

Teaching Literacy: A Puzzle-Based Approach

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Introduction

With over a year in the making, work to redesign an existing course was necessitated due to an apparent disconnect between literacy theory and practice. Curricular changes that would invite acknowledgement of the whole learner through visual representation, authentic tasks and learner-centered assessment opportunities were completed. Supported by an obvious gap in research, Bustle (2004) expressed the need for further investigation of the relationship between visual assessment tools and student learning.

“Although visual representations are considered important as meaning-making devices across theoretical constructs, little has been done to examine their role in the assessment and evaluation of learning in all areas of the curriculum” (p. 416).

Through this project, insight was gained to inform curricular and instructional revisions to enrich the rigor and experience for developing teacher candidates in an undergraduate literacy methods course. Ultimately, course redesign decisions organically lead to the formation of a model (to be discussed later) that strengthened the relationship between course content and student learning.

In an aim to more closely “...examine the role of visual representation in the assessment and evaluation of learning” (Bustle, 2004, p. 417), the redesigned course sought to equip teacher candidates with the ability to examine topics of literacy instruction and assessment individually, as well as holistically. An additional purpose of this research endeavor is to cultivate a greater awareness of the interrelationships that must exist and be thoughtfully considered to form the foundation for *intentional* teaching and learning to occur.

Research Questions

The research questions guiding this study are:

1. How can literacy methods professors provide a framework for this undergraduate, literacy methods course that anchors the content for our teacher candidates?
2. How do we stimulate visible thinking in conjunction with our study of the different literacy components that build the complete, literate student?

Rationale and Vision for Redesign

Nearing the one-year anniversary mark of the course's redesign, the need for such originated. In an attempt to achieve quality over quantity, increase course rigor, invite organization, and integrate more authentic experiences, course redesign was justified. Aimed to better serve students with a practical, working resource that would enable them to draw holistic, literacy connections as they relate to both curriculum and assessment practices, the redesign of *Diagnostic and Corrective Reading* commenced.

In our efforts to redesign the literacy course, a primary goal was to craft a visual that would anchor course curriculum in such a way to simultaneously engage audience members and elevate their understanding of literacy. To achieve this goal it became necessary for our vision of literacy to be reconfigured, breaking barriers of what literacy meant, giving a platform for new understanding. As indicated by Comber (2006), teachers and college professors alike need to extend the boundaries of their thinking, "...moving beyond minimalist and normative renditions of literacy" (p. 64). Alongside Comber, Bustle (2004) further claims that "...educators must carefully examine how and why they use visual representations in their classrooms and explore new ways they might employ them in their practice" (p. 417). Committing to lifelong learning as educators and literacy professionals enables us to refine our classroom practices and sustain our focus on intentional instruction (Chiariello, 2018).

Work to achieve quality over quantity was a primary goal in redesign due to the abundance of available literacy assessments and related resources for each respective topic. We discovered that while countless resources and instructional tools were readily available, the presentation of those lacked a logical order and reflected more of a piecemeal rather than a holistic, instructional design conducive to student learning, content application and achievement. As cited by multiple researchers, the use of a holistic approach effectively bridges disparity between students' prior knowledge and expected learning, while providing equitable attention to connections requiring critical thought and deeper analysis (McGrath, 2007).

To aid student learning, steps were taken to highlight fewer literacy assessments with opportunities afforded for students to analyze, apply, and reflect on their application in the classroom setting.

Highlighting fewer literacy assessments promoted student engagement and understanding, as well as the need for rigorous and intentional literacy instruction and assessment.

With every decision to keep, adapt, or discard original course content, steps to improving organization were made. This was achieved, in part, through the development of *The Complete, Literate Student Model*, which will be discussed in length later in the article. As previously mentioned, select assessments were highlighted across varying components of literacy as exemplars of effective instruction, as well as assessment. Organizationally, the course was then redesigned into sixteen weeks, with each week focusing on a distinct component of literacy considered in isolation and then, holistically at the end of the course.

