Using Microblogging as a Social Media Tool for Discussions in Higher Education Classrooms

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Through this qualitative study, researchers explored how preservice teachers' roles and functions vary when participating in both instructor-directed and student-directed microblogging discussions about children's literature on the microblogging platform, Todays Meet. Preservice teachers from three universities participated in an instructor-directed *within university microblogging* (WUM) discussion as well as a student-led *across university microblogging* (AUM) discussion with preservice teachers from the other two universities. The researchers developed a three-pronged framework based on the work of Java et al. (2007), Ebner and Maurer (2008), and Gao et al. (2012) to analyze the microblogging interactions in the WUM and AUM groups. Findings revealed that the AUM discussions tended to have more depth and moved away from the provided questions. Additionally, the participants demonstrated all the functions and roles of the microblogging framework in the AUM opposed to the WUM where several were absent. In this study, microblogging provided an opportunity for an interactive experience and the social construction of knowledge among preservice teachers.

Keywords: social media; higher education; microblogging, Todays Meet

Considerable research suggests that the ability to engage and collaborate with others encourages learning and the creation of knowledge (Goldenberg, 1991; Murphy, Wilkinson, Soter, Hennessey & Alexander, 2009; Smith et al., 2009; Vygotsky, 1962); however, in many traditional higher education classrooms and learning management systems, there is a teacher-centered pedagogy in which the instructor provides the content and students participate in a traditional question-and-answer format (Prestridge, 2014). Many researchers have suggested that social networking tools, such as microblogging, are one way to support a more participatory and interactive experience for students in the higher education classroom (Croxall, 2010; Gao, Luo, & Zhang, 2012; Perry, 2008; Prestridge, 2014).

Microblogging is a combination of blogging and instant messaging that allows users to share information in real-time or asynchronous communications with no more than 140 characters (Java, Song, Finin, & Tseng, 2007). Microblogging can be accomplished using multiple sources and tools, including websites, third-party applications, or mobile devices and allows participants to interact and collaborate among people from all over the world (Java et al., 2007; Mills & Chandra, 2011). Increasingly, social media tools are being used in a shift toward a more constructivist paradigm in which learners engage in "knowledge construction, not reproduction; conversation, not reception; articulation, not repetition; collaboration, not competition; reflection, not prescription" (Jonassen, Howland, Moore, & Marra, 2003, p.15). While social networking tools, such as Facebook and YouTube are commonly used in higher education, the use of microblogging is still in its infancy (Prestridge, 2014). With the previous research in mind, this study explores one application of microblogging in the higher education classroom. Specifically, the researchers examined the ways that student roles and functions vary during microblogging chats that are student-directed versus microblogging chats that are teacher-directed.

LITERATURE REVIEW

Several studies have found that the use of microblogging in higher education courses supports a constructivist paradigm and encourages collaboration and the co-construction of knowledge (Coxall, 2010; Ebner, Lienhardt, Rohs, & Meyer, 2010; Perry, 2008; Prestridge, 2014; Veletsianos, Kimmons, & French, 2013). Learning is no longer limited to the materials provided by the instructor; instead, everyone can serve as an information provider, information consumer, and/or knowledge constructor (Gao et al., 2012). By encouraging students to become active learners and interact with each other and the course content, microblogging "supports the learner in changing information into knowledge" (Prestridge, 2014, p. 109). Furthermore, the constant information flow between students and students, students and content, and students and instructor during microblogging supports the iterative process of the creation of knowledge (Ebner et al., 2010). In addition to encouraging a more active and engaged learning approach, there are several other advantages when using microblogging in higher education courses. The mobility of most microblogging platforms allows students and instructors to interact synchronously or asynchronously, with many exchanges happening beyond prescribed

class times (Ebner et al., 2010; Gao et al., 2012). In addition, this mobility allows the instructor to stay connected with students, encouraging the "metaphorical open door" (Veletsianos et al., 2013).

While the mobility of the platform is a valuable advantage, microblogging also encourages feedback and provides documentation of learning. Microblogging makes it easier to ask questions, have discussions, share resources, and share comments (Ebner & Maurer, 2009). Because of the rapid feedback of other students and the instructor, a process-oriented learning approach is supported (Mills & Chandra, 2011). In addition, the creation of written documentation or transcripts of the learning process is beneficial when using microblogging as a pedagogical or assessment tool in the classroom (Ebner et al., 2010).

Increased motivation and engagement is another advantage of microblogging. Grisham and Wolsey (2006) found that microblogging increased student engagement and motivation because of increased choice, power and sense of belonging. There is increased participation from some students who may not otherwise be active in class (Gao et al., 2012). In addition, there are opportunities for multiple types of interactions including learner-content, learner-learner, and learner-instructor (Gao et al., 2012).

Microblogging also encourages increased writing and transfer of learning outside the classroom walls. Mills and Chandra (2011) found that students participating in microblogging write more frequently and over a more extended period of time compared to students in a traditional writing setting. Mills and Chandra (2011) also found that microblogging encourages the transfer of learning between formal and informal learning contexts. Because of embedded hyperlinks and hashtags used in microblogging, there is increased intertextuality (Mills & Chandra, 2011).

While researchers have discovered many benefits of using microblogging, studies have found several downsides, including microblogging's character limits. Some argue that the character limit makes it a challenge to express complex thoughts (Ebner et al., 2010; Gao et al., 2012). Gao et al. (2012) noted that the length limit of microblogging makes it "inappropriate for certain activities, especially those requiring elaborated reflection on complex ideas" (p. 792).

Another obstacle is some students' unfamiliarity with the microblogging platform and their reluctance to learn new social media (Gao et al., 2012). Another study found that activities such as microblogging led to higher levels of distractibility because of information overload and because of attention to unrelated content (Gao et al., 2012).

