An Inquiry-Based Approach to Critical Literacy: Pedagogical Nuances of a Second Grade Classroom

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This case study explores the pedagogy and practices of an elementary school teacher who combines inquiry pedagogy and critical literacy. The authors gathered data for this analysis by conducting two interviews with a classroom teacher and observing classroom practices 12 times over a 6 month period. Through a general inductive approach to analysis, trends emerged that showed the classroom teacher used practices that combined traditional inquiry pedagogy for critical literacy development. This research provides insight into how this elementary teacher negotiated and connected inquiry to critical literacy. Furthermore, the findings can inform scholars and teacher educators of successful teaching strategies as they prepare future generations of elementary teachers.

Cette étude de cas explore la pédagogie et les pratiques d'une enseignante à l'élémentaire qui allie pédagogie d'enquête et littératie critique. La cueillette de données s'est faite par deux entrevues auprès d'une enseignante titulaire et douze observations en salle au cours de six mois. Une approche inductive à l'analyse a révélé des tendances indiquant que l'enseignante employait des pratiques qui intègrent une pédagogie d'enquête traditionnelle au développement de compétences essentielles à la littératie. Cette recherche donne un aperçu des démarches de l'enseignante pour négocier et lier enquête et littératie. De plus, les résultats présentent aux chercheurs et aux formateurs d'enseignants des stratégies pédagogiques efficaces et fructueuses dont peuvent profiter les générations futures d'enseignants à l'élémentaire.

"Critical literacy means to me... being literate in all areas, it means you're able and comfortable talking about issues that concern being human" (Sarah)

Inquiry pedagogy and critical literacy are pedagogical approaches with historical roots in constructivism, discovery learning, and critical theory. Inquiry pedagogy investigates issues, questions, and problems and often involves multiple hypotheses, ongoing discourses, additional questions, and new understandings (DeWitt, 2003). Critical literacy focuses on the uses of literacy for social justice and involves identifying author bias, understanding multiple voices in various texts, and critiquing dominant ideologies (Luke, 2012). Both of these pedagogical approaches continue to impact 21st century learning, where teachers are encouraged to collaborate with students to explore issues that are relevant to our social world. The students in Sarah's—one of our teacher participants'—second grade urban school classroom were curious about skin colour: they wanted to talk about race. Using a picture book to begin the

conversation, students asked, "What is race?" "What is racism?" "Who am I and what about it?" These are lofty questions coming from seven-year old students. The children explored their identities and their thoughts about race, and with the support of their teacher, framed their work in affirmation and appreciation for differences. They did this by using an inquiry-based approach to critical literacy.

Inquiry pedagogy and critical literacy share goals of developing critical thinking through exploration, analysis and action, yet the strategies and foci often differ. While critical literacy is often a more direct pedagogical approach with an explicit perspective on issues related to social justice, inquiry pedagogy investigates questions and intuitions, develops multiple hypotheses and explores misconceptions of the child, allowing for all ideas to be put on the table to be explored in collaborative ways. Participants in our study reconciled the two pedagogical approaches, which resulted in deep learning about issues related to race and to affirmation of one's own and others' identities. Teaching critical literacy within an inquiry framework offers an approach to teaching and learning where knowledge related to issues of identity, power, and relationships is socially constructed through a critical lens. The purpose of this qualitative case study was to examine the teaching practices of exemplary elementary educators who taught critical literacy in an inquiry-based learning environment. The nuances from one of our participant's teaching practice are shared and discussed in this paper. The intent of this paper was to provide a window into a second grade classroom where critical literacy and inquiry learning work together.

A detailed discussion of inquiry pedagogy and critical literacy, as separate pedagogical approaches, sets the foundation for this paper. Definitions, historical roots, environmental considerations, and relevant studies are described for each approach. The findings from this study are then presented and an in-depth description of the practices of critical literacy in an inquiry-based environment is shared. Finally, we discuss the implications for teacher education and professional learning.

Literature and Theories that Frame the Study

Inquiry pedagogy and critical literacy frame this research. Both pedagogical approaches have been well-defined and documented within the field of education. Inquiry pedagogy is based on constructivist learning theory, emphasizing "the importance of building on students' prior knowledge, scaffolding new experiences and the students' construction of knowledge" (DeWitt, 2003, p. 281). Along with the works of Piaget, Dewey, and Vygotsky, to name a few, constructivist learning theory has influenced various approaches to inquiry learning, which have been researched and shared in the literature. Some of these approaches include, but are not limited to, guided inquiry (Urska & Primoz, 2013), knowledge building (Natural Curiosity Manual, 2011), and open inquiry (Zion & Sadeh, 2007). While different definitions exist, it is generally agreed upon that inquiry pedagogy is a student-driven experiential approach to learning (Bredo, 2003; Tudge & Scrimsher, 2003) and incorporates collaboration among learners who are in pursuit of a common goal or interest (Bell, Urhahne, Schanze, & Ploetzner, 2010).

Inquiry pedagogy requires a learning environment in which children feel safe to share and evaluate their ideas and the ideas of others. An inquiry learning environment provides opportunities for knowledge to be socially constructed through developing and evaluating questions based on children's natural curiosities (Jansen, 2011; Natural Curiosity Manual, 2011).

Inquiry pedagogy encourages children to investigate their own curiosities about the world. Children's questions are at the centre of the learning experience; their questions drive the learning process forward (Natural Curiosity Manual, 2011). During this student-centred approach to learning, the teacher guides the children through careful planning and ongoing reflective practice.

Critical literacy has historical roots in social justice pedagogy and Freire's (1970) philosophies of power relations. Critical literacy scholars have offered definitions of critical literacy; for example, critical literacy offers an avenue for examining social justice issues in various forms of text and media (Leland, 2005). Critical literacy examines relations of power "by reading text critically to see how they have been constructed, whose interests are served, and how they work to produce our identities" (Janks, 2014, p. 355). Myths, distortions and misunderstandings are "unpacked" and transformed into "new ways of knowing and acting upon the world" (Luke, 2012, p. 5). Dialogue revolves around relevant social issues and children learn to question, analyze, deconstruct and transform texts and perspectives presented in texts.

