Affinity Groups: Fostering Community and Interdependence in a College Reading Class

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Problem in Context

This study was conducted in a developmental reading program at a large two-year public and urban institution in the East Coast. Students at the institution, which enrolls between 25,000 and 30,000 students per year, are ethnically, racially, and linguistically diverse (native-speakers of English to varied levels of ELLs) and include students who have various statuses of citizenship ranging from citizen to international student. A number of non-traditional students who did not attend college immediately after high school graduation also attend this college in high numbers. This diversity is particularly true of students enrolled in our developmental reading courses.

As is the case at many colleges, particularly two-year institutions like ours, remedial reading courses are often gateway courses, and students are either exempted from or placed into the developmental reading sequence based on their performance on entrance tests; students in the developmental sequence are unable to take a number of courses (e.g., begin the composition sequence) until they exit remediation. Because many students earn grades of F (failure), R (repeat), or W (withdrawal) in such gateway courses, college retention rates are affected. To improve retention rates, the administration at our institution provided professional development to help faculty members design and implement instructional interventions in gateway courses,

courses students must pass in order to reach the next stage in their programs. Through our participation in this initiative, we designed and implemented an action-research project focused on studying the effect affinity groups would have on students' academic success in our supportive reading courses.

Through our knowledge of literature, we knew that cooperative learning has long shown efficacy and a positive effect on retention (Dat, 2014, 2016). We decided to implement affinity groups, one form of cooperative learning that literature showed to be effective in supporting students' academic success, into our instructional practice, and to design an action research project targeting retention in our remedial reading courses. According to our pedagogical beliefs, students learn by engaging with cognitively challenging tasks when engaging with knowledgeable others—and peers can serve in such a role (Vygotsky, 1978). Interdependence requires students to be accountable to their peers and required group members to find ways to work together. It also challenges students to collectively overcome obstacles encountered in group work. We therefore knew that we wanted to utilize an intervention that would foster interdependence to build community.

In a large urban college where many students are disconnected from their peers outside of classroom activities, students learned their group mates' names, email addresses, and phone numbers, and they used these resources to build community and networks of support. We intended to help students forge a deeper understanding of the ideas of the course materials by working with students to establish a stronger sense of community in the classroom and to build communicative networks among peers. We proposed that incorporating affinity groups (practices

through which students are grouped according to shared aspects of their social worlds) would not only impact student success and communication but also their perceptions of community and rapport, thus improving factors like attendance and homework completion.

We must note that prior to the semester of implementation, under the directive of the administration, remedial course requirements were adjusted. Students no longer needed to only pass one high-stakes exit assessment, formerly the ACT Compass; the end-of-semester exam would now be determined by the department and could only count for 35% of the earned grade. The faculty members of the department voted to allow professors to determine the remaining 65% of the grade based on coursework. Thus, we had more control over assessing students and requiring student participation when beginning our research project than in previous semesters.

Literature Review

Overview of Group Work and Reading Instruction

Grouping students has long been synonymous with reading and literacy instruction, specifically remedial reading; however, this association has not always been positive. Grouping students according to ability level (e.g., robins vs. blue jays) has long dominated reading instruction. While some educators may have seen these ability groups as beneficial, many scholars now recognize that these ability groups likely limited students' reading growth (Smith, 2002). Often students who were in lower-level reading groups were taught with materials insufficient for cognitive growth, and students often saw little movement outside of these reading groups.

We begin here because this model of grouping, which was associated with decades of the controversial practice of tracking in k-12 education, affected how many individuals view remedial reading. Many educators, even in the college remedial program, frequently group students with reading needs according to instructors' perceptions of students' abilities (Stahl & King, 2018). Educational scholarship in remediation has shown that small group instruction can be helpful for student success, especially when it is tied to flexible groups (groups that allow students to move according to their respective needs). Reading Recovery (Clay, 1993), as an intervention program, has shown efficacy in developing early reading skills, and this model of reading support has spread throughout k-12 education with Guided Reading programs (Fountas & Pinnell, 1996). Daniels' model of literature circles (1994; 2002), which has also found its way into content-area instruction (Johnson & Freedman, 2005), is predicated on the belief that when active discussion leads students to engage meaningfully in group work, their knowledge of the text, appreciation of the author's craft, efficacy, and belief in interdependence grows. While initially arguing that students be assigned respective roles in these groups, Daniels has come to find that roles can actually inhibit students' academic success (Daniels, 2002). Regardless of the philosophical bent of the instructor, group work has been and remains integral to the development of reading skills in students from k-college.

Vygotsky and the Zone of Proximal Development

Vygotsky's argument of socio-constructivist learning, specifically his argument of the Zone of Proximal Development (1978; 1986), has influenced educational scholarship for almost

three decades (Doolittle, 1997). At the heart of Vygotsky's theory are two important positions: 1) language is central to cognitive growth and 2) individuals' cognitive growth can be nurtured through the support of knowledgeable others. The Zone of Proximal Development is of particular importance for educators because it allows them to help students who have not yet acquired, independently, language and cognitive skills. According to Vygotsky, educators, as knowledgeable others, can use structured, scaffolded instruction to help students develop the cognitive skills used to support reading. However, and as educators well know, teachers are not the only knowledgeable others in a classroom.

