DOCUMENT RESUME

ED 476 661 SE 067 981

AUTHOR	Yamaguchi, Ryoko
TITLE	Children's Learning Groups: A Study of Emergent Leadership, Dominance, and Group Effectiveness.
PUB DATE	2003-04-00
NOTE	28p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 21-25, 2003).
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	*Academic Achievement; *Cooperative Learning; Elementary Education; *Group Dynamics; *Leadership; *Mastery Learning; Mathematics Education; Middle Schools; Skill Development

ABSTRACT

This study explores the importance of the group context in the emergence of leadership, dominance, and group effectiveness in children's collaborative learning groups. Ten 3-person work groups performed a collaborative math activity. Using achievement goal orientation (Ames, 1992; Maehr and Midgley, 1996; Pintrich and Schunk, 1996) as a framework, six groups performed the math task under a mastery condition, which emphasized learning and improving. Four groups performed under a performance condition, which emphasized competition and social comparison. The groups were videotaped and fully transcribed. The group interactions were analyzed qualitatively (Glaser and Strauss, 1967; Strauss and Corbin, 1990). The emergence of leadership and dominance varied under mastery or performance group conditions. More specifically, under the performance condition, group members exhibited more dominance and negative behaviors, such as arguing, off-task behavior, and group member isolation. Under a mastery condition, group members exhibited more leadership and positive behaviors, such as giving and seeking help, talking about math strategies, and staying focused on the task. Group effectiveness also varied under mastery and performance group conditions. Under the performance condition, groups were not as effective in completing the math task because of member dissonance, isolation, lack of communication, and dominance. Under the mastery condition, groups were more effective, with more communication among all members and a shared responsibility in completing the math task. Implications for classroom practice are discussed. (Contains 59 references.) (Author)

Children's Learning Groups: A Study of Emergent Leadership, Dominance, and Group Effectiveness

Ryoko Yamaguchi, Ph.D.
University of Michigan, Ann Arbor

Abstract

This study explores the importance of the group context in the emergence of leadership, dominance, and group effectiveness in children's collaborative learning groups. Ten 3-person work groups performed a collaborative math activity. Using achievement goal orientation (Ames, 1992; Maehr & Midgley, 1996; Pintrich & Schunk, 1996) as a framework, six groups performed the math task under a mastery condition, which emphasized learning and improving. Four groups performed under a performance condition, which emphasized competition and social comparison. The groups were videotaped and fully transcribed. The group interactions were analyzed qualitatively (Glaser & Strauss, 1967; Strauss & Corbin, 1990). The emergence of leadership and dominance varied under mastery or performance group conditions. More specifically, under the performance condition, group members exhibited more dominance and negative behaviors, such as arguing, off-task behavior, and group member isolation. Under a mastery condition, group members exhibited more leadership and positive behaviors, such as giving and seeking help, talking about math strategies, and staying focused on the task. Group effectiveness also varied under mastery and performance group conditions. Under the performance condition, groups were not as effective in completing the math task because of member dissonance, isolation, lack of communication, and dominance. Under the mastery condition, groups were more effective, with more communication among all members and a shared responsibility in completing the math task. Implications for classroom practice are discussed.

Leadership is one of the most popular topics of group research, attributing leadership to group effectiveness (Borg, 1957; Chemers, 2000; Cohen, Chang, & Ledford, 1997; Hare & O'Neill, 2000), group cohesion (Dobbins & Zaccaro, 1986; Hurst, Stein, Korchin, & Soskin, 1978; Neubert, 1999; Schriesheim, 1980), and ultimately, group and organizational success (Bass, 1985; Collins & Porras, 1994; Kotter, 1988). However, leadership studies, including informal and emergent leadership (Sorrentino, 1973; Sorrentino & Field, 1986; Wheelan & Johnston, 1996; Wheelan & Kaeser, 1997), have focused primarily on adults. Research in children's leadership, particularly emergent leadership, is limited (Edwards, 1994). However, anecdotal evidence of children's emergent leadership is apparent in everyday life. For example, in learning groups, certain students under certain conditions emerge as the group leader. In sports groups, regardless of skill, certain children emerge as leaders of their team. In playgroups, children emerge as leaders, directing play themes and games.

The emergence of leadership is an important, yet missing, factor on how children learn in groups. Previous research on leaderless groups has found that leaders emerge within the group through certain achievement-related behaviors and motives (Bass, 1949; French & Stright, 1991; French, Waas, Stright, & Baker, 1986; Sorrentino, 1973; Sorrentino & Field, 1986; Stein, 1977; Stein, Geis, & Damarin, 1973). Behaviors, such as engagement, facilitating, soliciting opinion, organizing, and record keeping, distinguished emergent leaders from other group members (French & Stright, 1991). Hence, students who emerge as leaders are those who take an active role in the group and learning process. Emergent leadership, therefore, is a critical factor in understanding group effectiveness and achievement.

