



# PRE-SERVICE TEACHER'S PERCEPTIONS OF A WRITTEN FEEDBACK INTERVENTION IN RESPONSE TO MIXED-REALITY SIMULATIONS



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## PURPOSE STATEMENT

The purpose of this study is to explore how student perceptions of a written feedback intervention, including data-driven, formative, and caring feedback elements, impact the development of feedback literacy.

## RATIONALE

It is understood that feedback has "one of the highest effects on student learning." (Hattie, 2012, p. 18)

Less understood are student perceptions of specific feedback types and processes. (Akkuzu, 2014; Dekker et al., 2013; Irwin, 2017; Mulliner & Tucker, 2017; Price et al., 2010)

Feedback literacy is critical as a means to increase the effectiveness of feedback. (Carless & Boud, 2018; Higgins & Hartley, 2002; Molloy, Boud, & Henderson, 2020; Nicol & Macfarlane-Dick, 2006; Sutton, 2012; Winstone, Mathlin, & Nash, 2019)

The affective, emotional, and ontological aspects of feedback may be integral in the ability of students to accept, process, and act upon feedback. (Carless & Boud, 2018; Molloy, Boud, & Henderson, 2020; Sutton, 2012)

## STATEMENT OF THE PROBLEM

Despite efforts to provide various types of feedback—from corrective to clarifying to constructive to confirming—teachers are often left questioning the impact of feedback. (Burke & Pieterick, 2010; Hattie, 2016, 2019)

Recent research has acknowledged a need to more deeply explore student engagement with feedback, particularly regarding feedback literacy. (Carless & Boud, 2018; Higgins & Hartley, 2002; Molloy, Boud, & Henderson, 2020; Nicol & Macfarlane-Dick, 2006; Sutton, 2012; Winstone, Mathlin, & Nash, 2019)

## SIGNIFICANCE OF THE RESEARCH

This study aims to gain a better understanding of student perceptions of feedback types and processes, which may assist in improving feedback literacy.

Since "the power of feedback depends on the receiving skills of the learner as much as the feedback messages provided by the giver," it is important to analyze how these receiving skills are perceived by and developed in learners. (Hattie, 2019, p. 169)

The caring components of feedback (affective, emotional, or ontological) have "the potential to change the relationship of learners to themselves ... bring[ing] a learner's self into a new relationship with the world." (Sutton, 2012, p. 35)

## KEY TERMS

**DATA-DRIVEN FEEDBACK** includes "empirical pieces of information that educators can draw upon to make a variety of instructional and organizational decisions" (Hamilton et.al, 2009, p. 46).

**FORMATIVE FEEDBACK** answers three key questions as follows:

- 1) Where is the student going?
- 2) How is the student going?
- 3) Where to next?

**CARING FEEDBACK**, for the purpose of this study, is based on the 3 constructs of care ethics:

- 1) **Confirmation**-- aims to "know what the child wants to be" and "know what to encourage" (Noddings, 1988, p. 224).
- 2) **Empathy**-- "engenders both feeling and understanding" and "requires that we ... ask what the other is going through" (Noddings, 2012b, p. 55).
- 3) **Reciprocity**-- when the "carer" and "cared-for" both gain and give in the caring encounter; the "cared-for" recognizes that the "carer" cares (Noddings, 2013; Smith, 2004).

**FEEDBACK LITERACY** is defined as "the understandings, capacities and dispositions needed to make sense of information and use it to enhance work or learning strategies." (Carless & Boud, 2018, p. 1316)

## LITERATURE REVIEW

### Effective Feedback

<b>Hattie (1999)</b> <b>Hattie (2020)</b>	Over 10 years, Hattie (1999) accumulated studies of the effects of schooling; 337 meta-analyses. 200,000 effect sizes from 180,000 studies and determined that "the most powerful single moderator that enhances achievement is feedback" (p. 5). Feedback should include asking where the student is going, how the student is going and where the student is going next and should aim to move from task or product to process and progress to self-regulation.
<b>Van der Kleij, Feskens, &amp; Eggen (2015)</b>	A meta-analysis investigating the effects of methods for providing item-based feedback in a computer-based environment on students' learning. <b>Process-oriented feedback produced larger effect sizes (0.49) than correctness feedback (0.05). "More research that takes into account the specific characteristics of [feedback] interventions is needed"</b> (p. 505).

### Feedback Perceptions

<b>Mulliner &amp; Tucker (2017)</b> <b>Carless (2006)</b> <b>Nicol (2010)</b>	Studies have found "discord" between teachers' and students' perceptions of feedback practices with students being largely dissatisfied with the feedback they receive. Authors suggest a dialogical approach to feedback in order to reduce misconceptions.
<b>Robinson, Pope, &amp; Holyoak (2013)</b>	Past experiences with feedback could impact future engagement with feedback. Examined qualitative and quantitative data to determine that encouraging comments can "enhance the appreciation of negative feedback and maintain confidence and engagement" (p. 268).
<b>Wen (2013)</b>	"We must persuade students to reflect on and to act on the feedback we provide ... because researches show that most of the students do not really act on the feedback" (p. 430).

### Feedback Literacy

<b>Winstone, Mathlin, &amp; Nash (2019)</b> <b>Ducasse &amp; Hill (2019)</b>	Both studies reported on the perceived usefulness of a feedback intervention to develop feedback literacy; research showed that such resources may enhance students' general feedback literacy.
<b>Molloy, Boud, and Henderson (2020)</b>	Framework for well-developed feedback literacy: Commits to feedback as improvement, appreciates feedback as an active process, elicits information to improve learning, processes feedback information, acknowledges and works with emotions, acknowledges feedback as a reciprocal process, enacts outcomes of processing feedback information.
<b>Sutton (2012)</b>	<b>Three dimensions of feedback literacy:</b> A practical dimension - acting on feedback; an epistemological dimension -- acquiring academic knowledge; an ontological dimension - learned identity

### Care Ethics

<b>Noddings (2012b)</b>	The caring relationship includes both the carer and cared for. The "carer is attentive, observes, and is receptive to the expressed needs of the cared-for;" the cared-for "responds in a way that shows that the caring has been received" (Noddings, 2012b, p. 53).
<b>Noddings (1995)</b>	Care is integral to the educational process. "We will not achieve even that meager success unless our children believe that they themselves are cared for" (Noddings, 1995, p. 1).

