How Peers Support and Inhibit Learning in the Classroom: Assessment of High School Students in Collaborative Groups

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Abstract

Improving conditions of learning is a priority for schools, communities, states, and the federal government. Students are the stakeholders with the most to gain or lose and should be consulted about their classroom experiences as a basis for continuous school improvement planning. The population of 461 students from a rural public high school in the southern United States was invited by the school principal to complete the 16-item Peer Support Poll on ways peers support and inhibit learning. Results for the 443 participating students identified (a) ways peer support influences performance of individuals in cooperative learning groups, (b) functioning and effectiveness of teams, (c) and preferences for ways of learning. Findings of this study can help guide efforts to strengthen the school community by incorporating student voice to improve the efficacy of collaborative groups. Faculty reviewed the findings in a bar chart with poll items, frequencies, and percentages. The high rate of student participation, 96%, suggests they trusted the principal and faculty to respect their anonymous opinions and consider them as a basis for taking action. A 10-step process model is described to use polling to mobilize the school community in making decisions about school improvement.

Key Words: peer support, polling, cooperative learning groups, high school student voice, continuous improvement planning, principals, secondary teachers

Introduction

Leaders of American corporations have reported disappointment with the way secondary schools report achievement, based solely on the way students perform while working alone. This traditional method of reporting is seen as too narrow because it ignores the teamwork competencies that graduates will need for the interdependent workplace (Hart Research Associates, 2015, 2018; Pew Research Center, 2016). School records should include evidence of how individuals perform in cooperative learning groups (Gordon, 2018; Karlgaard & Malone, 2015; Malone & Bernstein, 2015; Rodriguez-Campos, 2015). Cooperative learning is a widely applied teaching approach in which small structured groups of students meet to provide peer support for solving problems, sharing knowledge of materials, and practicing collaboration skills (Coyle, 2018).

The purpose of the study reported here was to determine how 443 students at one high school viewed the peer support they received in their cooperative learning groups. Such information can contribute to continuous school improvement planning to prepare students for the workplace. The research literature identifies some ways peers support and inhibit learning. Studies suggest that respect for student voice should be considered in making decisions about improving school practices. In addition, cooperative learning is also acknowledged as a means to support student development in the social context.

Respect for Student Voice to Make Changes About School Improvement

A movement promoting what is called "student voice" has gained attention in many countries including the U.S. The common goals of this movement have been to (a) describe aspirations of youth, (b) explain how students perceive the assets and shortcomings of their schooling, (c) reveal how adolescents think instruction could be improved, and (d) identify ways to enable equity for the provisions of education (Quaglia & Corso, 2014).

Three award-winning American school superintendents—Lubelfeld, Polyak, and Caposey (2018)—explained their leadership experiences with student voice in *Student Voice: From Invisible to Invaluable*. The premise of their book was that student voice has not been heard, and this was a possible reason why public schools have not innovated to the extent they should to effectively serve students. They encouraged administrators to connect with students by finding out their ideas about how to improve learning, assess relevance of curriculum, and determine results of instruction. This process also provided students with understanding of democratic methods and preparation for leadership expected by employers (Caposey, 2018; Lubelfeld & Polyak, 2017).

A meta-analysis involving 49 studies about student voice was conducted by Gonzalez, Hernandez-Saca, and Artiles (2017). These studies confirmed that student voice is able to reveal insights not otherwise available in research that is framed only from the viewpoint of administrators or teachers. Studies included in the analyses generally recommended that schools consider ways to shift from the present adult-centric pattern to become more student-centric.

Landsman, Gorski, and Salcedo (2015) explained that students are the stakeholders with the most to gain from efforts to keep American education competitive. Recommendations were made for teachers, administrators, and boards of education to become more informed about the educational experiences youth value and aspects of guidance they feel are missing. Ryan, Urdan, and Anderman (2018) urged that adolescents should participate in planning efforts to improve education so schools can become more appealing for disengaged students who are likely to drop out. Unless student voices are considered, adults assume how youth interpret their experiences in the classroom and what they expect of their teachers.

