

The Complexity of Literature Circles in Social Constructivism

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This literature review explores the theoretical and practical aspects of literature circles. The related research was located using Education Research Complete, Educational Research and Information Center, and PsycINFO databases. This analysis of literature circles will be situated in social constructivism and explores Vygotskian perspectives on interaction in relation to literature circles as a collaborative task. Following the theoretical framework, practical ways of implementing literature circles will be discussed. Engagement is reviewed from several perspectives in literature circle research, and an argument for a different orientation will be established. Finally, the review will explore the measurement of and the relationship between personality and quality of engagement in literature circle discussions.

Literature circles have generally been studied qualitatively. Historically the major focus of literature circle research has been implementation (Bond, 2001; Burns, 1998; Clarke & Holwadel, 2007; Dail, McGee, & Edwards, 2009; Martinez-Roldan & Lopez-Robertson, 1999; Pearson, 2010; Peralta-Nash & Dutch, 2000; Raphael & McMahon, 1994; Spiegel, 1998; Wiencek & O'Flahavan, 1994), as well as the student and teacher perceptions of literature circles (Alvermann & Young, 1996; Brabham & Villaume, 2000; Daniels, 2002; Day & Ainley, 2008; Evans, 2002; King, 2001). These perceptions mainly relate to whether students and teachers enjoy literature circles as an instructional activity.

Literature Circles as Social Constructivism

Literature circles are generally understood as peer-led student groups reading the same text with an opportunity to discuss content (Daniels, 1994). The goal of literature circles is to

enhance the comprehension of text in a motivating and authentic manner. It is also contended that literature circles help students view reading as a social process (King, 2001).

According to social constructivist theory, learning occurs through social interaction. Learning in social interactive contexts can be observed in several ways. Vygotsky (1978) identifies four major aspects of learning 1) the zone of proximal development (ZPD), 2) semiotic mediation, 3) concept development, and 4) internalization. The ZPD is the zone in which a child can achieve success in learning when aided by a knowledgeable other. According to this tenant, a knowledgeable other is required in order to learn; therefore, instructional practices need to account for this because it is important to engage students in meaningful learning experiences. Typically, when initiating literature circles, the teacher assumes the role of the knowledgeable other and models interaction for the students through mini-lessons and other demonstrations. Later, these modeled interactions influence the discussion produced by the students (Dixon-Krauss, 1996). The learning from teacher is then applied in other contexts such as literature circles.

Vygotsky's second tenant, semiotic mediation relates to using signs and symbols in a social context to create meaning. Essentially, semiotic mediation is the process in which humans internalize the world around them through discourse. In most literature circle designs students engage in some sort of preparation prior to discussion in the form of writing questions, making connections, or other comprehension strategies. During the discussion, their notes serve as signs and symbols that represent their understandings of the text. Ideally, the participants' initial understandings act a spring board into semiotic mediation of meaning (Shotter, 1993). These signs and symbols initiate cognitive restructuring. A student's understanding of text can change as he/she engages in dialogue. Language can be a powerful sign that aids students in developing

their understanding of a concept; therefore, students should be given ample opportunity to use language as a learning tool.

Following is an example of students engaging in semiotic mediation in a literature discussion. McMahon (1996) describes two boys as they negotiate their understandings of war. At the beginning of their literature circle discussions, their symbols represent a more humorous perception of war, drawing pictures of war consisting of little stick figures being bombarded with heavy artillery. After engaging in literature circles for four weeks, the students take a more serious stance, and discussed consequences of war. The more sophisticated understanding might be the result of semiotic mediation, in this case language serving as the signs and symbols. The students began with their own conceptions of war, but through the collaborative negotiation of meaning and exploration of the topic, their understandings changed. This semiotic mediation leads to the third aspect of the social constructivist perspective—concept development. Consider the previous example: the students did not initially have an accurate concept of war. This was demonstrated in their humorous drawings and laughter during discussion. After the concept of war was developed through reading and subsequent dialogue, their discussions became serious, and the conversations turned from joint laughter to heated debate. Through the process of reading, discussing, and journaling, their concepts of war became more sophisticated. Therefore, the first three components of social constructivist theory help serve to explain the complex path from a novice understanding to a more complex and sophisticated one.

The last component takes the newfound concepts and internalizes them. According to Vygotsky, there are two ways to internalize concepts. He describes two planes of mental function: interpsychological and intrapsychological. Essentially, an individual in a group connects the social interaction to their prior experiences. Students do not internalize the social

constructed reality verbatim, but create a coherent understanding that can exist within their individual realities. While the internalization may not resemble the individual understandings of other group members, the social interaction plays a major role in the construction of private knowledge. In other words, the group conversation helps participants internalize information related to the text (McMahon, 1996).

Because discussion during literature circles can parallel the process of learning described in social constructivism, it makes sense to view the instructional activity through a social constructivist lens. Some argue, however, that literature circles are better understood from a socio-cultural perspective (Tracey & Morrow, 2006). According to socio-cultural theory, students bring their unique experiences to the discussion; therefore, different cultural perspectives represented by the respective students undoubtedly influence the conversation. Still, in a broader understanding of literature circles, the influence of a student's culture is seen in semiotic mediation, concept development, and internalization. All of the participants' previous experiences, including culture, influence the understanding of a text. These idiosyncratic, prior experienced-based understandings are known as schemata (Anderson & Pearson, 1984). In Schema Theory, the prior knowledge of an individual directly affects the comprehension of text. The various schemata of the group lead to coherent interpretations of text. The social constructivist process appears to best describe how unique interpretations of text are reorganized and internalized through social interaction (Dixon-Krauss, 1996; Guthrie & Others, 1995) because students engaged in literature circles move through the four aspects of social constructivist theory as described by Vygotsky (1978).