## RESEARCH QUESTIONS

**RQ1: What are pre-service teachers' perceptions of a written feedback intervention in a mixed-reality simulation?**

- a. What are pre-service teachers' perceptions of a written data-driven feedback intervention in a mixed-reality simulation?
- b. What are pre-service teachers' perceptions of a written formative feedback intervention in a mixed-reality simulation?
- c. What are pre-service teachers' perceptions of a written caring feedback intervention in a mixed-reality simulation?

**RQ2: How do pre-service teachers understand feedback literacy before and after mixed-reality simulations that include a written feedback intervention?**

## DESCRIPTION OF SETTING & PARTICIPANTS

Southern New England State University  
Pre-Service Teacher Preparatory Program  
Intermediate Level Education Course  
15-30 students enrolled in one section  
Students participate in 3 simulations exercises in the Mursion™ environment  
Sessions build higher order thinking skills into lessons and student exchanges



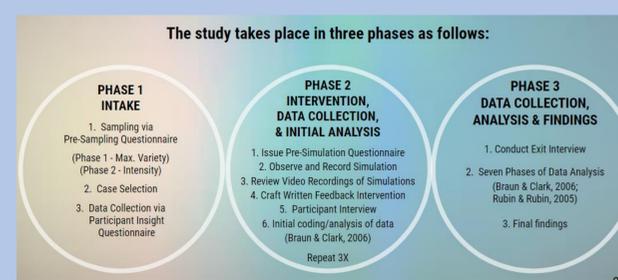
## RESEARCH DESIGN AND PHASES

Qualitative Multicase Study (Stake, 2006)

<b>Case</b>	Stake (2006) defines cases as specific entities with common characteristics; studied as part of an integrated system.	<i>Pre-service teachers in a course utilizing mixed-reality simulation and feedback intervention.</i>
<b>Quintain</b>	Stake (2006) defines the quintain as an object or phenomenon or condition to be studied.	<i>A written feedback intervention in response to a mixed-reality simulation for pre-service teachers.</i>

**Case-Quintain Dilemma** "The single case and the collection each vie for more attention." (Stake, 2006, p. 1)

The researcher "starts with the quintain, arranges to study cases in terms of their own situational issues, interprets patterns within each case, and then analyses cross-case findings to make assertions about the binding." (Stake, 2006, p. 10)



## SAMPLING

This study uses a two-phase purposeful sampling approach guided by Patton's (1990) description of maximum variation and intensity sampling procedures. Seven participants (n = 8) will be selected.

**PHASE ONE: Maximum Variation (n=14)**  
Diversify the chosen sample by gender, age, ethnicity, and GPA.

**PHASE TWO: Intensity Sampling (n=8)**  
Determine which participants might provide "information-rich cases that manifest the phenomenon of interest intensely (but not extremely)" (Patton, 1990. p. 171).

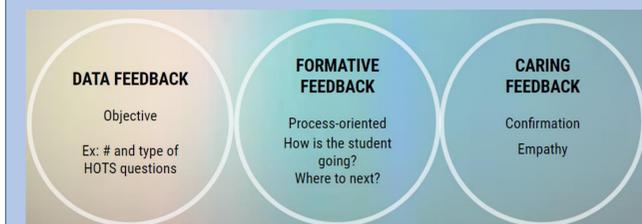
## INSTRUMENTATION FOR INTERVENTION

Participant Insight Questionnaire  
Pre-Simulation Questionnaire  
Observational Protocols

## INSTRUMENTATION FOR DATA ANALYSIS

Pre-Sampling Questionnaire  
Feedback Intervention Interview  
Exit Interview

## INTERVENTION



## DATA COLLECTION PROCEDURES

Instrument	Pre-sampling Questionnaire	Feedback Intervention Interview	Exit Interview
How issued:	Google form via email	Takes place via video conference; recorded and transcribed	Takes place via video conference; recorded and transcribed
When issued:	With ED212 roster release at beginning of SP21 semester	Participants will take part in interview as soon as possible after feedback is crafted.	To take place within 1 week of last simulation
How long:	10 minutes	1 hour	30 minutes
# of times issued	One time at beginning of SP21 semester	3 times after each simulation	1 time at end of course

## DATA ANALYSIS OVERVIEW

Data Type	Questionnaires	Interviews
Guiding Principles for Analysis	School Reform Initiative (2000) "ATLAS - Looking at Data" Protocol	Synthesis of Braun and Clark (2006) & Rubin and Rubin (2005)
Analysis Procedures	<ol style="list-style-type: none"> <li>1. Describe and organize the data via a filtered spreadsheet</li> <li>2. Code specific chunks of data</li> <li>3. Interpret and make sense of the data</li> <li>4. Note emerging themes</li> <li>5. Triangulate with other data sources</li> </ol>	<ol style="list-style-type: none"> <li>1. Become familiar with the data</li> <li>2. Recognize key themes and generate initial codes</li> <li>3. Collate codes into themes and define codes and themes</li> <li>4. Thematic mapping</li> <li>5. Re-code</li> <li>6. Refine themes and explore emerging narratives</li> <li>7. Produce the report.</li> </ol>