Cooperative Learning Supports Social Development

Schools can nurture social development by arranging cooperative learning that engages students in teams to study the subject matter of their courses. Students work together to achieve mutually understood goals. Besides learning the content of a subject, this provides an opportunity to practice teamwork skills that will be needed for productivity in the workplace. Strebe (2017) points out that some of the observed social–emotional benefits provided by cooperative learning include more frequent involvement with helping and tutoring, more careful listening to the views of others, encouraging and recognizing teammate contributions, the avoidance of put-downs or placing blame on others, greater willingness to accept compromise as the way to deal with differences of opinion, enhanced sense of belonging, more perspective taking, greater willingness to try new and difficult tasks, and increased expression of optimism with hope regarding group success.

Joliffe (2018) has summarized the results of many cooperative learning studies. Findings have consistently determined that academic performance improves, with students showing greater problem-solving abilities, more favorable attitudes toward school, increased appreciation of cultural and racial diversity, better understanding about principles of democracy, closer relationships among classmates, and a lower incidence of discipline problems. Johnson and Johnson (2018) asserted that how students interact with peers in teams is a neglected aspect of instruction. Teacher education emphasizes planning for ways to engage students, but how students should interact with one another is relatively

ignored. The ways teachers structure collaboration among students influences learning, self-esteem, and an appreciation of school, teachers, and peers.

Other studies of cooperative learning have explored the way social relationships influence student behavior and achievement. Johnson, Johnson, Roseth, and Shin (2014) conducted a meta-analysis involving 685 studies to compare relative effectiveness of using cooperative, competitive, and individualistic goal structures. These studies involved 52,000 participants from 26 countries. Results showed that students in classes using cooperative learning goals recorded higher problem-solving scores and performed better on reasoning and critical thinking compared to peers in classes emphasizing competitive or individualistic learning. Students in classes focused on cooperative learning goals also reported greater peer support.

Instrumentation for Data Gathering of Students' Views About Conditions of Learning

This section describes previous development of learning polls, field testing, and subsequent applications that served as a foundation for the current study. The initial purpose was to establish a school polling system that would be systematic, efficient, evidence-based, and anonymous. A set of 10 polls were developed by Strom and Strom (2016). Although focus groups have been used to explore student opinion, that approach does not represent the full range of student views or offer the protection of anonymity. Gathering student opinions requires procedures they trust; adolescents consider polling to be a safe form of self-disclosure based on their experiences in responding to media (Boyd, 2014). In a similar way, polls can focus on student experiences that occur in school. To introduce the possibility of polling secondary school students, several principals were invited to a meeting where they shared their views about potential advantages of this approach. Later, student volunteers participated in the identification of suitable topics for polling.

The list of topics students generated was examined by the authors and school principals. Together, they chose 10 topics as relevant for poll development. Every poll contained 15 to 20 multiple-choice items and an open-ended "other" fill-in response for answers not represented by the stated options. Students were invited to be experts about the adolescent experience by examining the first draft of each poll. Their tasks were to judge the relevance of each poll topic, ease of understanding the content of the items, and suitability of the response options. Based on student feedback, some of the polls were modified, reexamined by students, and checked for reading difficulty (Strom & Strom, 2016).

The 10 polls used the Flesch–Kincaid Grade Level Readability Formula. Reading grade levels included the following: Career Exploration Poll, reading

grade 5.9; Cheating Poll, reading grade 5.7; Cyberbullying Poll, reading grade 6.9; Learning on the Internet Poll, reading grade 6.2; Peer Support Poll, reading grade 6.7; School Stress Poll, reading grade 6.2; Selective Attention Poll, reading grade 6.7; Student Frustration Poll, reading grade 6.4; Time Management Poll, reading grade 5.5; and Tutoring Poll, reading grade 6.2 (Strom & Strom, 2016).

A field test of polling procedures was examined in cooperation with eight rural Title I underperforming schools enrolling high proportions of minority students (Strom, Strom, & Wing, 2008). Students (N = 2,575) were brought to the schools' respective computer labs; each was given password-protected entry data to access several polls the faculty had chosen, a school code, and an individual code drawn from a random generator. This procedure guaranteed anonymity and ensured that no one could respond to the polls more than once. Three polls were administered over a two-week period: Time Management, Tutoring, and Internet Learning. The principals checked each day to determine how many students had responded and the proportion choosing each response for every poll item. The response rate for each school exceeded 75%.

