Collaborative Assessment: Middle School Case Study

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Utilizing a participant observer research model, a case study of the efficacy of a collaborative assessment methodology within a middle school social studies class was conducted. A review of existing research revealed that students’ perceptions of assessment, evaluation, and accountability influence their intrinsic motivation to learn. A collaborative assessment methodology was developed to provide a means to involve the students in the decision-making processes of instruction: lesson planning, goal and objective identification, assessment, and evaluation. Changing extrinsic motivators like assessment and evaluation into intrinsic motivators was the ultimate goal of the collaborative assessment methodology. The collaborative assessment methodology utilized a cyclical information flow so that all assessments and evaluations became formative. The study was highly influenced by the instructor’s belief in constructivist curriculum tradition and existentialist philosophy.

Accountability, high standards, and assessment represent the central issues for many stakeholders and policy makers in education today. How do we motivate students to do their best within this high stakes climate? How do we promote equal opportunity for education to all students? How should teachers be held accountable, in a fair manner, for the successes or limitations of their students? The above questions lead to the use of extrinsic motivators to produce instructional and educational results as teachers struggle to meet the demands of the high-stakes educational climate. The assumption that external stimuli, rewards and punishments, are the key to educational improvement indicates a confidence in behaviorist strategies and a lack of confidence in constructivist approaches to education (Beane, 2005; Kohn, 1996; ). Collaborative assessment and the overall collaborative methodology implemented in this case study, starts from a different premise: students and teachers are intrinsically motivated when they are empowered as decision-makers (Bandura, 1986; Beane, 2005; Black & Wiliam, 2006; Cornelius-White & Harbaugh, 2010; Glasser, 1986; Jackson, Boostrom, & Hansen, 1993; Riggs & Gholar, 2009; Wiggins, 1993). As the Association for Middle Level Education asserts in This We Believe (Association for Middle Level Education, 2010) asserts, empowering students is an essential attribute of highly effective middle level education. Determining strategies for facilitating, sustaining, and internalizing empowerment among middle level learners is a significant challenge.

This premise is founded within the constructivist tradition that views the world and institutions like the classroom as what can be understood as intersubjectively defined Language Games (Wittgenstein, 1974). A participant observer case study was conducted to determine the efficacy of collaborative instructional methodologies in a middle school classroom. Collaboration is fundamental to an intersubjective, constructivist classroom (Bandura, 1877, 1986; Vygotsky, 1978) and to the empowerment of individuals, especially young adolescents (Association for Middle Level Education, 2010; Erikson, 1968; Riggs & Gholar, 2009; Vygotsky, 1978). By emphasizing the role of students in determining the content, criteria of success, and instructional climate of the classroom, the collaborative assessment methodology changed the traditional political dynamic of the instructional process (Dean, Hubbell, Pitler, & Stone, 2012). The dialectic of student-centered vs. teacher-centered did not apply within this paradigm. Constructivism relies upon democratic principles in which the teacher and students form an interconnected web of interests. This web has no center, but it is bound by the Language Game at play within the political context of the classroom (Ayers & Ayers, 2011; Beane, 2005; Cornelius-White & Harbaugh, 2010; Davis, Sumara, & Luce-Kapler, 2008; Dewey, 1916; Glasser, 1986; Gonzalez, Moll, & Amanti, 2005; Parkinson, 2005; Wittgenstein, 1974).

Within this collaborative methodology, content standards for the state of Tennessee were utilized to define the Language Game that governed the classroom (Tennessee Department of Education, 2012). The objectives for the collaboration that occurred within the classroom, for both students and teacher, were determined by these state curriculum standards. This incorporation of content standards into a collaborative methodology is a compromise with the prevailing educational climate. However, any collaboration occurs for a purpose. We do not simply come together to "collaborate." The curriculum standards also serve the purpose of defining the horizon (Wittgenstein, 1974) in which the classroom would develop. In this case, social studies curriculum standards for the 8th grade were utilized as a common set of essential information that the class would use as the medium of collaboration. It is important to note that these standards do not define the goal, purpose or process of the classroom as they are sometimes framed. They only provide the language for collaboration, the actual purpose for which the classroom community comes together is identified through dialogue by the teacher and learners. The collaborative assessment methodology was meant to stimulate intrinsic motivation to learn; this learning could occur in multiple and varied contexts or Language Games.