Comber (2001) states that teachers need to "help children understand that texts are constructed with particular motivations by particular people with goals and that these are never neutral" (p. 172). In critically literate environments, children are given opportunities to ask questions, deconstruct stereotypes, co-construct knowledge, and examine multiple perspectives. They are given many opportunities to reflect on various positions in texts and popular media, consider missing perspectives and other positions (Hamer, 2010). Children who experience literacy through a critical approach are given opportunities to take action on important social issues (Lewison, Seely Flint, Van Sluys, & Henkin, 2002). A critically literate environment is safe and inclusive where experiences are shared and ideas are valued (Mulhern & Gunding, 2011). In our study, Sarah established a safe and inclusive environment early on in the school year, allowing her second grade students to delve into a critical literacy study during our observational period.

Our study is framed around two specific views of inquiry pedagogy and critical literacy; inquiry pedagogy as a student-driven knowledge-building approach to learning, where ideas, questions and misconceptions are pursued through classroom discourse and experiential learning; and critical literacy as bringing questions and ideas related to social justice issues forward through shared readings of texts and media. By presenting the definitions around which our paper is framed, we hope to set a theoretical foundation for our study. Separately, inquiry pedagogy and critical literacy have gained attention from researchers and classroom teachers. Inquiry research in the classroom has most often revolved around science education, social studies and history (Bell, Urhahne, Schanze, & Ploetzner, 2010; Capps, Crawford, & Constas, 2012; Ireland, Watters, Brownlee, & Lupton, 2012). For instance, inquiry research has investigated daily classroom practices in science education (von Secker, 2001), science teachers' conceptions of inquiry learning (Ireland, et al., 2012), teachers' perceptions of student misconceptions during elementary school scientific investigations (Gomez-Zwiep, 2008), and teachers' changing beliefs during inquiry projects in social studies and history (Barton, McCully, & Marks, 2004). Scholars of inquiry pedagogy have also examined models of inquiry-based learning (Bell, et al., 2010).

Research in the area of critical literacy has also documented a range of teaching practices and instructional strategies (Luke, 2000; Paugh, Carey, King Jackson, & Russell, 2007). Critical literacy research has explored novice critical literacy teachers (Lewison, Seely Flint, Van Sluys, & Henkin, 2002) and expert teaching practices (Luke, 2000). For instance, Lewison et al. (2002) examined the understandings and classroom practices of teachers new to critical literacy and provided insights into concerns teachers have when they begin to implement critical literacy practices in their classrooms. Their findings are especially relevant to our study: knowing that teachers have concerns about teaching critical literacy emphasizes the importance of sharing exemplary models of practices and strategies, as we do with our second grade teacher participant. Critical literacy scholars have also examined pedagogy and institutional structures (Comber, 2001), and sociolinguistics and culture (Anderson & Irvine, 1993; Freire, 1970).

Research on inquiry pedagogy and critical literacy is extensive; however, little has been written about how teachers apply critical literacy works within an inquiry framework. This approach to teaching warrants attention: inquiry-based teaching is a pedagogical direction that more Canadian teachers are being encouraged to implement in classroom practice (Alberta Learning, 2004) and critical literacy instructional practices are gaining the attention of elementary school administrators (Ontario Ministry of Education, 2009). This research will add to the literature in both fields by presenting inquiry pedagogy as a framework for teaching critical literacy in the elementary classroom. The significance of this research is that it illustrates how two pedagogical approaches that are currently being utilized in classrooms work together in daily classroom life. Further, this research presents the detailed nuances for teaching critical literacy within an inquiry-based setting. The findings of our study will benefit classroom teachers and teacher candidates by offering practices and strategies for teaching critical literacy within an inquiry-based setting.

Suggestions have been made about types of classroom strategies that can best create and foster critical literacy; however, a one-type-fits-all set of strategies is to be considered with caution. There should not be a formula for "doing critical literacy in the classroom," but rather a more authentic and organic approach where critical literacy can transpire (Behrman, 2006). As noted by the elementary educator presented in this study, "there is no single recipe of how to incorporate critical literacy within an early childhood curriculum."

The purpose of this study was to present portraits of elementary educators who teach critical literacy within an inquiry-based setting. This paper presents one of the elementary educators from the larger research project as a case study. Two questions guided this case study research:

- What daily practices and strategies are used by a second grade teacher to foster critical literacy within an inquiry-based setting?
- How is critical literacy taught by a second grade teacher within an inquiry pedagogy framework?

The findings of this study can benefit practicing teachers and teacher candidates who are able to reflect on their own practices by learning from the experiences of others.

Methodology

The research presented here is part of a larger qualitative study that examined the critical literacy teaching practices across the early years and elementary grades of one school in Toronto, Ontario. Six teacher participants were involved in the study. Classroom observations for the larger qualitative study occurred daily over the course of the school year and visits were organized according to the teacher's schedule. Each teacher was interviewed twice, once at the beginning of the observation period and once nearing the end of the observation period.

The case study presented in this paper provides an in-depth portrait of the teaching

practices of one of the elementary educators who taught critical literacy in a second grade inquiry-based classroom. The aim of a qualitative case study is to explore a case over time, through detailed, in-depth data collection (Creswell, 2007). Classroom observations for this teacher occurred 12 times over a six-month period—between January and June of the school year. The second grade teacher was also interviewed twice, once at the beginning of her observation period and once nearing the end of her observation period. The elementary educator, referred to as Sarah, engaged her second grade students in rich discussions during knowledge building circles and small group discussions. Knowledge building is a central component of inquiry learning. Knowledge building circles provided a framework for critical literacy in the second grade classroom where rich, student-led discussions stemmed from the text, *Let's Talk about Race* (Lester, 2005) and revolved around relevant social issues of race and identity. Questions, ideas and theories related to family histories, common interests and identity emerged from knowledge building circles and provided opportunities for further explorations and investigations.

Context of the Study

The context of the present study is a well-established inquiry-based setting where inquiry pedagogy is central to the entire school. The school is an urban independent school located in downtown Toronto, Ontario, and ranges from nursery to sixth grade. Through inquiry learning, students and teachers from this setting explore and examine topics of interest, question their misunderstandings, and co-construct knowledge (Jansen, 2011). Thus, this setting offers an ideal context in which to explore critical literacy practices within an inquiry framework.

This case study involves the second grade classroom and includes 11 boys and 11 girls from professional families of diverse racial and cultural backgrounds. The teacher, Sarah, is an experienced teacher. Her viewpoint, as expressed in the interview transcript, involves empowering students through choice and open discussions. This complimented the researchers' perspectives where one researcher approached the study through a critical lens and the other researcher approached the study from a developmental point of view. The similar, yet varied perspectives worked well in that they incorporated a broader scope of literature and analysis to the study.

