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EDTC 813: Advanced Using Integrated Software

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## Introduction

The rise of artificial intelligence (AI) has caused discussions among educators about how it will affect students. According to a recent survey of teachers, opinions on AI are divided. When asked to rank statements on a scale, the replies revealed professional divisions. Some individuals are concerned that greater reliance on technology in the classroom may be harmful. On the other hand, educators are also remaining positive about technologies that may improve learning. As AI becomes more integrated into education, educators have different views on whether this developing technology will eventually benefit or harm students. More research is needed to fully grasp the twists and turns of these viewpoints. However, it is evident that there are strong feelings on both sides of this issue among the teaching community.

### Data Analysis of PreK-2nd Grade Educators on AI in Education

**Table 1**

*Survey Responses from PreK to 2nd Grade Educators*

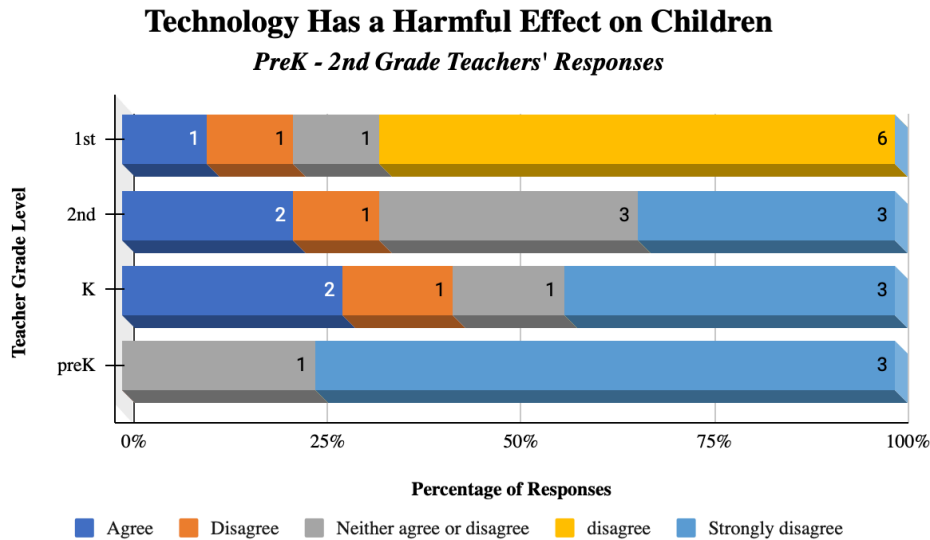
*Regarding the Potential Harmful Effect of Technology on Children*

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
preK			1		3
K	2		1	1	3
1st	1	6	1	1	
2nd	2		3	1	3
Grand Total	5	6	6	3	9

**Figure 1**

*Educators' Perspectives on the Potential Harmful Effect of Technology on Children*

*(PreK - 2nd Grade)*



The data indicates that most teachers across elementary grade levels do not perceive technology as harmful to children's development and wellbeing. Majorities of educators surveyed disagreed or strongly disagreed with the notion that technology is harmful to children. Specifically, 92% of 1st grade teachers held unfavorable views toward this idea, with 69% disagreeing and 23% strongly disagreeing. Similarly, 84% of 2nd grade teachers rejected the harmful effects of technology, with 67% disagreeing and 17% strongly disagreeing. Kindergarten teachers followed a comparable pattern, with 80% expressing disagreement, including 60% who strongly disagreed. Even among pre-kindergarten teachers, who represented a smaller sample, 75% strongly disagreed with the statement. These results reveal an early stage view among elementary school teachers that technology does not have harmful effects on children across early childhood and primary grade levels. While some teachers expressed neutral or favorable perspectives, the prevailing sentiment was firm disagreement. Further qualitative inquiry may

elicit deeper insights into the reasoning underlying these perceptions. However, the current data demonstrates that most teachers do not consider technology harmful to the children they teach.