Traditional classroom politics revolve around a dialectic: Student-centered vs. Teacher-centered. This dialectic asserts a politics that fluctuates between an authoritarian structure where a dominant figure, the teacher, controls all aspects of the classroom and a humanitarian structure where the basic/essential
needs of the constituency, the students, direct all aspects of the classroom (Cornelius-White & Harbaugh, 2010; Parkison, 2005). Both structures assume a center or subjective guide to the political relationships in the classroom. The teacher is either the master of his/her domain or a servant to the masses. The student is either obedient subject or a welfare constituent. In either case, the stakeholders of the classroom do not participate as democratic partners (Parkison, 2005).

Constructivism asserts a different political paradigm for the classroom. There is a shift in ontological perspective that fundamentally changes the classroom politics. Instead of establishing a center, either subjective or objective, constructivism asserts an intersubjective web as an ontogenesis (Davis, Sumara, & Luce-Kapler, 2008). This ontogenesis premises all of our experience of the world upon collaboration. Human beings utilize collective or intersubjective world views (language games) to create meaning. Wittgenstein (1974) calls these intersubjectively constructed language games *Horizons*. Within the *Horizon of our experience* we utilize democratically developed institutions in order to create meaning. By shifting from an objective/subjective political structure to an intersubjective political structure the classroom becomes democratic and collaborative (Parkison, 2005). We, teacher, students and administrators, cooperatively create Horizons in which to communicate, learn, and be held accountable (Association for Middle Level Education, 2010).

If education is approached from this philosophic position, the institutionalization of the classroom fundamentally changes. Classroom politics become collaborative not by choice of the instructor, but as a necessity. Democratic principles of equality, responsibility, independence, and liberty affect the classroom as an institution (Ayers & Ayers, 2011; Beane, 2005; Dewey, 1916; Glasser, 1986; Kohn, 1996). The classroom becomes a Horizon in which student/teacher interaction occurs. The true education that must occur within this Horizon involves leading the stakeholders in the collaborative development of the classroom itself. The classroom becomes a metaphor for the world(s) in which the teacher and students live, both inside and outside of the schoolroom.

Curriculum standards offer a medium through which this metaphor is realized. History, language arts, mathematics, and science become language games that act as a medium within the Horizon of the classroom. Establishing a common language, objective, or goal gives the classroom institution a purpose (Cornelius-White & Harbaugh, 2010; Dean, Hubbell, Pittler, & Stone, 2012). The collaborative efforts of the participants, utilizing democratic principles, revolve around the achievement of these objectives. The collaborative methodologies utilized in this study were developed from within this philosophic position.

**Method**

In order to implement the collaborative methodology within the sample classroom, it was decided that a participant-observer case study approach would be used in this study (Johnson & Christensen, 2012). The participant-observer methodology attempts to embed the researcher as an insider. As a participant-observer it was possible to answer emerging questions and provide process clarification where needed. Different opinions are expressed in the literature regarding when children and adolescents can start to make decisions to participate in research and give informed consent. Teachers are not frequently involved in research and thus do not have a thorough understanding of consent and related issues. Experiences with young adolescents led to the belief that young adolescents were capable of greater involvement in the research consent process than is the norm. This perspective aligned with the overall perspective taken in this research study. Increasing adolescents’ involvement in research had the potential to enhance their growing autonomy and capabilities. This was achieved in an environment in which protection from harm did not also mean prevention from decision making. The use of empowering processes like those implemented in this study to enhance adolescent involvement will provide benefit to adolescents in their transition to adult levels of responsibility. All participants in this study provided informed consent in compliance with institutional review board guidelines.