Non-parametric chi-square testing was conducted on all poll items allowing for multiple options. Each response had to be tested because students could choose more than a single option as their response; therefore, each had a separate data field. The purpose was to find out whether relationships were dependent or independent between responses and demographic variables of gender, grade, and ethnicity. The same tests were performed between the responses and specific schools to detect significant differences between student perceptions from school to school. Of the student responses on the polls, 69% showed a dependent relationship with one or more variables. Overall, the school location variable recorded the highest response relationship (46%), followed by gender (35%) and grade level (23%). Ethnicity recorded the lowest number of significant relationships (17%). Accordingly, the emphasis for student polling was on the local school rather than data drawn from multiple schools.

Each of the eight principals received a detailed report with a breakdown of the student responses by grade, gender, and ethnicity for their school. The report included answers to each question depicted by bar graphs so that each school could consider reforms based on specific responses of their students. Qualitative evaluation occurred six weeks after online reports were disseminated to the eight schools. Interviews were held with each of the principals at their respective sites. Feedback from the principals was highly favorable, citing the following advantages for polling (Strom et al., 2008):

- Polls reflect the opinion of students more accurately than adult interpreters.
- Polls identify conditions of learning and instruction preferred by adolescents.

- Polls describe school services that the students feel could be helpful to them.
- Polls empower students by accepting credibility of their ideas and opinions.
- Polls recognize frustrations and stresses students experience in the classroom.
- Polls detect faculty limitations that implicate priority for in-service training.
- Polls reveal student norms of opinion about issues of importance to them.
- Polls allow students to express opinions knowing that they are anonymous.
- Polls encourage students to recognize voting can produce favorable change.
- Polls permit students to express views without influencing school grades.
- Polls demonstrate the school respects student opinions about education.
- Polls clarify majority thinking and extent of variance in student viewpoints.
- Polls recognize things students want to learn that are not part of curriculum.
- Polls inform schools about student views of institutional assets and limits.
- Polls enhance faculty perspective to enable them to make better decisions.

Method

Sampling and Participants

The current study was conducted at a rural high school in a southern region of the United States. The rural community consists of approximately 6,000 people, with most working adults engaged in farming and the forestry industry. Two-thirds (65%) of students reside in poverty-level households and therefore are eligible for free or reduced cost meals. The principal and faculty agreed to invite the total school enrollment of 461 students to complete the Peer Support Poll. Students were informed that their opinions would be anonymous and used to improve school practices.

Respondents included 443 students, 96% of the school enrollment. The students were between the ages of 13 and 19 years with an average age of 16.26. Their education levels were Grade 9 (n = 118, 27%), Grade 10 (n = 111, 25%), Grade 11 (n = 119, 27%), and Grade 12 (n = 95, 21%). Gender distribution was 225 (51%) males and 218 (49%) females. Students identified themselves as White (n = 250, 56%), Black (n = 166, 38%), or Other (n = 27, 6%).

Poll Instrumentation and Procedures

The principal and faculty were oriented to origins of student polling, previous research outcomes, administration procedures, feedback method, and ways to use results for continuous improvement planning. A schoolwide announcement was made by the principal who explained that (a) student voice is an important source of insight to guide school improvement, (b) student responses would be used to help teachers and staff understand students' perceptions about peer support in the classroom and make school improvements,

(c) polls were anonymous, and (d) completing the poll was voluntary, not a class assignment.

The Peer Support Poll consists of 16 multiple-choice items including an open-ended "other" option for each item. The poll's reading level of Grade 6.7 was determined by the Flesch-Kincaid Grade Level Readability formula. The poll was administered by 23 teachers during the regular homeroom period. Polling was scheduled to take place on one school day; the next day was used as a make-up period for those students unable to complete the poll on the first day. Completion of the poll required 15 to 20 minutes using the anonymous paper and pencil format that schools use when computer laboratory scheduling is difficult. Directions appeared at the top of the poll indicating that more than one answer could be given for every item except Item 12 that required a single answer. Students also identified demographics of gender, ethnicity, grade, and age at the end of the poll (Strom & Strom, 2016).