Before redesign, course experiences were limited to local educational settings and became invasive when paired with a mismatched assessment tool equally uncondusive for the existing time constraints. While teacher candidates had field experiences to apply course content, these opportunities were not, in our professional opinion, appropriately scaffolded to the degree necessary for optimal implementation and learning. Time restrictions compounded this issue, forcing experiences to be rushed and unauthentic, ultimately leading to the potential for inaccurate assessment execution and analysis.

A key revision to the existing course was imbedding a practical resource named, *Comprehensive Classroom Literacy Assessment Log*, that encouraged teacher candidates to not only record highlighted literacy assessments, but acknowledge what literacy component is being assessed, note what information the assessment tool collects, and how the teacher candidate could use the assessment in their own classroom setting. This resource acts as a springboard for continued use throughout their teaching career as they learn about new literacy assessment tools and their administration. Maintenance of this log supports interpretation of course content as teacher candidates review and reflect upon literacy assessment tools in isolation, while keeping *the whole, literate student* at the forefront in order to form a critical interpretation of the interrelationships that influence one's literacy development.

Process of Redesign

Altogether, the redesign process was a complex, multi-step sequence that proved to be cumbersome and arduous. But, in our frequent return to the saying, *the toughest steel endures the hottest fire*, we persevered and openly celebrated the success of our course redesign. That said, the inaugural step guiding this process was identification of course concerns. Once the concerns of the existing course were identified, we engaged in collective brainstorming to reach a resolution. Ideas generated as part of the brainstorming process were compared with current research to confirm and validate our knowledge of best practice as it relates to meaningful literacy instruction.

Once validation was achieved, work to begin with the end in mind occurred (Wiggins & McTighe, 2012).

Knowing that we sought to develop a holistic visual that would anchor the redesign, components of such were generated. With the help of a former teacher candidate, a draft of the model was created. Afterward, strategic placement of the ten components, or hereafter referred to as puzzle pieces, occurred. Thus, the model of *The Complete, Literate Student* was born.

Figure 1. The Complete, Literate Student Model

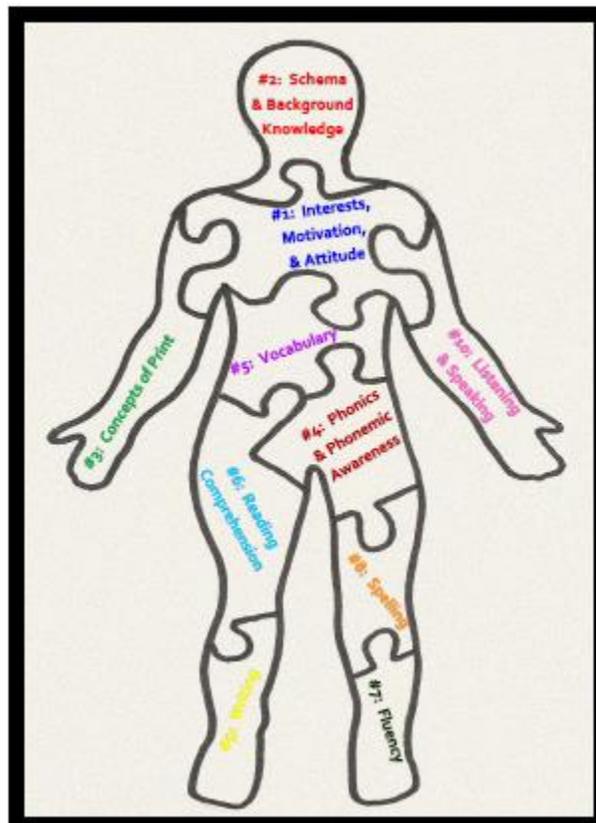


Figure 1. Model of The Complete, Literate Student. Model includes ten puzzle pieces named: Interests, Motivation, and Attitude, Schema and Background Knowledge, Concepts of Print, Phonics and Phonemic Awareness, Vocabulary, Reading Comprehension, Fluency, Spelling, Writing, and Listening and Speaking.