Study Overview

By synthesizing multiple theoretical aspects of microblogging, the researchers developed a three-pronged framework for examining the use of microblogging as a social media tool in the higher education classroom (see Figure 1). This framework is based on the work of Java et al., (2007), Ebner and Maurer (2008), and Gao et al. (2012). The first element of the framework addresses the idea of establishing a *purpose* for the microblogging activity. These purposes include seeking information, sharing information, and establishing relationships (Java et al., 2007). The second element of the framework outlines the five different *functions* of microblogging. These functions include asking questions, sharing opinions, (ex)changing ideas, sharing resources, and reflecting (Ebner et al., 2010). These functions can be further differentiated by categorizing them by communication between students and communication delineates the *roles* that learners take on as they microblog and includes information provider, information consumer, and knowledge constructor.

Participants

This study focuses on online book club discussions via microblogging as an undergraduate class assignment that was included in literacy education classes from three universities. Preservice teachers enrolled in the three similar literacy education courses (one class from each university) participated in the study. The group of 71 participants consisted of both female and male preservice teachers of various ethnic, cultural, and socioeconomic backgrounds. The group of participants included both traditional and nontraditional students from a wide age range. Two of the universities are located in Texas, with one in an urban university setting and the other situated in a more rural part of the state. The third university is a private institution located in Alabama.
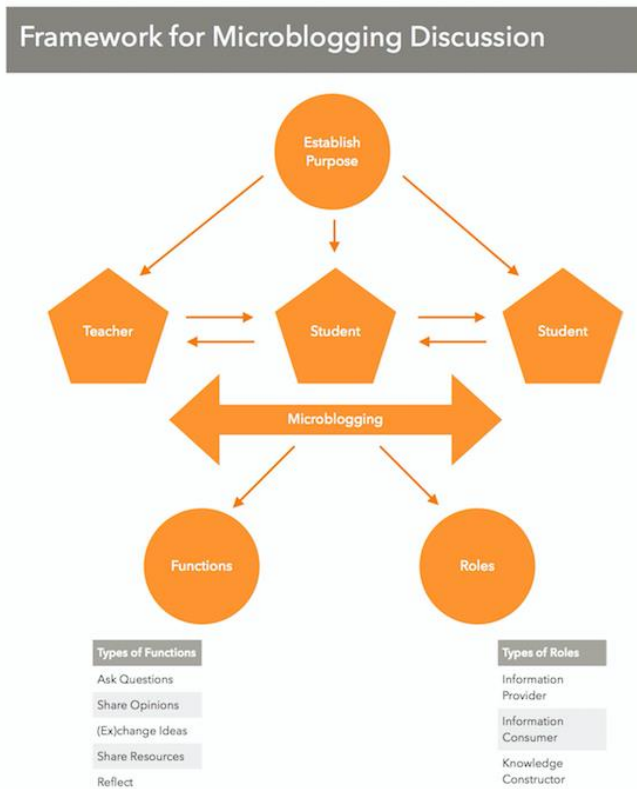
Figure 1. Framework for Microblogging Discussion
(Based on Ebner & Maurer, 2008; Gao, Luo, & Zhang, 2012).

METHODS

This descriptive case study (Yin, 2013) explored the ways in which preservice teachers use social media, specifically Todays Meet, as a platform for discussing children's and adolescent literature. We sought to gain insights into how preservice teachers' roles and the functions of microblogging vary when the discussions are instructor-directed versus student-directed. This study focused on the following research questions:

- How do participant roles vary during instructor-directed and student-directed microblogging?
- How do the functions of microblogging vary during teacher-directed and student-directed discussions?

Each class was divided into five book club groups. The participants chose one of five children's book titles and, based on this book selection, were assigned to a book club within their own classes. The five book titles, predetermined by the course instructors, were consistent across the three classes. The titles included: *Because of Mr. Terupt* by Rob Buyea (2010), *Brown Girl Dreaming* by Jacqueline Woodson (2014), *Out of My Mind* by

Sharon Draper (2012), *The One and Only Ivan* by Katherine Applegate (2012), and *Wonder* by R. J. Palacio. All of the preservice teachers participated in two separate online book discussions via Todays Meet over the course of two consecutive weeks. During the first online discussion, which was instructor-led, the preservice teachers responded to questions posed by the course instructors and only interacted with the other students in their own classes who had read the same book. The virtual meeting spaces or "rooms" on Todays Meet were open for 72 hours, allowing for asynchronous and/or synchronous participation in the online discussion. The preservice teachers were encouraged to check in and participate in the discussion at least once a day during the 72-hour period.

For the second discussion, which was student-led, the preservice teachers from all three universities were grouped together based on book selection, so that there was only one online discussion per book title. Again the "rooms" were left open for 72 hours and the participants were encouraged to visit at least once per day. The second discussion was student-directed, with no question prompts provided by the instructors. Following the two online discussions, the preservice teachers completed a questionnaire based on their participation in the microblogging activity.

Data Sources

To gain insights into how the preservice teachers used microblogging as a social media discussion tool, we collected data through the online discussion transcripts and a follow-up questionnaire. Each preservice teacher participated in two book discussions via microblogging. For the first session, the preservice teachers discussed their books with the other students from their own university who read the same book. We refer to this session as *within university microblogging* (WUM) discussions. This microblogging discussion was based on instructor-provided question prompts (see Appendix A). Each group, regardless of book or university, received the same prompts. We collected a total of 15 transcripts (five from each university) for this discussion session (see Appendix B for sample discussion transcript). The second microblogging session was a combined discussion including all of the students from the three universities who read the same book. This discussion was student-directed with no questions prompts provided and resulted in five transcripts (see Figure 2). We refer to this session as *across university microblogging* (AUM) discussions.