Design and Analysis

The following research questions guided the study:

1. How does peer support influence individual performance in cooperative learning groups?
2. How does peer support influence effectiveness of teams in cooperative learning groups?
3. How does peer support influence the assessment of individual and team performance?

Results for quantitative outcomes of the entire poll were reported to the administration and faculty in bar graph form showing frequencies and percentages for each option on all 16 items. Because students could choose more than one response for most items (except Item 12), the total percentages exceeded 100%. Responses included comments by participants for the "other" option for each item. When 5% or more of responses fit the "other" category, they were considered for analysis to detect perceptions that might otherwise be overlooked (Atkeson & Alvarez, 2018).

Results

Overall Student Responses to the Peer Support Poll

Table 1 displays the frequencies and percentages for each option on all poll items.

Table 1. Peer Support Poll: Responses of 443 High School Students

Items	*f*	%
1. Students in my classroom learning group usually		
Tutor me when I need help	133	30
Make me feel that I belong	199	45
Treat me like an outsider	49	11
Talk only to their friends	93	20
2. The group work tasks that seem most difficult are		
Focusing and paying attention so we can make progress	158	36
Making sure group members share what they have done	135	30
Deciding what part of the task each team member should do	149	34
Planning and meeting deadlines to get all our work done	105	24
3. In group work situations I usually		
Take on too much of the load	113	26
Do my fair share of the tasks	229	52
Do not have to work as hard	43	10
Dislike working in the group	71	16
Like working in the group	83	19
4. The problems with group discussions are		
Someone takes over and dominates	144	33
Quiet people are not asked to talk	105	24
People drift away from the topic	207	47
No one challenges group thinking	84	19
5. Our teachers prepare us for group work tasks by		
Discussing possible ways to proceed	186	42
Identifying obstacles that prevent success	99	22
Suggesting reflection before making decisions	89	20
Defining the group work skills expected of us	132	30
6. I find that group members typically		
Challenge the reasoning of one another	120	27
Allow everyone an equal chance to talk	136	31
Bring reading materials they share with us	44	10
Recognize the contributions of individuals	75	17
Try to build on ideas presented by others	138	31
7. I would like feedback from my group to		
Identify my strengths shown in group work	155	35
Learn those behaviors that I need to improve	103	23
Recognize improvement in group work skills	125	28
Correct the mistakes that I make	198	45

Table 1, continued

8. My group members usually help me to		
Stay focused on the assignment	144	33
Think about views I had not considered	183	41
Admit uncertainty when in doubt	92	21
Take time to plan how we will proceed	106	24
9. I would like to learn how to		
Give constructive feedback to group members	159	36
Take constructive feedback from group members	99	22
Compare how team members see me with how I see myself	129	29
Provide honest feedback to all members of my group	150	34
10. I prefer the evaluation of group work skills		
Is based on student observations of what occurs in groups	177	40
Is decided by the teacher who evaluates everyone	155	35
Shows peer feedback and is kept in my school portfolio	82	19
Occurs in every subject that I am enrolled in at school	78	18
11. When I express ideas, my group members usually		
Consider my ideas and how to use them	245	55
Challenge my reasoning that may be incorrect	116	26
Listen but dismiss ideas without consideration	95	21
Make fun of my ideas	42	9
12.* When a team member makes negative or hurtful comments, I		
Choose to ignore it and move on to something else	243	55
Confront the person on their disappointing attitude	136	31
Tell the teacher about it but not tell the individual	42	9
Express concern to other members but not the person	22	5
13. My experience working in groups could be improved by		
Avoiding distractions that keep me from paying attention	219	49
Knowing the importance of group skills for getting a job	96	22
Honest peer feedback on how to do better in the group	142	32
The teacher talking about certain group work skills	58	13
14. Groups could encourage full participation in discussions by		
Making sure each person talks before moving ahead	173	39
Urging quiet members to feel comfortable speaking	186	42
Discussing ideas without judging the speaker	121	27
Limiting amount of time for each member to talk	67	15
15. When making group assignments, I find we struggle with		
Identifying equal tasks to be carried out by each person	183	41
Who will do a task when more than one person wants it	159	36
Setting a due date for work so things are ready on time	89	20
Finding ways for each member to share what they learn	116	26