Scaffolding

Scaffolding, a construct coined by Bruner (Wood, Bruner, & Ross, 1976) relates to Vygotsky's (1978) notion of ZPD, and is a metaphor for providing needed support to students in an effort to maximize their success with challenging tasks. Scaffolding begins with the teacher's curricular decisions based on students' needs. For example, if students are proficient in classroom literature discussions, then a teacher may decide that literature circles may be an appropriate next step. Implementing literature circles in elementary classrooms is a difficult task, and in many cases requires a period of trial and error (Clarke & Holwadel, 2007). This period of trial and error might also be explained as making a difficult task achievable—an important process in scaffolding (Wood et al., 1976). The restructuring of literature circles through mini-lessons and student preparatory methods can help diminish the difficult transition to peer-led discussions (Burns, 1998; Clarke & Holwadel, 2007; Maloch, 2002). Scaffolding may be necessary to calibrate the instructional activity to reside within a student's ZPD. In the case of literature circles, once the task is calibrated to fit within the students' ZPDs, instructional scaffolding by the teacher should be removed. However, implementing peer-led literature circles is challenging; consequently, students are encouraged to step up as leaders, scaffold discussions, and make meaningful conversations (Li et al., 2007).

In this following example from a study (Palincsar, 1986) on peer-led discussions, the teacher provided scaffolding through dialogue. Teacher and student dialogue was analyzed in an ethnographic study involving 10 teachers with six students each. These students and teachers were in the treatment group, while an equal group of students served as a comparison group. For the treatment, the teachers learned a scaffolding method to teach comprehension strategies through dialogue. The sessions lasted 30 minutes for 20 days. In the sessions, the teachers read aloud expository passages and aided the students in understanding through dialogue. The

conservational themes of the groups helped students connect new ideas to existing ones.

According to the researcher, the conversations were dynamic, and affected by the needs of the student. In other words, the scaffolding was not prescribed before the discussion began—the scaffolding resulted from participating in the conversation and reacting to the contributions. The results indicated that students receiving dialogic scaffolding were able to perform more independently than students in the comparison group. According to this example, teachers help move discussions forward, and take the discussions to higher levels. However, in peer-led discussions, students are left to take on the role of enhancing the discussion.

Tharp and Gallimore (1988) asserted that there are six observable ways in which adults scaffold children in learning: modeling, contingency managing, feedback, questioning, cognitive structuring, and instructing. However, the transcripts in Palinscar's (1986) study revealed that scaffolding was unpredictable; therefore, explicitly preparing students to scaffold one another in the six means for assisted performance may be a complex task. The scaffolding dialogue was directly related to the students' current knowledge and understanding which indicates that scaffolding in discussions is likely context specific. The knowledgeable other, in this case the teacher, was able to extend the students' talk, and guide them towards new meaning through scaffolding. Ideally, teachers want this same phenomenon to occur in student groups; however, preparing students for high-level discussions is highly complex. Scaffolding is an instructional concept that helps students achieve on the edge of their capabilities. The countless variables and factors involved in an elementary literature discussion make predicting the outcomes very difficult, therefore appropriate scaffolds have to be in place prior to discussions.

Complexity in Literature Circles

In some ways, literature discussions are complex adaptive systems (Holland, 1992) in that the teacher creates a container (Eoyang, 1997) in which students are encouraged to discuss the text. Within a container however, chaos can ensue because of the discussion's open format (Trygestad, 1997). Chaos is actually desired in discussions (Boal & Schultz, 2007). Productive conversations are often nonlinear. In the beginning, conversations may seem disorganized. However, as the discussion moves toward the edge of chaos (Caine & Caine, 1997), it begins to self-organize (Boal & Schultz, 2007). Discussants build off each others' knowledge and contributions.

Because literature circles are complex, there is a possibility for off-track discussions. Structure, modeling, scaffolding, and the transfer of learning keeps students focused, and provide boundaries for discussion; otherwise, talks of birthday parties, video games, and recess prevail (Dixon-Krauss, 1996). There is also potential for negative and interactions unrelated to the text (Clarke & Holwadel, 2007). Discussions are social processes, and it is important for literature circle discussions to have social norms, mutual respect, and students should be well versed in collaborative skills (Wiencek & O'Flahavan, 1994).

Literature Circles as Collaborative Groups

The ZPD is an important component of Vygotskian perspectives (McCaslin, 2009). The ZPD refers to individual ability to accomplish a challenging task with the assistance of a knowledgeable other. This concept, though relatively easy to observe in a one-on-one, teacher and student interaction, is more complex in collaborative groups. The knowledgeable other is clearly the teacher when working one on one with a student. However, as the numbers increase, so do the variables, especially when the teacher is eliminated because the direction of the conversation is no longer controlled by the teacher. Focusing the direction of a group is

challenging task, not only because different students work within ranging ZPDs, but other intrapersonal factors beyond ZPD that affect the dynamics of the group (Li et al., 2007). For example, introverted students tend to keep to themselves, while extraverted students might dominate the conversations. Research (Tudge & Hogan, 1997) suggests that age, gender, motivation, and competence of each individual changes the dynamics of a group when engaged in a collaborative task. In addition to these personal factors, the ecological system, whether at home or in school, impact the collaborative efforts of individuals. School discourse is bound by the microsystemic interactions common in educational institutions (Bronfenbrenner, 2005). In other words, group discussions and collaborations are characterized by complexity impacted by the individual and the environment.

