Assessment 5: Turn Raw Survey Data Into A Descriptive Report

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EDTC 813: Advanced Using Integrated Software

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August 22, 2024

Analysis based on Pivot tables

Based on the data provided, we made three pivot tables. The first table looked at teacher's attitudes regarding whether technology has a harmful effect on children, the second pivot table was based on teacher's optimism about the future of education, and the third pivot table summarized the average number of years teachers have been teaching, segmented by different types of locations (Rural, Suburb, Urban) and grade levels (e.g., 1st grade, 2nd grade, etc.). The data reveals notable geographic and sentiment-based patterns regarding attitudes towards education and technology, as well as variations in teaching experience.

The survey data on opinions about whether technology has a harmful effect on children, suggests a varied perspective on the impact of technology on children depending on geographic location. Rural respondents tend to strongly disagree, suburban respondents are more balanced in their views, and urban respondents show a moderate spread with fewer strong opinions. This difference in opinion could be due to differing access to technology or the usage of technology in these areas.

The analysis of the data on optimism about the future of education reveals significant regional differences in perceptions. In particular, rural respondents demonstrate a notably more positive outlook regarding the future of education compared to their urban counterparts. While rural areas show a higher level of agreement and optimism, urban areas are characterized by more neutral or negative sentiments. Suburban respondents offer a more balanced perspective, reflecting moderate optimism.

Additionally, the report assesses the distribution of teaching experience across different grade levels. It finds that rural areas have a higher concentration of teachers in the lower grades

(1st through 4th), which may suggest a less experienced teaching force in these regions. On the other hand, suburban areas display a more varied distribution of teachers across grades, implying a more balanced level of experience. Urban areas also show varied distribution patterns but with marked reductions in certain grades, potentially reflecting fewer teachers or lesser stability. There are notable differences in the average years of teaching for each grade level across different locations. For example, the average years of teaching for 8th grade in rural areas (32 years) is much higher compared to other grades and locations, indicating a possible long-term tenure or accumulation of experience in that grade.

Overall, this report highlights that while rural areas tend to be more optimistic and have a higher concentration of teachers in early grades, suburban and urban regions exhibit more diverse perspectives and teaching experience distributions. These findings combined with future research can offer valuable insights into regional differences and can be used to inform educational policy and practice.

Analysis of Qualitative data

Although some responses were negative, the vast majority of teachers expressed positive sentiments regarding ChatGPT. The impact AI has on education encompasses a broad spectrum of themes. In exploring the predictions of teachers about ChatGPT, several key themes emerged, highlighting the impact AI has on education. After coding the responses, we found the following themes:

1. Automation and efficiency
2. Personalized learning
3. Enhanced learning experiences

4. Support with language acquisition
5. Challenges and concerns

Through automation and efficiency, teachers predict ChatGPT will support them with streamlining administrative tasks, grading and tracking student progress, freeing up time for more personalized interaction with students. Additionally, AI, like ChatGPT, can provide real-time feedback and aid in identifying effective teaching methods and student strengths. It is expected to cater to individual student needs creating personalized learning pathways by providing tailored learning materials and adaptive feedback, enhancing the learning experience. Overall, the integration of AI in education promises enhanced learning experiences with immersive and interactive learning environments, potentially transforming how students engage with content and concepts. ChatGPT's language capabilities support language acquisition and communication internationally. It offers opportunities for language learners to practice and improve their skills in real-time interactions, pronunciation aids, thereby facilitating language proficiency. These themes illustrate the multifaceted ways in which AI, partnered with ChatGPT, is anticipated to influence and innovate educational practices worldwide.

However, the integration of AI presents several challenges and concerns. There is a risk that it might exacerbate existing inequalities and reduce face-to-face social interactions, potentially impacting collaborative learning. Additionally, there are worries about the loss of critical thinking skills, job displacement for teachers, and over-reliance on technology. Overall, AI holds significant potential to transform education, but it must be implemented thoughtfully to address these concerns and ensure it supports diverse learning needs effectively.

Figure 1: Teacher responses