Table 1, continued

16. The group work skills individuals demonstrate should be		
Shown on report cards in the same way as reading and math	84	19
Decided by students who observe each other's team behavior	169	38
Determined by the teacher who evaluates everyone in class	182	41
Considered acceptable unless peers complain	66	15

*Participants chose only one response for Item 12.

Research Question 1. How does peer support influence individual performance in cooperative learning groups?

This question was answered by poll Items 1, 3, 6, 8, 11, 12, and 13 in Table 1. The participants reported that peers consider my ideas and ways to apply them (55%, Item 11), make me feel that I belong (45%, Item 1), help me think about views I had not considered (41%, Item 8), cause me to build on ideas presented by others (31%, Item 6), they tutor me when I need help (30%, Item 1), the group challenges the reasoning of one another (27%, Item 6), allow everyone an equal chance to talk (31%, Item 6), stay focused on the assignment (33%, Item 8), and admit uncertainty when in doubt (21%, Item 8). A majority (52%, Item 3) indicated that I do my fair share of the tasks. These responses qualify as evidence of peer support for individual learning that deserve to be acknowledged by teachers as signs of progress.

On the negative side, responses in Item 6 showed that peer support was lacking for recognition of contributions by individuals (17%), and only 10% stated they observed peers bringing reading materials to class to share with teammates. Few respondents (22%, Item 13) reported that their group experience could improve by knowing more about the importance of team skills for getting a job. Strong agreement was shown by respondents in Item 12 for when a teammate makes negative or hurtful comments during discussions. A majority indicated that they ignore it and move on to something else (55%); fewer students tell the teacher but not the individual (9%) or express concern to other teammates but not the offender (5%). Some students (10%, Item 3) reported that they did not have to work as hard in cooperative groups.

A sufficient proportion of students (7%) wrote comments for the "other" option on Item 1 (7%) and Item 6 (5%) to warrant consideration. These students complained teammates ignored them, put them down, caused them to feel inferior, or spoke only with their friends on the team. Some disliked being in groups and favored working alone. They observed that teammates seemed distracted much of the time or that some did little work or could not get along with their teammates.

Research Question 2. How does peer support influence team effectiveness of cooperative learning groups?

This question was answered by poll Items 2, 4, 5, 14, and 15 shown in Table 1. Results for Item 2 showed participants felt that the most difficult problems of teams were focusing and paying attention so we can make progress (36%), deciding what part of the total task each group member should do (34%), planning and meeting deadlines to get all the work done (24%), and making sure that group members share what they have done (30%). Item 15 indicated that participants experience additional difficulty when deciding who will do a task when more than one person wants it (36%) and identifying fair and equal tasks to be carried out by each person (41%).

Item 4 results showed problems during group discussions occur when teammates drift away from the topic (47%), someone takes over and dominates (33%), quiet people are not asked to talk (24%), and no one challenges group thinking (19%). Item 14 indicated that participants felt full involvement in discussions requires encouragement to quiet members so they feel comfortable about speaking (42%), making sure each person talks before considering another topic (39%), and teaching students to discuss ideas without judging the speaker (27%). Item 5 provides students' perceptions about how teachers help prepare the class for group work expectations. The responses were about discussing possible ways to proceed (42%), defining the group skills expected (30%), identifying obstacles that prevent success (22%), and suggesting reflection before making decisions (20%).

Research Question 3. How does peer support influence the assessment of individual learning and team effectiveness in cooperative groups?

This question was answered by poll Items 7, 9, 10, and 16 shown in Table 1. Participants recognized their need for group feedback to improve individual performance. Specifically, Item 7 showed students wanted help to correct their mistakes (45%), identify personal strengths (35%), learn behaviors that should be improved (23%), and recognize progress in group work skills (28%). Item 9 indicated that students would like to learn how to give constructive feedback to group members (36%), provide honest feedback to all group members (34%), compare how group members see me with how I see myself (29%), and take constructive feedback from group members (22%).