Doolittle (1997) argued that Vygotsky's theory can be a key undergirding to cooperative learning. Through cooperative learning, students must use language to negotiate their understandings of course materials in social situations, allowing them to "internalize" (p. 84) the central concepts of a lesson. Arguing that cooperative learning is supported by Vygostsky's theory of social learning, Doolittle offered that cooperative learning must be authentic to learning goals, that activities must be stimulating and challenging enough to both warrant group input and build students' cognitive skills. For Doolittle, four key facets of cooperative learning (positive interdependence, face-to-face interaction, individual accountability, and small-group and interpersonal skills) can help an educator best meet Vygotsky's theory. In other words, students are not only required to communicate, they become reliant on each other for success, are accountable to each other, and build communication skills that assist them beyond the classroom.

Cooperative Learning: What It Is, What It Is Not

While there are multiple styles of group work that can be employed by an educator, group work is generally categorized into the following: collaborative learning and cooperative learning. Both forms of group work have received scholarly attention, and both offer educators a chance to help students to develop both cognitively and socially (Prince, 2004). Unlike collaborative learning, where the focus is on the end product, the primary goal of cooperative learning is community building (Johnson & Johnson, 1999). Many scholars agree on at least four of five central "pillars" of cooperative learning that Jones and Jones (2008) credit Johnson and Johnson (1999) with developing: positive interdependence, individual accountability, interpersonal skills, and face to face interaction (see also Doolittle, 1997; Hancock, 2004; Johnson, Johnson, & Smith, 1998). A fifth "pillar" is "processing out" (Jones & Jones, 2008) or "group processing" (Felder & Brent, 2007).

One belief commonly associated with cooperative learning is that college students acquire skills necessary for surviving in a post-college career (Jordan & Le Metais, 1997; George, 1994; Ventimiglia, 1994); however, research does not document transference of skills from classroom to workplace environments. Despite a lack of research to support transference of skills, the pillars of cooperative learning illustrate that social learning is central to integrating cooperative learning, specifically helping students understand their role or position in learning communities. Research documenting how cooperative learning supports the development, acquisition, and honing of social skills appears to have been conducted mostly at the k-12 levels (Jordan & Le Metais, 1997; Oortwijin, Boekaerts, Vedder, & Fortuin, 2008), though cooperative

learning has also been shown to have a positive effect on graduate students' motivation and achievement of learning goals (Hancock, 2004). Researchers have also found that the social benefits of cooperative learning can also create bonds between students from different racial and ethnic communities (Oortwijin, Boekaerts, Vedder, & Fortuin, 2008; Slavin, 1991).

Research Efficacy of Cooperative Learning

Slavin (1989/1990, 1991), long a proponent of cooperative learning, found that cooperative learning did positively affect k-12 students' achievement of learning outcomes. This proved particularly true when teachers built in both group goals and individual accountability (Slavin, 1983, 1991). Slavin found, in synthesizing research, that children with disabilities, in particular, showed affective gains when in cooperative learning environments (1991).

In contradiction to what some may believe to be the goals of using cooperative learning, Baer (2010) found that grouping students homogeneously according to ability levels showed significant difference when contrasted against heterogeneously grouped students, though the author offers that there was no statistical significance for students who were "low achievers" when working in either style of grouping. However, Cooper (1995) argued that students who were heterogeneously grouped were more likely to experience Piaget's concept of cognitive disequilibrium and work cooperatively to make sense of complex tasks. Jones and Jones (2008) shared that what matters most in cooperative learning are the tasks set out and the fostering of group interdependence, which Baer did not demonstrate fostering.

Whether cooperative learning is conducive to achieving learning goals or developing interdependence is an important question. However, Shepperson (1991) found that students in remedial reading in secondary environments often implemented cooperative learning without receiving direct instructional practices in cooperative learning. Shepperson's study of how students in silent sustained reading environments built reading skills brought to light an interesting unanticipated phenomena: students who were sitting in groups often cooperated in ways that aligned to cooperative learning models without instructor intervention. Students worked together and supported each other, and even did so nonverbally, suggesting that cooperation may be a key learning tool.

Cooperative Learning and College

Johnson, Johnson, and Smith (1998,) demonstrate that cooperative learning has research-based efficacy and conducted a follow-up meta-analysis (2014). In the meta-analysis, the researchers argue that, of each of the factors considered, cooperative learning shows statistical strength when measuring for academic achievement and the building of relationships with fellow students (2014). Documenting that over 305 studies have been conducted on cooperative learning, Johnson, Johnson, and Smith (2014) explain the value of adjusting instructional practices with an eye towards cooperative learning. However, Prince (2004), who studied research on cooperative learning as well as other forms of active learning, found that research on active learning was often subjective. While strong evidence existed to support the claim that cooperative learning builds academic achievement as measured objectively (citing Johnson,

Johnson, & Smith, 1998), it was not clear that cooperative learning could build skills in the affective domain (e.g., interpersonal relationships) because of researchers' lack of clear objective measures or agreed-upon criteria.