The teacher is typically the knowledgeable other, and is the model for literate discussions. Tudge and Hogan (1997) agree that students need an external mediator to help internalize inner speech, so students can meet the demands of the situation; in this case, literature circles. Tasks are directed by inner speech in the novice stage (Berk, 1985). Once tasks are internalized, however, the tasks become automatic and the need for inner speech dissipates until the complexity of the task increases. The inner speech and self-regulation required in literature circle discussions, as well as other collaborative tasks, are internalized through conversations with the teacher (Smolucha & Smolucha, 1989). In the classroom, this additional influence, adds to the complexity of literature circles as a collaborative task because the teaching is transferred into the group dynamics.

Another complex component of literature circle discussions is evident because it is a language arts activity. Cognitive flexibility theory (Sprio, 1988) argues that in order to understand ill-structured domains such as free-flowing discussions, one cannot simply rely on

intact schemata to demonstrate advanced knowledge; the learner or discussant must apply various schemata from the self and others (Spiro, 1988). Krol's study (2004) measured the effects of a national cooperative learning initiative in the Netherlands. Up to this point, collaboration was rarely observed in the Dutch classrooms because whole group teaching dominated. The study measured cognitive development on a math and language arts task. In a pre/post-test design the treatment groups collaborated on a task, and the control completed the task alone. The group that collaborated in math did not perform significantly different from the independent group according to the post-test. However, there was a high effect (.70) in the language arts group. The researchers recognize the possibility that more than one interpretation of the selected passage can account for the cognitive restructuring. Private knowledge is made public, discussed, and internalized again in a different way. The discussion of the reading falls into an ill-structured domain; therefore, it requires cognitive flexibility (Spiro, 1988).

Researchers (Fawcett & Garton, 2005) investigated how students arrived at a common understanding. The researchers studied the effects of peer collaboration on problem solving. They stress that problem solving through collaboration is important because the skill is widely used in society. Teaching students to problem solve in groups is applicable outside of school walls, therefore it is warranted to conduct research. Fawcett and Garton state that collaboration should be centered on a unified task--an issue that will be discussed later in this section. Their study included 125, year 2, (6-7 years-old) students in an affluent Australian city. There were 10 pairs of high/high students, low/low, and high/low students completing a card sorting activity. The one-way ANOVA revealed a significant main effect among groups that sorted the cards correctly. The low students performed significantly higher on the sort when paired with a higher-level student. The other pairings make no significant gains. It is important to mention that

the overall performance of collaborative groups was significantly higher than the individuals in the control group. Though results of the study differ on the individual post-tests, the overall group performances were better than when individuals sorted alone. Thus, during this task, two heads were indeed better than one. Fawcett and Garton draw on Vygotskian and Piagetian beliefs stating that both differing ability and cognitive conflict benefit cognitive change in collaborative tasks.

The factors that influence group dynamics manifest physically (Tudge & Hogan, 1997) and mentally (Vygotsky, 1978, Li; 2008). These two broad factors, mental and physical, along with the context and implementation of the instructional activity, can influence the dynamics of literature circle discussions. Literature circles are complex, and they must be implemented carefully (Chan, 2010; Clarke & Holwadel, 2007; Day & Ainley, 2008). The instructional design has been researched extensively, but there is a gap in the research when considering group configuration.

Implementing Literature Circles

Although there are many forms of literature circles (Almasi, O'Flahavan, & Arya, 2001; Bond, 2001; Brabham & Villaume, 2000; Burns, 1998; Clark, 2009; Daniels, 2002), most versions share some common factors. In many cases, the groups are formed based on individual reading preferences. This initial choice of text is a key feature of literature circles that promotes reader engagement (Daniels, 2002; Flowerday, Schraw, & Stevens, 2004; Peralta-Nash & Dutch, 2000). The opportunity to discuss the text is another integral element when implementing literature circles. The discussions provide an avenue for learning through social interaction (Vygotskiĭ & Cole, 1978). Beyond these key features of choice and discussion, literature circles bifurcate and manifest themselves in many different forms.

Daniels (1994) introduced a version of literature circles that possesses the key features described above, as well as structural roles for discussion. Roles, such as discussion director, word wizard, connector, summarizer, or illustrator are given to students in preparation for the literature discussion. In fact, many interpretations of literature circles, or book clubs, assign roles to participants (Pearson, 2010; Sandmann & Gruhler, 2007; Tompkins & Tompkins, 2001). In support of this perspective, research indicates that students prefer some sort of preparatory work prior to discussion (Evans, 2002). However, preparatory methods vary in implementation. The structures range from rigid roles (Miller, 2002; Tompkins & Tompkins, 2001) to complete open discussion (Li et al., 2007). The differing structures might be attributed to varying teacher philosophies, goals for literature circles, or a teacher's past experience with literature circles.

Some researchers (Pearson, 2010) argue that limiting students to roles in literature circles potentially inhibits the discussion. Assigning roles limits the free flowing aspect of the discussion. Pearson's (2010) class of 28 students served as the subjects in a study that used roles for discussion. The teacher implemented literature circles with scripted lessons and utilized roles. Pearson was hoping to see more exploratory talk (Mercer & Wegerif, 1999). The goal was to have children elaborate reasoning, use personal anecdotes, and back up their claims with text evidence. However, discourse analysis revealed that students only exhibited these desired behaviors when conversation switched from school discourse to an informal discourse. In other words, when students abided by the structured roles, the discussions were less likely to go beyond the minimum expectation. However, when students neglected the roles, students were able to discuss freely. Pearson found that the less-structured instances produced more exploratory talk and thinking together (Pearson, 2010).