Split opinion was expressed about whether student performance in cooperative groups should be judged by the students or the teacher. To illustrate, 41% of the participants stated in Item 16 that they thought the group work

skills that individuals demonstrate should be decided by the teacher who evaluates everyone in class; in contrast, 38% preferred that the evaluation should be determined by students who observe each other's behavior in group work. In Item 10, many participants stated that I prefer the evaluation of group work skills is based on student observations of what occurs in groups (40%); others preferred the statement indicating the evaluation of student group work skills is decided by the teacher who evaluates everyone (35%).

Discussion

Student Voice

Students demonstrated an interest in expressing their opinions about peer support and contributing to improving their school. They were invited to complete the poll; this was neither a requirement, nor an assignment, and their willingness to reveal personal views was shown by a high level of response, 96%.

The experiences of students have been transformed by technology, frequently enabling adolescents to surpass their teachers in acquiring competence with tools essential for learning. Nevertheless, adults have continued to rely upon themselves as the only source of insight to identify reforms needed in schools. This approach has been challenged in many nations by youth whose experiences differ from previous generations (Robinson & Aronica, 2016; Turkle, 2017). When generation was considered in defining the school community, student voice has received more attention (Lubelfeld, Polyak, & Caposey, 2018). Leaders in education become less inclined to speak on behalf of students in favor of urging them to speak for themselves (Bentley & O'Brien, 2017). Because expectations students have for their school are often higher than expectations held by other stakeholder groups, adolescent opinions should be gathered by anonymous polling with results considered as a basis for innovation.

Complexity of Collaboration

The challenges associated with getting along in teams and contributing to group problem-solving in the workplace have been described in a special issue of *American Psychologist* (McDaniel, Salas, & Kazak, 2018). Students in the current study identified obstacles to the optimal functioning of their cooperative learning teams. Some of the problems implicate personal responsibility, such as fulfilling a fair share of the group load, avoiding distractions, not drifting away from the topic, paying attention, encouraging others, listening to teammates, challenging group thinking, and ensuring the civil treatment of peers. Egocentrism and narcissism can also influence group interaction (Twenge, 2017).

Helping cooperative groups to function efficiently appears more complex than generally supposed. Johnson and Johnson (2018) are acknowledged leaders in the field of cooperative learning. They have observed that how students interact with teammates continues to be a neglected aspect of instruction and can be an obstacle to progress. Teacher education emphasizes arranging for students to participate in groups, but the way students should interact with one another remains relatively ignored. The assumption that students know how to work in groups by the time they get to high school is contradicted by the poll results reported here. Adolescents need instruction on how individuals and groups should collaborate to ensure continuous improvement (Bukowski, Laursen, & Rubin, 2018; Gordon, 2018; Jackson, 2018).

Based on our polling projects involving secondary school and college students, the following recommendations have been made to improve cooperative learning team interaction (Strom & Strom, 2016):

- Do not let individuals dominate behavior of the team.
- Divide group responsibilities in an equitable manner.
- Share with peers what individuals learn independently.
- Obtain peer feedback in order to improve behavior.
- Evaluate individual progress in team performance.
- Ensure that civil treatment is provided for everyone.
- Help others avoid distractions and drifting from a topic.
- Encourage all teammates to express feelings and ideas.
- Know the cooperative learning and employment link.

Transition to Interdependence and Team Multitasking

The internet has altered conditions of learning in ways that allow students to become more self-directed and able to process information at their own pace. A corresponding shift for teachers involves adopting a more complex, guidance-oriented role (Baloche & Brody, 2017). The extent to which peer support is possible in cooperative learning groups depends on teachers knowing how to develop comprehensive assignments. The tradition has been to prepare a single assignment that all students complete and submit to the teacher. However, team learning necessitates broader assignments consisting of four to six differentiated tasks. Teams then divide the workload so each member is accountable to search the internet, books, or other resources related to the designated topic or to conduct parts of a project or experiment.

