**Assessment 7-Final Report**

Deniz Ismailoff

New Jersey City University

EDTC 813 Advanced Using Integrated Software Across the Curriculum

Dr. Christopher Shamburg

August 22, 2021

Final Report

This paper discusses the discoveries and findings from my datasets and coursework in "Advanced Using Integrated Software Across the Curriculum." The first assignment was to craft an interview on a classmate's experiences, as an educator, during the Covid-19 pandemic. The data was transcribed utilizing Otter.ai, a transcription software. The assignment focused on importing data, coding, analyzing, generating reports, and writing findings. The coding interview reported all open codes from the interview and listed multiple merged axial codes. For the second assignment, data (teachers' responses) were collected utilizing qualitative survey responses on Qualtrics. The survey included Likert scale questions and multiple-choice and open-ended questions. The teachers' responses centered on their difficulties teaching during the Covid-19 pandemic. Their responses were quoted and coded utilizing ATLAS. ti.

ATLAS. ti focuses on coding procedures which support a grounded theory approach for data analysis (Smit, 2002). The main focus was on the open-ended question, "what are your greatest difficulties during the shutdown?". A codebook was utilized to code, applying multiple relevant codes to specific quotes. Then, a frequency table was created to organize and represent the number of times specific codes were applied to each response. According to participants' responses, "connecting with students" was the most difficult as it accumulated the most responses. A generated code co-occurrence table was presented to illustrate how often a combination of codes was linked to the quotations. The table's report indicated that "engaging students, parent involvement, and incomplete work" were often linked to the same quotation, "connecting with students." Additionally, I learned to create pivot tables to interpret findings. Creswell and Plano Clark (2018) describe data as information collected, stored, and processed to produce and validate original research results. Creswell (2015) explains data as having a quality of describing things after assigning a specific value. Pivot tables are a great feature in Excel that helps organize and analyze data (Alexander & Jelen, 2001). Describing and analyzing quantitative data utilizing pivot tables in Microsoft Excel allowed me to sort and re-sort data in a straightforward visible design.

The next assignment focused on creating three Spearman correlation data tables utilizing SPSS software. Ramzai (2021) explains correlation as a statistic that measures how two variables move in relation to one another. Correlation coefficients are utilized to measure how strong a relationship is between two variables. For this assignment, Spearman's correlation coefficient is utilized to measure the strength of a monotonic relationship between data sets. The Spearman correlation coefficient can take values from +1 to -1. A correlation of +1 indicates a perfect positive correlation, a correlation of -1.0 shows a perfect negative correlation, and a correlation of 0.0 notes no linear relationship between two variables. As a result, the closer a value is to +1 or -1, the stronger the monotonic relationship is between the variables (Ramzai, 2021).

The first correlated table was among students having technological resources at home to succeed before and after the Covid-19 shutdown. Spearman's correlation coefficient displayed +.617, which represented a strong positive correlation. This strong positive correlation indicated that students had the technological resources at home to succeed before and after the shutdown. The second Spearman's correlation coefficient showed -.106, indicating a weak negative correlation and a minimal relationship between school type and administration support. Lastly, the third correlated table displayed teachers' years of experience and seeking professional development opportunities. Spearman's correlation coefficient presented -.089, signifying another weak negative correlation. The findings indicated a minimal relationship between teachers' years of experience and seeking professional development.

In conclusion, this course allowed me to examine emergent digital technology trends in education and assess integrated strategies that encourage and heighten educational experiences. I interviewed a classmate on their experiences as an educator during Covid-19 and transcribed the answers utilizing Otter.ai. I collected, analyzed, and interpreted a large data set (teachers' responses on their teaching difficulties during the Covid-19 pandemic) utilizing qualitative survey responses on Qualtrics. Their responses were quoted and coded utilizing ATLAS. ti. I learned how to create pivot tables and interpret findings by describing and analyzing quantitative data utilizing a pivot table in Microsoft Excel. The last software I studied and applied was the SPSS software. A Spearman's correlation coefficient was utilized to measure the strength of a monotonic relationship between data sets. Three Spearman correlation tables were created to evaluate the relationship between two variables utilizing a monotonic function. The first table represented a strong positive correlation, indicating that students had the technological resources at home to succeed before and after the shutdown. The second correlation coefficient table specified a weak negative correlation and a minimal relationship between school type and administration support. The third Spearman's coefficient table correlated teachers' years of experience and seeking professional development opportunities. Spearman's correlation coefficient presented a minimal relationship between teachers' years of experience and seeking professional development.

**References**

Alexander, M., & Jelen, B. (2001). Pivot table data crunching. Pearson.

Creswell, J. W. (2015). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. Pearson.

Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). Sage.

Ramzai, J. (2021). *Clearly explained: Pearson V/S Spearman correlation coefficient*. Medium. <https://towardsdatascience.com/clearly-explained-pearson-v-s-spearman-correlation-coefficient-ada2f473b8>.

Smit, B. (2002). Atlas. ti for qualitative data analysis: research paper. *Perspectives in Education*, *20*(3), 65-75.