

PEDAGOGICAL CONSIDERATIONS FOR TEACHING DATA TRANSLATORS

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The growth in demand for data-driven decision making has increased the need for ‘data translators’ (Maynard-Atem & Ludford, 2020); individuals with the ability to communicate findings from data analysis to non-specialists (Henke et al., 2018). A data translator is not necessarily a data scientist, although need such skills. This requires a new approach to teaching. Our research investigates how to effectively train data translation skills in both technical data science students and those from other disciplines who need to analyze data. To explore this issue, we synthesize 12 papers from our recent book (Woolford, Kotsopoulos & Samuels, 2023) on “Applied Data Science: Data translation Across the Disciplines”. These twelve papers serve as a foundation to provide insight into the key pedagogical considerations for effective training of data translators.

Our thematic analysis (Braun & Clarke, 2006) reveals three directives for training data translators: 1) interdisciplinarity, 2) a knowledge exchange framework (KEF), and 3) language calibration. First, interdisciplinarity needs to be recognized as a guiding force in data science; students need to be trained to effectively interact and communicate outside their home discipline. Second, a KEF between stakeholders, including both the end users and those performing the analysis is crucial. Students need to be trained to serve as knowledge brokers, using data to address real-world problems by engaging multidisciplinary practitioners, rather than focusing exclusively on technical analysis. Finally, language calibration points to the often-impenetrable technical terminology often associated with data science, which requires students be trained to pay close attention to clear communication through development of consistent, calibrated terminology to minimize uncertainties in meaning. We propose that a focus on these three skills must partner with data science training if we are to prepare data translators. This presentation has implications for instructors looking to adjust not just the methods, but their pedagogical philosophy to train students for a generation of data translation jobs.

REFERENCES

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