However, while emergent leadership is associated with pro-social group behaviors, scholars have researched dominance in children's group behavior (Parten, 1933; Pigors, 1933, 1935; Savin-Williams, 1979, 1980; Savin-Williams, Small, & Zeldin, 1981). Pigors (1933) defines leadership as the guidance of others toward a common goal, whereas domination is the forcing of others, by assertion of superiority, to perform acts that further the dominator's private interests. Also known as the "bully," dominators may actually decrease interaction and learning in group collaboration (La Freniere & Charlesworth, 1983; Segal, Peck, Vega-Lahr, & Field, 1987; Trawick-Smith, 1988).

Hence, how can educators influence the emergence of leadership, not dominance, in collaborative learning groups? Educators can influence the context in which the students learn. More specifically, research on achievement goal orientation provides evidence for two types of group contexts: mastery and performance goal orientations. Mastery orientation refers to a focus on learning and improving, while performance orientation refers to a focus on competition and social comparison (Ames & Archer, 1988; Maehr & Midgley, 1996). Research has shown that while performance goals have been associated with maladaptive patterns of cognition, affect, and behavior (Middleton & Midgley, 1997; Midgley, Anderman, & Hicks, 1995; Midgley, Arunkumar, & Urdan, 1996; Midgley, Feldlaufer, & Eccles, 1988), mastery goals are associated with adaptive patterns (Maehr & Midgley, 1996; Maehr, Midgley, & Urdan, 1992; Pintrich & de Groot, 1990; Pintrich & Schrauben, 1992). In school settings, mastery goal orientations focus on the task per se: progress in learning and mastering a skill, intrigue with an unanswered question. In school settings with a performance goal orientation, the focus is often on performing competitively and demonstrating who is "smarter." Instead of influencing the

motivational group context through external rewards (Slavin, 1996), goal orientation influences the group context through emphasizing the purpose and beliefs about learning (Ames & Archer, 1988; Maehr & Midgley, 1996; Pintrich & Schunk, 1996).

The purpose of this study is to explore emergent leadership, dominance, and group effectiveness under different learning conditions. Using achievement goal orientation theory as a framework, the research questions are:

1) Does the learning condition of the group influence the emergence of leadership or dominance?
2) Does the learning condition of the group influence group effectiveness?

METHOD

Subjects

Participants were 30 fourth, fifth, sixth, and seventh grade students from one elementary and one middle school from the same school district (53% female, 47% male). Both schools were located in a primarily White working class mid-western city (77% Caucasian students, 23% students of color).

Students were grouped into ten three-person learning groups. Table 1 details the group composition for the ten learning groups. All names have been changed to pseudonyms to ensure confidentiality.

Data Collection and Analysis

The data used for this analysis was taken from a larger study on motivation in collaborative learning groups, during the 1997-1998 school year. The study was conducted in collaboration with the school improvement team, led by the principal of each school.

The students took part in a collaborative math activity. Students worked together for 30 minutes to plan a hypothetical field trip to Chicago and Cancun, staying within a certain budget while fulfilling the requirements or "rules" of planning (e.g. planning for lunch, dinner, and fun activities). Each student in the group was given tickets, or information, about lunch, dinner, and fun activities. The main math question involved figuring out how many days they can spend in Chicago or Cancun without going over budget. Scratch paper and calculators were provided to all students. Each group completed one answer sheet, the "Trip Planner," on which the effort of the group as a whole can be evaluated.

For the math activity, all students within their classroom were assigned to three-person learning groups. All groups of students within a given classroom were given either mastery or performance instructions. These instructions followed patterns commonly employed in experimental studies of this nature (Butler & Neuman, 1995; Graham & Golan, 1991). For the mastery goal orientation, the class was instructed to complete the math task to the best of their knowledge and that the purpose of the task was learning and improving. Students in the mastery condition received the following instructions:

> We made this math activity to see if it would help you learn and understand how to use math when you do things outside of school. This is not a test; we're simply interested in making a math activity that will help kids learn. This should be interesting and fun to do.

Throughout the collaborative math activity, students were reminded that the focus was on learning, understanding, and improving.

For the performance goal orientation, the class was instructed to complete the math task correctly, and that the purpose of the task was to test their math ability and see

was "best" at math. Students in the performance condition received the following instructions:

> This math activity is designed as a way of testing how well (elementary or middle school) students can use math outside of school. When you finish the activity, we'll be looking at your papers to see how much you know about using math outside of school. We'll also be sharing this information about how well you did with your teacher.

Throughout the collaborative math activity, students were reminded that the focus was on doing better than other groups and to see "who was the best in math."

Two groups from each classroom were videotaped for their group interaction. The data used for this study focuses on the videotaped interaction of 10 three-person learning groups; four groups are performance-oriented, six groups are mastery-oriented. Field observations were conducted prior to, during, and following the collaborative math task, and always in the student's own classroom. The videotapes were fully transcribed.

Qualitative methodology was chosen for this study to understand social interaction patterns related to children's learning groups. By being field focused, detail oriented, and giving voice to students, qualitative methodology allows for an in-depth understanding of the subtle processes of emergent leadership and dominance in children's collaboration learning groups (Eisner, 1991; Eisner & Peshkin, 1990).

