co-pilot in the journey of creativity, empowering teachers, amplifying learning, and propelling future generations towards innovative solutions and groundbreaking ideas.

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