Upon completion of the microblogging sessions, preservice teachers were provided copies of the online discussion transcripts to reference while completing the follow-up questionnaire (see Appendix C). The questionnaire consisted of questions relating to the roles and functions of microblogging.

Figure 2. Map of 15 WUM Book Discussions and 5 AUM Discussions

Data Analysis

The coding framework was based on the 3-pronged model we created after consulting the literature on microblogging (see Figure 1). We used initial coding on each of the 15 WUM discussion transcripts separately, fully coding one transcript before moving on to another. For coding purposes, a complete thought was the unit of analysis. The codes

were then categorized based on the roles and functions of microblogging, as outlined in the framework. As a research team, we determined that thoughts categorized as a *share opinions* function would include an explicit or implied "I think" and "I believe" statements and thoughts categorized as a *reflect* function would include personal connections. A second member of the research team reviewed the WUM initial coding and categorization.

We then independently coded the five AUM transcripts and compared our findings. If a discrepancy arose between codes, the entire research team reviewed the transcripts in order to reach a consensus. The last step of transcript analysis was the comparison of WUM and AUM coding. The open-ended questionnaires were similarly coded and categorized with a focus on the purpose of microblogging and the preservice teachers' perceptions of their roles and the functions of microblogging as laid out in our 3-pronged framework. We then compared the findings from the discussion transcripts and questionnaires to ensure triangulation of data.

Krippendorff's alpha measures interrater agreement and is considered "the most general agreement measure with appropriate reliability interpretations" (Krippendorff, 2004, p. 221). Krippendorff's alpha estimates were run on the full sample of AUM coded transcripts to determine the level of agreement among the three researchers' analyses of the functions. Reliability scores of 0.80 or higher are generally considered the norm for a good reliability test, especially with complex coding (Krippendorf, 2004; Neuendorf, 2002). The analysis showed that there was strong agreement on all five transcripts (See Table 1).

Table 1
Krippendorff Alpha Reliability Values For Across University Microblogging Transcripts

Transcript	Alpha
Wonder	0.951
One and Only Ivan	0.944
Because of Mr. Terupt	0.956
Out of My Mind	0.962
Brown Girl Dreaming	0.845
Overall	0.923

RESULTS

Each class had a discussion through a microblogging forum about their chosen book. The WUM groups consisted of 4-6 members, and the primary topic of discussion was the book content. Group members were expected to finish reading the book before participating in the microblogging conversation, and each group had interacted with one another in a face-to-face classroom setting for at least six weeks prior to the microblogging conversation. The instructors provided students with a set of basic questions to use for the discussion, but these questions were not required and only given as a suggestion. After completing the classroom microblogging conversations on Todays Meet, the students were then placed in groups for across university discussions. This allowed students to participate in a conversation via Todays Meet with students from the other universities who had read the same book. For the AUM discussion, the instructors did not provide questions and encouraged the students to lead their own conversations. Once the discussions were completed, the transcripts were analyzed and paired with the questionnaire to provide data for results related to the microblogging model (see Figure 1).
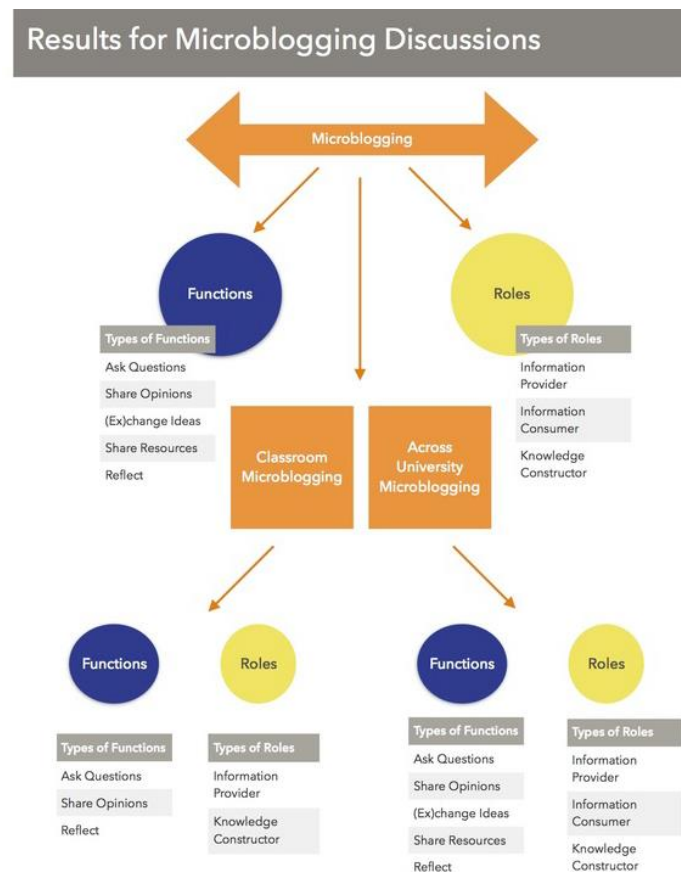

Figure 3. Results for Microblogging Discussion.

This model provides an understanding of the roles and functions occurring while microblogging. By examining the transcripts and comments regarding these conversations, microblogging can be understood in the context of social media as a tool for formal classroom conversation. Additionally, the transcript data for the AUM discussions were paired with the WUM discussions to provide insights into how the types of conversations corresponded and differed. Those differences are demonstrated in the results shown in Figure 3.