Research Design

Qualitative methods generate insights into the social practices and processes of a particular phenomenon and were used in this study. Specifically, case study research explores a case over time, through detailed, in-depth data collection (Creswell, 2007). For this research, a case study approach offered a thorough description of an elementary educator's teaching practices of critical literacy within an inquiry framework. The research design consisted of the following two data collection methods: (a) classroom observations and field notes, and (b) two semi-structured interviews.

Measures

Classroom observations and field notes. Observations of the classroom occurred 12 times during a six month period (January to June), and field notes accompanied the observations.

Observations began during the winter term and therefore a safe classroom community had already been established through Sarah's pedagogical approach. This allowed for a rich critical literacy study during the second half of the school year during which our observations were conducted. Classroom visits averaged one hour in length. The observations focused on classroom discourse, gestures, actions, and reactions. Observations occurred at the back of the classroom using a simple observation protocol that included a column for the observational notes and a column for reflective notes. The focus of the observations was the teacher—her language and interactions with the second grade students as well as her body language and reactions to student comments and their conversations.

Typically, observations began with the whole class gathered on the carpet for a discussion or shared reading. The whole group discussions often took the form of a knowledge building circle. Following the class discussion, students engaged in an integrated writing and visual arts task. During this time, observations focused on small group interactions between the teacher and students. Reflective notes were recorded during the observations and began the initial stage of analysis.

Semi-structured interviews. Two semi-structured interviews with the second grade teacher were conducted; one prior to the start of the observations as well as one immediately following the six month observation period in June. Questions asked during the first interview focused on instructional strategies, choices for text-selections, challenges and student outcomes. For example, some of the questions were, what do you do in your program? What is your current definition or understanding of critical literacy? And, how do you select texts for your classroom? Questions asked during the second interview drew upon the observations, such as, can you describe the learning that you have selected as a critical literacy experience? What do you know the impact on student learning to be? And, how do you see critical literacy and inquiry working together? The audio taped interviews were transcribed verbatim. As a result of the 12 intensive classroom observations, field notes and two teacher interviews, thick descriptions, transcripts, reflective notes, and well-documented observations were generated.

Data Analysis

A general inductive approach to analysis involved journaling, coding, categorizing, and interpreting (Thomas, 2006). During the first read through of the observation notes and interview transcripts, initial thoughts and reflective notes were recorded (Gibbs, 2008). A second reading of the observation notes and transcripts involved categorizing phrases and identifying initial codes. Categories were further refined and interconnected in a final review of the observation notes and interview transcripts (Gibbs, 2008). As a result of the analysis, seven pedagogical themes most relevant to the research questions were identified:

- Encouraging student dialogue through purposeful text selection,
- Connecting text to students' lives through ongoing reflective practice,
- Empowering student voice,
- Use of open-ended questions to develop deeper connections,
- Sharing multiple perspectives through knowledge building circles,
- Use of misconceptions to guide the learning, and

• Affirmations and identity.

Findings highlight how the instructional strategies practiced by the second grade teacher foster critical literacy within an inquiry-based setting. Direct quotes from the interview transcripts and observation notes are included as examples to support each theme.

Findings and Discussion

The patterns of practice that emerged from the analysis highlight how Sarah applied critical literacy in an inquiry-based setting. The following is a summary of the findings based on the analysis of the observations and field notes and interview transcripts. These findings reflect the teaching practices of an exemplary elementary educator who taught critical literacy in an inquiry-based learning environment. Further, the findings include detailed nuances of our participant's practice. Photographs of student work are included to reflect the nature of the learning experience. Findings resulting from the analysis can contribute to the pedagogical practices of inquiry learning and critical literacy. Specifically, our findings provide instructional strategies and practices of critical literacy within an inquiry-based setting to teachers new to this teaching approach.

Encouraging Student Dialogue through Purposeful Text Selection

A shared reading of *Let's Talk about Race* (Lester, 2005), a story by Julius Lester that explores ideas of race, self-respect and acceptance of others, launched a critical literacy study in the second grade classroom.

The text selection offered a variety of entry points for discussing issues around race and identity. During the first classroom observation, Sarah held the book up and asked students to share what they thought the book was about. Students had a number of ideas that they shared

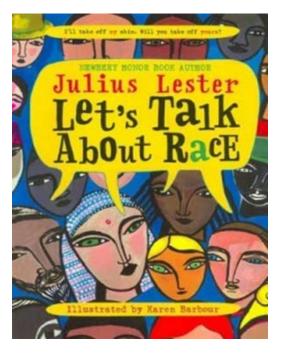


Photo 1. Let's Talk About Race

openly and freely: for example, "it's about Chinese New Year;" "it's about the human race;" "it shows people from many different countries;" "I think it's a car race." With all of their ideas on the table, Sarah moved into the text and read the first page: "I am a story. So are you. So is everyone." Conducive to inquiry pedagogy Sarah allowed all theories/ideas to be shared and did not comment, correct or disregard any idea. All of the students' ideas about the story were brought forward. Sarah then began to read the text slowly, pausing throughout, allowing for students to express, react, and share ideas at varying points when the story was read aloud. Students had strong convictions about race and through their initial discussions began making connections to how they viewed themselves in relation to each other. As Sarah moved into the first pages of the picture book she read, "I'm BLACK... what race are you?" The children called out:

"Ahhhh.... [race is about] skin colour!"
"Maybe it's racist?"
"Umm, maybe it's racist people?"
"Ah, I'm white."
"I'm white."
"I'm black."
"I'm white."
"I'm white."
"I'm kinda brown" (and a lot of people looking at their hands and comparing their hands).

"I think there are loads of skin tones."

Then Sarah closed the book and paused the story momentarily. A female student raised her hand to start to explain the different skin tones and who is what in class: "Me and Francis are white... she is tanned..." Further along in the book Sarah read, "Some people say that my race is better than your race... that story is not true." Sarah closed the book, paused and asked, "What do you think of that statement?" Students responded in a number of ways:

"It's made up, so it's not true."

"Someone made that up so it's not true."

"Well, I think what they are trying to tell you is that no race is better than anybody else."

"I think it means that it's not true... it means that all of the races have the same popularity."

"I was going to say the same thing as Jonah... no race is better than any other race... and if they say that, then they are telling the wrong story!"

"Well, I think that it's made up, if my race was better than say Zoe's race, then...well...actually we're the same race so that can't be right?"

