Applying Research on Effective Schooling in Middle Grades Classrooms

Laura Dawes

Walden University

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Abstract

This paper describes the context in which the curriculum is being implemented and my role in its implementation. In addition, this paper also discusses three improvements that should be made to the curriculum: teacher clarity, feedback, and problem-solving teaching. How the improvements will be implemented and how their progress will be tracked will be covered.

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A curriculum that has proven to help students achieve on the state mandated tests may seem like the last item on a long list of items that need improvement. However, after teaching the curriculum for a year and seeing how the rest of the school is focusing on the curriculums success, I argue that it is the first item on the list that needs improving. If we expect to set up similar curriculums in other content areas, then we need to be sure that we are working the kinks out in the prototype before we send it out to be mass produced. This paper describes the context in which the curriculum is being implemented and my role in its implementation. In addition, this paper also discusses three improvements that should be made to the curriculum, how they will be implemented, and how their progress will be tracked.

Context and Role

The below recommendations are being made by a sixth grade social studies teacher, in a suburban middle school, located in Northern Virginia. The school will be referred to as Springfield Middle School ("SMS"). The suburb the school resides in is situated in an area of the state which is experiencing a steadily growing population, and, therefore, so is SMS. From 2009 to 2012 the overall student population of SMS consistently increased, even though the number of students in each grade did not (Virginia Department of Education, 2013). SMS houses grades six through eight, and has 684 students, ranging in age from 11 to 16. The student population demographic breaks down to: 48.5% male, 51.5% female, 43.9% White, 45.2% African-American, 10.9% other races (Fredericksburg Public City Schools, 2012).

The parental involvement at SMS varies from those that are involved in multiple activities and are in contact with the teachers on a regular basis, to those who can never be reached by any staff member of the school. Parental involvement is reflected in the behavior and

participation of the students. The majority of students whose parents are involved in their education are hardworking and are rarely in trouble, although there are exceptions to every rule. Those students whose parents are not involved and cannot be reached to discuss concerns, do not put as much effort into their work and have a tendency to be in trouble on a more regular basis. This being said, those students who are not involved in school tend to have many more issues than an inattentive parent. Lack of food, shelter, and adequate health care are a few of the many issues these children have to face while being required to pursue their education.

The teachers of the school fall into two categories: the new and the veterans. The new teachers are a mixture of those new to the field and those just new to the school. No one came in with more than five years of teaching experience, and each has been at the school for less than two years. The new teachers implement programs and work together to try and enhance the students learning. There are some veteran teachers who are happy to join in with the new teachers, but a majority of the veterans want nothing to do with the new teachers. In addition, many veteran teachers feel protective over their materials and are not willing to share what they have taught in the past. The division makes for a very tense work environment, which is mostly hidden from the students.

Over the past three years, SMS students' passing rate on the Standard of Learning tests ("SOL"), the state mandated tests of Virginia which is the main statistic used to judge achievement at SMS, has been higher on the social studies portions than on any other subject that was tested in all three grades (social studies, mathematics and reading) (Virginia Department of Education, 2013). According to the 2012 test results, on the sixth grade social studies portion (covering years 1865 to present), a higher percentage of males than females passed, and a higher percentage of Caucasian students passed than students of other races (Virginia Department of

Education, 2013). The sub group "Students with Disabilities" had the lowest passing percentage but still met the state requirement at 70%. "Economically Disadvantage" and "Limited English Proficient" sub groups scored higher, but were not far above "Students with Disabilities", scoring 74% and 77% respectively (Virginia Department of Education, 2013).

In the sixth grade, there are 249 students who are divided up among four teachers: three teach four classes each and the fourth teaches two classes to students with learning disabilities (Virginia Department of Education, 2013). Of the four teachers, three are veterans and one is new. The class sizes of the regular education social studies classes range from eight students to thirty-two students. The higher a student's achievement is the more likely she will be in a class with more students.

The sixth grade social studies curriculum was created three years ago by two veteran teachers, one that is still at the school and one who is not, and it details every day in a given unit. Resources, notes, activities, and assessments are all listed in the curriculum and diverging from what is written is looked down upon by the administration as students' scores on the SOLs prove that it is working. All four teachers not only follow the curriculum, they also pace themselves so that they do the same lesson plans on the same days. The special education teacher makes adjustments based on the needs of her students, but stays as close as possible to what has been created. The curriculum is regarded as what all other curriculums should strive to be, within the school.