**Table 2**

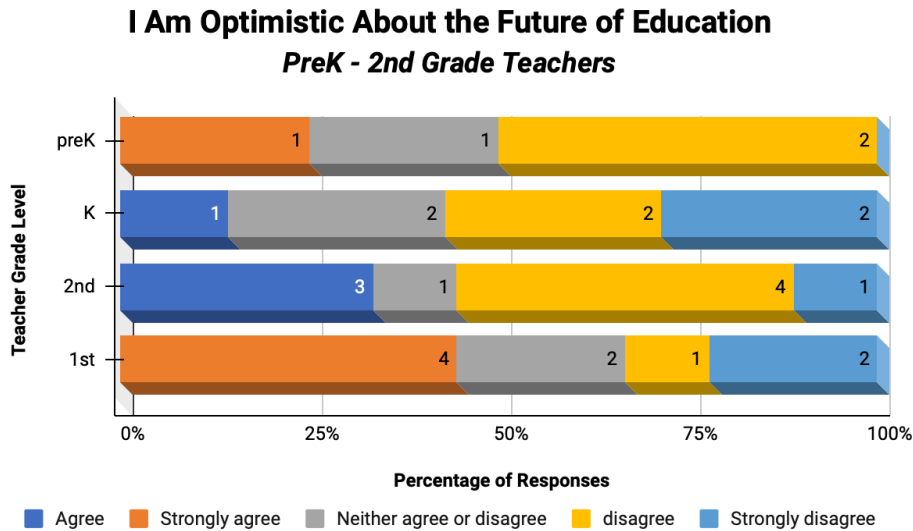
*Survey Responses of PreK - 2nd Grade Educators*

*Regarding Optimism About the Future of Education*

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
1st		1	2	4	2
2nd	3	4	1		1
K	1	2	2		2
preK		2	1	1	
Grand Total	4	9	6	5	5

**Figure 2**

*Educators' Optimism About the Future of Education (PreK - 2nd Grade)*



Looking at the data table, it appears most teachers - from preK all from 2nd grade do not think too positively about where education is headed. Only 14% of 1st grade teachers strongly agreed that the future looks bright. Most of them, about 57%, disagreed or strongly disagreed that they feel optimistic. The same goes for the 2nd grade teachers - just 14% were strongly optimistic, while 57% were pessimistic. Kindergarten teachers felt about the same. A little under 60% weren't feeling very optimistic, and only 29% strongly disagreed that the future of education looks good. Pre-K teachers, mostly disagreed or strongly disagreed at 67%. There were a fair number of "neither agree nor disagree" responses too. Therefore, some teachers seem uncertain or undecided. However, very few teachers said they strongly agree that education has a bright future. The data makes it clear that most teachers have their doubts and concerns. They're just not all that optimistic about where things are headed. More research could help understand

exactly what they're worried about and why they feel this way. But for now, it's clear that optimism is in short supply for many teachers.

### **Data Analysis of 3rd-5th Grade Educators on AI in Education**

**Table 3**

*Survey Responses from 3rd to 5th Grade Educators*

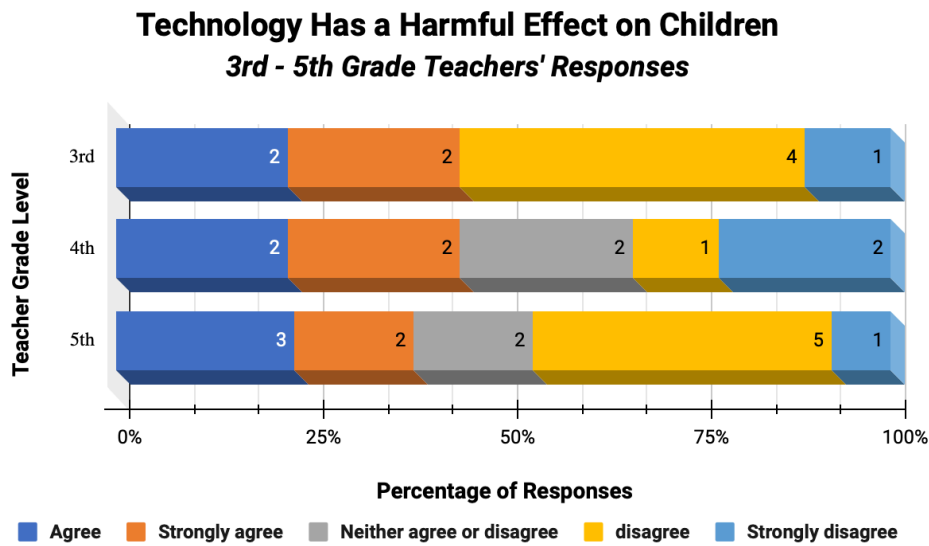
*Regarding the Potential Harmful Effect of Technology on Children*

