Chapter 10

Fostering Global Literacies among Pre–Service Teachers through Innovative Transdisciplinary Projects

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ABSTRACT

This chapter investigates the role of global literacy skills in teacher education while integrating multiple literacies as a means of further developing pre-service teachers' global competencies and 21st century skills[1] while designing innovative transdisciplinary curriculum projects with limited resources and equipment in the global education context. The goal is to: a) introduce the role of multiple literacies (e.g., information, technology, geography, media literacy) in developing global competencies and 21st century skills among pre-services teachers; b) showcase pre-service teachers' Universal Design of Learning (UDL)[2] model lessons across content areas (e.g., math, geography, cultural studies, physical education) in P-12 curriculum; and c) demonstrate creative strategies and possibilities for engaging pre-service teachers in project-based global literacy activities integrating new technologies.

INTRODUCTION

I will be a PE teacher. Why do I need media literacy?

I am just a math teacher. I do not understand how and why I need to add geography into my lesson.

I am confused. I do not understand… I may be able to add media, but how I can integrate maps, and math into my art class.

Over the last fifteen years, we have been teaching courses related to media literacy and educational technology to pre-service teachers in various subject fields and working with in-service

and pre-service teachers in integrating new media and technologies into their curriculum design. We have heard many of our pre-service teachers in our program say how their subject field has nothing to do with literacy, technology, or multicultural education. It was so painful to hear them say: "I will be JUST a …. teacher." A number of years ago, in a literacy and technology course, one music student said: "I believe you will say even cheese cake has something to do with literacy." There was a pause and then the reply: "Yes, we may call it a culinary literacy…. Also there are a variety of cheesecakes around the world. There may not be any cheesecake in another country. In that course, we may even discuss cultural literacy with cheesecake."

It was concerning for us to observe that most of our pre-service teachers provide instruction the way they were taught years ago. The pre-service teachers we worked with found it hard to define what good teaching is or how it should look like when they had not experienced it themselves. Situated within the context of teaching and learning, this chapter aims to advance scientific knowledge of how transdisciplinary collaboration projects work as a means to promote global media literacy skills in teacher education programs. The ideas and projects in the paper are taken from various pre-service teacher education courses focusing on curriculum and design, methods of teaching and student teaching experiences.

In order to develop lesson plans, we engaged our pre-service teachers in transdisciplinary curricular activities to enhance their 21st century skills and global competencies (Council of Chief State School Officers, 2010). needed to succeed in the classroom. We believed that they first needed to experience the principles of "Pedagogy of Plenty" prior to developing their own lesson plans. Pre-service teachers were taught to use three theoretical models while designing and implementing their transdisciplinary lesson plans that promote "Pedagogy of Plenty":

1. Media literacy education,
2. Global competency, and
3. Universal design of learning (UDL).

Although new media and technologies can be considered time consuming, difficult, and expensive, educators need to understand the importance of their integration into their curriculum in order to prepare a new generation for media-rich global culture. When we integrated research-based strategies and projects to our teaching practice, we empowered our pre-service teachers to reach their highest potential and prepared them for success both in school, at work and in life. From showcasing digital portfolios (Googlesites) to posting online reflections and journals (Blogspot, Wordpress); co-writing books (Wikibooks) to co-producing digital stories (Voicethread); co-creating interactive maps (Communitywalk) to collecting data (GPS) to solve community based issues, pre-service teachers used the various technologies for their UDL model projects from the National Center on Universal Design for Learning website[3].

In this chapter, we further argue the challenges and advantages of UDL model transdisciplinary curriculum across subject fields. In addition, we will address academic excellence and equity; explore the power of new technologies to foster global media literacy skills; describe pre-service teachers' reactions, discoveries, and experiences with new technologies; and showcase their multilingual and multicultural curriculum projects. Through their re-discovery process, pre-service teachers explored, designed, and created the strategies, curricula, and programs for improving students' outcomes. They gained alternative point of view on integrating multiple literacies into their teaching.

BACKGROUND

The dynamic of teacher education has shifted with the totality of new standards, new technologies, and new developments. Our students have also

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