Several factors distinguish the acquisition of knowledge that takes place in team multitasking assignments. First, individuals assuming responsibility for one aspect of the team assignment narrows the focus of researching and students can concentrate better on their tasks. Second, collective learning increases

because the scope of differentiated tasks are combined. Third, by sharing with teammates what each member has learned independently before their work is submitted to the teacher, students become a source of learning for one another. Recall that only 10% of the students in the current study stated they observed peers bringing reading materials to share with teammates. Multitasking is usually an unreasonable expectation for individual students, but multitasking should be seen as a necessary expectation for teamwork (Malone, 2018).

Before students had access to the internet, U.S. school achievement was defined mostly in relation to individuality, independence, autonomy, and self-reliance. These qualities remain essential but are no longer considered to be the only factors contributing to productivity. The importance of obtaining group skills for employment is commonly underestimated by students (Hart Research Associates, 2015, 2018). Educators should provide this knowledge to motivate peer support in cooperative learning groups which can enable success in the classroom, on the job, at home, and in the community.

Helping students adopt a definition of success that goes beyond personal aspirations is necessary to merge the goals of independence and interdependence. Unless cooperative groups are characterized by peer support, the interdependence that is necessary for success is missing. Employers want students to realize their need for collaborative effort and application of group intelligence for problem-solving at work (Malone & Bernstein, 2015). Higher expectations for accountability in cooperative groups should become a common goal. Being able to appreciate interdependence requires encouragement to counteract self-absorption and to overcome the negative impact of clique behavior that can undermine self-esteem and productivity (Twenge, 2017). Interdependence enables group cohesion, promotes pride, and contributes to favorable morale. Administrators can use results of the Peer Support Poll to assess how group interaction can be improved through the following: direct instruction related to skill development, modified assignments to focus group practice, more frequent formative feedback, and in-service training for teachers targeting deficits identified by listening to student voice.

Evaluation of Performance in Teams

Learning considered essential should be evaluated. Currently, students typically receive grades for individual performance in classes related to subjects of the curriculum. However, they are not evaluated for performance as members of cooperative teams. This situation may cause some students to suppose that their performance in groups is less important. Schools reinforce this misperception by recognizing the need for teamwork skills but lack awareness of effective instrumentation to assess student progress in this context (Berg,

2018). Teachers who recognize students as the most reliable sources of observation about team interaction are more likely to demonstrate the trust necessary for anonymous peer evaluation. The evaluation of individual performance in cooperative groups is needed to gauge development, guide teacher direct instruction, detect remediation needs, and recognize achievement in cooperative groups (Sackstein, 2017).

Mobilizing the School Community

Poll planning by school administrators should include a concerted effort to mobilize the school community (Ice, Thapa, & Cohen, 2015; Strom & Strom, 2016). Although this study focused mainly on the results of poll questions that reflect variables in cooperative learning groups, the general practice of polling presents wider opportunities to connect with various stakeholders that affect school communities. A process model to engage stakeholder groups in decision-making merges poll results of student views about conditions of learning with supportive action to be taken by adults. The following 10 progressive steps contribute to continuous improvement planning.

Step 1. Faculty and school leaders are oriented to the importance of student polling. The collaboration process begins with orientation of school administrators, faculty, and staff. This interactive presentation should (a) provide a rationale for student polling; (b) explain the logistics of polling and privacy safeguards; (c) show how poll outcomes will be reported; (d) discuss expected efforts to inform stakeholders and motivate their participation with decision-making about school improvement; (e) explain how effects of trial changes in practices can be monitored; and (f) elaborate benefits of collaborative reform. School improvement committees have a separate orientation to reflect their advisory role for the instructional program.

Step 2. Relevant polls are selected by teachers and administrators for this school. The school principal, in consultation with faculty and students, chooses two or more polls that are considered most relevant for the particular school year. The polls chosen will be completed early in the academic year and repeated in the spring after trial reforms are implemented to determine student opinion about worthwhileness of changes in conditions of learning.