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
3rd	2	4		2	1
4th	2	1	2	2	2
5th	3	5	2	2	1
Grand Total	7	10	4	6	4

**Figure 3**

*Educators' Perspectives on the Potential Harmful Effect of Technology on Children*

*(3rd - 5th Grade)*



The analysis of the survey data, aimed at assessing opinions among 3rd, 4th, and 5th grade students regarding technology's impact on children, offers illuminating insights into the differing perceptions across these grade levels. Among 3rd grade respondents, 33% agreed with the statement, while 67% disagreed, with a smaller portion strongly agreeing (22%) and strongly disagreeing (11%). For 4th grade, reactions were more evenly distributed, with around 29% in agreement, 29% neither agreeing nor disagreeing, and 29% strongly agreeing, while 14% disagreed and 29% strongly disagreed. In contrast, 5th grade students displayed a more balanced perspective, with roughly 27% agreeing, 45% disagreeing, 18% neutral, 18% strongly agreeing, and 9% strongly disagreeing. These findings highlight the division in viewpoints across grade levels, suggesting students' outlooks on technology's impact become more varied and refined as they advance through elementary education.

**Table 4**

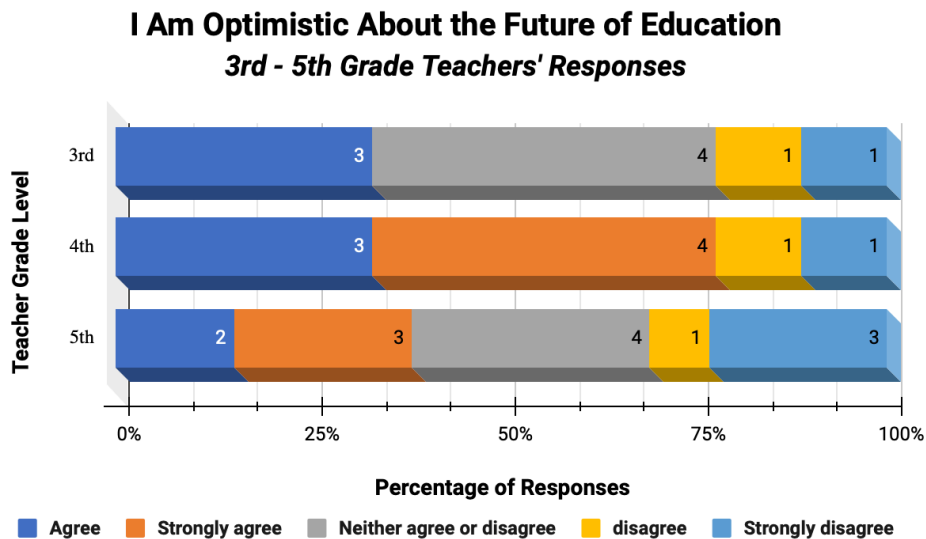
*Survey Responses of 3rd - 5th Grade Educators*

*Regarding Optimism About the Future of Education*

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
3rd	3	1	4		1
4th	3	1		4	1
5th	2	1	4	3	3
Grand Total	8	3	8	7	5

**Figure 4**

*Educators' Optimism About the Future of Education (3rd - 5th Grade)*





Looking at the data from 3rd, 4th, and 5th grade teachers, it seems like their views on the future of education are kind of mixed. The 4th grade teachers stand out as being more optimistic - around 57% strongly agreed that they feel positive about where education is headed. The 3rd grade teachers were more uncertain. Many teachers, 43%, said they neither agree nor disagree about being optimistic. And 29% straight up agreed they feel positive. For 5th grade, it was almost evenly split - 43% strongly agreed they felt optimistic, but then 29% strongly disagreed. There were a good number of "neither agree nor disagree" responses from teachers in all grades, suggesting they just aren't sure how they feel about the future. Teachers have pretty complicated views on this issue. The 4th grade teachers seem mostly optimistic, but the 3rd and 5th grade teachers are uncertain or divided. This shows there isn't really a consensus among them. More research would probably help understand why they have such different perspectives. But for now, it's clear their attitudes cannot be generalized too much.