Advocacy for cooperative learning at the college level, especially as a contrast against traditional lecture format, has been prevalent since at least the 1990s (Doolittle, 1997; Felder & Brent, 2007; Johnson, Johnson, & Smith 1998; Jones & Jones, 2008; Johnson, Johnson, & Smith, 2014). Personal narratives of how cooperative learning has been implemented in the college classroom offer reflective insights into professors' instructional decisions (George, 1994; Ventimiglia, 1994). In two separate but complementary pieces, George (1994) and Ventimiglia (1994) show that cooperative learning can assist professors in both United States and foreign-based university settings. Though not seen as research-based, these narratives often stem from meaningful reflection of instructional practice and may warrant scholarly attention. Advice on how to implement cooperative learning frequently appears in college instructional journals, magazines, and texts (e.g., Doolittle, 1997; Felder & Brent, 2007; Johnson & Johnson, 1999; Jones & Jones, 2008; Shimazoe & Aldrich, 2010; Smith, 1996). It should be noted that though these theoretical pieces often base claims in studies on cooperative learning, they are not primary research articles and often use overviews to advance arguments in favor of cooperative learning.

Case studies on successful application of cooperative learning in college level courses abound. Tsay and Brady (2010), for instance, found that when students participated in cooperative learning, cooperative learning strongly correlated to academic success. Of particular

note, Tsay and Brady found that at statistically significant levels, students who were most grade conscious were more likely to be active participants in cooperative learning.

Cooperative learning has been shown to be so successful that it also has been adopted in international universities for purposes of promoting academic achievement and knowledge retention (Dat, 2014, 2016). In a study of 110 undergraduates taught by the same professor, statistically significant differences were recorded in students' achievement and knowledge retention compared with those students who completed coursework in a traditional lecture format (Dat, 2014). Using this study as a basis for additional research, Dat (2016) found that students achieved statistically stronger levels of knowledge retention on tasks assigned through jigsaw.

Statistical significance also was evident in a similar study (Yamarik, 2007) when a professor of economics engaged classes in both cooperative learning and traditional lecture format. Students in classes where faculty members used cooperative learning, when compared to student performance in traditional lecture classes, were more likely to achieve learning outcomes at statistically significant levels.

Cooperative learning has also shown been shown to be successful in a graduate educational research methods course (Hancock, 2004). Students who valued working with peers were, at statistically significant levels, more likely to be motivated to learn. This suggests that cognitively complex tasks, like learning to engage in research methodologies, can be best supported through cooperative learning.

While Dees (1991) found that students in cooperative learning and non-cooperative learning situations performed at equal levels in a college remedial mathematics course, statistical

significance was demonstrated in two cognitively complex tasks. First, students in cooperative learning groups were more likely, at statistically significant levels, to accurately solve word problems. Second, students who were in cooperative learning groups were more likely, at statistically significant levels, to accurately write geometric proofs. While the author could not say that cooperative learning influenced overall course success in remedial mathematics, she argued that the value of cooperative learning was demonstrated by remedial mathematics students' development of these two skills.

Furthering the notion that cognitively complex tasks may be best supported through cooperative learning, Jalilifar (2010) found that cooperative learning may have a positive effect on English language learners' college level reading comprehension. This study, conducted with all female participants, compared two methods of cooperative learning (Student Team Achievement Divisions and Group Investigation) against a control group. ANOVA results showed that students in the former grouping improved their reading achievement (as measured by the English as a Foreign Language reading comprehension measure) at statistically significant levels and students in the Group Investigation and control groups did not. The researcher concluded that the benefits of being placed in teams (including extrinsic rewards) might have affected students' achievement.

Cooperative Learning & Retention

Cooperative learning, which sees a re-emergence in the college setting every few years, is seen as a high-impact learning activity that professors can integrate into the college curriculum

(Kuh, 2008). Cooperative learning is also a basis for learning community models of higher education (Zhao & Kuh, 2004; Rocconi, 2011), which are implemented because research suggests that they have improved levels of retention (Kuh, 2008; Rocconi, 2011; Zhao & Kuh, 2004), in particular for minority populations and students from lower socio-economic backgrounds. These institution-wide integrations of cooperative learning, including at community colleges across the nation, have been supported by micro-level initiatives to improve retention by integrating cooperative learning into the curriculum, especially in remedial, developmental, or supportive environments where students may linger.

Affinity Groups

"Affinity groups" is often a phrase used by social scientists to connote members of a shared identity category. In cooperative learning environments, however, affinity groups are how faculty members group students according to a shared aspect of personality, such as interest or level of motivation or by shared goals or orientations (Gates, Della-Piana, & Bernat, 1997). Affinity groups are a means of grouping students on criteria other than ability and to build social skills that are consistent with cooperative learning (Gates, Della-Piana, & Bernat, 1997), in essence socializing students into practices commonly employed in career-oriented environments. Affinity groups, in the sense of cooperative learning, have been little researched, though work in engineering and technical education, which has readily embraced cooperative learning models, has demonstrated the efficacy of affinity grouping.

One of the first studies to implement affinity groups, Gates, Teller, Bernat, Delgado, and Della-Piana (1999) found that cooperative learning through affinity groups supported undergraduates' learning of research practices. This study later served as a basis for additional studies (Teller & Gates, 2001; Villa, Kephart, Gates, Thiry, & Hug, 2013) on the role that affinity groups can play in helping undergraduate students acquire the cognitively complex skills of research. The students who participated in the study also showed acquisition of and reliance on social skills that will help them to be successful in career-oriented settings.