With the visual model now assembled, we began mapping out the curriculum for the redesigned course. As previously stated, decisions to keep, adapt, or discard existing materials and resources were critically rendered. Before revising the course schedule work to closely align content with each of the ten model puzzle pieces was completed. Once that alignment process was

accomplished, the course schedule was developed with sincere intention to deliver content for each of the puzzle pieces in order as indicated on the model. Course development remained balanced between us with strong consideration given to our individual areas of strength, expertise, and background. As development of the redesigned course continued, instructional materials and resources for each class session's module were shared. As the course progressed, we made a conscious commitment to meet weekly to discuss successes and adjust timelines accordingly, while remaining cognizant of teacher candidates' growth and learning.

Conceptual Framework

Casing for this research endeavor is supported by principles extracted from the following theories: *Theory of Andragogy* (Knowles, 1984); *Adult Learning Theory* (Speck, 1996); and, the *Theory of Constructivism* (McLeod, 2018).

Driven by four chief principles, the Theory of Andragogy (Knowles, 1984) aligns with a Constructivist approach in that active involvement and ownership of the learning experiences is warranted; learning tasks should be intentional, relatable, and authentic, and prior schema is held critical to learner development.

Still aligning with a Constructivist approach, the *Adult Learning Theory* (Speck, 1996) continues to support learning tasks that are experience-based (Sharma, 2014) and collaborative in design, facilitating open discussion and deeper exploration of transparent topics, issues and content on a societal level, enabling every adult learner to be critically literate.

The merger of andragogical principles among adult learners with key ideas of constructivism creates a rich, academic environment where students are afforded a variety of opportunities for collaborative dialogue (Bruffee, 1999), open discussion (Bishop, 1991) and engagement in learner-centered tasks (McGrath, 2007; Sharma, 2014). Additionally, constructivism also gives credence to the bi-directional influences (Bronfenbrenner, 1979) as they exist between the learner and their environment. As time lies at the heart of constructivism, the process and product are equal measures to evaluate student learning that exist in this triad: the learner, the pedagogy, the impact.

Intentional Literacy Design

Components needed to ensure an intentional literacy design include: visual model representation, authentic tasks, and learner-centered assessment opportunities. According to Fetherston (2008) "...the classroom culture is regarded as encompassing the broad range of activities occurring within the classroom (p. 3). As part of our vision in redesigning this course, we sought to marry intentional instruction with authenticity and rigor across all course tasks and assessments. Sturken and Carwright (2001) define such efforts as, "...the shared practices of the classroom through

which meaning is made from the visual, aural and textual world of representations accessed in that classroom” (as cited in Fetherston, 2008, p. 3).

Through intentional literacy design, intentional learning results. The art and science of teaching is a complex craft and a balanced marriage of the two. Merging intentional literacy instruction into this equation necessitates a need to return to the literature base to summarize best practices in pedagogy and theory. Mollman and Candela (2017) express that self-regulating behaviors coupled with self-direction and active engagement in the learning process, lead to goal mastery and learning achievement. In keeping these ideals at the forefront, we made the decision to anchor the course redesign through a holistic, visual representation.

Visual Model Representation. Knowing that visuals are meaning-making devices (Bustle, 2004; Felten, 2008; Fetherston, 2008), work to construct a model comprised of ten, essential components for building a literate student was completed. Then, course schedules were aligned with the respective model to focus on individual components, while maintaining sight of the whole learner.

The importance of the whole learner was the basis for course redesign. Educating the whole learner is paramount when considering the range of skills and competencies held by the developing reader. Garrett (2006) encourages instruction of the whole child, while Fried (2013) emphasizes the need for a pendulum shift from engaging part of the learner to educating the whole student. Walker-Gleaves and Waugh (2017) further support a whole child approach as a means to deliver intentional instruction and effective literacy interventions.