**Data Analysis of 6th-12th Grade Educators on AI in Education**

**Table 5**

*Survey Responses from 6th Grade to High School Educators*

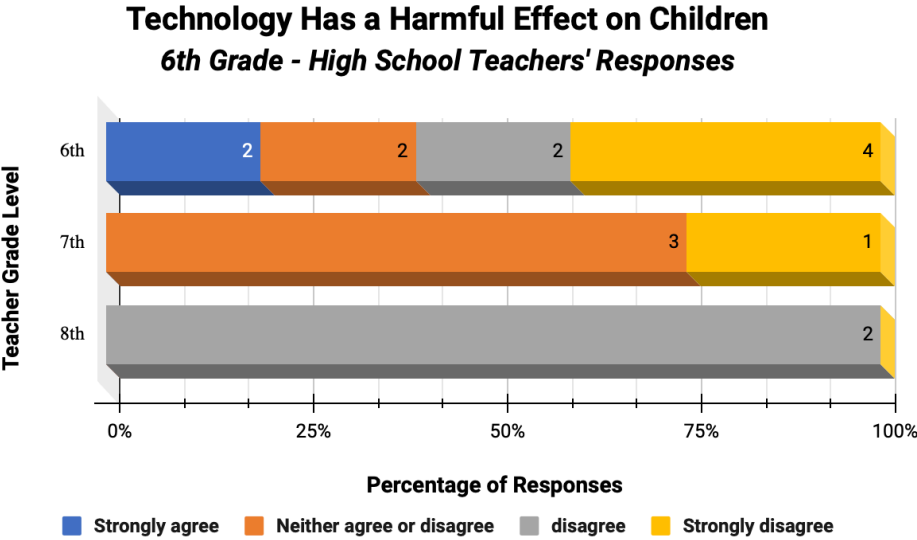
*Regarding the Potential Harmful Effect of Technology on Children*

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
6th		2	2	2	4
7th			3		1
8th		2			

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
HS	4	3	1	1	6
Grand Total	4	7	6	3	11

**Figure 5**

*Educators' Perspectives on the Potential Harmful Effect of Technology on Children  
(6th Grade - High School)*



The analysis of the provided data table provides data on the diverse perspectives of teachers that teach 6th, 7th, 8th grades, and high school regarding the harmful effects of technology on children. With given data, 7th-grade teachers mainly express disagreement, with 75% of them choosing this response, suggesting that they generally do not believe technology has a harmful impact. In contrast, 6th-grade teachers exhibit a more balanced view, with 44% strongly agreeing or agreeing, and 44% disagreeing, indicating a more divided feeling. High

school teachers display a wide range of opinions, with 40% in agreement and 30% in disagreement. A high proportion (30%) of high school teachers strongly disagree, suggesting a substantial belief that technology is not harmful to children. The absence of responses in some categories, particularly among 8th-grade teachers, indicates a need for further investigation. From analyzing this data, one can conclude the diversity of educators' views on the effects of technology on children, with a considerable range of opinions spanning these grade levels, emphasizing the importance of exploring the underlying factors influencing these perspectives. It would be interesting to dig deeper into why teachers feel the way they do. But the data makes it obvious there's no consensus among them on how the use of technology impacts children.