Newer forms of literature circles (Day & Ainley, 2008; Eriksson & Aronsson, 2004; Hulan, 2010) eliminate the use of roles, and change the preparatory process for discussion. A new direction of literature circles emerged with the aim to deviate from traditional discursive patterns in classrooms between teachers and students (e.g., initiate, respond, evaluate) and move towards more authentic conversations (Goatley, Brock, & Raphael, 1995).

There are other research-based preparatory methods for literature circles. Research (National Institute of Child Health and Human Development, 2000) suggests that summarizing, making connections, and word study are helpful reading strategies. Earlier literature circle designs tended to promote the use of one skill per discussion; for example, the student in the connector role is only asked to make connections and the illustrator is only asked to create mental images (Miller, 2002). Each student has a different role, and provides insight to the discussion. More recently, researchers have advised promoting multiple comprehension strategies simultaneously over isolated use because strategic readers use multiple strategies when reading for more authentic purposes (Brabham & Villaume, 2000). In response to the need for multiple strategy use, teachers using literature circles encouraged students to generate questions (Long & Gove, 2003a). In this case, students are encouraged to generate questions to ask within their literature circles that would elicit multiple types of responses instead of restricting contributions such as only allowing a student to make connections. Other preparatory methods tapped underlying comprehension strategies as a foundation for discussion (Clark, 2009; Lloyd, 2004). However, in order to achieve the goal of unrestricted contributions, need to be taught how to generate questions and/or verbalize various comprehension strategies; therefore, it is important that teachers prepare students through explicit instruction and modeling.

Mini-lessons are often used to prepare students for literature circles. In a third-grade case study involving five third-grade students, researchers (Sandmann & Gruhler, 2007) emphasized mini-lessons as a necessary component of literature circles. The teacher modeled strategy use in literature circles to promote literate and functional discussions. The group met twice a week for four months. The students were instructed in functional and reflective talk prior to the meetings. Functional talk explored the text, while the reflective talk examined the functionality of the group itself. The researchers coded the discussions based on functional and literate talk. The researchers found that reflective talk decreased over time, and functional talk increased. This indicates that, initially, structure and management of the group is necessary—reflective talk, but as students become practiced conversationalists, the focus shifts towards literature content and the students engaged in functional talk.

However, some teachers may want literature groups to be more than merely functional. When groups are functional, they talk about the text, but talk may seem superficial if students do not process and interpret the text based on their own experience. In addition to mini-lessons, teachers can provide interventions as needed to foster the kind of collaborative dialogue desired (Maloch, 2002). In Maloch's five-month qualitative study in a third-grade classroom, the transition to peer-led discussions was difficult for students. Therefore, the teacher carefully monitored the transition period, and intervened when necessary. Per Maloch's discussion, the interventions focused on the teacher's goal for exploratory talk in literate discussions. Essentially, the reflective talk is necessary to structure the group, and the functional talk keeps the focus on the text. In the end, however, it was Maloch's goal to go beyond these basic features of discussion, and have students engage in exploratory talk that deepened their understandings of the text.

Methods of literature circle implementations that employ strategies that tap students' experiences and encourage personal insights are also beneficial when encouraging exploratory talk. In a study conducted by Stien and Beed (2004), 22 third-grade students indicated whether they liked marking interesting sections of text or the use of roles. After using each the methods, the students were surveyed to determine which method they preferred. One student likes the roles, 3 like both roles and marking, and 18 students prefer marking. Teachers, researchers, and students agree (Stien & Beed, 2004) that other preparatory methods, such as marking interesting sections of text (tabbing) are preferred over the use of roles, and foster more personal contributions to literature circle discussions.

From a social constructivist perspective there is a need for a knowledgeable other. In the case of intervention and direct instruction, the teacher fills that role. However, if discussants receive the necessary support from the teacher, the students can assume the roles of knowledgeable others (Vygotsky, 1978; Wiencek & O'Flahavan, 1994). In a study involving 22 sixth-grade students (Wiencek & O'Flahavan, 1994), the teacher minimized her dominance and observed students engaged in literature circle discussions. The groups actively constructed meaning of text and were generally excited about the discussions. The differing opinions and interpretation of meaning in text created a context for social interaction, a key component of learning from social learning perspectives (Vygotsky, 1978).

Although it may be difficult for the teacher to step back, it is accomplished by applying proper scaffolding and releasing when students achieve the desired level of participation. Long and Gove (2003) conducted a study with 27 fourth-grade students. They observed the implementation of literature circle engagement strategies and analyzed transcripts qualitatively. The study (Long & Gove, 2003a) described three strategies for a successful literature circles. The

first was more of a plea for respect in that students were expected to ask questions, listen to responses, honor perspectives, and encourage one another. The next strategy was largely characterized by inquiry. Essentially, students were asked to determine the deeper meaning in text. The last strategy asked students to pose and solve problems. They practiced each of these strategies in a variety of different ways before applying them in literature circles. As prescribed in this study, the role of the teacher was minimized, and scaffolds were withdrawn once competence in literature circles was observed.