Qualitative research has many different methods or techniques, rooted in a paradigm (Guba & Lincoln, 1994). One form of qualitative research is grounded theory, which was first introduced by Glaser and Strauss (1967). Grounded theory is defined as the following:

> Grounded theory is one that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory stand in reciprocal

> relationship with each other. One does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge (Strauss & Corbin, 1990, p. 23).

Using the qualitative software, NVIVO, chunks of dialogue were coded using Glaser and Strauss's (1967) constant comparative method, also referred as open coding (Strauss & Corbin, 1990) to develop the coding categories. Open coding is the process of breaking down, examining, comparing, conceptualizing, and categorizing data (Strauss & Corbin, 1990, p. 61). After analyzing the chunks of data, the domains were further refined into the following categories: group effectiveness, dominance, and leadership. Glaser (1978) refers to this method as "reduction typology (p. 67)." Hence, the analysis is an immersion of a qualitative approach to analyzing quasi-experimental data[i].

Results

1. *Does the learning condition of the group influence the emergence of leadership or dominance?*

In analyzing the group interactions during the collaborative math activity, the mastery or performance learning condition greatly impacted the emergence of leadership and dominance. In the performance group, one member dominated his or her way into the top position by bullying and taking over the group process. While previous studies have found gender differences in emergent leadership, where women emerge as social leadership, while men emerge as task leaders (Eagly & Karau, 1991; Kolb, 1999), there were no gender differences in emergent leadership or dominance.

For Group 7, Rob pushed, yelled, and blamed his way to take over the group process. In one instance, Rob was ordering Harvey to add a set of numbers, which Harvey was reluctant to do. When Tina offered to add the numbers instead, Rob became

upset and insisted that they all add together. In another example of Rob's dominance, he physically pushed Harvey away, yelling, "Get out of here!" when Harvey was trying to verify Rob's calculations. Rob also ordered his group members to raise their hand when he had a question about the math task. Rob consistently antagonized Tina by excluding her out of the math process or calling her names. Towards the end of the math task, Tina realized that the group did not fill in the answer sheet. Because Rob was doing all the math calculations, Tina asked him to fill out the answer sheet. Initially, Rob ordered Tina to fill out the answer sheet. When she refused, he retorted, "Look. It says, 'Group members.' You Retard! Everybody's got to fill it out."

In Group 8, Gina dominated the verbal conversation, to the dismay and irritation of her group members. She often snapped at her group members (sometimes literally) and eventually horded all the materials, including all three calculators. The following is an example of Gina's hording,

> Gina: For lunch, for lunch, what do you want for lunch? Let's go to Hard Rock.
> Liz: Here's the answer sheet.
> Gina: We don't use that yet! Do you have any hotel tickets? Give me one of those!

Towards the end of the group process, the other group members were clearly annoyed and irritated with Gina's dominance, especially when Gina accused them of "not helping."

Group 10 was an unfortunate example of "the blind leading the blind." It was clear that Chris did not understand the math task. However, he dominated the group by overpowering, shouting, and hording the materials. Tomika, who understood the directions and the concepts involved in the math task, tried to emerge as the leader

throughout the group interaction. Unfortunately, as the example shows, Chris shouted and over voiced his way to the top position.

> Tomika: We don't need Day 2. See, it says, "If you need it."
> Chris: Hold up! (And starts calculating) $1752. What was the hotel?
> Mary: (looks for ticket) $420
> Chris: Oh well, we're still on our budget any way, where's Day 2?
> Tomika: (gives Chris a dirty look) We don't need Day 2!
> Chris: Yea... We do!
> Tomika: It says, "If needed!" And we don't need it!
> Chris: We plan two days. Now we're figuring this out (and gets worksheet).

In the mastery group, leadership emerged in all students, where all members shared the responsibility of completing the task. More specifically, each member led the group at different times. Leadership in the mastery group not only focused on the math task, but it also focused on group cohesion and building positive group interactions.

In Group 1, Natalie often emerged as the leader. However, towards the end of the math task, Aaron directed the group processes. Eric, who tended to be off-task, was also able to lead some parts of the math activity. The following example shows how leadership shifted from Eric, then Aaron, who suggested starting over, and finally to Natalie,

> Eric: The first day we have to have one of those or we're not going anywhere!
> Aaron: What's that?
> Natalie: Oh, yea! We have to have that the first day 'cause...Plus that, Aaron!
> Eric: Yea, the first day we're not going anywhere. We're just gonna go around on our own buying stuff if you don't put that in there!
> Aaron: We gotta start over!
> Natalie: Oh yea. Aaron, no Aaron, no! Ok, fine!
> Eric: We're going to the museum!
> Natalie: Ok, we're starting all over.

Group 2 is another team where leadership not only emerged in all members, but also was shared and distributed throughout their interaction. In almost a round-robin approach, Larry indicated to the group that he would add a set of numbers and wanted

Bill to organize the tickets. Bill agreed, and while he organized the tickets, asked Sue to subtract a set of numbers. Sue, in turn, agreed and gave her the answer to the group, and suggested what to do next. This round-robin approach of leadership was evidenced throughout their interaction.