**Table 6**

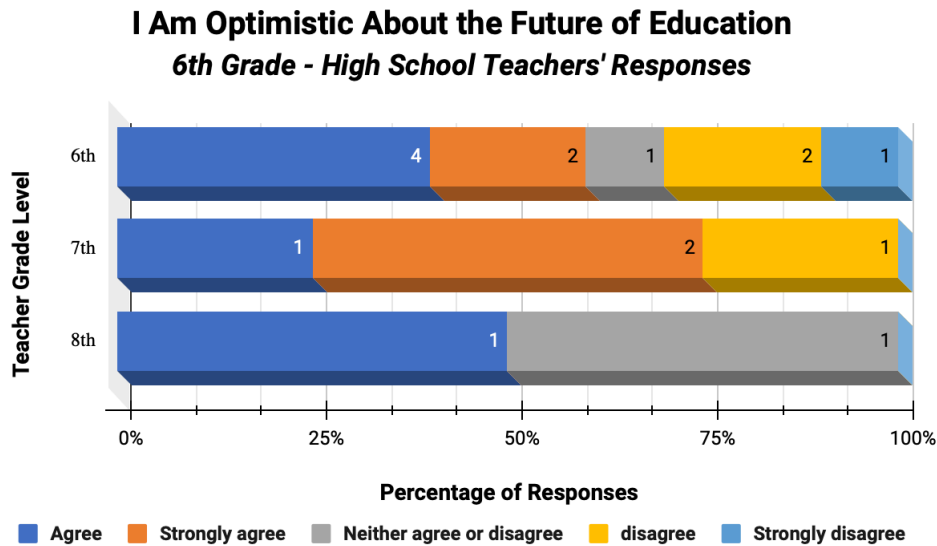
*Survey Responses from 6th Grade to High School Educators*

*Regarding Optimism About the Future of Education*

Grade Level	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
6th	4	2	1	2	1
7th	1	1		2	
8th	1		1		
HS	6	6	1	1	1
Grand Total	12	9	3	5	2

**Figure 6**

*Educators' Optimism About the Future of Education (6th Grade - High School)*



The analysis of the provided data table reveals a diverse range of viewpoints among teachers spanning grades 6 through high school regarding their optimism about the future of education. In particular, 6th-grade teachers stand out with 57% expressing agreement, indicating a major sense of optimism. In contrast, 7th-grade teachers exhibit a more mixed feeling, with 33% selecting "Agree," "Disagree," and "Strongly Disagree" each, suggesting a variety of viewpoints within this grade level. 8th-grade teachers, while fewer in number, display cautious optimism with 50% expressing agreement or neutrality, and no disagreement or strong disagreement. High school teachers present a complex view, with 38% expressing optimism, 38% choosing disagreement, and the rest showing diverse opinions. Neutral responses underscore the existence of uncertainty among educators. The data highlights the various nature of educators' perspectives on the future of education, with varying degrees of optimism and pessimism, which entails the importance of exploring the underlying factors shaping these perspectives.

## Exploring Teachers' Perspectives: The Impact of Technology on Children, Grouped by Years of Teaching Experience

**Table 7**

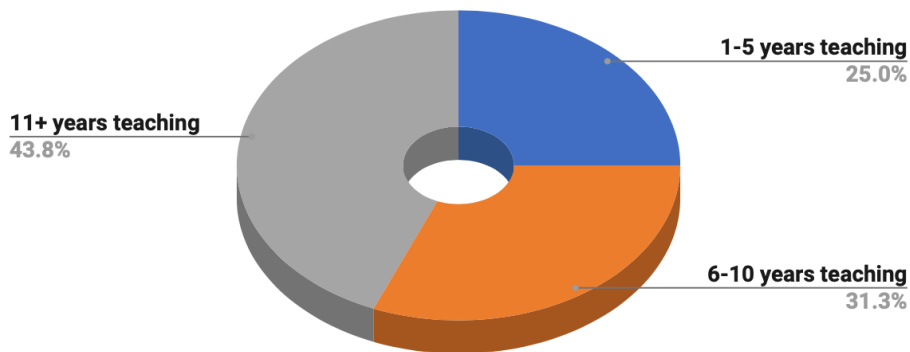
*Teachers' Responses Regarding the Potential Harmful Impact of Technology on Children, Stratified by Years of Teaching Experience*

