

EDRD 812

QUALITATIVE RESEARCH PROJECT EVALUATION SCALE

Name: Kim Fair

1. Did the paper have a sound conceptual rationale and relevant research questions?

To a great extent...X.....to a limited extent

Provides an intelligent review and analysis of critical findings from the literature on procedural and contextual math reasoning, ultimately stressing the point that both types of knowledge are transactional and essential to attain math expertise

This review serves as background for the phenomenological study of math reasoning by three students at differing developmental levels

Shares her research question concerned with how the three participants makes sense of contextualized and decontextualized fractional and proportional math problems; the question is sufficiently broad to work as a guiding question for phenomenological inquiry

You could have included your own professional rationale for exploring this phenomenon

2. Were the qualitative methods clearly explained and rigorous?

To a great extent...X.....to a limited extent

Describes the three participants whom she has known since they were children; these student participants were deliberately chosen because of they are all from the same family, and rationalized that this would make for a particularly interesting analysis of any differences in their math reasoning

Explains that interpretive phenomenological analysis was the general approach to determine how the participants' solved problems;

Gathered data from the two required sources: observations of participants engaging in think-alouds while solving the math problems; also conducted reflective interviews with the participants

Appropriately employed a form member checking of interpretation of student participants' problem solving processes during immediate follow-up reflective interviews

Provides helpful detail of the space and environment where the research was conducted

Made transcripts for analysis of student think-alouds, observational field notes, and interviews

Provides examples of a decontextualized and a contextualized math problems

Describes with appropriate detail how data were first analyzed holistically, inspired by phenomenology, as well as the initial coding process through closer text analysis and then deriving emerging themes

3. Were the findings adequately supported by relevant data?

To a great extent...X.....to a limited extent

Shares strengths and weaknesses of her role as researcher with the three participants; threats to validity and her own struggle to set these biases aside, given the long-term relationship held with the participants as their former music teacher and family friend

Foregrounds important findings about problem solving processes for each of the three participants; draws on observation notes as well as direct quotes from participants during problem solving and during the interview afterward

Katie, the middle schooler, preferred decontextualized problems and turned story problems into decontextualized equations before attempting to solve them

Jon, the high schooler, did the opposite, contextualized the problems and visualized them as much as possible

Chris, college freshman, used a combination of solving decontextualized and visualizing problems to contextualize them

4. Was the discussion of the findings tied to research questions and include directions for future research?

To a great extent...X.....to a limited extent

Asserts that because the participants come from same SES background, this did not predict a preferred style or approach to problem solving

Found the participants differed in their levels of sophistication with problem solving; yet, all three relied on the procedural skills

Type of problem did not dictate which approach to problem solving was employed by the three participants

Found that qualitative analytics is very personal; the process left space for discovery; you don't know what learners are thinking until one inquires—the advantage of qualitative inquiry

It's very interesting and significant that the findings appear to be consistent with research evidence suggesting that expertise involves transactional ability within contextualized

and decontextualized math problem solving contexts—this is what Chris, the one with the most sophisticated math ability, exhibited; whereas Katie, the least sophisticated, displayed a strict reliance on procedural skills, even with contextualized problems; and Jon was somewhere in between.

5. Did the presentation appropriately summarize all critical aspects of the qualitative research project?

To a great extent...X.....to a limited extent

Adequately summarizes the conceptual framework for the study, the researcher role, methods, data analysis and findings;

Also includes directions for future researcher, suggesting to track the math skill development of the three participants in a longitudinal way

Kim,

A highly intelligent research report and presentation on a compelling and worthwhile phenomenon. The methods and analysis were tailored to your goal of discovering the extent and nature of math problem solving within contextualized and decontextualized contexts among the adolescent participants. Furthermore, support for your generalizations about students' problem solving processes remained faithful to the words and ideas expressed by the student participants during and after their problem solving activity. This is entirely appropriate for increasing rigor and validity in qualitative research designs.

I would urge you to think about shaping this report into a journal article and submit it for publication. It could straddle a research/method journal, such as Mathematics Teacher.

It has been a pleasure having you in class, and I appreciate all of your thoughtful contributions to class discussion.

Dr. B.

75/75 points

Ps. Instead of “talk-alouds” refer to these as “think-alouds”