Functions & Roles in WUM Versus AUM Discussions

Within University Microblogging (WUM). Three of the five functions from our framework were present in the WUM microblogging conversations: *share opinions*, *ask questions*, and *reflect. Exchanging ideas* and *sharing resources* were noticeably absent from these conversations. The dominant function found throughout all transcripts was *sharing opinions*. The majority of the groups focused on *reflecting* and *sharing opinions*. Information provider and knowledge constructor were the roles present in the transcripts with information provider being the dominant role. The students used the questions provided by the instructors and did not deviate much from those specific questions. Some groups even went methodically down the list of instructor-provided questions during their microblogging conversation. Spontaneous questions were not common in these discussions and resources were rarely shared with one another concerning the books and how they could be used in the students' future classrooms.

Across University Microblogging (AUM). As with the WUM discussion, the functions most commonly found in the AUM discussions were *sharing opinions* and *reflecting,* with *reflecting* being the dominant function across all book groups. The group discussing *Brown Girl Dreaming* gave more attention to *asking questions* and *sharing resources* in the across university discussions than in the WUM. In addition to the information provider and knowledge constructor roles, the information consumer role was present in the AUM discussions. All of groups fell into the pattern of using the instructor-provided questions to an extent, but some groups' questioning was more organic and strayed from the template provided during the WUM discussions. Table 2 outlines the percentages and frequencies of the different types of functions among the different groups.

Table 2
Percentages and Frequency of Microblogging Functions for WUM and AUM Discussions

Type of Univ.	Function of Microblog	Because of Mr. Terupt	Brown Girl Dreaming	One and Only Ivan	Out of My Mind	Wonder	Totals
				Book Titles			
WUM private suburban	Share Opinions	41% (n=41)	43% (n=14)	38% (n=15)	40% (n=27)	52% (n=18)	42%
	Reflect	9% (n=9)	9% (n=3)	34% (n=13)	17% (n=12)	26% (n=9)	17%
	Exchange Ideas	34% (n=34)	39% (n=13)	18% (n=7)	25% (n=17)	17% (n=6)	28%
	Ask Questions	13% (n=13)	0% (n=0)	10% (n=4)	16% (n=11)	0% (n=0)	10%
	Share Resources	3% (n=3)	9% (n=3)	0% (n=0)	2% (n=1)	5% (n=1)	3%
public rural	Share Opinions	29% (n=33)	29% (n=25)	49% (n=31)	43% (n=29)	38% (n=24)	36%
	Reflect	46% (n=53)	45% (n=38)	46% (n=29)	47% (n=32)	59% (n=38)	48%
	Exchange Ideas	23% (n=26)	24% (n=20)	5% (n=3)	10% (n=7)	3% (n=2)	15%
	Ask Questions	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)	0%
	Share Resources	2% (n=2)	2% (n=2)	0% (n=0)	0% (n=0)	0% (n=0)	1%
public urban	Share Opinions	17% (n=4)	15% (n=4)	25% (n=9)	21% (n=9)	35 % (n=8)	23%
	Reflect	52% (n=12)	46% (n=12)	44% (n=16)	43% (n=18)	43% (n=10)	45%
	Exchange Ideas	22% (n=5)	27% (n=7)	17% (n=6)	29% (n=12)	9% (n=2)	21%
	Ask Questions	0% (n=0)	0% (n=0)	3% (n=1)	0% (n=0)	0% (n=0)	>1%
	Share Resources	9% (n=2)	12% (n=3)	11% (n=4)	7% (n=3)	3% (n=3)	10%
AUM ALL	Share Opinions	22% (n=36)	21% (n=32)	31% (n=29)	26% (n=32)	23% (n=16)	25%
	Reflect	62% (n=101)	75% (n=49)	52% (n=49)	55% (n=68)	58% (n=40)	53%
	Exchange Ideas	6% (n=9)	12% (n=18)	8% (n=8)	12% (n=15)	12% (n=8)	10%
	Ask Questions	9% (n=14)	10% (n=10)	5% (n=5)	7% (n=9)	6% (n=4)	7%
	Share Resources	2% (n=3)	9% (n=14)	4% (n=4)	0% (n=0)	1% (n=1)	3%

Functions

Sharing opinions (WUM). A common function found in the conversations was sharing opinions about the books. Members of all groups were eager to rate the book and explain why they liked or disliked the book as a whole or specific parts. This type of sharing was a large chunk of the conversations with the classroom groups. Along with these ratings, participants shared opinions about characters or authors that related to their preferences for the book:

- "Definitely a creative and fun way for the students to see things from the other students' point of view."
- "Sadly, there are some people in the world who do not fully understand stories such as Jackie's."
- "I love how Melody's parents hugged themselves in the kitchen and both took a deep breath."
- "I think when she goes to the library and finds books with African Americans pictured throughout the pages, it is a turning point for her. I think that's when she realizes that it is possible for her to become a writer."

- "This is a great book to read for educators."

These opinions were typically met with other opinions that were similar or in agreement.

Additionally, agreement with statements made by fellow participants was common. In the majority of these instances, the student would respond with a simplistic agree comment, and then the discussion would move on instead of elaborating further on the specific comments or points in question. Often, the conversation thread included a large number of "me too" responses which showed the simple agreement occurring. Agreement typically consisted of "I agree," but at times the participants elaborated with "It does show a different form of writing. Good point!" or "Agree with how you liked the parts where she compares the difference between the area she lived and the area she loved." Disagreement was rare in these discussions.

Teaching ideas related to the books was substantial throughout the WUM conversations. Participants tended to remark on how the book related to diversity: "This novel could be used to encourage diverse perspectives about racism because there are several individuals of diff. [sic] colors and who perceive specific events in the book and life differently. The book portrays the drastic differences of racism in both the North and South." The topic of diversity was consistent across the majority of books chosen. Participants wanted to express how they recognized the diversity in the book ("You can see the struggle she goes through because people don't understand her and that is why I like that it is told from her perspective because even though she is able to do so much despite her handicap you still see her struggle internally.") and then how that diversity could be used as a teaching tool in their future classroom ("If students can understand how this little girl is feeling, it might make them think twice before mistreating someone because they are different.").