The below recommendations are to be presented to the three veteran teachers and administration by the new teacher. The areas for improvement were discovered during the new teachers first year of implementing the curriculum. As changes or suggestions to change the curriculum are looked down upon, all recommendations will be supported by data.

Recommendations for 6th grade Social Studies Curriculum

As the sixth grade curriculum is a few years old, it is time we use the data we have and evaluate its effectiveness. As the social studies scores have been the highest in the sixth grade of the three subjects that are tested by the state, it is easy to become complacent with the curriculum. However, even though the passing percentage for social studies has been higher than the other subjects, they have fallen over the last three years, proving that the curriculum is not as effective as it could be.

Although the curriculum needs to be updated, making changes for the sake of change must be avoided. To determine areas that can need improvement, data selected from Hattie (2009), as reviewed by Huitt, Huitt, Monetti, and Hummel (2009) (see Table 1), was cross referenced with concerns and data gathered by the presenting teacher during her first year of teaching the curriculum. The purpose of Huitt et al. (2009) was to review "research related to improving academic achievement" (p.1), and as improving academic achievement, and in turn, improving our students performance on the SOLs, is our priority, it makes sense to ensure our curriculum encompasses the different aspects covered in Huitt et al.'s (2009) review. Three areas that were seen as effecting student achievement in Huitt et al.'s review, but were seen as lacking from the cross reference are: teacher clarity, feedback, and cooperative learning. The reasoning for the selection of each will be given, in addition to an action plan for implementing and tracking.

Teacher Clarity

Although the curriculum has been created in a way that dictates all four teachers present the curriculum in the same fashion, it is the realization of the new teacher that implementing someone else's ideas is difficult. Upon comparing the scores of the four teachers' students, the

scores for the various tested standards vary. As all activities and notes are the same, it can be deduced that how the individual teacher explains the topic is impacting her students' achievement. The individual teacher's ability to clearly and efficiently explain a topic is called teacher clarity (Rodger, Murray, & Cummings, 2007). If a teacher has shown that she can clearly explain material to students on a given subject, she should share that information with her fellow teachers of the same topic to ensure that they can also relay the information in a way that will be best received by students.

In order to ensure that every topic is taught as clearly as possible, the teachers would evaluate the data from the tests at the end of every unit and the SOL from the previous academic year. Each test would be broken down into standards, and the teacher with the highest percentage of students passing would then discuss with the other teachers what she did to make sure the students understood the material. If the teacher could not effectively explain what she did, then that unit would be bumped up in the year for that teacher's students so that she could be taped and then discuss what she was doing with her colleagues as they watched the video. Those teachers who still feel they need assistance can video themselves teaching the content and can ask the teacher who is seen as the "master" of that particular topic for feedback.

Because the state requires 70% of students must pass in order for the school to be considered proficient in a subject, for a teacher to be considered to be teaching with clarity, her scores on any give standard must be at least at 70% passage rate, as well (Virginia Department of Education, 2013). If all teachers are above the 70% cut off, then the topic will need to be addressed on the individual student level, and not on the teacher level. If none of the four teachers meets the requirement for a given standard, then they will sit down as a group and go through the material their students are struggling to understand. As the teachers go through the

material they not only work to reorganize the section, but they will also work to deepen their understanding of the topic. Shulman (1987) discussed the fact that in order for teachers to be able to explain a topic, they need to first understand it themselves. If the teachers' scores are below 70%, they may not be able to explain the material because they do not have enough personal knowledge of the content.

In order to see if clarity has been achieved by the other teachers, the tests at the end of each unit will be evaluated to see what percentage of students passed any given standard. If a teacher failed to reach the 70% passage rate after input from the "master" teacher, then she and the "master" teacher will sit down and discuss not only how the class should flow, but also try and deepen the teacher's general knowledge on the topic. The teachers would then plan a mini lesson and the two would implement it together, with the master teacher in the lead so the other teacher could observe. They would then retest the students to see if their understanding had increased.

