

# Virtual Exchange (VE): A New Approach When Teaching Audit Data Analytics

Tawei (David)Wang

School of Accountancy & MIS, College of Business, DePaul University, United States

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Virtual exchange (VE) is defined as “technology-enabled learning experiences with clear learning outcomes and deliverables, in which sustained communication and interaction takes place between students (individuals or groups) who are geographically separated, with the support of educators” (DePaul University, 2020). Based on this definition, there are several key features in a virtual exchange arrangement (DePaul University, 2020):

- It is technology enabled or facilitated: with the support of information technology (IT), students in different geographic regions can now interact easily.
- It is carefully designed by two or more professors with clearly defined learning outcomes typically through one or more shared assignments or projects.
- It is designed to increase the number of intercultural experiences through interactions and communications between students who are geographically separated.

Virtual exchange has been widely discussed in the past two decades (Zak, 2021). For example, Hauck et al. (2020) discuss pedagogical competence development in teacher education in the virtual exchange context. Lee and Sauro (2021) address and document the language learning processes through virtual exchanges. There are also conferences, such as the International Virtual Exchange Conference <sup>1</sup> and the Biennial Asia-Pacific Virtual Exchange Association (APVEA) Conference <sup>2</sup>, and journals, such as the Journal of Virtual Exchange <sup>3</sup> and Online Learning Journal <sup>4</sup>, discussing virtual exchange related topics. However, the incorporation of virtual exchange in accounting or data analytics is still very limited (e.g., Wang and Warshaw, 2021).

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<sup>1</sup><http://iveconference.org/>

<sup>2</sup><https://apvea.org/>

<sup>3</sup><https://journal.unicollaboration.org/>

<sup>4</sup><https://olj.onlinelearningconsortium.org/index.php/olj>

The virtual exchange arrangement fits nicely when designing an audit data analytics course because of the followings. First, for audit firms or organizations nowadays, it is not uncommon to have a global arrangement of shared IT services or IT solution teams (Deloitte, 2016; Bachinger, 2021). For instance, KPMG and Protiviti both have software development teams in India (KPMG, 2016; Protiviti, 2021). Discover Financial Services has a data subsidiary in Shanghai focusing on data analysis and modeling (Businesswire India, 2008). With such arrangements, it is crucial for our auditors to be able to work in a global team. In addition, the communication between team members who have very different educational and cultural background requires more practices. Understanding the differences in how people think, express their opinions, and present their ideas can ensure the communication among team members or across global teams to be more effective. Lastly, the interpretations of the findings of audit data analytics and the recommendations rely heavily on the local institutional contexts and the understanding of different business operations and priorities. The intercultural experiences can be a great starting point for auditors to incorporate these additional institutional backgrounds into the decision-making processes.

With all these potential benefits in mind, during the Spring semester (quarter) 2021, DePaul University and National Chung Cheng University in Taiwan arranged a virtual exchange project for their audit data analytics courses. The arrangement lasted for seven weeks for a joint audit data analytics final project. The setting follows the recommended structure for a virtual exchange project: empathy building, virtual exchange activities, and reflection. The first two weeks were the empathy building phase. Students from both universities had an opportunity to read articles about cultural and communication differences between the US and Asian countries. They also had their first virtual meeting to introduce themselves and to start their planning processes. The next four weeks were centered around weekly interactions among student groups for discussion and actual data analysis. Towards the end, students had a chance to reflect what went well and what did not go well. They were also able to discuss or share this experience with their peers and the organizing professors.

A virtual exchange project requires detailed planning and coordination between participating programs. With the efforts, we can bring the intercultural collaboration and communication experiences to audit data analytics courses or other accounting courses. Such experience can help our future auditors be more mindful about the differences between global communities and be successful when working with or leading a global team.

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