The implementation of the case study followed a two-week instructional cycle that was repeated three times. Each cycle relied upon student input to determine the instructional material to be utilized. Material related to the Ante-bellum and Civil War periods were used as the content for the collaborative assessment and evaluation strategy (Tennessee Department of Education, 2012). Student input was utilized to set the curriculum for each two-week instructional cycle. Students were taught using a variety of instructional methods: cooperative learning, lecture, projects (group and individual), and others. The instructional methodology selected by the class was documented in the research journal. Three cycles were completed allowing students to have input into the material to be covered, assessment standards to be used, and criteria for evaluating the successful completion of tasks, establishment of individual learning goals, and self-assessment of previous learning goals.

**Hypothesis**

Students’ internal motivation to achieve is determined by the perception of the following factors:

1. Students’ understanding of what is expected of them on each task being assessed.
2. Students’ belief in the fairness of the assessment being made.
3. Students’ establishment of individual learning goals.
4. Students’ attainment of previous individual learning goals.
5. Students’ involvement in the structuring of the learning material and environment.

**Procedure**

In order to assure that the above factors were being addressed within the classroom, a formative assessment strategy was developed. The formative assessment strategy provides for collaboration by all the classroom stakeholders. Following the assumptions of a constructivist classroom, the Tennessee State curriculum standards for Eighth Grade social studies were utilized as the Horizon or language game of the classroom (Tennessee Department of Education, 2012). Using the strategy of Backward Design (Wiggins & McTighe, 1998), standards act as a frame or medium of collaboration. The stakeholders in the classroom have a clear objective that serves as the foundation of interaction (Dean, Hubbell, Pittler, & Stone, 2012). Time was taken to discuss the purpose of the students and teacher coming together within the classroom. This discussion was productive in bringing about a common understanding – if not full buy-in or consensus – regarding learning social studies as the desired outcome.

Instructional strategies were determined through a collaborative methodology that represents one of the contributions of this study. The students were involved in the decision-making process that determined the type of instruction utilized. On a weekly basis, the students would reflect upon the previous week’s learning activities and evaluate the tasks that they felt were helpful, task on which they felt they were successful, and task that they felt limited their success. Figure 1 contains the weekly self-assessment instrument.
**Figure 1. Student Weekly Self-Assessment**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Course:</th>
<th>Grade:</th>
<th>Student Name:</th>
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What objectives were taught during this week? Look at the weekly task sheet for a statement of these learning goals.

List the learning activities that you were responsible for completing each day this week. For each activity rate how successful you feel you were using a scale of 1-5. A score of one meaning you had a great deal of difficulty and a score of five meaning it was easily completed.

<table>
<thead>
<tr>
<th>Day</th>
<th>Activity</th>
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Of these activities, which would you like to do more often and why?

Of these activities, which would you not like to do more often and why?

What did we do this week in class that you feel you had success completing? Why?

What did we do this week in class that you feel you were not successful completing? Why?

Identify a Study Skill, Social Studies Skill, Problem Solving Skill, or Decision-Making Skill you want to work on improving next week. This should serve as next week’s personal study goal.
The instructor utilized the weekly self-assessment sheets to establish instructional strategies that the students had indicated were beneficial to their learning styles. This collaborative decision-making would be accomplished through a discussion of what task students liked, disliked, or task that the students felt competent completing. Student input through both the weekly self-assessment and the accompanying classroom discussion was documented in the research journal. As the data was gathered and the discussion held, decisions on the manner in which the next learning objective could best be accomplished were determined. By collaboratively determining the instructional strategy to be used during the next instructional cycle (two-week period), the students actively participated in addressing their learning styles and learning goals.

One of the key aspects to the success of this procedure relies upon the students’ and teacher’s familiarity with a variety of instructional strategies (Dean, Hubbell, Pitler, & Stone, 2012; Joyce, Weil, & Calhoun, 2000). The first instructional cycle utilized a variety of teaching methods: cooperative learning, direct instruction, mastery learning, memorization, Socratic questioning, and others. The first cycle helped to introduce the stakeholders to the various instructional methodologies available to them. It was critical to put a name to the strategy being implemented. Students demonstrated curiosity about the rationale for a strategy and why it was selected. Having open dialogue regarding these typically top-down decisions enhanced the collaborative climate of the classroom.