Civikly (1992) discussed that clarity can be difficult to achieve. However, if teachers use each other as a resource and allow those who excel in a given area teach them what she knows, then clarity may take work, but it could happen. What needs to be remembered is that we are not competing against each other, but rather working together to achieve high passing percentages. Egos need to be set aside and those who are falling behind need to admit that they need help and be willing to accept it from whoever has proven that they can get the desired results.

Feedback

According to Huitt et al. (2009), to ensure that students learn the required knowledge for standardized tests, instruction needs to be designed around four components: (a) presentation, (b) practice, (c) assessment and evaluation, and (d) monitoring and feedback. With presentation, the

teacher needs to ensure that she reviews previously learned material, states what is going to be learned, why it is important, explain the material, and then probes the students to gauge their understanding and respond to them accordingly (Huitt et al., 2009). For practice, the teacher needs to make sure the students not only receive guided and independent practice, but that they also receive periodic review of the material (Huitt et al., 2009). Assessment should occur daily in formative form and at the end of the content in summative form (Huitt et al., 2009). Lastly, the teacher needs to apply monitoring and feedback in the form of cues, prompts, and corrective feedback, simultaneously as the other presentation, practice, and assessment and evaluation (Huitt et al., 2009).

Although the current curriculum does a great job of allowing for presentation, practice, assessment, evaluation, and monitoring, it lacks in the feedback. A majority of our assessments call for us to decide if the answer is right or wrong, but simply marking something wrong does not allow for students to figure out where their thinking went awry. While the social studies portions of the SOLs require that students be able to recall facts if they are not told why their answer is wrong, they may not figure out the correct answer.

Feedback could be formal or informal (Cauley & McMillan, 2009). Teachers can wait to give feedback formally on assignments, tests and quizzes. This formal feedback should be constructive and help guide the students to the correct answer, as simply marking something wrong does not help students learn the correct answer. Once the feedback is given, the teacher can decide how to proceed with the rest of the lesson or what needs to be revisited. Teachers can also give informal feedback to students as a lesson is occurring. This could happen in a group discussion or a question and answer situation. In these informal situations, feedback should be quicker for lower achieving students than higher achieving students as the higher students may

be able to figure out their faulty thinking without assistance from the teacher (Cauley & McMillan, 2009). Teachers could decide based off of the students answers if the current lesson is getting the information across or if things need to quickly changed so that students might have a chance to understand the material better.

In order to implement this, the four teachers need to come together and decide on what and to what degree formal and informal feedback should be given. In addition, as both could impact the curriculum, it is necessary for the teachers to keep notes of what did and did not work in assisting their students understanding, and each brings that data to the weekly meeting the teachers are already required to attend. Teachers also need to make notes of changes they did make so that the curriculum can be updated, even if it is nothing more than an alternative way from the current curriculum to teach a given standard.

To see if the feedback is working, students should be given the opportunity to correct their formal assessments using the feedback, and then have a new opportunity to show if they are able to apply the information on their own. This could take the form formally as another quiz or worksheet. Informally, this could mean asking a student a similar question to the one he was given feedback on before. This system not only allows for feedback and monitoring, but it also allows for more practice, which as mentioned earlier, is essential in preparing students to do well on standardized tests (Huitt et al., 2009). If, however, the new assessments show no change in achievement, then the teacher may need to go back and work on her clarity as discussed earlier, of the subject before attempting to explain the material further.

Problem-Solving Teaching

The current curriculum has many great activities built into it already; unfortunately, they are activities that are designed to recall information and to be completed by one student.

Although some of these activities could be used to practice memorizing the facts (for example, flashcards with the needed definitions for a given unit are created individually, but they can be used while students study together), this is not the same as working together to complete an assignment. According to the Partnership for 21st Century Skills (2003), to prepare students to be active participants in the 21st century, teachers need to ensure their instruction requires students to develop their understanding of core academic content, to think critically, to problem solve, and to communicate effectively with their peers. Unfortunately, the current curriculum is only ensuring that students know the core academic content and nothing more.

It is important to make sure that our students are challenged. Although our current curriculum will ensure the memorization of information, activities where students simply reapply information they were told or read, does not prepare their brains to work critically outside the academic environment. At least some portion of instruction time should be spent with students solving problems that would require not only new content, but also information previously learned in the class. The problems should be designed in a way where there is no one right answer, and they require students to research, discuss, and form ideas. Creating cognitive dissonance, by posing a problem that does not line up with the students' reality is a good way of creating these problems (Hyslop-Margison & Strobel, 2008).