Years teaching	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
1-5	4	14	9	1	13
6-10	5	8	5	2	6
11+	7	6	5	9	6

**Figure 7**

*Teachers' Views on the Potential Harmful Impact of Technology on Children by Years of Teaching Experience*

**Technology Has a Harmful Effect on Children**  
*Distribution of Teachers by Years of Experience*



The data provides insight into how teachers' views on technology's potential harms to children differ based on their years of experience. Teachers newer to the field, with 1-5 years experience, agreed/strongly agreed (25%) that technology is harmful. Teachers with moderate experience (6-10 years) held more balanced perspectives, with 31.3% agreeing/strongly on the harms of technology. However, veteran teachers (11+ years) expressed greater concern, with 43.8% agreeing/strongly agreeing that technology has negative impacts. The sizable proportion of veteran teachers strongly agreeing reveals a firm conviction about technology's adverse effects. In conclusion, educators' opinions seem to depend on their time in the classroom, but overall the data shows a range of both positive and negative views on technology's influence on children. More research is needed to fully understand these varied, experience-based perspectives.

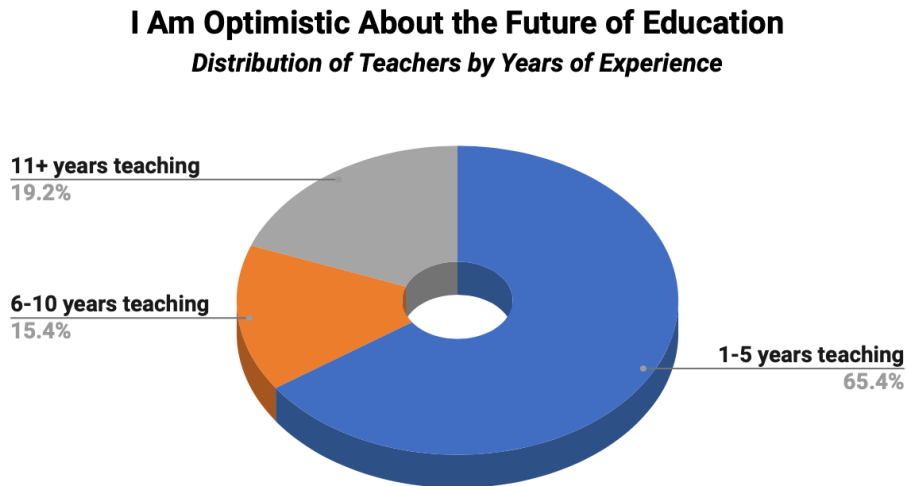
**Table 8**

*Educators' Optimism About the Future of Education by Years of Teaching Experience*

Years teaching	Agree	Disagree	Neither agree or disagree	Strongly agree	Strongly disagree
1-5	17	4	10	8	2
6-10	4	7	6	6	3
11+	5	10	5	3	10

**Figure 8**

*Optimism About the Future of Education Among Educators by Years of Teaching Experience*



The analysis of the provided data table reveals visible patterns in teachers' optimism about the future of education based on their years of teaching experience. The largest percentage of teachers who are optimistic about the future of education are those with 1-5 years of experience (65.4%). This may be because they are newer to the profession and are more likely to have a positive outlook. The percentage of optimistic teachers decreases with experience, with 15.4% of teachers with 6-10 years of experience and 19.2% of teachers with 11+ years of experience being optimistic. There are a few possible reasons for this trend. One possibility is that experienced teachers have seen more challenges and setbacks in the education system, which may make them less optimistic about the future. Another possibility is that experienced teachers are more aware of the problems facing education, and are therefore more realistic about the challenges that need to be overcome.

## Qualitative Themes of Impact of AI in Education

**Table 9**

*Key Themes and Example Quotes on the Impact of AI in Education*

Theme	Teacher Quote
Personalization	"AI can provide personalized study schedules and time management strategies to help students optimize their learning."  "AI-powered adaptive learning platforms can provide tailored resources and practice exercises to address students' specific learning gaps."
Efficiency	"AI can assist in automating routine administrative tasks, allowing teachers to focus more on instruction and student support."  "AI can automate administrative tasks such as attendance tracking, grading, and scheduling, saving time for both teachers and students."
Accessibility	"AI can enhance accessibility in education by providing support for students with disabilities, enabling inclusive learning environments."  "AI can provide real-time translation and captioning services, making educational content more accessible to students with language barriers or hearing impairments."