Cooperative learning appears to be an important tool in apprenticing students into cognitively complex tasks, from academic reading or mathematics at the college level (Dees, 1991; Jalilfar, 2010) to undergraduate (Gates, Teller, Bernat, Delgado, & Della-Piana, 1999) and graduate (Hancock, 2004) research. Though students may naturally form cooperative learning communities based on the level of complexity and dynamics that educators foster in the classroom (Shepperson, 1991), it is believed that instructional design for meaningful cooperative learning is best (Doolittle, 1997; Felder & Brent, 2007; Johnson & Johnson, 1999; Jones & Jones, 2008; Shimazoe & Aldrich, 2010; Smith, 1996).

Our concern with the high-fail nature of our supportive reading course, the students' ability to progress to credit bearing courses, access to financial aid, and, eventually, timely graduation led us to consider how cooperative learning could influence students' perception of their success. Therefore, we developed the following research question: What are students' and instructors' perceptions of the use of affinity groups in the supportive reading classroom?

Research Method

This study was conducted within the context of a very large urban two-year college that is part of an immense public university network. This university network maintains several two-year colleges, four-year colleges, and graduate schools in a large American city.

Participation in the faculty development project mentioned at the onset of this paper required each participant to devise an intervention that would be implemented as an agent of change in courses shown to have a higher failure rates. As mentioned earlier, the authors felt strongly that the failure rate in the college-level supportive reading classes could be lowered if students were encouraged to build a support network with a small group of fellow classmates. To create this support network, each instructor administered a survey (see Appendix A) designed to provide insight into the interests of each student so that s/he could be placed in a group with other students who shared similar interests. Once the survey was completed, the instructors carried on with their classes as usual, taking special care to incorporate group work into their lesson plans and to observe and document the support networks the students were creating in their groups.

Participants were enrolled in one of the four college-level supportive reading classes, each taught by one of the researchers, and thus were a convenience sample. Instructors invited their students to participate in the study. Once students volunteered to participate, their respective professor administered the informed consent documentation.

Initially, the instructors simply matched students based on interests they identified through the survey. Sometimes instructors had to be creative in how they developed the group

because in many cases there were interest indicators that did not match any of the other responses. Furthermore, in at least one case, an instructor quickly realized the groupings created from the survey were not working in the class and decided to change the groupings to better suit the needs of the participants. The rest of the instructors maintained the groups as originally composed.

The five students that took part in the study were Ellen, David, Juan, Simone, and Portia. These students were representative of the population served by the college, which includes immigrants, English language learners, and typically underrepresented populations. The four instructors were Caucasian; three males and one female.

The authors designed a multiple case study focusing on five student participants and their respective professors. The authors chose a multiple case study method based on the following reasons: the research question, the context, the existence of a minimum of four cases (Creswell, 2012), and the presence of what research methodologist Stake (2013) calls a "quintain," which binds all the cases together.

Data were collected throughout the fall semester of 2016 in the form of classroom observations, interviews of student participants, and the reflective writing provided by the instructors. Instructors took turns observing each other's classes and wrote reflectively about their experiences incorporating the group work into their course sections. These artifacts were assembled and added to the corpus of data. Data were transcribed and coded in keeping with Saldana's (2011) method of initial and focused coding. Initial coding was conducted collaboratively. The researchers met together and looked through the data, highlighting themes

and patterns that were meaningful throughout the data. These collaborative meetings were crucial because they served as forums through which the authors negotiated individual coding patterns. Furthermore, the focused coding occurred when the authors grouped the themes and patterns from the initial coding into related elements. For example, when informants indicated anything related to holding one another responsible for aspects of the tasks, all those codes would be grouped together into a larger pattern of accountability.

Findings

The coding process yielded the following patterns:

1. Accountability
2. Building community/interdependence
3. Perspectives on group work
4. Challenges

The first emergent theme, accountability, speaks to the participants' desire to create and maintain communal structural integrity. For them, being held accountable to one another, and being partially responsible for the success of the group, helped provide a mechanism of stabilization. In her interview, Ellen, for instance, stated that, "it was nice to share responsibility; I didn't feel alone when doing the tasks." Ellen also stated that, "it felt good to know that someone else knew what was going on," alluding to the potentially supportive nature of group work. Juan expanded on this notion in responding to a question about what he felt he learned from working with his group:

> J: Um, actually, um, like I always like to work with groups because, like, sometimes in my opinion, like um, sometimes whenever I get an answer that isn't right, so if I ask my group, they can tell me what the answer should be. They explain it to me so that I understand. It actually helps me.

The second emergent theme related to the notion of community building and/or interdependence. Data from interviews were filled with language that placed emphasis on the importance of on the notion of community and interdependence. Consider the following exchange between Tuvi (researcher) and Ellen (participant):

> TV: If I were to ask you to give me one word that you think would describe the biggest advantage of working in groups like this, what would that word be?
>
> E: Support.
>
> TV: Support?
>
> E: I mean everyone supported each other except the one. So, that's something. It's 75%.

Similarly, Simone commented in this same pattern:

> S: Sometimes some of the students might be scared [of] asking questions in public but when they're in groups together they get more comfortable…

We also identified a third theme—perception of cooperative learning—that emerged in context of students' comments about their experiences working in the groups.

> S: For me working in groups like make me understand more. Like sometimes some of the students might be scared asking questions in public but when they're grouped they get more comfortable like you saw them talking to each other, asking questions, laughing.

Juan also saw positive aspects to his group work experiences:

> J: …from my personal experience I think the group work is very important because you can really know… other people['s] point of view and you will get more experience and maybe other people who don't know anything…you can share with them…. I think it's important.