Sharing opinions (AUM). Sharing opinions continued to be a common function when the discussions shifted to the AUM groups. Most of the groups shared their ratings of the books and offered their opinions about characters and specific events or situations that took place in the stories. Each of the five groups discussed their opinions on the appropriateness of the book for classroom use and for which grade level the book would be most suited. In many of the groups, some students worried that the subject matter was too mature for elementary school-aged children, but others countered by stating that children

often deal with difficult situations in their real lives and can handle more than adults may think. For example, a student who read *The One and Only Ivan* told her group members that "the topic is hard, but one that is part of life."

Another common discussion point was the format or structure of the book. All of the groups spent time sharing opinions on the authors' writing styles and the way the authors structured the chapters. In the group discussing *Out of My Mind*, students liked that they author wrote the book from the main character's point of view because "that really gave the reader a better insight into how Melody felt." Students who read *Brown Girl Dreaming* appreciated how the chapters were written as short vignettes in the form of poetry. A few students commented that the author's style helped make the text more approachable. Others agreed pointing to the author's ability to say a lot with a few words. Speaking specifically of the final chapter, a student commented, "Although brief, the words from that chapter are extremely powerful."

Most groups also shared opinions about the application of the book to their future classrooms. The students who read *Out of My Mind* considered their responsibility to broaden their future students' perspectives:

- "I believe as future educators it's our job to open the minds of our students and teach them that because someone is different doesn't make them less of a person."
- "I agree that it is our job to help open the minds of our students and I think this book would be a great way to do that."

Those who read *The One and Only Ivan* were in agreement about the book's potential to teach children about empathy:

- "This book teaches kids empathy. Empathy towards humans and animals."
- "It definitely teaches kids empathy. It shows a completely different perspective and makes you think."

Ask questions (WUM). The questions provided by the instructors consisted of a list of 10 basic questions that were designed to elicit ideas, opinions, and resources about the books (see Appendix A). The instructors explained to all students that they were simply suggestions and were not required for the discussions. In spite of that, all groups remained steadfast in answering the provided questions and most groups did not deviate from those

questions, meaning the bulk of the conversation centered around the list of questions. As a result, asking questions was a major function found in the transcripts.

Ask questions (AUM). For the AUM discussions, the students were encouraged to initiate their own conversations about the books without the structure of the questions provided by the instructors for the first discussion. Despite being given complete freedom over the structure of the conversations, all groups asked at least a few questions from the list provided by the instructors for the WUM discussions. The commonly asked questions from the provided list included rating the book on a scale of 1-10, sharing the readers' favorite parts of the books, pairing another text with the book they read, choosing literacy skills to teach with the novel, and reflecting on whether the book changed the readers' perspectives.

Each group had at least one member who asked spontaneous questions that were specifically related to the book the group read. In the discussion of *Brown Girl Dreaming*, questions arose about the historical context of the book during the Civil Rights Movement and experiences the students could contribute from living in various parts of the United States. These questions sparked a conversation about race relations in the present day and experiences students have had with discrimination. After a student asked "Did anybody catch how the Woodson family may trace all the way back to Thomas Jefferson?" the group began discussing Sally Hemings and one person shared a link to a news article about Jefferson's extended family.

The *asking questions* function was much more common in the AUM discussion groups compared to most of the WUM groups. The numbers of questions asked during the across university groups was rivaled only by the individual groups from one university. The researchers questioned if the students asking the questions during the WUM discussions were the same students asking questions during the AUM discussions. The results, as shown in Table 3, indicate that students from each of the three universities asked questions in all of the AUM groups.

Table 3
Types of Questions During AUM Discussions by University

	Brown Girl Dreaming		Wonder		Out of My Mind		The One and Only Ivan		Because of Mr. Terupt		Totals
	Original	Instructor-Provided	Original	Instructor-Provided	Original	Instructor-Provided	Original	Instructor-Provided	Original	Instructor-Provided	
Private suburban	2	2	0	1	0	5	0	0	0	1	11
Public urban	1	0	1	2	0	1	1	0	2	1	9
Public rural	10	0	1	0	3	0	2	2	7	2	27

Reflect (WUM). One area of reflection common to all discussions was the sharing of a favorite part of the book. Participants recounted a specific time in the story that made them feel a specific emotion. Other participants responded with agreement and typically shared their own favorite section.

As students asked questions of one another, they were able to reflect on their thoughts about the reading. Students explained that the reading had broadened their perspective in some way. For example, in *Brown Girl Dreaming,* the students were discussing how interesting it was to learn about the characters being Jehovah's Witness. In *The One and Only Ivan*, students remarked on reading about the animals in captivity and being in a cage away from family: "I never thought about the animal's feelings when I've seen them in captivity. This book made me look at it in a whole new way." This particular book's topic brought up issues where students reflected in a new way than they had previously in their thinking:

- "It has opened my eyes to think differently about animal rights."
- "I have never really thought about what living in a cage would do to these animals' emotions."

In *Because of Mr. Terupt*, the students discussed how they were unsure if the book changed them, but "it broadened my [their] outlook on bullying." *Out of My Mind* and *Wonder* elicited a similar reaction of helping them understand the point of view from a person who has exceptionalities. One group reflected on how *Wonder* shaped them for

their future classroom: "This book also made me realize that as a teacher I would have to be considerate of students that are different."