Theme	Teacher Quote
Job Loss	<p data-bbox="459 310 1349 422">"The introduction of AI in education might lead to the loss of jobs for teachers, causing unemployment and economic strain."</p> <p data-bbox="459 533 1393 644">"AI's presence may create a reliance on standardized algorithms, limiting the exploration of alternative teaching methods."</p>
Feedback	<p data-bbox="459 709 1378 821">"AI can provide immediate feedback to students, enabling them to track their progress and make necessary improvements."</p> <p data-bbox="459 932 1321 1043">"AI-powered adaptive assessments can provide instant feedback to students, enabling them to identify their strengths and weaknesses."</p>
Bias	<p data-bbox="459 1108 1398 1220">"AI's algorithms may perpetuate biases and reinforce existing inequalities within the education system."</p> <p data-bbox="459 1331 1393 1442">"AI could result in a one-size-fits-all approach to education, disregarding individual learning styles and preferences."</p>
Creativity	<p data-bbox="459 1507 1317 1619">"AI could reduce the importance of creativity and innovation in the classroom, as it focuses more on data-driven outcomes."</p> <p data-bbox="459 1730 1365 1841">"AI's impact on education may undermine the importance of ethics and social responsibility in learning."</p>

Theme	Teacher Quote
Engagement	<p data-bbox="456 310 1300 422">"The use of AI might lead to a decrease in student motivation and engagement, as it can feel impersonal and detached."</p> <p data-bbox="456 533 1398 644">"AI's influence on education may result in a narrowing of the curriculum, focusing solely on subjects that can be easily automated."</p>
Data Analysis	<p data-bbox="456 709 1406 821">"AI can analyze large datasets to identify effective teaching strategies and share best practices among educators."</p> <p data-bbox="456 932 1406 1043">"AI can analyze students' learning patterns to identify areas of interest and recommend relevant educational resources or career paths."</p>
Teacher Role	<p data-bbox="456 1108 1406 1220">"AI in education will replace teachers and diminish the human connection necessary for effective learning."</p> <p data-bbox="456 1331 1292 1442">"AI's impact on education might reduce the importance of human mentorship and guidance."</p>

The responses indicate both positive and negative implications of implementing AI in education. On the positive side, AI can enable more personalized and modified learning experiences for students by providing adaptive resources, assessments, and recommendations based on their progress and needs. AI can also make education more efficient by automating administrative tasks, allowing teachers to focus on instruction. AI has the potential to make

learning more accessible to students with disabilities through features like real-time translation and transcription.

However, there are also significant concerns about AI's impact on the human aspects of education. Several responses warn that over-reliance on AI could reduce student engagement and motivation if the learning feels impersonal and detached. AI may also lead to job loss for teachers as some of their responsibilities are automated. There are worries that AI could perpetuate biases, limit creativity and critical thinking, and take a one-size-fits-all approach that disregards diverse learning needs. The reduction in human connection and mentorship is a common concern, with fears that AI cannot fully replace the guidance of a human teacher.

### **Conclusion**

In conclusion, the responses indicate a belief that while AI can augment and enhance certain educational processes, it should not aim to replace teachers entirely. Concerns about diminishing the human elements of learning, like relationships, creativity, and ethics, come up repeatedly. The analysis reveals a balance is needed - utilizing AI for personalization and efficiency while ensuring sufficient human interaction, individualized instruction, and holistic development. More research is likely required to develop ethical frameworks and guidelines for effectively integrating AI in education.

The survey data results and qualitative comments reflect varied and different perspectives among educators on the impact of technology and the future prospects for education. While certain common themes emerge, such as concerns about student participation and human connection, differences in opinions and experience highlight the significance of having a balanced approach. As the role of technology in education evolves, more research and

conversation will be required to build ethical frameworks that maximize advantages while avoiding hazards.