In Group 3, Jim, Jenny, and Erin equally focused on the math task and group cohesion. For example, Jim suggested, "Erin, you pick your (tickets). Jenny, you pick yours. And I'll pick mine." When two group members disagreed, the third smoothed things out, as evidenced by Erin,

> Jenny: No, it's add.
> Jim: No, it's take away, duh.
> Erin: Jim, don't say "duh," it's not nice.

Jim immediately apologized and reiterated his motivation to work together to complete the math task.

Similarly, Group 5, while especially focused on finishing the math task, also worked on improving group cohesion, as evidenced in this example,

> Becky: If they take away...
> Aine: What's Hard Rock Café? (To Efrem)
> Efrem: Shhh, listen to Becky (To Aine).
> Becky: If we take away the 2 nights at the hotel, we have this much left (shows calculator to Efrem).

In Group 4, John made it a point not to overtly take over the group process. Rather, he encouraged Catie and Sonia to take part in the group decisions. For example, John suggested that each member be in charge of one aspect of the math task.

> John: Each one of us has to cover something—so Sonia, you be like food and fun things, and I'll be like arriving and leaving, Ok? You know, that's just my suggestion...Ok, you wanna do that? (To Sonia) Two and two? (Looks at Catie and asks) What do you want to do?
> Catie: I don't know? I guess travel and hotel.
> John: Travel and hotel? (Looks at Sonia) What do you want?

Sonia: I'll trade you, arriving for fun things. (To Catie) So what do you want?
John: (To Catie) And I got fun things and leaving.

While Catie was initially reluctant to participate, John's encouragement and insistence on group decisions made Catie an equal participant towards the end of the math activity.

2. *Does the learning condition of the group influence group effectiveness?*

Mastery groups were more effective in completing the math activity than the performance groups. Students in the mastery condition showed more math strategies and effective communication than students in the performance condition. These differences attributed to the mastery groups completing the task on time, and more importantly, enjoying the collaborative learning process.

Math strategies included viewing the math task as "fun," trying out different combinations, and selecting the cheapest tickets to solve the math task. One group member from the performance condition, Liz, indicated that the math task was "fun."

Liz: Do you guys want to do it (math task) again for fun?
Gina: No! We have another one to do anyway!
Cody: (Agrees with Gina, and ignores Liz's comment)

Unfortunately for Liz, her comment was immediately dismissed. However, groups in the mastery condition were much more receptive in viewing the math task as "fun." For example, in Group 2, all the group members validated Sue's comment that the math task was "fun."

Sue: This should be fun!
Bill: Yea, this should be fun!
Larry: Yea, 500 pesos is probably like, $200 here!

In Group 3, another mastery group, Jim was obviously excited about the activity, which also motivated his group members, Jenny and Erin. Even before the researcher finished the instructions, Jim loudly whispered to his group, "This'll be fun!" Jim asked

the researcher for a weather report of the area so his group can plan the field trips accordingly. Jim continued to whisper to his group, "You got the tickets and the envelopes. Ok you guys! I have the afternoon, you've got the morning, you've got fun things." While Jenny and Erin agreed with Jim's suggestions, and were also excited about the math task, they reminded him to finish listening to the researcher, who was still giving instructions to the class.

In the mastery condition, students were much more willing to be adventurous and try out different scenarios to answer the math problem. For example, in Group 5, a mastery group, Efrem concluded, "So we can only stay 2 nights." Before Efrem can write the answer on the "Trip Planner," Becky interrupted and proclaimed, "No, hold on! I'm going to see if we can stay 3 nights!" Such willingness to "do more work" was beneficial, since Group 5 was able to answer the math problem correctly.

While Efrem and Aine supported Becky's attempt to "stay 3 nights," in the performance group, such adventurousness created friction, as experienced by Group 7.

> Rob: We can still go on for two days, I bet. So why don't we go for three days. Day three.
> Harvey: We have $1136.
> Rob: $1236
> Harvey: No, no no don't...
> Rob: So we can go for three days.
> Harvey: No, we can't.
> Rob: Yes! We can!
> Harvey: Let's see what it's going to be then!

Interestingly, Harvey and Rob's continued arguments over who had the right answer played against them, where their group did not finish the math task.

The mastery groups were able to figure out that in order to stay as long as possible in the field trips, the students had to find the "cheapest" and most affordable itinerary.

Mastery students were suggesting ways to "save money." Eric's (Group 1) strategies to save money were on the creative side, suggesting that in order to save money for more fun activities, they can "go on a diet to eat less food," and "sleep in a rental car and eat pizza." Efrem's (Group 5) suggestion to save money was to "bring a bag lunch," instead of eating out.

For the most part, students in the mastery group figured out that in order to stay as many days as possible, they needed to "save money" by selecting the cheapest items for their fieldtrip. In Group 2, Bill, Sue, and Larry were focused on "saving money" throughout the math activity. For example, when Larry wanted to go to an expensive restaurant for lunch, Sue stated, "we should save money for the fun activity." They all agreed for a cheaper lunch.