"If you say that, it's technically making the other person feel bad and if you're White you're making the Black people feel bad and the Black making White people feel bad and it's sort of like boasting."

"I think that the White people have one story and the Black people have another story... so one White person said to another White person that my race is better than yours but then they're not telling the truth because they are the same race."

"But WE ARE all one race."

"Well, what if someone is Chinese?"

"But just if we have different skin colour well we are still all people" (this student was emotional as her voice cracked and she grew teary, Sarah acknowledged that the child was emotional).

Sarah noted the students "really are exploring themselves in a deep and critical way." The content was reflective of critical literacy material as the students explored notions of race,

identity and the social construction of liking and disliking someone because of race. The process in which critical literacy was explored was inquiry-based. Sarah shared elements of a story, asked a question and students listened to one another's ideas, building on each other's thoughts and carrying on a discussion virtually on their own.

This observation emphasizes the point that selecting texts as the main source of content for critical literacy is essential in an inquiry environment. The teacher must consider how the text can encourage dialogue and how students and teachers work with the text can go "far beyond reading a passage and completing comprehension and/or extension assignments" (Creighton, 1997, p. 442). Text selection set the tone for the learning throughout the critical literacy study and demonstrates how critical literacy and inquiry worked together in the second grade classroom. Below is an excerpt from the first interview where Sarah described how she selects particular texts, including the text that launched the study on race and identity, *Let's Talk about Race* (2005), by Julius Lester.

I love involving children in the stories and children being able to make a change or enacting a change...I find what I want children to do is have a deeper exploration and connection to themselves, to Canada, their culture, to their race and others, to biases that maybe they hear express or express themselves...so there are two parts to that—there's finding the beautiful books with the beautiful stories and what happens in those books we can look at critically.

Sarah goes on to explain how text selection revolves around open discussions. The students are asked about the "types of books they like, what sorts of books they dislike. We're asking them for their opinions about all sorts of things that are available to them." The open discussions to text selection are a part of inquiry pedagogy where children are encouraged to voice and express their thoughts and preferences and reasons for their ideas. This is clear in the above examples where the children share a variety of ideas related to their understandings of race and identity as a result of Sarah's text selection. Bold statements in the text are presented by the author in an age-appropriate way allowing the children to move beyond traditional story elements, like character, setting and plot, to examining the language of the text and their own connections to it.

Text analysis and critical literacy go beyond basic story elements. As stated by Sarah,

You need to be able to come up with reasons for why this is a good story, what is it that challenges you, where do you get the pictures in your mind that excite you further, and is there anything about the way that it's being presented that disturbs you and why.

Student discussion around issues of identity were framed according to the *Let's Talk about Race* (Lester, 2005) text.

Connecting Text to Students' Lives through Ongoing Reflective Practice

Connecting text to students' lives is an encouraged and well-used practice in elementary schools today. Making texts relevant to students' lives (Ladson-Billings, 2004), is well-documented from a standpoint of literary comprehension (Harvey & Goudvis, 2000; Keene & Zimmerman, 1997). How Sarah created opportunities for connecting text to students' lives is captured in the following excerpt taken from the first interview where Sarah discusses her thought processes at

the beginning of the school year:

I have what I call the big picture in mind. I know where I want my students to go and I have an idea about what I want to teach them. I believe strongly in teaching children awareness about the world around them and I feel strongly about empowering children to take up causes that they feel passionate about and to feel as though they can make a change...within that kind of really big notion are very well thought-out steps for how I'm about to do this.

By asking questions, such as, "How does that make you feel?" "What do you think?" "What did you learn?" and "What can you say about yourself?" Sarah encouraged open-discussions to which the students could connect the ideas presented in *Let's Talk about Race* (Lester, 2005) to their own lives. For instance, after Sarah reads, "I'll take off my skin, will you take off yours?" the students examine a colourful illustration of a skeleton. One student says, "We're all the same." This statement is followed up by Sarah who asks, "If [the author is] saying we're all the same but we all look different, then how are we all the same?" Responses filled the room, of which four examples are shared:

"We're different on the outside but our skeletons are all the same." "I think all people have some similarities to each other." "All people are people." "We're all animals but we're not like all other animals."

Sarah facilitated this discussion by carefully reflecting upon the direction in which the students were moving. After the students paused, Sarah carefully brought a close to the discussion by restating a "take-away" point:

I am hearing that we agree that while we look different on the outside, that we all are the same on the inside... and the author is saying that just by looking at me that there is a lot we don't know.

The opening lines of Lester's (2005) book, "I am a story, so are you, so is everyone" gave Sarah the "in" to invite the second grade students to tell their own story in the form of an autobiography. Sarah named the process of constructing the autobiographies *self-ologies* and the content areas for the self-ologies were inspired by the messages in *Let's Talk about Race* (Lester, 2005). Through integrated visual arts and writing lessons that were framed by an inquiry-based, critical literacy pedagogy, students experienced ongoing reflective practice through the process of creating pages for their self-ologies where they shared aspects of themselves, their lives, interests, families and life events. During the self-ology project, the second grade students moved through the stages of inquiry, which have generally been agreed upon as containing four steps:

- 1. Bringing forward a question or idea;
- 2. Hypothesizing possible solutions or developing understandings;
- 3. Discussing and analyzing the information;
- 4. Refining initial understandings and beliefs to incorporate the new evidence (DeWitt, 2003).

From the initial reading of *Let's Talk about Race* (2005), students began bringing forward questions and ideas related to race, identity and themselves. Knowledge was built upon their



Photo 2. The "Self-ology" Cover

initial ideas during student discourse, group discussions, and the development of various pages of each student's self-ology. Pages of each student's self-ology were compiled and the end product was a reflection of and appreciation for each student's self-identity. Short descriptions and selected photos of the different pages of the self-ologies are included in the following section. By including an overview of the self-ology, we hope to provide the reader with a rich representation of the self-ology project. The development of the students' self-ologies is an example of how reflective teaching and practice contributed to meaningful instruction. Each page was thoughtfully planned based on the students' ideas, interests and the connections they continued to make to *Let's Talk about Race* (Lester, 2005). Connecting the text to the lives of the second grade students through reflective practice demonstrates how Sarah fostered critical literacy within an inquiry-based setting.

