Professional Literacies with Mathematics, English Language Arts, and Science teacher candidates

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Introduction

Basic Literacy

“learning to read and write (text and numbers), reading and writing to learn, and developing these skills and using them effectively for meeting basic needs”

(UNESCO, 2003)

Functional Literacy

“true literacy encompasses much more than just these basic skills. It includes the ability to analyse things, understand general ideas or terms, use symbols in complex ways, apply theories, and perform other necessary life skills—including the ability to engage in the social and economic life of the community”

(Canadian Council on Learning, 2007)
Introduction

Plural Literacy

“A plural view of literacy recognizes that there are many literacy practices that are embedded in social, political, and cultural processes, personal circumstances and socio-economic structures.” (UNESCO, unpublished)

Multiple literacies (Ahmed, 2011)

“an evolving set of skills” (UNESCO, unpublished)

Changing literacies, the classroom context (Selmer & Graham, 2010)
Introduction

...learning to teach is less about absorbing particular bits of information and more about acquiring specific literacies that will endure this evolution in communication practices (Pilgrim & Bledsoe, 2011)

Therefore...

Professional Literacies

Various literacies from subject content, assessment and evaluation, leadership, safe school and mental health, learning disabilities, technology in education, and pedagogy, to name a few, provide support for, and a foundation to the professional teacher discourse.
The study...

**Topic**

Preservice teachers’ acquisition of teacher discourse.

**Problem**

An apparent lack of knowledge of the various literacies used by teachers in their teacher discourse, and how they acquire, think about, and understand these literacies.

**Purpose**

Unpack preservice teachers’ acquisition of teacher discourse through an inquiry into their knowledge of, understanding, and use of its particular literacies in the context of teacher preparation courses.
The study...

**Methodology**  a phenomenological stance

**Method**

Four questionnaires gauging level of knowledge of these literacies, and where they perceive they acquired this knowledge of these literacies.

Sept 1, Dec. 1, Jan. 29, April 24

Instructor journal and observational insight.

Focus group exploring understanding of these literacies as they pertain to teachers’ professional practice (using a classroom scenario case study for discussion).

Mid April.

Three-step thematic coding  (i.e., Corbin & Strauss, 2015)
The study...

**Results: Overview**

*Note: This presentation will focus on the questionnaire and focus group data and analysis.*

The six professional literacies studied (content, technology, assessment, communication, pedagogy, and ethics) showed a quantitative vocabulary increase over time, and a change in emphasis and sense of importance of the terms used, relevant to the teaching and learning of a subject area.

The teacher discourse during the focus group was representative of the teaching field (basic literacy) and preservice teachers described, explained, and conversed with words and terms in a meaningful (functional) manner.

However, the focus group results also show this awareness of professional literacies may not have progressed far from ‘buzz words’ for some preservice teachers.
A particular example...
Results with mathematics preservice teachers

September
*teacher-centred*

December & January
*what it can involve*

April
*its intent, and who it’s for*
A particular example...
Results with mathematics preservice teachers

Content
September

what content (subject matter) is perceived to be, from personal experience, the math they know

it becomes what is to be learned and taught, curriculum expectations, mathematical thinking, and how it can be experienced; mathematics processes, Achievement Categories, rich learning tasks

April
A particular example...
Results with mathematics preservice teachers

Assessment
- September
  - popular words, expected words, measurement words, words just heard in the first week, words from past experience

April
  - a focus on student learning, lots of emphases, rubrics, Achievement Categories, types of assessment (formative, summative)
Teacher candidates were often thinking from the perspective of their own learning experiences and their practicum classrooms.

They were thinking inside the box in relation to the learning contexts with which they were familiar and applying the buzz words.

Teacher candidates also attached many of these buzz words to particular instances or audiences

...indicating a potential *Apprenticeship of Observation*
A particular example...
Results with English language arts preservice teachers

Classroom discussions focussed on the need for teachers to think on their feet in ways that allow them to pull relevant and appropriate literacies ‘on the fly’

...indicating a beginning of a changing mindset
Discussion

Preservice teachers are ‘literate’ (can read and write) and have a conversational sense of functional literacy (terms are used appropriately for the immediate context).

However, meta-cognition of the application of these literacies when responding to classroom scenarios is still at a stage of focusing on the practice of teaching rather than the impact on learning.

➤ One explanation... this indicates initial stages of teacher concern coinciding with their developing sense of teacher efficacy.

(Pyper, 2014)
Another explanation... they may not value these literacies, they may not perceive these literacies as helping them keep up with the learning demands of today’s learners (e.g., 21st century learning skills).

(Bissaker, Davies, & Heath, 2011)

Finally, we (as researchers and instructors) could think about making explicit the changing nature of learning in ways that guide preservice teachers to think beyond the ways that they were taught. For example, we could conceptualized classroom learning by changing mindsets -- the 21st Century classroom using new thinking about the nature of learning.

Lankshear and Knobel (2011)
Selected References