Group 3 was focused on planning the fieldtrips as cheaply as possible. Throughout their group interaction, the focus was on finding the cheapest items, without regard to their preference in activities or restaurant. This strategy was drastically different from the performance groups, where they focused more on preference of activities than solving the math problem.

In the performance group, elementary and middle school students did not readily understand the concept of saving money, or budgeting, to plan the trip to Chicago or Cancun. Rather, instead of focusing on completing the task, the performance group students got caught up in organizing the tickets and debating what they wanted to do in Chicago and Cancun. While the tickets offered such fun activities as "go to the beach" and "go to the zoo," some students in the performance group were off task, talking about their family vacations in Cancun or Chicago.

The mastery groups were more effective in communication than performance groups. Even when there were disagreements, or a group member was off-task, students in the mastery group relied on one another for help. Suggestions were met with enthusiasm from other group members. The following example from Group 1 shows the dynamic flow of the conversation,

> Eric: Day one we got the museum, the trip, and the food. That's all we need, ok.
> Natalie and Aaron (in unison): Ok
> Natalie: I need the trip tickets!
> Eric: Got it.
> Natalie: I need something to do after you.
> Aaron: Day Two.
> Natalie: We need something in the morning and afternoon.

Group 2 exhibited effective communication, even when there was disagreement on the task. Larry, Bill, and Sue were able to diffuse any possible power struggles and relied on the instructions for clarification. This group was self-reliant, only asking questions to the researcher when they could not find the answer in the instructions, as this example illustrates,

> Larry: We can leave in the morning. Then, we don't have to spend for lunch.
> Bill: We can't leave in the morning.
> Larry: Yea, we can.
> Bill: Ok.
> (Sue looks in the directions and finds that they do leave in the morning.)
> Sue: See in the rules. (Reads instructions aloud) You leave early in the morning.

However, Larry, Bill, and Sue were confused if leaving in the early morning constituted paying for the night. When they were all stumped, they asked the researcher for clarification.

Group 5 also experienced frustrations, anxieties, and disagreement, especially when time was running out to complete the math task. However, this group had an incredible ability to positively communicate with each other and even joke about their

disagreements. Efrem was excited about the math task from beginning to end, often stating that the math task was "business stuff." This excitement also motivated his group members, as evidenced by the following example,

> Efrem: Ok. We have $990 left 'cause I added it up. We only need things to do there. We've got breakfast covered.
> Becky: So we've got lunch and fun things.
> Efrem: Fun things.
> Aine: I'll do lunch, ok?
> Efrem: This is all business stuff, right here! (Clearly excited about the activity)
> Becky: What would they most like to do in the afternoon?
> Efrem: They can go to the beach.
> Aine: Yea! The beach!

Group 6 had a difficult time getting started because they had trouble understanding the math task. After receiving instructions again from the researcher, they were able to complete the math task on their own. Instead of constantly asking the researchers for help, they were able to help and rely on each other. The following example illustrates their efficient and effective communication,

> Zack: We have to add this all up...to see how long we can stay.
> Nora (picks up the calculator): 2 take away 18, plus 30, plus 420, plus 60, plus 330...what do I do over here?
> Zack: (goes over to her end of the table) Day 2, here. Which place do you want to go to eat?
> Brandon: $850.
> Zack: Ok, put this in the envelope.
> Brandon: What? All this?
> Zack: yea.
> Nora: Ok

The performance groups exhibited more negative group interactions than the mastery groups. In the performance groups, there was ineffective communication, social loafing, cheating, fighting, and blaming each other during the group process. The communication became stagnated in performance groups. In Group 7, Rob, Harvey, and

Tina struggled to communicate with each other. Rob and Harvey were so competitive with one another that they often ended up in power struggles. For example, when Harvey gave an answer, it was met with disdain from Rob:

> Harvey: That's $46.
> Rob: How do YOU know!?!
> Harvey: 'Cause I used a calculator.
> Rob: Well, then figure it out! 30 plus...
> Harvey: See, that's $46!
> Rob: 546! We got lunch ticket, afternoon fun thing, we got this, and we got this.

Whenever Rob and Harvey got into a power struggle, Harvey often asked a researcher to help resolve their differences. In all, Harvey asked a researcher for help 12 times during the group interaction. Unfortunately, Rob, Tina, and Harvey did not seek help from each other.

In addition, Rob often silenced Tina. At the end of the group interaction, Tina had her hands resting on her face, just watching Rob and Harvey continue their power struggles. At one point in the interaction, Rob accused Tina of "stealing the tickets," calling her names, and suggesting that she is not as "smart" as the other members, as evidenced by this example,

> Harvey: Second day, I get to plan.
> Rob: No, I get to plan!
> Tina grabs the envelopes for Second Day and smiles at Harvey and Rob.
> Rob: He gets to plan, he's the second smartest at this table!
> Tina: No he's not! (But clearly looking demoralized)

In Group 9, poor communication was exhibited when Heather completely ignored her fellow group members. This group split into two factions. Because Heather ignored her group members, Adam and Michelle ended up trying to do the math activity

themselves. While the math activity was designed to be collaborative, Heather took over the math task and completed it herself, as evidenced by the following:

> Michelle: (To Heather) Where are we going to eat?
> Heather: Don't know, I'm almost done. Ok! I only have $500 to go! I made it! I have to add this up now!
> Michelle: What are you doing Heather?
> Heather: I have to get this out before we do anything! (Heather continues to calculate feverishly, ignoring Adam and Michelle)
> Michelle: (To Adam) What is she doing? (Michelle and Adam both shrug)
> Researcher: Ok, times up. Please put everything in the envelopes and I'll come to pick them up.
> Michelle: We don't know the answer or nothing!
> Heather: Well, I got MY answers. Here, just write your names!