The weekly self-assessment also addressed student learning goals. Students were encouraged to establish their personal learning goals independently. After several weeks of attempting to allow students to set individual learning goals, it was determined that the students did not have the necessary framework for setting these goals. Drawing from several sources (Association for Middle Level Education, 2010, Common Core State Standards Initiative, 2012; Cornelius-White & Harbaugh, 2010; Davis, Sumara, & Luce-Kapler, 2008), a set of learning goals was established to serve as a model or guide for the students. The list included the following categories:

- Acquiring Information: Acquiring information involves locating, gathering, observing, comprehending, organizing, and processing information from a variety of primary and secondary sources.
- Analysis of Data and Problem Solving: Problem solving involves the comprehension, analysis, and interpretation of data leading to the development of a solution or conclusion.
- Communication: Communication is the conveyance of ideas, value judgments, beliefs, and emotions through individual expression, group dialogue, cultural communities, and global networks by oral, written, symbolic, visual, and technological means.
- Historic Awareness: Historic awareness, integral to all of the Social Studies disciplines, includes an understanding of chronological placement, historic trends, and historical decision-making.
- Proficiency: Proficiency at achieving a particular level of skill, mastery, or understanding.

Students were also encouraged to reflect on and develop their skills and proficiency with information processing and documentation, cooperation and collaboration, and self-regulation (Dean, Hubbell, Pitler, & Stone, 2012). The time spent developing the students’ awareness of these competencies was significant but essential to the students’ development as independent learners. The students could reference this listing of academic learning skills, objectives, and goals to help them determine their personal learning goal. They were encouraged to consider the areas of learning that had been identified as limitations on the weekly self-assessment.

Another integral part of the collaborative assessment methodology developed for this study involved student-generated rubrics and task lists. Allowing students to determine the standards by which they would be evaluated created a climate in which fairness, understanding of expectations, and personalized learning goals came together to create intrinsic motivation. This was a difficult adjustment for all the stakeholders. Again, the state offered a set of guidelines for this process. Similar to the content standards, the state indicators offered a set of choices for performance standards (Common Core State Standards Initiative, 2012; Tennessee Department of Education, 2012). Each learning objective is matched to a set of indicator activities that address a variety of proficiency levels. Using the weekly self-assessment, the students indicated the types of performance indicators that they preferred. Their preferences were integrated into the next learning cycle’s performance tasks.

Once the performance task was determined, a basic task list was developed. The difference in this evaluation involves setting the relative assessment value of each sub-task. The students were allowed to establish the points possible for each sub-task within a performance task. This process also took some time for the students to become familiar with the expectations. Most students are not used to having this type of power within their classrooms.

Self-evaluation continued by including student reflection upon previous learning activities. As part of the weekly self-assessment, students were asked to consider what had helped them succeed and what had limited their performance. They were also encouraged to assess the degree to which they were able to accomplish the learning goal from the previous week. As the students became acquainted with the collaborative methodology, they demonstrated greater awareness of their responsibility in the successes and limitations they experienced within the classroom. This aspect of the self-evaluation took the students some time to become comfortable utilizing.

Collaborative methodology was integrated into the daily lesson plans as well. The instructor identified the content standard(s) that would serve as the Horizon of the classroom activity. Students were able to collaboratively decide the indicator that would be utilized to demonstrate proficiency and understanding of the content standard. All of these steps were accomplished through the instructor’s analysis of the weekly self-assessments from the previous week. The learning objectives of the students were aligned with the stated learning goals and the state content standards. Indicators of student learning were based upon previously identified activities in which the students felt successful. For example, if they identified notes as a means of successfully acquiring the desired learning, then notes would be incorporated into the daily lesson. The same would be true of cooperative learning, graphic organizers, mastery learning activities, and other instructional methodologies. All lesson plans were formatted in the same manner and compiled in the research journal. The research journal contained the notes from student/teacher conferences, daily observations, the daily lesson planner, and the daily journal entries.
Results

Given the scope of the case study conducted, the preliminary results are encouraging. A comprehensive collaborative methodology anecdotally improves the intrinsic motivation of the students. Aspects of the study indicate that many students are not prepared to accept the responsibility that collaboration bestows upon them. In order to compensate for this hesitance, the teacher may find it necessary to spend extra time developing the classroom environment -- participation/accountability requirements and political relationships -- upon principles of a democratic and constructivist classroom. Collaboration requires that the students be comfortable within a democratic political environment. This is significantly different than simply teaching democratic principles. All of the stakeholders need to accept the Horizon, or Language Game, of collaboration in order for it to be successful.