The first page of the self-ology, entitled "My Self-Portrait," was inspired by Lester's (2005) book and was intended to introduce each student. The self-portrait is discussed later in this paper when identity construction as a form of critical literacy is analyzed. A variety of visual materials were used to portray how each student viewed him/herself. The next page was dedicated to a "family flower." Adapted from the traditional family tree, the family flower was created with the child at the centre. Photos of the people who had contributed to the child in some way were glued to the petals that folded out from the centre. As noted by Sarah, creating a family history with the child at the centre "allowed that child to determine who was significant in their life, who played a role in their life."

This re-design of the traditional family tree offers an implicit re-reading of who is in a family. While the traditional family tree assumes the nuclear family structure with the child at the bottom followed by one matrilineal and one patriarchal line, the family flower breaks this assumption and offers the child to define who is in their family.

Other pages in the self-ology included an interview with a relative and a timeline highlighting significant life events. An "All-About-Me" page was influenced by Lester's (2005) page, "Things You Don't Know About Me." Finally, the cover of the book was adorned with the student's handprint and decorated in a way that truly reflected each student's sense of self.

Critical literacy involves time, the teacher's knowledge of critical literacy and the use of

developmentally appropriate and high quality support materials (Comber, 2001). When critical literacy is embedded within daily routines and regular teaching practices children begin to "see the everyday through new lenses" (Lewison, et al., 2002). As Wolk (2003) states, children "engage in a critique of society, the world, and themselves" (p. 102). Creating the self-ologies in response to the messages in *Let's Talk about Race* (Lester, 2005) provided an opportunity for students to develop deeper connections between aspects of their own lives and the lives of others in meaningful ways over the course of several weeks.

Empowering Student Voice

Teachers typically pause for less than one second for a student to respond (Rowe, 1986). Yet, the benefits of pausing after asking a question or hearing from a student are invaluable (Maroni, 2011). Pausing as little as five seconds can result in pronounced changes in students' use of language, active engagement and willingness to share (Ostrosky, Mouzourour, Danner, & Zaghlawan, 2013; Rowe, 1986). In our study, Sarah paused after posing a question, making a statement, following a question asked by the author, and following a student's comment. These pauses gave students a chance to respond and initiate dialogue. For instance, a short pause following Sarah's statement, "By learning about ourselves, we learn about others," led to a student-led discussion about appearances. One student suggested that "some people might say you have dark skin and they wouldn't want to be with that person, then when they read the book they'll think oh, that person is so nice." As students identified and compared the colour of their skin, hair and eyes—"people might think they have black hair but it's really dark brown"—Sarah sat on the sidelines and remained neutral. Only during a pause in the students' conversation did she speak and ask an open-ended question about what the students noticed was similar and different about an illustration of people in the book.

During discussions such as the above example, Sarah maintained as neutral a position as possible. Sarah noted in the second interview that she is constantly thinking as she moves through experiences. She stated that the students are "looking for any sense that you might disapprove, they're ultra-sensitive, they're incredibly aware." By maintaining neutral facial expressions during pauses and discussions and avoiding affirmative or subjective statements, like "yes I agree," "you are correct" or "no, that's not right," students were more likely to take risks and share their thinking. Sarah's role as a reflective facilitator during discussions empowered students to voice their ideas and demonstrates how critical literacy and inquiry pedagogy worked together in the second grade classroom.

Use of Open-Ended Questions to Develop Deeper Connections

In the same way that pausing fosters student engagement, open-ended questions create opportunities for students to develop deeper connections. In the following example, Sarah poses an open-ended question that leads to a discussion about family amongst the students.

Sarah: "So who can be in a family?" Students respond by listing off different members of a family: "moms, dads, half-sisters..." Another student describes a family of divorce. "Let's say someone has two moms, they don't always have to adopt." "A family can also be a pet."

"Or friends."

The above transcript is an example of how Sarah initiated student dialogue with an openended question. Another example of using an open-ended question to initiate a discussion occurred during a classroom observation when Sarah responded to a student's statement, "some families are mixed."

Sarah: "So what does that mean?""Two different races in one family.""Your parents don't have to be a mom and a dad.""One parent from one country and another parent in another country."

After posing the question, responses moved from student to student and ideas continued to unfold. Students made connections and shared their ideas. This knowledge building circle, a central component to inquiry learning (Bell et al., 2010), began with an open-ended question that avoided affirmative responses and allowed the students to share their personal points of view.

Sharing Multiple Perspectives through Knowledge Building Circles

A key element of critical literacy is the sharing of multiple perspectives (Lewison, et al., 2002). Children need to be exposed to multiple view points and possibilities in order to critically assess ideas and concepts. Knowledge building is one of the core elements of inquiry learning, and can be described as "an unpredictable, holistic process of creative development of ideas within a community of learners" (Bell et al., 2010, p. 352). As the previous example demonstrates, open-ended questions led to opportunities for knowledge building discourse. Knowledge building discourse helped deepen students' understanding of themselves and those around them. It provided opportunities for increased exposure to the diverse perspectives and ideas of the class (Natural Curiosity Manual, 2011). Sarah described how the interview with a relative also allowed for "many different perspectives, many different abilities, many different levels of interest...the children could come at it from where they were already and move forward and everybody's contribution was valued in exactly the same way." Students shared their interviews during a discussion and spoke about new pieces of information gained as a result of talking with a relative.

"I found out about her job...she had a lot of jobs." "One of my great-grandfather's mother died when he was 12." "I knew she was always was a principal but I didn't know how long." "My grandmother's parents died when she was 53." "I interviewed my dad...Art was his favourite subject." Sarah: "And what does he do today?" "He's an architect."

Another example of sharing multiple perspectives in a knowledge building circle occurred at the end of the self-ology unit. Sarah asked: "What do you think social justice is?" Students shared their thoughts related to race and identity and dialogue moved amongst the students. They made personal connections and expanded or transformed their initial beliefs, a process whereby the "learners become teachers of their understandings and experiences" (Luke, 2012, p. 7). The use of knowledge building; that is student-led discussions where ideas are built on one another and students listen and respond to each other (Bell et al., 2010) was effectively used to explore concepts of social justice and race. This process is part of critical literacy; the content is critical in nature. The children explored and shared issues related to social justice. They listened to each other and they analysed and evaluated the information in ways meaningful to them.