Another study (Clarke & Holwadel, 2007) reports similar implementation, but focused more on the context of the literature circles. The researchers describe a class of sixth-grade students in an urban, low-SES school in “Academic Emergency”—the lowest of the state’s rating system for public schools based on standardized test results. The teacher was unhappy with literature circles in her classroom. They were unproductive and riddled with negativity. Clarke and Holwadel (2007) responded to the negativity in student discussion groups by using mini-lessons that promoted respect. In an effort to create cohesion, the teacher utilized mini-lessons that reminded group members that they were involved in something special. Next, the students were taught to take turns and share the floor. The teacher realized that students who are not interested in the content are less likely to engage positively in discussions; therefore, the teacher chose good books that fit the interests of the students. Finally, the authors describe the need for coaching students in desired discursive patterns. The decision in this case, was to reinsert the teacher into the literature circles to serve as a model for positive and productive talk. Although, at the conclusion of the research, the teacher felt that literature circles still require further nurturing and growth, the qualitative data suggest that the mini-lessons improved the quality of literature circles and increased positive interaction.

Literature circles are complex and contain a substantial number of variables such as implementation strategies (Clarke & Holwadel, 2007), student population (Long & Gove, 2003a), and preparatory methods (Clark, 2009). The various implementations described previously reflect the difficulty in allowing students to engage in discussions without a teacher and still achieve the intended goals. The constant change in literature circle design reflects the need to ensure discussions are productive in order meet the high demands on student learning (Burns, 1998; Clarke & Holwadel, 2007; Day & Ainley, 2008; Pearson, 2010).

Types of Engagement in Literature Circles

One way to promote discussions is to increase student engagement. Certo, Moxley, Reffitt, and Miller (2010) report a study of a random sample of students, consisting of 24 first, third, fourth, and fifth graders who had participated in literature circles. The students were interviewed regarding their literature circle experiences. From the data, the researchers concluded that literature circles promoted active engagement among participants. The researchers analyzed the interview responses and found that 92% of the students described literature circles as the “best part of language arts” (p.251). In fact, a third grader actually compared literature circle discussions to lunch time and physical education because of the inherent freedom during the instructional activity. Such a positive perception among these students demonstrates the potential power of literature circles as an in-class activity. However, one cannot assume that because students enjoy an activity that they are cognitively engaged in it. In addition, one cannot assume that mere participation represents engagement. Other studies (McElvain, 2010a; Tracey & Morrow, 2006) take a closer look at student participation and students’ construction of meaning. The following looks at engagement based on instructional constructs, such as meaning making and scaffolding.

In an experimental study (McElvain, 2010b) conducted with 75 fourth through sixth-grade students, the students in the literature circle treatment group outperformed the control group in standardized reading comprehension testing. The qualitative aspect of McElvain's research was confirmed by other research (Carrison & Ernst-Slavit, 2005) in that students in the participating in literature circles were excited about reading, confident, and more likely to participate in class discussions according to teacher observation. Both studies (Carrison & Ernst-Slavit, 2005; McElvain, 2010a) interviewed students about their literature circle experience. The results were similar in that students genuinely enjoyed the instructional activity, but also included pre- and post-test scores of comprehension that confirm learning occurred as a result of discussion. Thus, indicating that not only do students enjoy literature circles, but individual comprehension increases as a result of the activity.

Although it is important that students enjoy an instructional activity (Certo, Moxley, Reffitt, & Miller, 2010), the types of engagement researched begins to shift from enjoyment to observable behaviors that promote learning such as student scaffolding and facilitating group discussions with leadership qualities (Li et al., 2007; Tharp & Gallimore, 1988).

While teacher scaffolding is a focus in literature circle discussions (Evans & International, 2001; King, 2001; Maloch, 2002), not much has been done to investigate peer scaffolding. Essentially, a more recent direction of literature circle research seeks to understand characteristics of students who contribute to the quality of discussion and influence the participation of other group members, including emergent leadership and the contributions of discussants.

One study (Short, Kaufman, Kaser, Kahn, & Crawford, 1999) juxtaposed the inclusion and exclusion of teachers in literature circle discussions. Teachers were included in four different

groups with four different roles: teacher as facilitator, participant, mediator, and active listener. In another classroom, 9-11 year olds engaged in peer-led discussions. While each teacher role had a differing effect on the groups' discussions, discourse analysis suggests there were only minor qualitative differences between teacher led and peer-led groups. For example, student groups spent more time on each topic and talked about a smaller range of topics. Overall, both types of groups stayed on topic, and discussed relevant issues regarding the text. Although there were only minor differences, teachers did encourage discussion of a wider range of topics and deepened the discussion of relevant topics. Teacher scaffolding is arguably beneficial in group discussions, but the absence of the teacher does not indicate unproductive discussions necessarily. This study indicates that students are capable of engaging in literate discussions that are focused and relevant to the text. The issue remains whether the productivity of the peer-led groups is somehow the result of students facilitating discussions similarly to the teacher-led conditions. According to the results, peer-led conditions were not completely hopeless and unstructured, but mirrored the productivity of the teacher-led conditions. The study focused on the leadership structure as the variable. Therefore, the lack of significant differences indicates other variables may account for differences.

Tharp and Gallimore (1988) describe six ways in which adults scaffold children: modeling, contingency managing, feedback, questioning, cognitive structuring, and instructing. Using this framework, Gnadinger (2008) conducted a study to determine whether peers scaffold each other similarly. The study involved 23 second and third-grade students. The students engaged in various activities across the curriculum such as science experiments, reading response, and writing conferences; thus, many different collaborative, small-group tasks were analyzed. The researcher coded the transcripts based on the six means of assisted performance

(Tharp & Gallimore, 1988). Students were observed predominantly using questioning, providing feedback, and instructing. Modeling and contingency managing were also observed, though less salient. Finally, there were no occurrences of cognitive structuring observed during the study (Gnadinger, 2008). The researchers conclude that students are capable of scaffolding one another.