Factor One

Factor one of the hypothesis of this case study asserts that as students gained an understanding of the learning expectations there would be a noticeable increase in their intrinsic motivation. During the second instructional cycle, when the collaborative methodology was fully implemented for the first time, there were some surprising results. The traditionally high achieving students (based upon previous grading cycles) saw a decline in their performance assessment. These students found that they were not even performing at levels that they expected of themselves. This initial drop-off can be explained if we consider the amount of personalized attention that high achieving students typically receive, which is sometimes limited in a climate framed by concepts like achievement gaps and accountability. This group within the sample had become accustomed to sliding by with just enough effort to get the learning task completed. During the third instructional cycle, this group demonstrated higher performance assessments than those previously observed. They had re-established their intrinsically determined high standards.

Students who were traditionally lower-achieving students, based upon previous grading cycle, saw an immediate increase in their performance assessment. Knowing the expectations helped these students achieve. The students' collaboration in developing the task assessment made them more aware of the task requirements. This level of empowerment motivated the lower-achieving students to perform at a higher level of proficiency. This group also tended to self-assess in a stricter manner than the instructor's assessment.

The surprising result, and the result that is the most troublesome, involves the achievement of those in the middle. This middle-achieving group dropped in their performance and did not recover in the next instructional cycle. Losing the middle group cannot be explained and offers fertile ground for future research and study.

Factor Two

With regard to the second factor of the hypothesis which asserts that student belief in the fairness of the assessment being made affects intrinsic motivation, the study indicates that the students' perception of justice does influence their intrinsic motivation. In the first instructional cycle, the students in the high and middle-achieving groups assessed themselves more liberally than the instructor. The field notes indicate a high number of conferences dealing with complaints about grade fairness: approximately 35% of the students participated in a grade conferences with the teacher. The number of complaints declined as the students in the high-achieving group came to recognize the standard to which they were going to be accountable. The middle-achieving group did not make this same adjustment in performance, but no longer brought forward complaints. This observation, combined with the earlier observation regarding the middle-achieving group, raises some concerns about motivating the average student. Two key concerns arise: a) Did this group find that their concerns were not respected? b) Did this group come to accept a lower standard of performance? It may be that the middle-achieving group needed more time to feel comfortable with the new system. This middle-achieving group represents approximately 48% of the subject classroom and cannot be ignored.

As variances between self-assessment and teacher-assessment of more than 10 points were observed, conferences were held to discuss the cause of the discrepancy. Student conferences were largely informal and guided by a standard conference format as shown in Figure 2.

**Figure 2. Student Interview Record**

<table>
<thead>
<tr>
<th>Student Interview Record and Self-Assessment</th>
</tr>
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<tbody>
<tr>
<td>The interview is an informal conversation with a student to try and establish the students perceived strengths and limitations. The instructor should also attempt to teach the student goal setting strategies and develop appropriate study skills. The student's perception and participation are essential.</td>
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<tr>
<td>The purpose of this conference is to discuss the following problem:</td>
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<tr>
<td>Did you ask for help on this activity?</td>
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<tr>
<td>What was the difficulty with this part of the activity?</td>
</tr>
<tr>
<td>Why do you think we had different assessments of this/these parts of the activity?</td>
</tr>
<tr>
<td>What adjustments do we need to make in order for us the reach the same assessment of your work?</td>
</tr>
</tbody>
</table>
These conferences were typically positive in tone and the student and instructor reached a consensus on the appropriate assessment. Compromises when reaching this consensus were made by both stakeholders. The conferences appear to be one of the most successful aspects of this study. By setting a criteria for when a conference should be held (the 10 point variance criteria), the student received immediate satisfaction and feedback. The important thing to note is that the variance could be positive or negative. If the student under-valued their work a conference was called. These conferences gave the instructor the opportunity to demonstrate the student's competence and thus positively affect their self-efficacy and locus of control.