Doing so encouraged teacher candidates to understand the value and significance of each literacy component while simultaneously seeing the interrelationships as they exist between one component and another. Communicating to our teacher candidates the merit of such a model paved the way for both appreciation and respect for visual representation and a renewed understanding that *pictures really are worth a thousand words* and are, according to Shephard (1993) “...not [just] an accessory, frill or add-on” (as cited in Bustle, 2004, p. 417). Taking this visual model and infusing authentic tasks enables a return to intentional teaching and learning, both guided by purpose (Slavin, 2000).

Authentic Tasks. In an attempt to cultivate a greater ownership of learning (Sharma, 2014), teacher candidates were afforded opportunities to engage in course content through authentic task assignment and completion. As each component on the model is reviewed, research findings were presented, application to classroom practice noted and ideal assessments to inform each respective component practiced. Examples of authentic task assignments include: engagement in group presentations, cooperative learning tasks, technology-infused projects, simulations, individual assessment scoring and analysis, critical reflection, and opportunities for problem-solving. While each of these authentic tasks helped to solidify course content, mindfulness of the whole learner

remained crucial. No longer is it acceptable for teacher candidates to just understand the *what* of instruction, but the shared perspective of *why* is paramount "...to [effectively] shift the focus to engaging and educating the whole student" (Fried, 2013 p. 2) through authentic, learner-centered academic experiences.

Learner-Centered Assessment Opportunities. Situated between intentional instruction and intentional learning, teacher candidates are afforded opportunities to reflect and showcase genuine growth in knowledge through meaningful assessment measures. As stated by Beswick and Snow (2006), "Assessment precedes and accompanies reading [literacy] instruction, and it situates skill emergence within each learner's unique developmental hierarchy" (p. 16). These assessment opportunities vary greatly and include but are not limited to: the comprehensive literacy assessment log, repeat interaction with quality children's literature to develop corresponding assessments, exposure of and practice with various assessment tools to include formative, summative, informal, and formal literacy assessments. Additionally, open dialogue occurs amongst all members of the learning community to reflect, question, and support individual understanding of course content. Engagement in these learner-centered assessment opportunities support students' construction of knowledge and enable "...a purposeful nature [in the design of] learning activities" (McGrath, 2007, p. 230). In sum, our conceptual framework gains substance not only through practical experience but also through research findings.

Implementation

Timeline of Redesign. Redesign of the course began on December 14, 2017 in preparation for the Spring 2018 academic semester, launching the first time the redesigned course was taught. This timeline allowed us to make revisions while the existing course was still fresh in our minds. Since the Spring 2018 academic term, the redesigned course has been taught in consecutive academic terms, beginning in Spring 2018. Throughout the Spring 2018 semester, which occurred from January 8 through April 27, weekly meetings were held to collaborate on the course. This included ongoing discussion about the course's pacing, as well as the students' prior knowledge relevant to course content.

Reflection of Redesign. In an effort to remain intentional, authentic, and learner-centered, our reflection on the impact of this course's redesign has catalyzed several positive outcomes of which we celebrate including: a) stronger alignment of program of study literacy courses; b) candidates' organic steering of course content and delivery; c) holistic showcase of literacy assessment and the value of visual representation to candidates' learning; and d) collaboration of authors throughout the redesign process.

First, we celebrate the increase of curricular alignment between this course, *Diagnostic and Corrective Reading*, and another, *Teaching Reading and Language Arts in the Elementary School*.