As the SOLs are what our success is based on, it goes without saying that the majority of our instruction needs to be designed in a way that will ensure students will be successful when taking the assessments. However, we cannot simply prepare students for tests as there are no straightforward tests in life. The four teachers need to come together and create four problem-based assignments (one for each quarter) that will require critical thinking and collaboration among the students. By having one a quarter, it will allow the teachers to create problems that

would span many standards while still having time for the direct instruction and activities that will help students prepare for the SOLs.

The four teachers will each choose one of the four problems to create, in addition, to how it will be assessed. Once completed, the four teachers will come together and discuss any questions they have about the problem, or how to implement it, and discuss the timetable for each. As the year progresses and the teachers implement the problems, they will take notes about what they observe and any issues they encountered. At the end of each problem, the teachers would come together with their notes and their students' assessments and decide what needs to be altered for the next time the problem is implemented and/or before the next one is executed. It will also be useful for the teachers to look at how students did on the standards covered in the problems, on the SOLs. If the students did poorly, a new problem will need to be created.

The age of expecting children to sit and receive information from strictly teacher-centered methods is over, and we have entered an age where education means not only ensuring students have a rich understanding of academic content, but that they also are practicing the skills that are required in the 21st century (Partnership for 21st Century Skills, 2003). In order to prepare students for the demands of the real-world and state mandated tests, teachers have to create an environment that balances teacher-centered and student-centered learning methods while incorporating and stretching the current capabilities of the students. Although, this seems like a tall order for any one teacher to complete in a year if teachers work together to perfect the clarity in which they present content and feedback, then time can be found for more student-centered activities. The student-centered activities will not only allow for practice and review

that Huitt et al. (2009) called for, but they are also more likely to cause students to build intrinsic motivation to learn as they will be actively involved with the content.

Conclusion

The current 6th grade social studies curriculum has proven to be a good foundation, but some structural changes need to be implemented in order to bring our students to the level of achievement we expect. By implementing teacher clarity, feedback, and cooperative learning, which have been statistically linked to student achievement, the curriculum could become what we need. However, this will take work and dedication from all four teachers and the administration. The improvements will not be noticeable overnight, so patience will be needed as the data is reviewed and adjustments are made. Without these statistically backed improvements, our students' achievement may continue to meet the state cut off score, but with the current downward trend of the social studies SOL scores; it is not a risk the school can afford to take.

References

Cauley, K. M., & McMillan, J. H. (2009). Formative assessment techniques to support student motivation and achievement. *Clearing House*, *83*(1), 1-6.

Civikly, J. M. (1992). Clarity: Teachers and students making sense of instruction. *Communication Education*, *41*(2), 138-52.

Fredericksburg City Public Schools. (2012). *SchoolNet: School demographic report* [Data File]. Retrieved from: https://fredericksburg.schoolnet.com/account/PreFormattedReportsDisplay.aspx?snidx=6&report_type_id=0

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London & New York: Routledge.

Huitt, W., Huitt, M., Monetti, D., & Hummel, J. (2009). *A systems-based synthesis of research related to improving students' academic performance*. Paper presented at the 3rd International City Break Conference sponsored by the Athens Institute for Education and Research (ATINER), October 16-19, Athens, Greece. Retrieved from http://www.edpsycinteractive.org/papers/improving-school-achievement.pdf

Partnership for 21st Century Skills. (2003). *Learning for the 21st century*. Washington, DC: Author. Retrieved May 2013, from http://p21.org/storage/documents/P21_Framework_Definitions.pdf

Rodger, S., Murray, H. G., & Cummings, A. L. (2007). Effects of teacher clarity and student anxiety on student outcomes. *Teaching in Higher Education*, *12*(1), 91-104.

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, *57*(1), 1-22.