While Michelle and Adam did their best to take part in the math task, they were clearly bored during the collaboration due to Heather's dominance.

CONCLUSION

The current study shows that the learning condition plays an important role in the emergence of leadership, dominance, and group effectiveness. Mastery groups exhibited more pro-social leadership, focusing on the math task and group cohesion. The emergence of leadership in the mastery groups was distributed and shared among group members. In addition, mastery groups were more effective in solving the math task, as evidenced by their math strategies and effective communication. Performance groups exhibited more dominance, where one student, regardless of race or gender, emerged to overpower the group process. Performance groups were less effective in solving the math task because the friction within the groups created ineffective communication, social loafing and dissonance, and more off-task behavior. More importantly, students in the mastery groups enjoyed the math activity and asked the researchers to come to their classroom again. Unfortunately, students in the performance groups, particularly those

who were dominated, looked frustrated, stressed, and bored during the collaboration. Finally, it is important to note that mastery and performance groups faced similar problems, such as confusion on the math task and occasional friction between group members. The differences between the groups were their strategies and interactions to solve these problems. By emphasizing learning and improving, mastery groups were able to focus on the task at hand. By emphasizing competition and social comparisons, performance groups experienced friction within their groups and were not able to concentrate on completing the math task.

These results have direct implications for practice. Advocates of cooperative learning have touted the values of group learning experiences (Slavin, Madden, Dolan, & Wasik, 1995), without taking into consideration the learning environment. This study shows that the group condition is an important factor in successful collaboration and learning. In addition, this study shows that emergent leadership is a positive feature of group collaboration, while domination is a negative component of group collaboration.

Teachers and educators can influence the emergence of leadership, and limit dominance, in group learning situations. Specifically, teachers can prime the students into a mastery orientation by emphasizing learning and improving as goals. Unfortunately, with an increased emphasis on testing and standards, schools often emphasize performance goals, focusing on social comparison, student ability, and competition. However, research has shown that mastery goal orientations provide better learning environments for students, particularly disadvantaged students (Baden & Maehr, 1986; Maehr & Midgley, 1999; Midgley et al., 1996; Midgley & Edelin, 1998). In addition, the results of this study show that mastery goals are beneficial for effective

group collaboration and learning. To conclude, children's learning groups provide opportunities for students to learn from each other (Slavin, 1996), as well as learn social interaction skills. However, for learning groups to be an effective teaching technique, teachers must also shape the group environment to focus on mastery goal orientations.

Table 1: Group Composition in Children's Learning Groups Study

Group #	Mastery/Performance Condition	School Level	Gender Composition	Group Members* (Student Ethnicity)
1	Mastery	Elementary	Male-majority	Aaron (African American) Eric (Caucasian) Natalie (Caucasian)
2	Mastery	Middle	Male-majority	Sue (Asian American) Bill (Caucasian) Larry (Caucasian)
3	Mastery	Elementary	Female-majority	Jim (Caucasian) Jenny (Caucasian) Erin (Caucasian)
4	Mastery	Middle	Female-majority	John (Caucasian) Catie (Caucasian) Sonia (Caucasian)
5	Mastery	Elementary	Female-majority	Aine (Asian American) Becky (Caucasian) Efrem (African American)
6	Mastery	Elementary	Male-majority	Brandon (Caucasian) Zack (Caucasian) Nora (Caucasian)
7	Performance	Elementary	Male-majority	Rob (Caucasian) Harvey (African American) Tina (Caucasian)
8	Performance	Middle	Female-majority	Gina (Caucasian) Liz (Caucasian) Cody (Caucasian)
9	Performance	Elementary	Female-majority	Heather (Caucasian) Michelle (Caucasian) Adam (Caucasian)
10	Performance	Elementary	Female-majority	Tomika (African American) Mary (Caucasian) Chris (Caucasian)

* All names are pseudonyms.

REFERENCES

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*(3), 260-267.

Ames, C. A. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261-271.

Baden, B. D., & Maehr, M. L. (1986). Confronting culture with culture: A perspective for designing schools for children of diverse sociocultural backgrounds. In R. S. Feldman (Ed.), *The Social Psychology of Education: Current Research and Theory* (pp. 289-309). New York: Cambridge University Press.

Bass, B. M. (1949). An analysis of the leaderless group discussion. *Journal of Applied Psychology, 33*, 527-533.

Bass, B. M. (1985). *Leadership and Performance Beyond Expectation.* New York: Free Press.

Borg, W. R. (1957). The behavior of emergent and designated leaders in situational tasks. *Sociometry, 20*(2), 95-104.