Teacher scaffolding is often necessary to deepen student discussions and include a broader range of topics (Gnadinger, 2008; Short et al., 1999). The study conducted by Short et al. (1999) examined groups with teachers who scaffolded the discussion and talked about a larger variety of relevant topics. However, the Tharp and Gallimore (1988) study observed students who were capable of scaffolding the discussion. Therefore, if a teacher truly wants to transition to peer-led discussions, she must help students assume the role of facilitator. Then, the most prominent facilitators emerge as leaders.

Emergent leadership was empirically studied in a fourth-grade classroom (Li et al., 2007). The researchers analyzed 12 open-discussion groups for five functions of leadership: turn management, argument development, planning and organizing, topic control, and acknowledgement. Student groups were heterogeneous and composed of five to eight students. The group members read the same narrative text individually and met in their groups to discuss the story. Teachers were asked to allow students to talk without interfering. The students met twice per week for five weeks. The researchers found that half of the groups had at least one leader emerge and 5 groups had more than one student exhibiting leadership functions. While it is remarkable how many leaders emerged, on a practical level, one must be concerned with the group without a leader because the leadership functions are similar to scaffolding, and groups lacking scaffolding may be less productive (Wood et al., 1976).

Li et al.'s (2007) functions of leadership (turn management, argument development, planning and organizing, topic control, and acknowledgement) are arguably similar to Tharp and Gallimore's (1988) six means of assisted performance (modeling, contingency managing, feedback, questioning, cognitive structuring, and instructing). While the leadership functions and six means cannot be matched up perfectly, they often overlap (see Table 1).

Table 1. Comparison of Six Means of Assisted Performance and Leadership Functions

Tharp & Gallimore (1988)	Li et al (2007)	Example
Modeling	Planning and Organizing	"Try this..." "I think the teacher means..." "Think about it this way..." "It's like..."
Contingency Managing	Planning and Organizing Topic Control	"I'm going to tell." "The teacher will love this." "You need to stay on task"
Feedback	Acknowledgement Argument Development	"I don't think so." "Good job." "That's right."
Questioning	Argument Development Topic Control	"Who was the main character?" "What do you mean?"
Cognitive Structuring	Topic Control	"Let's take turns." "Let's talk about the main character first."
Instructing	Planning and Organizing Argument Development	"Make a connection." "Answer the question." "Think about it again."

Modeling, the first of Tharpe and Gallimore's (1988) six means of assisted performance is a way to plan and organize the group. Modeling the desired discourse gives students the means to contribute to the discussion in a coherent manner. Students who model productive engagement in discussions helps other students plan their contributions to the discussion. For example, a student may use a similar language stem, such as "I made a connection when...", but include a personal connection. As leaders model the use of language stems, other students learn the productive discourse structure. Contingency managing also serves as planning, organizing, and

topic control in that rewards and punishments were administered for staying on topic and maintaining organization in the group. For example, a student might threaten to “tell the teacher” or commend a peer for a helpful contribution to the discussion. In the study conducted by Li et al (2007), the frequency of leadership functions grew over time, therefore children were actually learning the functions through discussion practice.

The acknowledgement function of leadership can be achieved by offering feedback. This feedback acknowledges other group members’ responses descriptively. In addition, offering feedback is form of contingency managing. Certain types of feedback—for example, questioning—align with the Li et al’s (2007) argument development function of leadership. Asking questions about members’ contributions helps students examine their own beliefs and contribute to the development of an argument. Through feedback, students make connections and collaborate on the reasoning behind the argument. In addition to argument development, asking general questions about the text is also a form of topic control. It helps guide the discussion down new pathways. Cognitive structuring is another form of topic control as it explicitly asks students to stay on task as well as on topic through ordering the discussion points.

Finally, in this comparison of group discourse functions, instructing is also evident in argument development and planning and organizing. Students directly ask students to accomplish certain tasks or elicit particular responses. When instructing, students also ask students to examine their interpretations and rethink their reasoning. The instructors help other students build their own argument about a particular topic. In the study conducted by Li et al (2007), the frequency of leadership functions grew over time, therefore children were actually learning the functions through discussion practice.

Although it is not a perfect overlap, it is important to see the connection between leadership and scaffolding. The leader(s) of each group in the study (Li et al., 2007) were scaffolding students in discussion techniques and furthering the discussion by asking relevant questions and responding appropriately. In that large scale study, it may, again, seem remarkable that so many leaders emerge, but an entire group of students may not have received the same learning experience because they lacked a leader that guided the discussion productively. Unfortunately, the study by Li (2007) did not describe the specifics of the leaderless group, but according to previous literature circle research (Day & Glenna, 2008) improper implementation of literature circles can be devastating. Therein lies the problem, every literature circle group should be productive. Teachers should strive to give every student equally productive learning contexts. Li et al (2007) mention that emergent leadership cannot be predicted by fixed personality traits, only leadership qualities in the contexts in which they occur. However, if personality traits are fixed, then they would arguably transfer across all contexts. Therefore, it might be beneficial to determine which fixed personality traits influence elementary literature circle discussions.