Because self-reflection was apparent in the WUM conversations, participants discussed their personal connection to the book or a specific character. The depth of their conversation suggested that they had put thought into this specific connection and wanted to share it with others. In several book discussions, participants talked openly about how the story had reminded them of their own experiences with prejudice or bullying. They shared personal stories that they viewed as similar to the characters' stories and how the reading had evoked that memory. Other participants discussed how they had not had such an experience in their personal lives and wanted to be more aware of how they behaved in the future:

- "At the same time this made me step back and take a look at how I treated people who are different than me."
- "This book definitely made me realize animals have feelings just like we do."
- "This book has definitely changed my perspective on some things. When I see someone different in my day to day life I really think I don't tend to look at them differently. I may think something in my head, nothing bad ever, but even the slightest glance of an eye down or shake of my hand can let them know what I am thinking."

Another area of reflection common to the WUM discussions was how the participants would use the book in their future classrooms and with their students. Most who shared such reflection affirmed that they would use the book with their students, and the reflection that occurred was *how* they would use it:

- "Exactly, that's why I would read this book at the end of the year to my future class. Because it shows how everyone is different."
- "I would teach comprehension with the book. I would see if they comprehend the feelings of the characters and if they have ever felt the same"

Reflect (AUM). Across all groups, students touched on ways in which they connected to characters and/or the subject matter of the books they read. These connections were based on their own experiences or their emotional reactions to events in the books. Students who read *Out of My Mind* recalled interactions they have had throughout their

lives with people with special needs in both school and social settings. A few students described the influence of this book on their pursuit of a special education certification: "I have always had a pretty broad perspective being a SPED major, but I think this book reassured why I enjoy working with children with special needs."

Similar to the group who read *Out of My Mind*, the students who read *Wonder* had emotional connections to the text. Several students commented on events in the book that angered them or characters that either disappointed or inspired them. One group member mentioned that "this is the type of book you don't want to put down because you are so emotionally attached." This group also reflected on what they can take from this book as they enter the teaching profession: "As future educators we need to be aware of the situation our students might be going through. This book helped me to open up more about how others could be feeling even if I don't know what is going on."

For *Brown Girl Dreaming*, the questions the group members asked each other led to reflection of how they connected to Jackie's experiences. One student in particular commented that she "was raised with my grandparents and my grandfather and I shared a special bond…so as I read there were moments that pulled at my heart strings." Another student later stated that she gained perspective from others' reflections: "I love hearing your real life connections to BGD. It's nice to hear because I personally didn't connect with the book." This group also shared quotes from the text that resonated with them or that stood out to them as significant. Many group members reflected on the historical context of the experiences the author described and discussed ways in which race relations have, and oftentimes have not, evolved over the past few decades: "The Confederate flag is flying high in one of the dorm rooms by me…and even though a few of us have said we were uncomfortable, there was nothing we could do. That would never happen in Chicago."

Another agreed that she "will walk into some of the dorm rooms where the Confederate flag is hanging up and it makes me and my friends uncomfortable." "I have never been [there] but I see so many things in the media. I often wonder if the belief system from the pre-Civil Rights era are still prevalent today." Those who were not online during this portion of the discussion remarked that they were disappointed to have missed the conversation, but appreciated the opportunity to read what the others had discussed.

Emotional and personal connections were the primary reflections made by students in both *The One and Only Ivan* and *Because of Mr. Terupt* groups. Many who read *The One and Only Ivan* had emotional reactions to the way the animals were treated and claimed they would never again see zoo animals in the same way. For *Because of Mr. Terupt*, students connected to various characters and related to the concept of the book in general. They felt that the book is relatable to any student because of "the diversity in the characters' backgrounds." Several students remarked that they felt inspired by Mr. Terupt, a first-year teacher:

- "I would love to influence my students the way Mr. Terupt did. He is my role model as a teacher."
- "I would love to be an amazing teacher like Mr. Terupt one day."

Share resources (WUM). This function was not substantial in these discussions.

Share resources (AUM). During most of the book discussions, opportunities arose for students to seek out and share resources related to the topics depicted in the books or the conversations taking place online. Students who read *Wonder* and *Because of Mr. Terupt* shared with their group members the titles of sequels to these books. Readers of *The One and Only Ivan* shared other texts related to the book, as well as a video about Ivan.

The conversation about the historical context of *Brown Girl Dreaming* and race relations today prompted a student to share a news resource about when the KKK visited her college campus in the 1980s. At one point in the discussion, students shared video and text resources related to the *Letter from Birmingham Jail*. Members of this group also shared news sources about Thomas Jefferson and Sally Hemings following the conversation about the author's ancestry.

Exchange ideas (WUM). This function was not substantial in these discussions.

Exchange ideas (AUM). In all groups, students offered ideas for how to use the texts in their future classrooms. There were discussions about pairing the books they read with other texts, such as supplementing *Brown Girl Dreaming* with Martin Luther King, Jr.'s *I Have a Dream* speech and a documentary about the Freedom Riders. As one student pointed out, "this [book] could be related to so many things that happened throughout

history and students…would grasp the information more and will be able to have real discussions in class about this."

For *Wonder*, group members discussed using the text as a whole class read and then providing the option for students to read the sequels in literature circles or in book clubs. Some viewed the book as a good resource for teaching point of view and different perspectives. In the group discussing *Out of My Mind*, students shared ideas on a variety of activities they could create that would give their students insights into what it is like to live with different disabilities. Some of the ideas included using word boards and conducting research as part of an inquiry project about children with exceptionalities. The exchange of ideas about *The One and Only Ivan* mostly focused on how children the students know have reacted to the book. After hearing that children of many ages enjoy the book, a student suggested that offering the option of listening to an audio version of the text would be beneficial for those who may not be reading on the level of the text yet.

Roles

As the researchers examined the data, we noticed several connections among the roles and functions of microblogging. In general, we found that the *exchanging ideas* and *sharing resources* functions were highly associated with the *information provider* role. Similarly, we discovered a high correlation between the *asking questions* function and the *information consumer* role. Lastly, the *sharing opinions* and *reflecting* functions were correlated with the *knowledge constructor* role.