Challenges of cooperative learning, a fourth theme, emerged in comments student participants made about uncooperative group members. Simone and Juan share thoughts on this issue in their interviews:

> S: … I like teamwork…and everything…but if you work differently and
> the other partner with you never show[s] something…it will be useless for me…
> J: …I just think they (two group members) didn't understand what was going on half of the time, and they never asked…. We never knew what they understood or didn't understand. We never knew what to expect from them.

Finally, consider these reflections from two of the instructors, Megan and James, which we feel encapsulate the crucial role peers play in the success of affinity groups:

MD: The most successful interactions were those where the groups were given a task that required creativity and an element of social interaction. These in combination with the "right" grouping created a more motivated group of students

JM: Affinity grouping led to students mostly teaming up to make sure they all completed the assignment satisfactorily. It improved communication among students and between students and myself.

Although when initially designing the project, the authors sought to investigate impact on student retention rates and student performance on high-stakes assessments, institutional and administrative changes to the course curriculum made this virtually impossible. What the findings do suggest is that instructors, and more importantly students, perceived benefits from the use of stable affinity groups. Though the data do suggest that there are challenges to implementing affinity groups specifically and cooperative learning generally, specifically participation, these challenges can be addressed to strengthen the efficacy of grouping. We also believe that additional consideration of the possible uses of affinity groups in remedial/developmental/supportive courses is warranted.

Discussion

Vygotsky's Zone of Proximal Development is a theoretical perspective that cognitive growth occurs not through stages, as Piaget argued, but through support and guidance of a knowledgeable other. For many college instructors of remedial students who ascribe to Vygotsky's theory, they serve in the role of knowledgeable other. However, Doolittle (1997)

offers that through cooperative learning that includes positive interdependence, face-to-face interaction, individual accountability, and small-group and interpersonal skills students can become the knowledgeable other and support each other's cognitive growth. Such cooperative learning activities also encourage students in becoming accountable to one another, further fostering community.

It is understood that most educators who teach remedial reading use some form of group work to enhance their instruction. Instructors may use groups in a myriad of ways, including jigsawing, as a means of supporting student learning. However, for many of us, group work entails placing students into groups of three or four students to complete specific tasks. Even if we think about personalities of our students and how well students would function as a group, most of us create groups prioritize completion of tasks over community building.

We felt that building community through group work would be a useful intervention for improving absentee and withdrawal/failure rates. Through the literature, we found that there were varieties of ways to utilize groups in college courses. For example, students are often grouped according to their abilities; however, this method of grouping may negatively affect students' reading development (Smith, 2002). Furthermore, instructors must decide whether to assign collaborative tasks, which emphasize end products, or cooperative tasks, which emphasize community building (Johnson & Johnson, 1999). Through our review of literature, we decided that for our intervention, we would a) group students into one group for the duration of the semester rather than for the completion of specific tasks, b) utilize cooperative learning (i.e., building learning communities would be more essential than the correctness of the end product),

and c) group students into affinity groups (i.e., find common grounds through which students could be grouped for building community).

Our decision to group our remedial students into affinity groups was influenced by research conducted by Gates, Teller, Bernat, Delgado, and Della-Piana (1999). This research suggested that affinity groups improved undergraduate students' research practices. Further, Teller & Gates (2001) as well as Villa, Kephart, Gates, Thiry, & Hug (2013) showed that affinity groups had the potential to help students acquire skills related to both socialization and solving cognitively complex tasks. While we understood that our students would not be engaged in upper-level academic research similar to those of students in many research studies on affinity groups, we believed that remedial students shared common ground with those students in upper-level research courses: academic apprenticeship. Through our research, we found that cooperative learning, specifically in the form of affinity groups, would best help us to build community, lower failing rates, and raise retention rates of our remedial students, each of whom was an apprentice in academic reading.

To group students, we constructed a questionnaire that provided insights into common students' interests or motivations. However, we found that relying solely on the questionnaire presented some difficulties. For example, some students entered very short responses requiring instructor inference. Occasionally, students left a particular question blank. Once the groups were formed, some students naturally found common interests or motivations that helped them to begin building community. However, some students experienced difficulty working in groups as cooperative learning challenged their individual learning styles. While a questionnaire

distributed at the start of the semester may allow for an instructor to begin building communities, we found that brief interviews, self-introductory essays, and initial community-building activities may help define groups. In one class, for instance, the professor asked students to interview each other and then present their peers to the whole class and assigned a name quiz; students also used readings that helped them build houses (like *Harry Potter*, with an animal, colors, and a crest) for their respective affinity groups that further built community.

In spite of these challenges, our study is in line with the vast research suggesting cooperative learning supports students' social learning (Jordan & Le Metais, 1997; Oortwijin, Boekaerts, Vedder, & Fortuin, 2008) and that cooperative learning helps students to connect to peers with different racial and ethnic backgrounds (Oortwijin, Boekaerts, Vedder, & Fortuin, 2008; Slavin, 1991). Our institution is a commuter college where students often commute from every compass direction—by bus, train, and ferry—and often leave class without many opportunities to build community, eager to attend to work or family obligations. Few students, particularly older students, take part in student clubs as many work or have home/family obligations. Through our research, we found many examples of students establishing strong bonds with one another both in and out of the classroom. Students collected email addresses and phone numbers and were in contact with each other regularly (e.g., building group chats through text messaging). In some cases, group members connected with a student who was unable to come to class via text message so that the absent student could remain involved (e.g., we found students who used Skype to attend class via a group member's phone). Students who missed class sometimes submitted homework to the professor through their group members. In other

cases, students communicated to one another if there was an expected lateness, absence, or homework issue.

