

## Chapter 4.8

# Using On–Line Discussion to Encourage Reflective Thinking in Pre–Service Teachers

**E. Gregory Holdan**

*Robert Morris University, USA*

**Mary Hansen**

*Robert Morris University, USA*

### ABSTRACT

Discourse has been thought to be an essential aspect of high quality education (Bean & Stevens, 2002; Harkness, D’Ambrasio & Marrone, 2006; Wade, Fauske & Thompson, 2008; NCTM, 2000; Heller, 2004). But because the teaching profession is sometimes one of isolation and disconnectness (Wong & Wong, 2001; Zmuda, Kuklis & Kline, 2004; Sparks & Hirsh, 1997), teachers may not get opportunities to engage in thoughtful discourse. With advances in on-line education, however, teachers who might otherwise not have opportunities to engage in meaningful, reflective discourse about teaching and learning can easily, and at their own relative convenience, do so. Through an on-line venue, teachers can get involved in substantive communication about teaching and learning, address valid and invalid preconceptions about the profession, and work

to improve their practice through directed meta-cognitive reflective activities.

### INTRODUCTION

Reflective practice for the classroom teacher has been conceptualized in many different ways: reviewing and thinking about ones teaching (Stronge, 2002); reviewing an experience to identify accurate and inaccurate perceptions (Marzano, 2007); thinking about teaching before, during, and after a lesson (Artzt, Armour-Thomas, & Curcio, 2008); sophisticated thoughtful consideration of instructional intentions and the degree to which those intentions have been accomplished (Danielson & McGreal, 2000); a cycle of inquiry to foster building new understanding of self and teaching practice (Lambert, 1998); a mental activity where an experience is recalled,

thoughtfully considered, and then evaluated, usually with some overarching purpose in mind (Richards, 1991). Overarching purposes might be to improve instruction and influence student learning (Stronge, 2002), to uncover beliefs, as well as accurate and inaccurate perceptions about teaching and student learning (Marzano, 2007), to analyze one's personal teaching practices and cognitions that drive each and every lesson (Artzt, et al., 2008), to build a strong sense of self-efficacy (Stronge, 2002), or to build a deeper understanding that the consequences of teacher actions can build an expanded repertoire of teaching skills (Danielson, 1998).

Reflective thought requires more than just recounting events, though. It must also consider the why's associated with those events. Simply put, for example, recounting the sequence of events of a particularly good lesson is not reflective thinking at a comprehensive level. The teacher must thoughtfully consider why that particular lesson may have been so successful. It is believed that reflective thinking by the effective teacher acts as a learning tool for the teacher and builds confidence in teaching. Indeed, reflective thinking about one's teaching can transform an ordinary classroom into a much more productive one (Stronge, 2002).

According to Richards (1991), one may consider reflection as a three step process. First is the identification of a teaching or classroom event. Second, there is an account of what happened, without explanation or any evaluation. Third, there is a conscious review of the event, questions are asked about the event, and an evaluation is generated. For example, when asked to respond to a discussion on a best and worst lesson, a student teacher might, at the first stage, simply identify that a lesson on the unit circle in trigonometry was his worst lesson. At the second stage, that same student teacher might describe the lesson as one where he derived some trigonometric expression as his students watched and then sent his students on a path to apply that trigonometry. At the third level, the student teacher might suggest that the

lesson was too teacher-centered and consequently many students were left disenfranchised for too long a period of time; he might further realize that students spent too much time mindlessly copying from the chalkboard without processing the underlying big mathematical ideas. Realization then sets in that students were unable to work on the application problems without a lot of help from the student teacher, who spent much of the rest of the class running around the room helping individual students. Finally the student teacher might add an evaluation that "teacher-directed, note-taking" math classes may not be effective because of low student engagement. When this high level of reflection is met, the student teacher can make the conscious and evidence-based decision to involve students more in developing an understanding of mathematics with active student involvement in activities that encourage students to explore, make conjectures, and test them. In essence, through reflection, the student teacher comes to recognize the role of problem-solving in developing meaning in his content area.

### **The Role of Technology in Reflection**

In recent years, advances in on-line education have increased the potential for synchronous and asynchronous discourse across all disciplines. Asynchronous discussions have the potential to promote high quality reflection (Brookfield & Preskill, 2005), which is seen as an essential aspect of learning (Fåhræus & Döös, 2007). Further, successful on-line learning involves developing a community of learners (York, Yang, & Dark, 2007), in which students feel comfortable reflecting on and responding to others' posts. In on-line, asynchronous discussions, students can ponder over the material before responding. Thus, such discussions have the potential to result in students' increased ability to critically reflect, provide well thought-out views and realize deeper thinking (Brookfield and Preskill, 2005, Wade

7 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/using-line-discussion-encourage-reflective/41387](http://www.igi-global.com/chapter/using-line-discussion-encourage-reflective/41387)

## Related Content

---

### DBGCN: A Knowledge Tracing Model Based on Dynamic Breadth Graph Convolutional Networks

Ping Hu, Zhaofeng Li, Pei Zhang, Jimei Gao and Liwei Zhang (2024). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 1-20).

[www.irma-international.org/article/dbgcn/342848](http://www.irma-international.org/article/dbgcn/342848)

### A Teaching Suggestion in the COVID-19 Disease Pandemic Period: The Educational Website Enriched by Web 2.0 Tools

Mehtap Yildirim and Lerna Gurleroglu (2022). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 1-17).

[www.irma-international.org/article/a-teaching-suggestion-in-the-covid-19-disease-pandemic-period/281239](http://www.irma-international.org/article/a-teaching-suggestion-in-the-covid-19-disease-pandemic-period/281239)

### Transforming Online Learning Beyond the Digital Data: Massive Open Online Course (MOOC) for Blended Learning

Haniffa Beevi Abdul Jaleel and Pauline Teo Hwa Ling (2023). *Research Anthology on Remote Teaching and Learning and the Future of Online Education* (pp. 938-957).

[www.irma-international.org/chapter/transforming-online-learning-beyond-the-digital-data/312764](http://www.irma-international.org/chapter/transforming-online-learning-beyond-the-digital-data/312764)

### Developing Student e-Portfolios for Outcomes-Based Assessment in Personalized Instruction

Kam Hou Vat (2010). *Learning Management System Technologies and Software Solutions for Online Teaching: Tools and Applications* (pp. 259-290).

[www.irma-international.org/chapter/developing-student-portfolios-outcomes-based/43458](http://www.irma-international.org/chapter/developing-student-portfolios-outcomes-based/43458)

### Cognitive Mapping Decision Support for the Design of Web-Based Learning Environments

Raafat George Saadé (2010). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 36-53).

[www.irma-international.org/article/cognitive-mapping-decision-support-design/46160](http://www.irma-international.org/article/cognitive-mapping-decision-support-design/46160)