Measuring Unique Student Contributions

Many studies report a higher level of engagement and positive student perceptions of literature circles (Alvermann & Young, 1996; Bond, 2001; Burns, 1998; Dail et al., 2009; Day & Ainley, 2008; King, 2001; Long & Gove, 2003; Pearson, 2010). Still, literature circles should not be considered a “silver bullet” (Spiegel, 1998). In one article, the authors (Long & Gove, 2003) promote literature circles favorably because they provide students with equal opportunity to respond. Because of the complexity of literature circles, however, it may not be safe to assume equality. Although student groups might appear equitable, some groups are more successful than

others, and exhibit a higher level of quality (Li et al., 2007). There must be some explanation for varying instances and quality of student participation. One explanation might be found in characteristics of students and their unique contributions to discussion.

As noted earlier, an important instructional scaffold is modeling (Tharp & Gallimore, 1991). In the study conducted by Li et al (2007), the frequency of leadership functions grew over time, therefore children were actually learning the functions through discussion practice. In literature circles, students model their comprehension through speech. Through these oral expressions, students are verbalizing their comprehension and interpretations of texts. Pre- and post-tests of comprehension measure the individual understandings after the fact (Carrison & Ernst-Slavit, 2005; McElvain, 2010a; Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009). Research in literature circles should also focus on what is happening during the discussion. Measuring comprehension in an open discussion is difficult and uncommon.

In a descriptive study (Paradis, Chatton, Boswell, Smith, & Yovich, 1991) two university professors and three elementary school teachers sought to find an informal method of assessing comprehension during discussions. All three teachers had expressed their concern for accountability in literature based classrooms. In an effort to hold students more accountable in literature discussions, the researchers created a comprehension matrix. Unfortunately, the teachers found the matrix difficult to use and a hindrance during discussions. So, each teacher revised the comprehension matrix for easier implementation. In the end, the teachers came up with descriptors for five categories of comprehension: main idea, association, elaboration, reaction, and application. The first three are particularly helpful when analyzing discussion transcripts. (The reaction component does not apply if the transcripts do not include gestures because the reaction element looks at facial expressions and body language only. The application

element determines whether students utilize learning in other contexts not within the discussion.) Researchers who want to analyze the verbal discourse in context can look towards the first three components: main idea, association, and elaboration.

Main idea, association, and elaboration can be observed during literature discussions, and the discourse can be analyzed. When the researchers (Paradis et al., 1991) looked for main idea, they looked for evidence that students summarized main points, understood the author's purpose, and were able to link the title of the story to the main idea. The association component applied to when students made comparisons in the book and made connections with the text, book, and world. When elaborating, students made predictions, inferences, and asked questions. Nevertheless, the resulting comprehension assessment is somewhat exclusive as it ignores other types of productive talk such as making judgments or predicting during literature discussions, so other methods of in-context comprehension assessment need to be explored.

Costa and Kallick (2000) and their description of the three-story intellect (Fogarty & McTigue, 1993) can also be used to construct an appropriate measure of expressed comprehension during literature discussions (see Table 2). This framework captures all of the elements in the Paradis et al. (1991) study, as well as categorizes other talk that are not considered in that assessment. The three story intellect is based on three cognitive processes as evidence of thinking (McTigue, Washburn, & Liew, 2009) : input, process, and output. The input level entails basic recall of information and is demonstrated by reiterating the text. For example, a student may retell an event that happened in the reading. Essentially, the reader is restating content that is explicitly input from the text. The next level builds on the input level, but requires processing from the reader. The surface level knowledge from the text is processed in different ways. For example, the student might compare a character to his own experiences. Finally, the

output level requires students to think beyond the text, and make generalizations or predictions (Costa & Kallick, 2000).

Table 2. The Three Story Intellect (Costa & Kallick, 2000)

Level	Descriptors
Input	Name, Recall, Restate, Reread, Locate, Describe, State, Inform, Define, Identify, List
Process	Compare, Contrast, Classify, Distinguish, Explain (Why), Infer, Sequence, Analyze, Synthesize, Make Analogies, Reason
Output	Evaluate, Generalize, Imagine, Judge, Predict, Speculate, If/Then, Apply a Principle, Hypothesize, Forecast, Idealize

There may be a correlation between the three-story intellect and reading comprehension. Blair and Raths (1978) qualitatively analyzed reading comprehension test questions on standardized reading assessments. They argued that test items could be grouped into three categories: recall, low inference, and high inference. Recall questions are similar to the input level—such items ask students to remember explicit content from the text. The low-level inference questions ask students to make reasonable inferences in the text, similar to the process level. For example, if the text states a child made a snowman, one could infer it was winter. According to Blair and Raths (1978) the high-level inference questions usually require a judgment, of “what is the best answer?” Students are then required to select the “best answer” from multiple choices. Speculation is also prominent in the output level of the three-story intellect model (Costa & Kallick, 2000). Standardized reading comprehension assessment questions (Blair & Raths, 1978) and the three story intellect (Costa & Kallick, 2000) are based on a similar constructs. A standardized test measures comprehension through paper and pencil, but the three-story intellect framework can be used to measure comprehension orally.

The original intent of the three-story intellect was to teach educators how to help their students think (Fogarty & McTighe, 1993). Students who demonstrate these levels in literature circle discussions are thinking at these differing levels. Thus, it might be assumed that students demonstrate comprehension through dialogue on one of the three levels of intellect.

Personality Factors and Participation in Literature Circles

Heretofore, the review of related literature focused on the complexity of literature circles as an instructional activity within a social constructivist perspective, existing approaches to literature circles, and the complex interactional nature of the instructional activity. The literature rarely discusses the intrapersonal factors that likely impact the social interaction. Intrapersonal factors such as individual leadership qualities influence student engagement (Li et al., 2007) and should be considered during social learning situations. Because literature discussions are social learning situations, the influences of human factors like personality are worthy of investigation (Chan, 2010). Understanding more about personality factors that influence individual participation in literature circle discussions could provide information to educators on how to organize literature circles for more optimal interaction.