Jones and Jones (2008) argued the most important element of group learning was the tasks themselves. Each of us designed cognitively complex tasks that required group interdependence. Though our interviews showed that some students reported occasional inequalities in workload, the students handled these concerns within their groups. Each student had a task to accomplish, and each student's progress affected the performance of the group as a whole. Cooperative learning was imperative for group success with a task, and students mostly took their responsibilities to their group members seriously.

Students did not always have favorable predispositions regarding group work. However, upon reflection at the end of the semester, these predispositions were challenged. Interestingly, students did not realize that their predispositions had been challenged until directly questioned by the respective researcher. For instance, early in his interview, one student indicated a disagreement with group work and stated, "I keep remembering what my mom always said…If you want something done right, do it yourself." However, when later questioned during the same interview, this student claimed to have learned a lot through group work. He strongly connected with one other student, with whom he felt he was able to accomplish many tasks. He claimed to have been in regular communication with his group mates via text and email and to have applied, with his group members, reading skills such as outlining, finding main ideas, and summarizing articles. Though his group wasn't always on task, he found ways to accomplish his tasks, which he believed he was able to do satisfactorily. Asked whether he believed the cooperative class

activities helped him, he responded, “Yes, definitely.” Other interviews showed a similar progression of thought about cooperative learning: Anxiety at the notion of having to do group work, followed by satisfaction with the group’s accomplishments.

Implications

This study might be especially helpful for instructors at other commuter colleges, particularly those where large percentages of students are working class or at/below the poverty line. Professors who approach learning from the perspective of academic apprenticeship can take the initiative to build community in their courses (whether or not those courses are remedial in nature), which may help student achievement and attendance as well as overall college retention rates. Perhaps the most important finding of this study is that there were positive overall outcomes regarding student interdependence. Students learned to lean on each other to achieve the tasks set out for them by their instructor. They established feedback networks for their group members and took on the responsibility for learning and assisting each other in the acquisition of course content. Instructors at any college may find that affinity groups, easy to implement, can help students to become interdependent learners. While many of our students did achieve the requisite scores necessary for leaving the remedial sequence, thus lowering failing/withdrawal rate, our use of affinity groups came from the strong belief that establishing community and social learning can help students to achieve and flourish. The authors are hopeful that students grouped with others who share their interests might find group work to be more enjoyable,

thereby increasing student motivation to attend and be attentive in class. These group members, then, would then support each other's learning.

While the concept of affinity groups shows promise, there are possibilities for future research. Researchers might focus on the development of a questionnaire that is better suited to group students. Additionally, future research might attempt a similar study with non-remedial populations, or with students at different points in their academic career. Though the context of our study was a developmental reading program, affinity groups would likely be useful in composition courses (remedial or credit-bearing), particularly in the context of peer-revision groups, and would suggest further opportunities for research.

Finally, though we did find that the rate of absenteeism was reduced from previous semesters, we could not be certain that it was a result of our intervention—cooperative learning in the form of affinity groups—or the revised structure of the remedial reading courses. Absenteeism—a concern that many remedial instructors may have—can, of course, negate the effectiveness of cooperative learning. This is particularly true of a commuter college that is open enrollment and has large percentages of students at or below the poverty level. Though cooperative learning has been shown to have an effect on retention rates at the college level (Ventimiglia, 1994), it is our hope that future studies demonstrate the effectiveness of cooperative learning, specifically affinity groups, on attendance rates in the classroom, particularly in institutions with similar student bodies.

Limitations

Student failure can be caused by a number of out-of-class factors, including work and family obligations. These out-of-class factors can cause students to be distracted, become stressed, and miss class. Because of the fifteen-week nature of our college courses, we used the inventory and grouped students early in the semester without understanding patterns of performance. As a result, some group members suffered from a peer's attendance. While most group members did form strong bonds, not all group members felt connected with each of their group members. Also, some students were just not academically diligent, even with prodding from group members or the professor. We encourage future researchers and professors to consider how much they want to emphasize student performance in the design of affinity groups.

Another limitation to consider is that some students came to our classes with preconceived notions about what group work is, how well it works, and whether or not they enjoy it. These notions played into individual students' perceptions of cooperative learning. While interviews showed that some students grew accustomed to and even appreciated working in their groups, resistance from any group member could affect group camaraderie and performance.

While our findings suggest students did pass these courses at a higher pass rate, there was a major change to the grading structure immediately before we put into place our intervention. We worked through the previous semester and summer under the impression that the structure would remain unchanged (100% of the student's grade was dependent on the college-wide exit examination); the adjustment, which included us being able to factor student work into students'

grades, affected how we implemented our intervention at the start of the semester. This difference negated our ability to collect and analyze statistical data about student achievement.

Another limitation was building students' interests into affinity group assignments. Though we attempted to group students according to shared interests and aspects of personality, we could have made better use of the students' interests to apprentice them into academic and critical reading. Though students, particularly at the college level, should read a variety of materials and build self-regulatory strategies for approaching and completing texts, especially those with which they are unfamiliar or that they might label as "boring," we could have better incorporated readings that matched the groups' shared interests or aspects of personality. Additionally, we might have supplied readings to make students "experts" on their interests and have them share this information both with their classmates via social media or Internet-based projects.