Step 3. Students, parents, and other stakeholders are oriented to polling purposes. Students are oriented to the polling process on the school website and at meetings, including (a) reasons will be given for why student input is needed to detect conditions of learning for improvement; (b) the anonymous polling process is illustrated along with an explanation of how stakeholder groups will be kept informed; (c) a rationale will be presented for polls that have been chosen; and (d) students will individually decide whether to complete polls.

Parents of students will have a separate orientation convened by the Parent Teacher Organization and available on the school website.

Step 4. A schedule is planned for polling and students are invited to participate. The schedule for student polling is identified with a deadline. Students can complete polls on a computer, tablet, cell phone, or using paper and pencil. Most students prefer to finish this task on their own. The school or district information technology specialist should ensure the poll URLs can be accessed by school computers for student use. Teachers will be notified about the deadline for students to complete their choice of polls or abstain from participation.

Step 5. Students complete polls, and a faculty committee summarizes implications. When polls are conducted in the computer lab, teachers bring classes on the dates and times scheduled when polling stations are open. Students anonymously complete available polls selected earlier by the school administration. Department heads and the principal monitor daily results and urge student participation to help the school become more responsive. Poll data are analyzed to create a tentative summary of implications.

Step 6. Poll results are posted on the school website for students and stakeholders. Poll outcomes are disseminated by graphic reports showing proportionate responses of students for each item on every poll. Stakeholders in the community who do not have children in school will be contacted by representatives of civic organizations such as churches, senior centers, ethnic associations, television news, and local newspapers.

Step 7. Stakeholders share their reactions with the school improvement committee. Discussions are held at community facilities familiar to stakeholders along with school locations. The school improvement committee will schedule meetings where stakeholders in groups or as individuals can present questions, state opinions, or have views presented in written form. Email input is also considered. The principal attends these meetings in an advisory capacity.

Step 8. School improvement committee recommends trial methods to the principal. The committee identifies reforms they want implemented on a trial basis to find out if new practices improve conditions of learning in the estimation of students and teachers. The time designated for trial reforms is made public. Faculty departments will provide specific examples of how they are implementing changes recommended by the improvement committee.

Step 9. Students are polled a second time to evaluate effects of the trial procedures. At the end of the designated trial period for reforms, the effects of change will be evaluated by polling students a second time. Faculty will complete qualitative assessments reflecting their views about merits of the trial practices. The principal will decide whether evidence gathered from students and teachers justify adoption of the trial reforms as a regular aspect of policies and practices in the future.

Step 10. Stakeholders are notified about changes in student perceptions of practices. All stakeholder groups will be notified by the principal about effects of reform practices and consequent decisions. The reports will be communicated to news outlets to inform the public about contributions that have been made to bring about school improvement.

Limitations of the Present Study

The purpose of this study was to help administrators and teachers at one high school to become aware of student perceptions about peer support to improve learning in cooperative groups. Administrators are responsible for the climate of their school, so polling results apply directly to existing policies and practices and can guide direction for change. Because the focus for student sampling is deliberately narrow, study results cannot generalize to the conditions of learning at other schools, even those in the same district, state, or geographical region. A related limitation is that the responses of students in special education and diversity programs were included in the overall results but not analyzed separately. However, this study may inform other schools wishing to incorporate student polling to obtain and act on student voice in their own context.

Conclusion

Student polling relies on a process model that assumes all schools can be improved by allowing more stakeholder participation in decision-making. Application of this strategy means that reliance on adult opinion as the sole source for reform is replaced by an intergenerational perspective that respects the views of students. When polls are used that have been carefully devised and field tested, better results can be expected, and comparability becomes possible. The administration and faculty in the current study expressed gratitude for insights provided by students about their peer support in cooperative learning groups and have made efforts to implement favorable change.

In addition to reporting overall school results, the focus of our LearningPolls.org website is being enlarged to collaborate with faculty serving secondary school and college students enrolled in programs reflecting special diversity needs. Analysis of poll outcomes for these groups will allow their conditions of learning and recommendations for improving instruction to receive due consideration by the institution. When secondary school and college administrators express an interest in collaboration to use one or more of the online polls, we provide access to the polling system with feedback of results. This is a community service at no cost to the school. Sharing poll results with a broad range of stakeholders recognizes educational achievements and needs for improvement.

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