Use of Misconceptions to Guide the Learning

Misconceptions are more than misunderstandings of a concept and are often integrated with other knowledge and experiences (Gomez-Zwiep, 2008). In the context of inquiry pedagogy, misconceptions are often used as a vehicle for further study. Students are encouraged to share their ideas and all theories and frames of thinking are accepted; hence, misconceptions are welcomed (Bar, 1989; Gomez-Zwiep, 2008; Longfield, 2009). Addressing students' misconceptions best occurs though dialogue and experimentation when students are confronted with unexpected results or ideas that differ from their own and have not previously been considered (Gomez-Zwiep, 2008). In our study, students were often confronted with information that was different from their initial understandings. For example, during a classroom observation of Sarah re-reading the opening lines of *Let's Talk about Race* (2005), one student described racism as a thing of the past; the child stated, "Racism is a part of history, it does not exist today." The conversation between Sarah and her students demonstrates how misconceptions were used as learning tools.

"So if we go back in time and we think about how White people thought they were better than Black people and so the White people made them slaves..."

Sarah: "Ahh, and so Black history is coming up. So what's that about?"

"It's about how Black people got their freedom."

"Yes, it's about how Black people were heroes sometimes and White people were heroes sometimes." Sarah: "So what we are saying is that there are a lot of misconceptions about race... a lot of people can play different roles in history and race can play a big role in how people were treated in history."

A child revisited the first statement that had sparked this conversation: "But that doesn't happen anymore...maybe in other countries but not in Canada."

Sarah: "Really? Are we sure?"

"The slaves went in other countries than America so not to be slaves."

Sarah: "So where were they slaves?"

The last child who commented is thinking... "I don't know... People captured them and took them away..."

Then the discussion turned to when the class made Navajo carpets earlier in the year and Sarah gives a brief history of the experience: "And we talked about how in a land we thought is free, that people are still mistreated...Do you want to talk a little bit more about race and how people are being mistreated?"

Many students reply: "Yes."

The preceding data provides an example of how children practice critical literacy. They explore misconceptions of racism with the teacher. How the teacher guides them through the thinking and ideas of time, place, and relationships as they relate to racism are what make the experience one of critical literacy. According to Ladson-Billings (1995) developing students'

critical consciousness is a major component of culturally relevant pedagogy. Culturally relevant pedagogy shares goals of pedagogy with critical literacy, as Ladson-Billings (1995) states:

Beyond those individual characteristics of academic achievement and cultural competence, students must develop a broader socio-political consciousness that allows them to critique the cultural norms, values, mores, and institutions that produce and maintain social inequities. If school is about preparing students for active citizenship, what better citizenship tool than the ability to critically analyze society? (p. 162)

Further, in her study of culturally relevant pedagogy, Ladson-Billings (1995) examined teachers' practices. Equitable relationships between teacher and students are a feature of culturally relevant pedagogy; that is, teachers position themselves as co-learners with their students and together they co-construct knowledge. This process is similar to inquiry-based pedagogy and is precisely what Sarah creates in the classroom.

In the second interview, Sarah noted that she enjoyed "the exposure of misconceptions because then there's the opportunity for us to discuss ideas further." Dei (2003) offers practical ways of doing anti-racist education: Asking critical questions is a start. Sarah's discussions were often prompted by asking critical questions. A place to start anti-racist work is by assuring all students that they are welcome in the class and that each has the right and the responsibility to have a voice that must be heard (Dei, 2003).

Using inquiry-based pedagogy with critical literacy allows for the misconceptions to surface and then be explored, or as Sarah called "unpacked." This was evident during another classroom observation when one student expressed a concern for a country named in a classmate's family history that had recently been discussed in the media for its violent events. Rather than stating the fact that the violent events were localized, the teacher opened up the conversation to the rest of the class. One student shared a first-hand experience of visiting this country and provided a much different perspective than the one presented in the media. The opportunity to discuss real and relevant issues through an open forum allowed students to reconstruct and transform their initial misconceptions.

During the first interview Sarah stated that student-generated topics, such as the one described above,

Opens the door to all sorts of discussions...that kind of open discussion allows kids to look at the way that books are written, talk about point of view, talk about how a point of view is conveyed and whether the point of view is conveyed in a way that is sensitive, whether it's a point of view that's conveyed in a way that is biased.

These student-generated discussions were formed out of the students' own curiosities and interests—characteristics that Bell et al. (2010) describe as essential to the beginning stage of the inquiry process. As noted during the second interview, "the children have brought [an idea to the classroom] because they think it's of great importance, so we value that and we spend a lot of time unpacking it, exploring it and discussing it." By initiating discussions with personal points of view, Sarah promoted a safe space where students were more likely to take risks and to share their stories. She also guided the students through the first three stages of the inquiry process:

- Bringing forth a question or idea;
- Hypothesizing possible solutions or understandings; and

• Discussing and analyzing the information.

As students continued to develop their self-ologies and share and discuss their findings they moved into the later stage of inquiry in which initial understandings and beliefs are refined to incorporate the new evidence (DeWitt, 2003).

Affirmations and Identity

Henry Giroux (1992) defines critical literacy as the understanding of historical roots and consequences of one's values and the values of others. Critical literacy calls for the exploration of identity and the development of understanding of how identity may influence one's life experience. In order for children to analyze and critique texts, they must first come to be aware of who they are and their own perspectives. Sarah explored the critical literacy component of identity awareness by having students connect their identities to their familial history in Canada. This learning experience was accomplished through the development and design of a self-portrait. Prior to creating the self-portrait, students had to ask their families their place of origin and when they first came to Canada as a homework assignment. It was noted that not one student in the classroom was of First Nations, Métis, or Inuit ancestry. Therefore, all students and their families had at some point immigrated to Canada from another country. The exploration of immigration was important for situating, connecting and developing identity. The students had to discover six points:

- What country was I born in?
- What province/territory was I born in?
- If I was born outside of Canada, when did I move to Canada?
- What countries were my parents/caregivers born in?
- What province/territories were my parents born in?
- If any parents/caregivers were born outside of Canada when did they move to Canada?

Once they completed the written portion of the sheet, students were required to create a visual portrait. Sarah provided a variety of materials for hair, clothing, and features that offered various textures, colours, and designs. During this particular classroom observation, the students worked diligently, thinking critically about their self-images, searching for materials that would best reflect who they are. Critical thinking involved analyzing and evaluating the construction of the students' visual portraits in relation to their self-images and was demonstrated by their questions and conversations with each other as well as by the materials they chose.

"I'm lighter than that."

One girl picks up a figure and shows it to another girls who says: "too dark." The girl puts the figure down and chooses a different one.