By combining self-assessment with student/teacher conferences, the students had a greater sense of fairness. The results of a pre-survey and the post-survey of the student sample indicate this shift. After the implementation of the collaborative methodology, the students asserted a greater degree of satisfaction with the fairness of assessment as described in Figure 3.

**Figure 3. Assessment Fairness**

![Assessment Fairness](image)

Factors Three and Four

Factors three and four of the hypothesis relates to the students' ability to set and evaluate personal learning goals. The weekly self-assessment sheet facilitated student goal setting and assessment. During cycle two, the students struggled to complete this part of the collaborative methodology. Goals were vaguely defined: study harder, take better notes, or do better. The students needed to learn how to establish specific goals and to follow through on those goals. They also had to become accustomed to assessing the degree to which they accomplished their specific learning goal. Once the students were given the listing of academic learning skills, objectives, and goals handout, they were better able to establish specific goals. However, these goals were seldom accomplished or assessed by the students.

Developmental appropriateness is the key to explaining the limitation of this aspect of the collaborative methodology. The students were not comfortable with setting the objective of their learning. Accountability remained something that was imposed from outside in a concrete manner. The level of abstract thinking necessary to break learning down into sub-tasks and skills was not present within a significant number of this group of students. Establishing learning goals and evaluating the attainment of those goals requires greater instructor guidance than other parts of the collaborative methodology. With older students this may not be necessary, but the development of this skill needs to be a subject of instruction (Dean, Hubbell, Piter, & Stone, 2012).

**Factor Five**

Factor five of the hypothesis asserts that student involvement in the structuring of the learning material and classroom environment will improve intrinsic motivation. Two indicators of student involvement in the collaborative development of the classroom serve to indicate the positive effect: comparison with previous year's instructional records and survey results. When looking at how the same content was taught during the previous two school years, a significant change could be seen with regard to instructional methodology. According to the lesson plans of the classroom teacher the previous year, direct instruction and mastery learning models were utilized. Short classroom activities were used to reinforce key concepts and skills. During the second and third instructional cycle of the study, the instructional methodology shifted toward cooperative learning models, advance organizer models, and inquiry training (Cornelius-White & Harbaugh, 2010; Joyce, Weil, & Calhoun, 2000).

The shift in instructional methodology was due to the input received from the weekly self-assessment. Evidence of student perception of this influence can be seen in the survey results. When asked how they felt about the teacher's receptiveness, classroom collaboration, and the environment of productive change, the students were more favorable following the study than before the study as demonstrated in Figure 4.

**Figure 4. Student Perception of Classroom Climate**

![Student Perception of Classroom Climate](image)
Although the results of the survey are not dramatic, they do represent an important increase in the students’ perception of their input into the classroom decision-making processes. The collaborative methodology did influence student ownership. This result would help to explain the earlier observation of increased intrinsic motivation.

Conclusion

Overall, the collaborative methodology developed for this study demonstrates the effectiveness of incorporating democratic processes into the classroom. Although the teacher is required to give up a certain degree of control, the resulting intrinsic motivation of the student compensates. Finding strategies that would directly influence the middle-achieving group is a subject for future study and is essential to the success of any collaborative methodology.

By refocusing the desired learning outcome on students’ independence and empowerment as learners and away from high-stakes accountability, it is possible to influence the students’ sense of self-efficacy and enhance their internal locus of control. As middle level learners struggle to find identity and a sense of empowerment, it is critical that teachers and schools provide frameworks or schemas through which the students can learn the requisite skills of an independent, autonomous learner. Collaboration within the classroom is a result of cultural adjustments: the students have to be empowered as learners, the teacher needs to recognize their expertise in learning processes as well as content, and the desired learning needs to be context specific. Building relationships among and between stakeholders takes time and structure. Teachers should feel confident in the impact that taking time to teach process and learning skills can have on the climate of the classroom and the success of the students.

References

Association for Middle Level Education. (2010). *This we believe: Keys to educating young adolescents.* Westerville, OH: Association for Middle Level Education.