A common measure of personality is the Big Five, or Five Factor Model (Anusic, Schimmack, Pinkus, & Lockwood, 2009). The Big Five was originally established in the late 1940s (Fiske, 1949). The model has been studied extensively and yielded high coefficients (.90) of relatedness across studies (Kaiser, Hunka, & Bianchini, 1971). Fiske's (1949) original study has been corroborated by other researchers (Norman, 1963; Tupes & Christal, 1992). Personality research contends that no matter how large or broad a personality inventory, the items can be categorized in five robust factors (Digman & Inouye, 1986; Goldberg, 2001). The Big Five personality traits are extroversion, agreeableness, conscientiousness, emotional stability (also

referred to as neuroticism), and openness. According to this model, extroverted students are enthusiastic and energetic. Agreeableness is understood as compassion and the ability to cooperate. When a student is efficient and organized, he/she is described as conscientious; therefore, a lack of conscientiousness would be characterized by disorganization, carelessness, and spontaneity. Emotional stable students are secure and confident. Openness measures a student's propensity to enjoy new experiences or the level of curiosity a student exhibits (Anusic et al., 2009; Barbaranelli, Caprara, Rabasca, & Pastorelli, 2003). These classifications have been used to rate personality in a variety of fields such as sociology, psychology, marketing, entrepreneurship, and education (GoslingLab, 2012).

Measuring the Big Five

Although there are other personality models, the Big Five model is the most dominant in personality research (Donnellan, Oswald, Baird, & Lucas, 2006). Attempts have been made to expand the model into six or seven factors, but research (Digman & Inouye, 1986) indicates that five are sufficient. One of the largest collections of child personality data comes from the Hawaiian Islands. It includes 88 teachers' reports on 2,572 elementary students. Using this large data pool, Digman and Inouye (1986) found a weak 6th dimension of creativity, but ultimately contended that five dimensions were sufficient in capturing personality traits. Other research sought to downsize the model into two or three factors (Marsh, Craven, Hinkley, & Debus, 2003; Ng, Cooper, & Chandler, 1998), but again, the model remains a reliable means for measuring personality traits in children and adults (Digman & Inouye, 1986).

Some researchers prefer a shortened assessment rather than asking participants to fill out thick packets to measure personality, especially when the researcher wishes to reduce the burden on the subjects (Muck, Hell, & Gosling, 2007). The Ten Item Personality Inventory

(TIPI)(Gosling, Rentfrow, & Swann, 2003; GoslingLab, 2012) is a reliable measure of the Big Five personality factors (Donnellan et al., 2006; Gosling et al., 2003). The brief TIPI can be used when larger assessments might be cumbersome on young students or when time is limited.

Measelle, John, Ablow, Cowan, & Cowan, (2005) assessed 91 children ages five to seven and claim that children as young as five can self-report measures of personality. Children rated themselves on a brief measure of the Big Five while parents and teachers served as external raters. The children's self-reports were compared to the external ratings provided by the parents and teachers. The results include a correlation coefficient of .60. Therefore, it is reasonably safe to assume that children beyond the age of 5 are aware of and can reliably report their personality traits through brief measures.

The TIPI, a measure of the Big Five, is used in a variety of research involving personality factors in many different fields of study, but no published research exists that uses the TIPI with children in relation to discussion performance. However, other assessments of the Big Five have been used to study other phenomena in young children. In a study (Jensen-Campbell et al., 2002) of middle school children, two of the Big Five personality factors were shown to predict acceptance among peers. Extraversion and agreeableness predicted acceptance among peers in middle school. In addition, higher ratings of agreeableness also predicted that students were less likely to be victimized. Another study citation using the Big Five inventory correlated procrastination and lack of conscientiousness among 280 students in grades 3-5. The study utilized teacher reports of students and students' self-report data. The researchers were able to reliably predict higher observed procrastination in students who lacked conscientiousness (Lay, Kovacs, & Danto, 1998). While the findings are interesting, this research reiterates the ability of

children to self-report measures of personality as the personality reports were consistent among the students and teachers.

In addition to the literature circle design, prior instruction, and preparatory methods, personality traits might also play a significant role in peer interaction during instructional activities. The interactional dynamics of the groups change when a teacher is removed. In a study involving 29 ethnically and socioeconomically diverse third graders, Maloch (2002) noted difficulty when transitioning from teacher-led to peer-led discussions. Maloch studied third graders for 5 months as they transitioned from teacher-led to peer-led literature circles, and she found the peer-interactional component of literature circles problematic. Students responded positively to teacher's scaffolding of conversations through facilitation and mediation, yet some students struggled in the absence of the teacher. However, when teachers do not intervene, students are observed assuming leadership roles (Li et al., 2007). Students interact differently in peer-led discussions, but the interactions are not always for the better (Clarke & Holwadel, 2007). If literature circles are considered a learning activity rather a practice activity, then discussions should be analyzed for quality of individual participation and whether student scaffolding enhances the quality of the conversation. Teachers need to know if literature circles are a legitimate learning activity, and if every literature circle group can be led to success. The problem is identifying the students who might emerge as leaders and who might scaffold discussion groups in the social construction of knowledge. Examining a handful of factors that may predict strong verbal engagement may help extend the extant research related to literature circle implementation. It is also helpful to consider whether the highly engaged students facilitate the participation and understanding of other students during literature circle discussions.

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