Virginia Department of Education. (2013). *Report card*. Richmond, VA: Author. Retrieved from https://p1pe.doe.virginia.gov/reportcard/report.do?division=110&schoolName=5005

Table 1. Improving Student Achievement

	Domain	Revised	Level	Influences	d.
K-12 Teachers	Teacher	Tchg Events	ALL	Teacher clarity	0.75
	Teaching	Tchg Strat	ALL	Reciprocal teaching	0.74
	Teaching	Tchg Events	ALL	Feedback	0.73
	Teacher	Cls Proc	ALL	Teacher – student relationships	0.72
	Teaching	Tchg Events	ALL	Spaced vs. mass practice	0.71
	Teaching	Tchg Strat	ALL	Meta-cognitive strategies	0.69
	Teaching	Stdt Beh	ALL	Self-verbalization/self-questioning	0.64
	Teacher	Tchg Events	ALL	Not labeling students	0.61
	Teaching	Tchg Strat	ALL	Problem-solving teaching	0.61
	Teaching	Tchg Strat	ALL	Cooperative vs. individualistic learning	0.59
	Teaching	Tchg Strat	ALL	Direct Instruction	0.59
	Teaching	Tchg Strat	MG/HS	Study skills instruction	0.59
	Teaching	Tchg Strat	ALL	Mastery learning	0.58
	Teaching	Tchg Events	ALL	Worked examples	0.57
	Teaching	Tchg Strat	ALL	Concept mapping	0.57
	Teaching	Cls Input	ALL	Goals	0.56
	Teaching	Cls Proc	MG/HS	Peer tutoring	0.55
	Teaching	Tchg Strat	ALL	Interactive video methods	0.52
	Teaching	Tchg Events	ALL	Questioning	0.46
	Teaching	Tchg Events	ALL	Behavioral obj./Advance organizers	0.41
	Teaching	Tchg Strat	ALL	Matching style of learning	0.41
	Teaching	Tchg Strat	ALL	Cooperative learning	0.41
	Teaching	Stdt Beh	ALL	Time on Task	0.38
School Principals	School	Schl Proc	ALL	Acceleration	0.88
	School	Schl Proc	ALL	Classroom behavioral program	0.80
	School	Cls Proc	ALL	Classroom cohesion	0.53
	School	Cls Proc	ALL	Peer influences	0.53
	School	Tchg Events	ALL	Classroom management	0.52
	School	Tchg Strat	ALL	Small group learning	0.49
	School	Schl Char	ALL	School size	0.43

Table 1. Improving Student Achievement (continued)*

	Domain	Revised	Level	Influences	d.
District-level coordinators and administrators	Curricula	Curricula	EL	Vocabulary programs	0.67
	Curricula	Curricula	EL	Phonics instruction	0.60
	Curricula	Curricula	EL	Tactile stimulation programs	0.58
	Curricula	Curricula	EL	Visual-perceptual programs	0.55
	Curricula	Curricula	EL	Play programs	0.50
	Curricula	Curricula	EL	$2^{nd}/3^{rd}$ chance programs (e.g., Reading Recovery)	0.50
	Student	Schl Proc	EL	Early intervention	0.47
	Student	Schl Proc	EL	Preschool programs	0.45
Teacher Training	Teacher	Tchr Char	HE	Micro teaching	0.88
	Teaching	Tchg Strat	ALL	Reciprocal teaching	0.74
	Teaching	Tchg Events	ALL	Feedback	0.73
	Teaching	Tchg Events	ALL	Spaced vs. mass practice	0.71
	Teaching	Tchg Strat	ALL	Meta-cognitive strategies	0.69
	Teaching	Stdt Beh	ALL	Self-verbalization/self-questioning	0.64
	Teaching	Tchg Strat	ALL	Problem-solving teaching	0.61
	Teaching	Tchg Strat	ALL	Cooperative vs. individualistic learning	0.59
	Teaching	Tchg Strat	ALL	Direct Instruction	0.59
	Teaching	Tchg Strat	ALL	Mastery learning	0.58
	Teaching	Tchg Events	ALL	Worked examples	0.57
	Teaching	Tchg Strat	ALL	Concept mapping	0.57
	Teaching	Cls Input	ALL	Goals	0.56
	Teaching	Tchg Strat	ALL	Cooperative vs. competitive learning	0.54
	Teaching	Tchg Strat	ALL	Interactive video methods	0.52
	Teaching	Tchg Events	ALL	Questioning	0.46
	Teaching	Tchg Events	ALL	Behavioral obj./Advance organizers	0.41
	Teaching	Tchg Strat	ALL	Matching style of learning	0.41

Data selected from Hattie (2009) as reviewed by Huitt et al., (2009)