We also want to conclude with a note that there are multiple forms of group work that can be beneficial to students. First, professors choose between whether they want groups for purposes of cooperation (e.g., emphasis on community building) or for purposes of collaboration (e.g., emphasis on task achievement). Professors can use group structures like jigsaws, peer-review groups, literature circles, problem-based learning, or Socratic seminars (among others) to achieve learning goals in either cooperative or collaborative settings. While each model of group work has benefits, particularly problem-based learning (where group members hone problem-solving skills to solve academic problems), we chose affinity groups as our intervention because we wanted to emphasize shared aspects of identities, experiences, or motivations as catalyst to

grouping students. We believed that affinity groups would encourage students to attend classes and thus help them to achieve at higher rates of proficiency. Though professors using affinity groups could still design cognitively complex tasks to encourage group problem solving, argumentation, and analysis (Cooper, 1995; Dees, 1991), our study was focused on the role that affinity groups would have on student attrition and retention, not on the achievement of particular academic tasks. We are also of the belief that no one model of cooperative learning is genuinely a contrast or counter to another; in fact, the literature shows that if the focus of cooperative learning is on building communities of learners, multiple models may be complementary and useful to implement (Doolittle, 1997; Hancock, 2004). We encourage future researchers to consider studying the effect of paired models (e.g., affinity grouping and problem-based learning) on student achievement in remedial reading courses.

Finally, we also acknowledge that each professor has his/her own teaching style and approach with students, which may have impacted student performance and attrition.

Appendix A: Interest Questionnaire

Note: This questionnaire will be used to place students into affinity groups.

1.) If you were asked to describe yourself, what are three adjectives you'd use?

2.) Give me three adjectives that describe yourself as a reader:

3.) Share with me your favorite hobby and tell me a little bit about why it's your interest.

4.) List three books you've read that have been personally meaningful to you.

5.) Choose one of those books—tell me what it was about that book that made it meaningful.

6.) Tell me about your favorite movie. What is it about that movie that catches your interest?

7.) Now, why don't you tell me about your music interest. Choose ONE song – what is it that makes it your favorite song?

8.) What brought you to (Name of institution). Give me a little bit of insight into your aspirations as a college student and for your future. What would you like to accomplish, and/or who would you like to be?

Works Cited

Baer, John. "Grouping and Achievement in Cooperative Learning." *College Teaching,* vol. 51, no. 4, 2010, 169-175.

Clay, Marie M. *Reading recovery: A guidebook for teachers in training*. Portsmouth, NH, Heinemann, 1993.

Creswell, John. *Qualitative inquiry and research design: Choosing among five approaches.* Thousand Oaks, CA, Sage Publications, 2012.

Cooper, James L. "Cooperative Learning and Critical Thinking." Teaching of Psychology, vol. 22, no. 1, 1995, 7-9.

Daniels, Harvey. *Literature circles: Voice and choice in book clubs and reading groups.* 2nd ed., Portsmouth, NH, Heinemann, 2002.

---. *Literature circles: Voice and choice in the student-centered classroom*. Portsmouth, NH, Heinemann, 1994.

Dat, Tran Van. "The Effects of Jigsaw Learning on Students' Knowledge Retention in Vietnamese Higher Education." *International Journal of Higher Education,* vol. 5, no. 2, 2016, 236-253.

---. "The Effects of Cooperative Learning on the Academic Achievement and Knowledge Retention. *International Journal of Higher Education,* vol. 3, no. 2, 2014, 131-140.

Dees, Roberta L. "The Role of Cooperative Learning in Increasing Problem-Solving Ability in a College Remedial Course." *Journal for Research in Mathematics Education,* vol. 22, no. 5, 1991, 409-421.

Doolittle, Peter E. "Vygotsky's Zone of Proximal Development as a Theoretical Foundation for Cooperative Learning." *Journal of Excellence in College Teaching*, vol. 8, no. 1, 1997, 83-103.

Felder, Richard M., & Brent, Rebecca. "Cooperative Learning." In Patricia Ann Mabrouk (Ed.), *Active Learning: Models from the Analytical Sciences*, Washington, DC: American Chemical Society, 2007, 34-53.

Fountas, Irene, & Pinnell, Gay Su *Guided reading: Good first teaching for all children*. Portsmouth, NH, Heinemann, 1996.

Gates, Ann Q., Della-Piana, Connie Kubo, & Bernat, Andrew "Affinity Groups: A Framework for Workplace Skills." Frontiers in Education Conference, 27th Annual Conference, Teaching and Learning in an Era of Change. Proceedings, 1996, 53-56.

Gates, Ann Q., Teller, Patricia J., Bernat, Andrew, Delgado, Nelly, & Della-Piana, Connie Kubo "Expanding Participation in Undergraduate Research Using the Affinity Group Model." *Journal of Engineering Education*, 1999, vol. 88, no. 4.

George, Pamela G. "The Effectiveness of Cooperative Learning Strategies in Multicultural University Classrooms." *Journal of Excellence in College Teaching*, vol. 5, no. 1,1994, 21-30.

Hancock, Dawson. "Cooperative Learning and Peer Orientation Effects on Motivation and Achievement." *Journal of Educational Research*, vol. 97, no. 3, 2004, 159-168.