"Is this my colour?" (A girl holds up brown yarn to her hair and asks students at the table if it's a match).

Sarah used this time to move about the room, offering positive comments, simple suggestions and open-ended questions to support their critical thinking and to understand how

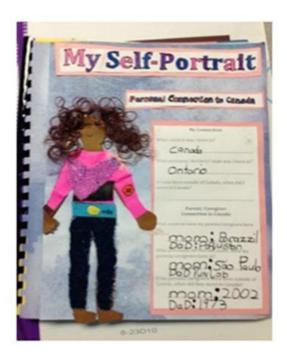


Photo 3. The Self Portrait

the students viewed themselves and what identity means to them. At one table, there was a discussion between a group of boys using markers, pencils, crayons, and yarn:

One boy examines another boy's eyes.

Student looks closely and says: "Right in the middle there is a bit of black."

The other boy draws the eyes on his body with a marker then shows the other boy, he asks: "Do you like it?"

The boy responds: "Yeah, looks good, just like you."

Students spoke to one another during this artistic experience sharing supportive advice and suggestions for how to best present themselves in their portraits. Sarah encouraged students to think critically about their physical appearance and to really appreciate their features by asking them why they chose certain colours and materials to represent their hair, clothes and facial features. The portraits were uniquely crafted.

The purpose of the self-portrait was to build affirmation of identity in young children; to have children recognize that each person is different and unique and that everyone is special. Furthermore, students were guided to discuss that in Canada all people, unless they are First Nations, Métis, or Inuit, come from another country. A sense of the self and the Other was central to the learning and to the process of developing an understanding of identity.

Inquiry requires that the learning stem from the students' prior knowledge and is developmentally appropriate. The process of the self-portrait offered students the platform to explore critical literacy elements including exercises in oral and written storytelling and in identifying with the ideas, interests, histories, and attitudes of Others (Shore, 1997). The inquiry pedagogy framed the work and discourse in a way that was suitable for the second graders.

Implications and Future Directions

This research contributes to our understanding of the teaching practices and instructional strategies of critical literacy within an inquiry-based context. While research in the areas of critical literacy and inquiry pedagogy have been well-documented, critical literacy teaching practices within an inquiry setting have received less attention. Findings from this study reveal that fostering critical literacy within an inquiry-based classroom is an active process that requires careful planning and ongoing reflection by the classroom teacher. The process whereby critical literacy meets inquiry pedagogy stems from students' questions, curiosities, and the uncovering of misconceptions. Big ideas, such as those related to issues of race, identity and social relationships, are unpacked in ways that engage students' natural curiosities.

Inquiry-based teaching is a direction pedagogy is taking in Canada (Alberta Learning, 2004; Natural Curiosity Manual, 2011); therefore in-depth descriptions of instructional practices of inquiry should be documented and shared. The portrait of instructional practices presented in this paper can contribute to the literature on inquiry pedagogy; specifically, how critical thinking can be integrated within an inquiry-based learning environment. Teaching through a critical lens requires the right amount of scaffolding, the use of purposeful prompts, and the careful selection of texts (Labadie, Wetzel and Rogers, 2012). Within an inquiry framework, where learning is often more fluid and unpredictable, careful reflection of critical literacy practices and teaching strategies warrant even greater attention.

More questions are raised as a result of this study. For instance, what does critical literacy and inquiry pedagogy look like across the early years and elementary grades? What other strategies and instructional teaching practices are used by expert teachers teaching critical literacy within an inquiry context? What are the student outcomes, both short term and long term, of teaching critical literacy within an inquiry framework? How can model instructional approaches to teaching critical literacy within an inquiry context be mobilized to the classroom and to teacher preparation courses?

The findings from the present study offer an authentic approach to teaching critical literacy in which students take the lead in the learning process. Studying critical literacy within an inquiry frame can benefit classroom teachers and teacher educators who are able to reflect on their own practices by learning from the experiences of others. Furthermore, teacher candidates can learn from in-depth documentations of teaching critical literacy within an inquiry framework. This is especially true given that opportunities to visit and explore exemplary models of classroom environments and teaching practices are often limited in teacher education programs (Melnick & Meister, 2008). Exposure to diverse learning environments is necessary for teacher candidates to develop confidence in their own teaching practices. Therefore, descriptions of unique instructional approaches to teaching, such as the one described in this paper, should continue to be shared.

Conclusion

Critical literacy focused on identity and differences have also been discussed by Mary Louise Pratt (1991). Pratt proposed language arts for a critical pedagogy that profiles differences while exploring dominant culture. One of the learning experiences offered is the auto-ethnography, "a text in which people undertake to describe themselves in ways that engage with representations they and others have made of them" (Pratt, 1991, p. 35). Sarah, our participant, developed the self-ology project as an age appropriate exploration of auto-ethnography.

The portrait presented in this study offers a window into a second grade classroom where critical literacy and inquiry learning work together. The second grade teacher presented in this study established a safe and inclusive environment through thoughtful planning, the careful selection of texts, and a variety of teaching strategies that valued the students' ideas. These teaching practices set the foundation for the development of critical thinking and awareness and took place within an inquiry framework where a knowledge building approach, in which misconceptions, questions, and ideas helped guide the learning process, provided many opportunities to explore social justice issues of race, identity and equity.

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References

- Alberta Learning, (2004). *Focus on inquiry: A teacher's guide to implementing inquiry-based learning*. Edmonton, AB: Learning and Teaching Resources Branch.
- Anderson, G. L., & Irvine, P. (1993). Informing critical literacy with ethnography. In C. Lankshear & P. L.
 McLaren (Eds.), *Critical literacy: Politics, praxis, and the post-modern* (pp. 81-104). Albany, NY:
 State University of New York Press.
- Bar, V. (1989). Children's views about the water cycle. Science Education, 73(4), 481-500.
- Barton, K., McCully, A., & Marks, M. (2004). Reflecting on elementary children's understanding of history and social studies: An inquiry project with beginning teachers in northern Ireland and the United States. *Journal of Teacher Education*, *55*(1), 70-90.
- Bell, T., Urhahne, D., Schanze, S., & Ploetzner, R. (2010). Collaborative inquiry learning: Models, tools, and challenges. *International Journal of Science Education*, *32*(3), 349-377.
- Behrman, E. (2006). Teaching about language, power, and text: A review of classroom practices that support critical literacy. *Journal of Adolescent & Adult Literacy*, *49*(6), 490-498.
- Bredo, E. (2003). The development of Dewey's psychology. In Zimmerman, B. J., & Schunk, D. H. (Eds.), *Educational Psychology: A Century of Contributions*. (pp. 113-154). Mahwah, NJ: Lawrence Erlbaum Associates Press.
- Capps, D. K., Crawford, B., & Constas, M. A. (2012). A review of empirical literature on inquiry professional development: Alignment with best practices and a critique of the findings. *Journal of Science Teacher Education*, *23*, 291-318.
- Comber, B. (2001). Critical literacy: Power and pleasure with language in the early years. *The Australian Journal of Language and Literacy*, *24*(3), 168-181.
- Creighton, D. (1997). Critical literacy in the elementary classroom. Language Arts, 74(6), 438-445.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd Ed.). Thousand Oaks, CA: Sage.
- Dei, G. (2003). Communicating across the tracks: Challenges for anti-racist educators in Ontario today. *Orbit, 33*(3), 2-9.
- DeWitt, S. (2003). Mulitcultural democracy and inquiry pedagogy. *Intercultural Education*, *14*(3), 279-290.

- Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Herder and Herder.
- Gibbs, G. (2008). Analysing qualitative data. London, UK: Sage Publications.
- Giroux, H. (1992). *Border crossings: Cultural workers and the politics of education*. New York, NY: Routledge.
- Gomez-Zwiep, S. (2008). Elementary teachers' understanding of students' misconceptions: Implications for practice and teacher education. *Journal of Science Teacher Education*, *1*9, 437-454.
- Hamer, J. (2010). Should critical literacy be a part of early childhood education in New Zealand? *He Kupo: The Word, 2*(3), 16-27.
- Harvey, S. & Goudvis, A. (2000). *Strategies that work: Teaching comprehension to enhance understanding*. Portland, ME: Stenhouse.
- Ireland, J.E., Watters, J.J., Brownlee, J., & Lupton, M. (2012). Elementary teacher's conceptions of inquiry teaching: Messages for teacher development. *Journal of Science Teacher Education*, 23, 159-175.
- Janks, H. (2014). Critical literacy's ongoing importance for education. *Journal of Adolescent and Adult Literacy*, *57*(5), 349-356.
- Jansen, B. (2011). Inquiry unpacked: An introduction to inquiry-based learning. *Library Media Connection*, *29*(5), 10-12.
- Keene, E. & Zimmerman, S. (1997). Mosaic of thought. Portsmouth, NH: Heinemann.
- Labadie, M., Wetzel, M., & Rogers, R. (2012). Opening spaces for critical literacy: Introducing books to young readers. *The Reading Teacher*, 66(2), 117-127.
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory Into Practice*, *34*(3), 159-165.
- Lee, H. (2005). Understanding and assessing preservice teachers' reflective thinking. *Teacher and Teacher Education*, *21*, 699-715.
- Leland, C., Harste, J., & Smith, K. (2005). Out of the box: Critical literacy in a first-grade classroom. *Language Arts, 82*(4), 257-268.
- Lester, J. (2005). Let's talk about race. New York, NY: HarperCollins.
- Lewison, M., Seely Flint, A., Van Sluys, K., & Henkin, R. (2002). Taking on critical literacy: The journey of newcomers and novices. *Language Arts*, *27*(5), 382-392.
- Longfield, J. (2009). Discrepant teaching events: Using an inquiry stance to address students' misconceptions. *International Journal of Teaching and Learning in Higher Education*, *21*(2), 266-271.
- Luke, A. (2000). Critical literacy in Australia: A matter of context and standpoint. *Journal of Adolescent & Adult Literacy*, *43*(5), 448-461.
- Luke, A. (2012). Critical literacy: Foundational notes. Theory into Practice, 51, 4-11.
- Maroni, B. (2011). Pauses, gaps and wait time in classroom interaction in primary schools. *Journal of Pragmatics*, *43*, 2081-2093.
- Melnick, S., & Meister, D. (2008). A comparison of beginning and experienced teachers' concerns. *Educational Research Quarterly*, *31*(3), 39-56.
- Mulhern, M., & B. Gunding. (2011). What's critical about critical literacy? *English Quarterly, 42*(1-2), 6-23.
- Natural Curiosity Manual (2011). Retrieved September, 2013 from http://www.naturalcuriosity.ca/pdf/NaturalCuriosityManual.pdf
- Ontario Ministry of Education. (2009). Connecting practice and research: Critical literacy guide. Retrieved September 2013 from

http://www.edugains.ca/resourcesLIT/CoreResources/Critical_Literacy_Guide.pdf

Ostrosky, M., Mouzourou, C., Danner, N., & Zaghlawan, H. (2013). Improving teacher practices using microteaching: Planful video recording and constructive feedback. *Young Exceptional Children*, *16*(1), 16-29.

Paugh, P. Carey, J., King-Jackson, V., & Russel, S. (2007). Negotiating the literacy block: Constructing spaces for critical literacy in a high-stakes setting. *Language Arts*, *85*(1), 31-42.

Pratt, M. L. (1991). Arts of the contract zone. Profession 91, 33-40.

- Rowe, M. (1986). Wait time: Slowing down may be a way of speeding up. *Journal of Teacher Education*, *37*, 43-50.
- Shor, I. (1999). What is critical literacy? Journal for Pedagogy, Pluralism and Practice. 1(4), 1-7.
- Thomas, D. (2006). A general inductive approach for analyzing qualitative data. *American Journal of Evaluation*, *27*(2), 237-246.
- Tudge, J., & Scrimsher, S. (2003). Lev S. Vygotsky on education: A cultural-historical, interpersonal, and individual approach to development. In Zimmerman, B. J., & Schunk, D. H. (Eds.), *Educational Psychology: A Century of Contributions*. (pp. 113-154). Mahwah, NJ: Lawrence Erlbaum Associates Press.
- Urska, R., & Primoz, J. (2013). Guided inquiry projects: Enrichment for gifted pupils. *School Libraries Worldwide*, *19*(1), 114-127.
- von Secker, C. (2001). Effects of inquiry-based teacher practices on science excellence and equity. *The Journal of Educational Research*, *95* (3), 151-160.
- Wolk, S. (2003). Teaching for critical literacy in social studies. The Social Studies, 94(3), 101-106.
- Zion, M., & Sadeh, I. (2007). Curiosity and open inquiry learning. *Journal of Biological Education*, *4*1(4). 162-169.

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