THEORETICAL FRAMEWORKS: A MEANS TO AN END IN DISCIPLINE-BASED EDUCATION RESEARCH

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GOAL
To offer an interactive experience to introduce and develop participants' familiarity with theoretical frameworks as a means to design and conduct discipline-based education research.

BACKGROUND
In many scientific experiments, a researcher uses a specific analytical instrument to collect data that will ultimately be analysed and interpreted in order to answer research questions or test hypotheses. The choice of instrument thus influences the type of data that can be gathered and, ultimately, what the researcher can learn about the sample or phenomenon under study.

For qualitative research studies in education, the theoretical framework plays a role analogous to that of the instrument. A theoretical framework is a system of ideas, aims, goals, theories and assumptions about knowledge; about how research should be carried out; and about how research should be reported that influences the way educational research questions are framed, which type of data is collected, and how data are analysed. Thus, the choice of theoretical framework ultimately determines what can be learned about a given educational context.

AIMS
In this session, we will consider a potential area of research interest and a potential data source from multiple theoretical perspectives. We will determine if particular theoretical frameworks are appropriate for the research focus. We will also discuss the intent of, design research questions for, and identify appropriate data for studies that are guided by various theoretical perspectives. Finally, we will discuss factors that may affect the ultimate choice of a theoretical framework for a qualitative research project.

DELIVERABLES
Through this workshop we hope to facilitate the following deliverable outcomes:
- An introduction to common theoretical frameworks that have been and are used in discipline-based education research;
- Professional development for both new and transitioning researchers moving into discipline-based education research;
- A "take-home" pack with basic descriptions of some theoretical frameworks as well as a worksheet about using theoretical frameworks to design DBER studies.

WORKSHOP
Introduction (15 minutes)
In any learning environment, there are many interactions, people, and things that we could study. We can't pay attention to all of them at the same time. A theoretical framework provides guidance that focuses our attention on a specific concept or issue within a learning environment. A different theoretical framework, applied to the same learning environment, focuses our attention on a different concept or issue.

We will begin the workshop by introducing several commonly-used theoretical frameworks and how they influence the design of a qualitative educational research study about a particular learning environment.

Workshop task (30 minutes)
Participants will be assigned one of the previously-discussed, common theoretical frameworks and will work in small groups to develop corresponding research questions and a data collection plan for a study about a given learning environment. Workshop facilitators will be available to provide support and assistance in this task.

Discussion and Reflection (30 minutes)
Participants will share their developed research questions and approaches with the larger group, explaining how their assigned theoretical framework influenced their research design. Workshop facilitators and other participants will provide feedback about how the research design could be further improved and extended.

We will finish the workshop by asking the participants to consider a planned or current study and how theoretical frameworks could add value to those projects.

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