Jalilifar, Alireza. "The Effect of Cooperative Learning on College Students' Reading Comprehension." *System*, vol. 38, no. 1, 2009, 96-108.

Johnson, David W., & Johnson, Roger T. "Making Cooperative Learning Work." *Theory into Practice*, vol. 38, no. 2,1999, 67-73.

Johnson, David W., Johnson, Roger T., & Smith, Karl A. "Cooperative Learning: Improving University Instruction by Basing Practice on Validated Theory." *Journal of Excellence in College Teaching*, vol. 25, no. 3-4, 2014, 85-118.

---. "Cooperative Learning Returns to College: What Evidence is There That It Works?" *Change: The Magazine of Higher Learning*, vol. 30, no. 4, 1998, 26-35.

Johnson, Holly, & Freedman, Lauren. *Content area literature circles: Using discussions for learning across the curriculum*. Norwood, MA, Christopher-Gordon Publishers, 2005.

Jones, Karrie A., & Jones, Jennifer L. "Making Cooperative Learning Work in the College Classroom: An Application of the "Five Pillars" of Cooperative Learning to Post-Secondary Instruction." *The Journal of Effective Teaching*, vol. 8, no. 2, 2008, 61-76.

Jordan, Don W., & le Metais, Joanna. "Social Skilling Through Cooperative Learning." *Educational Research*, vol. 39, no. 1, 1997, 3-21.

Kuh, George D. *High-impact educational practices: What they are, who has access to them, and why they matter*. Washington, DC, Association of American Colleges and Universities, 2008.

Oortwijin, Michiel Bastiaan, Boekaerts, Monique, Vedder, Paul, & Fortuin, Janna. "The Impact of Cooperative Learning on Pupils' Popularity, Non-Cooperativeness, and Interethnic Bias in Multiethnic Elementary Schools." *Educational Psychology*, vol. 28, no. 2, 2008, 211-221.

Prince, Michael. "Does Active Learning Work? A Review of the Research." *Journal of Engineering Education,* vol. 93, no. 3, 2004, 223-231.

Rocconi, Louis M. "The Impact of Learning Communities on First Year Students' Growth and Development in College." *Research in Higher Education,* vol. 52, no. 2, 2011, 178-193.

Saldana, Johnny. *Fundamentals of Qualitative Research*. New York, NY, Oxford University Press, 2011.

Shepperson, Grace M. "Cooperative Learning in a Silent Classroom." *Reading Psychology,* vol. 12, no. 2, 1991, 133-145.

Shimazoe, Junko, & Aldrich, Howard. "Group Work Can Be Gratifying: Understanding and Overcoming Resistance to Cooperative Learning." *College Teaching,* vol. 28, no. 2, 2010, 52-57.

Slavin, Robert E. "Synthesis of Research of Cooperative Learning." *Educational Leadership,* vol. 48, no. 5, 1991, 71-82.

---. "Research on Cooperative Learning: Consensus and Controversy." *Educational Leadership*, vol. 47, no. 4, 1989-1990, 52-54.

---. "When Does Cooperative Learning Increase Student Achievement." *Psychological Bulletin,* vol. 94, no. 3, 1983, 429-445.

Smith, Karl A. "Cooperative Learning: Making "Groupwork" Work." *New Directions for Teaching & Learning,* vol. 67, no. 1, 1996, 71-82.

Smith, Nila Banton. *American reading instruction*. Newark, DE, International Reading Association, 2002.

Stahl, Norman A., & King, James R. "History." In Rona F. Flippo & Thomas W. Bean (eds.), *Handbook of College Reading*. 3rd ed, New York, NY, Taylor Francis Routledge, 2018, 3-26.

Stake, Robert E. *Multiple case study analysis*. New York, NY, Guilford Press, 2013.

Teller, Patricia J., & Gates, Ann Q. "Using the Affinity Research Group Model to Involve Undergraduate Students in Computer Science Research." *Journal of Engineering Education,* vol. 90, no. 4, 2001, 549-555.

Tsay, Mina, & Brady, Miranda. "A Case Study of Cooperative Learning and Communication Pedagogy: Does Working in Teams Make a Difference?" *Journal of the Scholarship of Teaching and Learning,* vol. 10, no. 2, 2010, 78-89.

Ventimiglia, Laura M. "Cooperative Learning at the College Level." *Thought and Action: The NEA Higher Education Journal,* vol. 9, no. 2, 1994, 5-30.

Villa, Elsa Q., Kephart, Kerrie, Gates, Ann Q., Thiry, Heather, & Hug, Sarah. "Affinity Research Groups in Practice: Apprenticing Students in Research." *Journal of Engineering Education,* vol. 102, no. 3, 2013, 444-466.

Vygotsky, Lev S. *Thought and language*. Translated by Alex Kozulin, Cambridge, MA, MIT Press, 1986.

Vygotsky, Lev S. *Mind in society: The development of higher psychological processes.* Cambridge, MA, Harvard University Press, 1978.

Yamarik, Steven. "Does Cooperative Learning Really Improve Student Learning Outcomes." *The Journal of Economic Education,* vol. 38, no. 3, 2007, 259-277.

Zhao, Chun-Mei, & Kuh, George D. "Adding Value: Learning Communities and Student Engagement." *Research in Higher Education*, vol. 45, no. 2, 2004, 115-138.