Butler, R., & Neuman, O. (1995). Effects of task and ego achievement goals on help-seeking behaviors and attitudes. *Journal of Educational Psychology, 87*(2), 261-271.

Chemers, M. M. (2000). Leadership research and theory: A functional integration. *Group Dynamics: Theory, Research, and Practice, 4*(1), 27-43.

Cohen, S. G., Chang, L., & Ledford, G. E. J. (1997). A hierarchical construction of self-management leadership and its relationship to quality of work life and perceived work group effectiveness. *Personnel Psychology, 50*(2), 275-308.

Collins, J. C., & Porras, J. I. (1994). *Built to Last: Successful Habits of Visionary Companies*. New York: HarperCollins Books.

Dobbins, G. H., & Zaccaro, S. J. (1986). The effects of group cohesion and leader behavior on subordinate satisfaction. *Group and Organization Studies, 11*(3), 203-219.

Eagly, A. H., & Karau, S. J. (1991). Gender and the emergence of leaders: A meta-analysis. *Journal of Personality and Social Psychology, 60*(5), 685-710.

Edwards, C. A. (1994). Leadership in groups of school-age girls. *Developmental Psychology, 30*(6), 920-927.

Eisner, E. M. (1991). *The Enlightened Eye*. New York: Macmillan.

Eisner, E. W., & Peshkin, A. (Eds.). (1990). *Qualitative Inquiry in Education: The continuing debate*. New York: Teachers College.

French, D. C., & Stright, A. L. (1991). Emergent leadership in children's small groups. *Small Group Research, 22*(2), 187-199.

French, D. C., Waas, G. A., Stright, A. L., & Baker, J. A. (1986). Leadership asymmetries in mixed-age children's groups. *Child Development, 57*(5), 1277-1283.

Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.

Glaser, B. G. (1978). *Theoretical Sensitivity*. Mill Valley, CA: The Sociology Press.

Graham, S., & Golan, S. (1991). Motivational influences on cognition: Task involvement, ego involvement, and depth of information processing. *Journal of Educational Psychology, 83*, 187-194.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 105-117). Thousand Oaks, CA: Sage.

Hare, L. R., & O'Neill, K. (2000). Effectiveness and efficiency in small academic peer groups: A case study. *Small Group Research, 31*(1), 24-53.

Huberman, A. M., & Miles, M. B. (1994). Data Management and Analysis Methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 428-443). Thousand Oaks, CA: Sage.

Hurst, A. G., Stein, K. B., Korchin, S. J., & Soskin, W. F. (1978). Leadership style determinants of cohesiveness in adolescent groups. *International Journal of Group Psychotherapy, 28*(2), 263-277.

Kolb, J. A. (1999). The effect of gender role, attitude toward leadership and self-confidence on leader emergence: Implications for leadership development. *Human Resource Development Quarterly, 10*(4), 305-320.

Kotter, J. P. (1988). *The Leadership Factor*. New York: The Free Press.

La Freniere, P., & Charlesworth, W. R. (1983). Dominance, attention, and affiliation in a preschool group: A nine-month longitudinal study. *Ethology and Sociobiology, 4*, 55-67.

Maehr, M. L., & Midgley, C. (1996). *Transforming School Cultures*. Boulder, CO: WestviewPress.

Maehr, M. L., & Midgley, C. (1999). Creating optimum environments for students of diverse sociocultural backgrounds. In J. Block & S. T. Everson & T. R. Guskey (Eds.), *Comprehensive School Reform: A Program Perspective* (pp. 355-375). Dubuque, IA: Kendall/Hunt.

Maehr, M. L., Midgley, C., & Urdan, T. (1992). School Leader as Motivator. *Educational Administration Quarterly, 28*(3), 410-429.

Middleton, M., & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An under explored aspect of goal theory. *Journal of Educational Psychology,* 89(4), p. 710-718.

Midgley, C., Anderman, E., & Hicks, L. (1995). Differences between elementary and middle schoolteachers and students: A goal theory approach. *Journal of Early Adolescence. Special Issue: Middle grades schooling and early adolescent development: Interventions, practices, beliefs, and contexts, 15*(1), 90-113.

Midgley, C., Arunkumar, R., & Urdan, T. C. (1996). "If I don't do well tomorrow, there's a reason": Predictors of adolescents' use of academic self-handicapping strategies. *Journal of Educational Psychology, 88*(3), 423-434.

Midgley, C., & Edelin, K. C. (1998). Middle school reform and early adolescent well-being: The good news and the bad. *Educational Psychologist, 33*(4), 195-206.

Midgley, C., Feldlaufer, H., & Eccles, J. S. (1988). The transition to junior high school: Beliefs of pre- and post-transition teachers. *Journal of Youth and Adolescence, 17,* 543-562.

Neubert, M. J. (1999). Too much of a good thing or the more the merrier? Exploring the dispersion and gender composition of informal leadership in manufacturing teams. *Small Group Research, 30*(5), 635-646.

Parten, M. B. (1933). Leadership among preschool children. *Journal of Abnormal and Social Psychology, 27*, 430-440.

Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (Second Edition ed.). Thousand Oaks: Sage.

Pigors, P. (1933). Leadership and domination among children. *Sociologus, 9*, 140-157.

Pigors, P. (1935). *Leadership or Dominance*. Boston: Houghton Mifflin.

Pintrich, P. R., & de Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*(1), 33-40.

Pintrich, P. R., & Schrauben, B. (1992). Student's motivational beliefs and their cognitive engagement in academic tasks. In D. Schunk & J. Meece (Eds.), *Student Perceptions in the Classroom: Causes and Consequences* (pp. 149-183). Hillsdale, NJ: Erlbaum.

Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in Education: Theory, Research, and Applications*. Englewoods Cliffs, N.J.: Prentice Hall.

Savin-Williams, R. C. (1979). Dominance hierarchies in groups of early adolescents. *Child Development, 50*(4), 923-935.

Savin-Williams, R. C. (1980). Dominance hierarchies in groups of middle to late adolescent males. *Journal of Youth and Adolescence, 9*(1), 75-85.

Savin-Williams, R. C., Small, S. A., & Zeldin, R. S. (1981). Dominance and altruism among adolescent males: A comparison of ethological and psychological methods. *Ethology and Sociobiology, 2*(4), 167-176.

Schriesheim, J. F. (1980). The social context of leader-subordinate relations: An investigation of the effects of group cohesiveness. *Journal of Applied Psychology, 65*(2), 183-194.

Segal, M., Peck, J., Vega-Lahr, N., & Field, T. (1987). A medieval kingdom: Leader-follower styles of preschool play. *Journal of Applied Developmental Psychology, 8*, 79-95.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychologist, 21*, 43-69.

Slavin, R. E., Madden, N. A., Dolan, L. J., & Wasik, B. A. (1995). *Every Child, Every School: Success for All.* Thousand Oaks, CA: Corwin Press, Inc.

Sorrentino, R. M. (1973). An extension of theory of achievement motivation to the study of emergent leadership. *Journal of Personality and Social Psychology, 26*(3), 356-368.

Sorrentino, R. M., & Field, N. (1986). Emergent leadership over time: The functional value of positive motivation. *Journal of Personality and Social Psychology, 50*(6), 1091-1099.

Stake, R. E. (1995). *The Art of Case Study Research.* Thousand Oaks: Sage.

Stein, R. T. (1977). Accuracy of process consultants and untrained observers in perceiving emergent leadership. *Journal of Applied Psychology, 62*(6), 755-759.

Stein, R. T., Geis, F. L., & Damarin, F. (1973). Perception of emergent leadership hierarchies in task groups. *Journal of Personality and Social Psychology, 28*(1), 77-87.

Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park: Sage.

Trawick-Smith, J. (1988). "Let's say you're the baby, OK?" Play leadership and following behavior of young children. *Young Children, 43*(5), 51-59.

Wheelan, S. A., & Johnston, F. (1996). The role of informal member leaders in a system containing formal leaders. *Small Group Research, 27*(1), 33-55.

Wheelan, S. A., & Kaeser, R. M. (1997). The influence of task type and designated leaders on developmental patterns in groups. *Small Group Research, 28*(1), 94-121.

---

[i] Employing qualitative analysis with quasi-experimental data can cause problems in grounding the theory in the data. First, qualitative studies are often criticized for their lack of generalizability. However, by triangulating video data and observations, I have strived to minimize bias and have focused on the quality of the group interaction. Thus, these results, I believe, are transferable (Guba & Lincoln, 1994; Huberman & Miles, 1994; Patton, 1990; Stake, 1995), though it may not fit the quantitative rigor of generalizability. Second, because the analysis of the data involved an immersion of qualitative analysis within quasi-experimental data, where groups were pre-assigned to mastery or performance conditions. The quasi-experimental nature of the data implied an expected difference in behaviors under the two group conditions. This approach has limitations when using rigid applications of grounded theory. While it would be ideal to have left the groups unassigned, using a grounded theory approached helped to tease out the group dynamics and show patterns of behavior.

SE067981

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC Educational Resources Information Center

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Children's Learning Groups: A Study of Emergent Leadership, Dominance, & Group Effectiveness	
Author(s): RYOKO YAMAGUCHI	
Corporate Source: UNIVERSITY of MICHIGAN, ANN ARBOR	Publication Date: AERA APRIL 2000

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1 ↑ [X]

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A ↑ [ ]

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B ↑ [ ]

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, please

Signature: [signature]	Printed Name/Position/Title: RYOKO YAMAGUCHI, RESEARCH INVESTIGATOR
Organization/Address: 426 Thompson St #2344 ISR ANN ARBOR, MI 48106-1248	Telephone: 734 647 9296 FAX: 734 936 9329
	E-Mail Address: RYokoy@umich.edu Date: 6/1/03

(Over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC CLEARINGHOUSE ON ASSESSMENT AND EVALUATION
UNIVERSITY OF MARYLAND
1129 SHRIVER LAB
COLLEGE PARK, MD 20742-5701
ATTN: ACQUISITIONS

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfacility.org