Information provider (WUM). The functions connected to this role are *exchanging ideas* and *sharing resources*. Participants did not exchange ideas of any consequence; however, they did share some resources. This sharing was not substantial, but in some instances, participants did provide an applicable resource. This particular role could be of great importance to preservice teachers since the functions of sharing information would widen their limited experiences and allow them to utilize such a role in their future classrooms with their students. If participants would have shared ideas and resources to a greater degree, the role would have been developed, and participants would have been providing information in such a way as to help their fellow participants understand the

content better or connect it to other avenues of learning. None of the participants in the WUM took on that role because the sharing was so limited.

Information provider (AUM). In the AUM discussions, participants took a greater initiative to provide information by sharing resources and exchanging ideas. Shared resources included links to news resources and videos, names of specific historical texts, ideas for supplemental texts to the novels, and sequels. Sharing of the resources was also closely tied to the exchange of teaching ideas. Participants in all of the AUM groups discussed how they might approach using the novels in their future classrooms and what resources could help provide valuable context for making connections while reading. In this way, the students' thinking expanded beyond the primary text, and in some groups, the process of sharing resources had a domino effect in that one person's idea or resource gave another an idea, which was then shared.

Information consumer (WUM). This function was not substantial in these discussions. This role connects to the *asking questions* function. Participants did ask questions of one another, but they did not go beyond asking the questions provided. As a result, their discussions did not evolve into spontaneous or original questions. This role requires participants to move beyond asking the provided questions because that was possibly perceived as a requirement. Therefore, the role of information consumer could never take shape. The participants needed to form their own questions to search for additional necessary information. If they had done this, then the role would have been constructed because the role is about seeking information to broaden knowledge; it is not just about asking questions.

Information consumer (AUM). As previously mentioned, asking questions was a more substantial function associated with the role of information consumer in the AUM discussions. Although many of the questions posed were directly lifted from the questions provided in the previous discussion, there were many more original and spontaneous questions that arose as a result of the student-led conversations.

Knowledge constructor (WUM). Sharing opinions and reflecting are the functions related to this role. The role of knowledge constructor should be one of providing thoughts and the thought process about the topic. By providing opinions and reflections, this role can come to life in the discussion, and participants engaging in such a role are giving

considerable insight compared to simply relaying information they read. The functions data suggests that participants shared opinions in depth by discussing their ratings of the books as well as their favorite sections of the reading. Opinions about characters were also discussed in all the WUM groups. Participants shared how their perspectives changed based on the reading, and they spent time talking about their personal connections to characters and the storyline. This function is key to this role because sharing those opinions and how their opinions were shaped about the book and characters allows for the role of knowledge constructor to take shape. Such a role requires that participants do more than simply throw out opinions but use such opinions to form a dialogue with other participants about how they built knowledge about the text and themselves after reading.

Knowledge constructor (AUM). As with the WUM discussions, the students in the AUM groups took on the knowledge constructor role through their opinion sharing and reflecting. The inclusion of individuals from different parts of the country and with a variety of lived experiences provided unique opportunities for the students to consider others' perspectives on the book in addition to their own. Each member of the group was able to contribute opinions and reflections, that when built upon one another, allowed for a more complete and collective understanding.

Questionnaire

After the WUM and AUM discussions, participants completed a questionnaire and provided their perceptions on which discussion they preferred. A slight majority of participants (44%) preferred the AUM while 35% preferred the WUM. Nineteen percent enjoyed both and 2% preferred neither.

WUM Preference
- "I preferred the small group [classmates only] only because I connected with them on a personal level since I already knew them and we had already discussed the book while we were reading it."
- "I felt like the large group was very overwhelming and I found it hard to follow the discussion. There were too many people and such a small box to contain the discussion."

AUM Preference

- "I preferred the across school microblogging opportunity because I got to interact with people that shared different ideas outside my university."
- "I think the across school microblogging with students from another university was more beneficial. Getting feedback from everyone contributed to a new perspective."

Liked Both AUM and WUM

- "I liked getting input from people who live in different areas, but I also like smaller groups because it is less confusing and there are a fewer number of posts to go through."
- "I liked both. You get to share with people you know but also get some perspective from people who live somewhere else."

Interestingly, the advantages and disadvantages of microblogging mentioned by the students were similar. While some students listed the asynchronous format, the character limit, and the anonymity of the online format as advantages, many other students listed these same features as disadvantages. One clear advantage listed by a majority of the respondents was the fact that they were able to interact with other students from different universities and gain new perspectives.

DISCUSSION

The purpose of this study was to determine how social media, specifically Todays Meet, can be used as a discussion tool in the higher education classroom. In addition, this study examined how the functions of microblogging and students' roles varied during teacher-directed microblogging (WUM) versus student-directed microblogging (AUM). We used a three-pronged framework, created for this study, to analyze and code the roles and functions of the various chats. The framework created for this study could be applied to many other social media platforms and allow instructors to analyze and assess the purpose, role and function of informal and formal online interactions.

The data showed that the AUM discussions tended to have more depth and moved away from the provided questions; additionally, the participants demonstrated all the functions and roles of the microblogging framework in the AUM opposed to the WUM where several were absent. The researchers attribute these differences to the fact that the

AUM were student-led discussions. By providing students a means for creating their own space for a discussion, microblogging can help encourage the constructivist paradigm of collaborative learning. The participants displayed many more functions and developed more roles in the AUM compared to the WUM. Such findings demonstrate that students can use social media to create informal learning spaces that are of value to the learning process, and that these discussions do not have to be instructor-led or instructor-driven.