Figure 2. Conceptual Framework of the Intentional Literacy Design Model

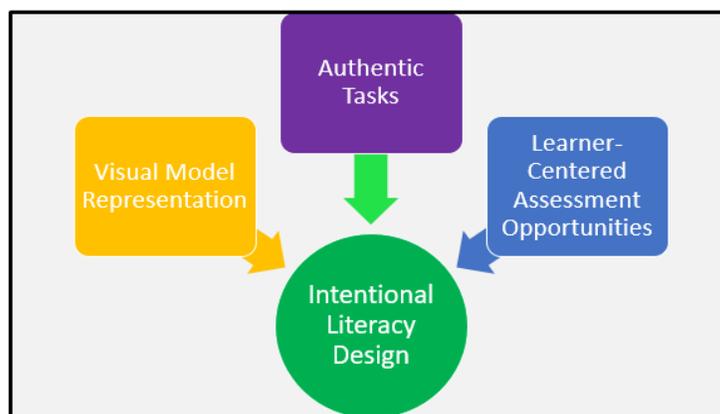


Figure 2. Conceptual framework of the intentional literacy design model. The influence of visual model representation, authentic tasks, and learner-centered assessment opportunities allow for the construction of the intentional literacy design.

Feedback received from students on final course evaluations indicated that students found content from both courses to run parallel to one another. Therefore, reiterating the symmetry between effective literacy instruction and assessment.

Another reflective theme emerged during the implementation phase. We wanted to ensure the proposed timeline did not hinder our intentional aim to allow our students' prior knowledge and ability to drive course content. Our concern was not with doing the same thing on the same day, but rather offering the provision for students to guide instruction and ultimately, the pacing of the course in alignment with their needs as learners. While a course schedule was crafted, the pacing of such remained at the discretion of our community of learners, allowing us to model best practice.

Celebrating our efforts in redesigning this course is also a pinnacle element to our reflection. Knowing that class content effectively spirals to more concretely showcase that literacy assessment remains an integral part of literacy instruction and not a substitution for has significantly benefited the flow of the course and is a reason for success. This course has not only modeled this concept, but it has enabled our students to effectively construct, adapt and implement literacy assessments appropriate for classroom practice. The organization of the redesigned course is yet another point of celebration.

Through the model of *The Complete, Literate Student*, we have empowered students to conceptualize the whole of literacy. As part of this work, students have been afforded authentic opportunities to better understand the value of each puzzle piece in isolation, while also formulating meaningful connections as they exist between each component. Identifying the interrelationships between the pieces of the puzzle support students' understanding that solving the puzzle of literacy requires full consideration of the whole and not just individual tenants.

Knowing that this model is valuable for all educators, we believe it should not stay stagnant nor be restricted to only undergraduate students in this course. For this reason, this model has been infused into the graduate reading program as the information transcends across the curriculum and throughout professional practice.

We would be remiss if we did not count the collaboration process as a celebration. We have spent countless hours sharing ideas, resources, and expertise, which has allowed us to refine our craft and in the end, become better teachers of literacy. As we grow to be better educators of literacy, this is a rich and added benefit to our teacher candidates.

Next Steps

Moving forward from this manuscript, we plan to further investigate students' perceptions of the redesigned course. Consideration of this data will prepare us in the writing of a sequel manuscript that will highlight students' perceptions of the redesigned course and the relationship those have to academic performance. At this time, we will continue to use the university course evaluations to guide instructional revision.

Conclusion

Simply put, "...the time is right to rethink the very concept of literacy" (Felten, 2008, p. 60). Efforts to redesign this undergraduate, literacy methods course was justified by an apparent gap in research that has yet to examine how holistic models positively impact instructional delivery and student learning. Framed with the *Theory of Andragogy* (Knowles, 1984); *Adult Learning Theory* (Speck, 1996); and, the *Theory of Constructivism* (McLeod, 2018), in mind, intentional literacy design is made possible through visual model representations, inclusion of authentic tasks, and learner-centered assessment opportunities. As part of our visionary redesign, we first evaluated the need for such, while giving consideration to the importance of the whole learner and the alignment of this philosophy with both pedagogy and theory. After having evaluated the need for redesign, thought was then directed to instructional goals and aims for redesigned course. Out of that conversation, a model was created and developed to anchor all instructional planning. Commencing over a year ago, redesign and its implementation is complete and yielded many positive outcomes. Next steps in this regard will more closely examine students' perceptions of the redesigned course and its effectiveness from their perspectives.

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