Microblogging allows everyone (including students) to serve as an information provider, information consumer, and/or knowledge constructor (Gao et al., 2012) and take a more active, participatory role in the classroom. As shown in the data, once participants had expanded their discussion beyond the walls of their classroom, they were able to take on more roles due to their increased functions. Microblogging was a tool that allowed students to create knowledge outside the time and space constraints of the classroom, which allowed students to branch out and take on roles that are critical to quality discussion and learning. The microblogging discussions, both the WUM and the AUM, encouraged students to share their experiences and make connections. The discussions, particularly the AUM, provided an opportunity for an interactive experience and the social construction of knowledge. The process of sharing personal connections and experiences created a new collective knowledge that would not have occurred in a teacher-centered, whole group book discussion. While there were challenges related to logistics and character count, the primary benefit of the AUM was that students were able to transform their opinions, feedback, and resources into substantial roles that evolved into intelligent discussion.

Overall, microblogging in this study led to an iterative process in which the students interacted with each other and with the content of the books in ways that allowed them to transform ideas, thoughts, and information into co-constructed knowledge. This process was particularly evident for AUM due to their diverse perspectives and experiences. The diversity of their ideas and the inclusion of multiple students from a variety of backgrounds created a unique experience that allowed for a more nuanced sociocultural construction of shared knowledge. The ability for social media to transcend the constraints of time and location allowed these conversations to take place

and encouraged diverse perspectives and experiences that otherwise, would not have been possible.

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Online Connections

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Appendix A
List of Teacher Directed Questions for WUM Discussion

1. On a scale from 1-10 with 10 being the best, how would you rate this book?
2. What was your favorite part of the book?
3. Has this book changed you or broadened your perspective? Did you learn something new or were you exposed to different ideas about people?
4. How do you think the author uses the story and the characters to change students' thinking about <<insert book theme or topic here>>?
5. How could <<title of book>> be used to encourage diverse perspectives about <<insert book theme or topic here>>?
6. What is a short supplementary text that you could pair with this novel? How does this supplementary text complement the theme(s) of the book?
7. What literacy skill(s) could you teach with this novel?
8. Would you use this book in your classroom? Why or why not?

Appendix B
Microblogging Questionnaire

Professor:

Book Discussed:

Please respond to the following questions about your microblogging experience. You may refer to the transcript of your participation in the microblogging to help you answer the questions.

1. As you microblogged with your classmates, what was your role? As you answered the teacher provided questions and interacted with your classmates, did you:

   a. provide details, quotes, or thoughts straight from the book? If so, provide one example:

   b. go beyond the book and make new connections with your own life, another text, and/or the world? If so, provide one example:

   c. use short phrases to agree or briefly respond to others? If so, provide one example:

2. As you microblogged with your classmates, what did you see as the function of your comments?

   a. ask a question? If so, provide one example:

   b. give your opinion? If so, provide one example:

   c. exchange ideas? If so, provide one example:

   d. share a resource? If so, provide one example:

   e. reflect on your book? If so, provide one example:

3. Did you prefer the small group microblogging opportunity with your classmates or did you prefer the across school microblogging opportunity with students from another university? Why?

4. Based on your experience with microblogging, what do you think are the advantages of microblogging? What are the disadvantages of microblogging?

5. Did your professor (or group members) employ microblogging in a useful way? If so, how was it useful to you?

Appendix C
Sample Microblogging Transcript from *Brown Girl Dreaming* AUM

And that's why people are so mad. Page 72
9:57pm, Tues, Oct 20, 2015 by Lisa

Did anybody catch how the Woodson family may trace all the way back to Thomas Jefferson?
9:59pm, Tues, Oct 20, 2015 by Lisa

Lisa, I never picked up on that! That is very interesting!
10:54pm, Tues, Oct 20, 2015 by holly

I don't really have a favorite quote from the book but I like how it keeps the chapters simple to read and short. Good for kids
12:09am, Weds, Oct 21, 2015 by Moses

And adding to Alexandria, the small chapters have powerful meanings. That's what I like about this book as well
12:10am, Weds, Oct 21, 2015 by Moses

I agree with Moses, kids would want to read more if the chapters are short even though the book it self is 300pages.
8:53am, Weds, Oct 21, 2015 by LaurenL

Lisa, how were you able to figure out that the Woodson family was traced back to Thomas Jefferson?
8:54am, Weds, Oct 21, 2015 by LaurenL

Also, with small chapters it gives kids motivation to read more than just one or two chapters, they would probably read like 20.
8:56am, Weds, Oct 21, 2015 by LaurenL

I totally agree that with the chapters being a shorter length it helps them to read more. Kids don't want to have to read long chapters.
1:17pm, Weds, Oct 21, 2015 by Caitlyn

They would loose interest very quickly.
1:17pm, Weds, Oct 21, 2015 by Caitlyn

I like the chapter towards the end where she says she believes in everything, contrary to each other. Makes me think why but it makes sense
5:44pm, Weds, Oct 21, 2015 by Moses

Also, where she says that there are many worlds and you can choose one to walk into each day. That is powerful to me. Any one else?
5:45pm, Weds, Oct 21, 2015 by Moses

"Each day a new world opens itself up to you". I believe that is true because everyday is a new day and you can choose what you want and fol
5:46pm, Weds, Oct 21, 2015 by Moses

low it and decide each ending
5:47pm, Weds, Oct 21, 2015 by Moses

LaurenL, The Woodsons of Ohio pg8 explains how they traced her father's history back to Thomas Jefferson & his slave, Sally Hemings.
7:15pm, Weds, Oct 21, 2015 by Kayla

This will be a book I reread over and over again because it is so inspiring and powerful. It made me recall my own childhood memories.
7:18pm, Weds, Oct 21, 2015 by Kayla

I guess I overlooked that Kayla, but that is interesting that she noted that in her book. I would love to use his book for a history aspect.
8:59pm, Weds, Oct 21, 2015 by LaurenL