

Spring 2016

Students' Perceptions of Lesson Design Impact on Engagement at the Elementary and Secondary Levels

Craig Woodall
University of Wyoming

Follow this and additional works at: <http://repository.uwyo.edu/edd>



Part of the [Education Commons](#)

Recommended Citation

Woodall, Craig, "Students' Perceptions of Lesson Design Impact on Engagement at the Elementary and Secondary Levels" (2016).
College of Education EdD Project Papers. 8.
<http://repository.uwyo.edu/edd/8>

This EdD Project is brought to you for free and open access by the College of Education at Wyoming Scholars Repository. It has been accepted for inclusion in College of Education EdD Project Papers by an authorized administrator of Wyoming Scholars Repository. For more information, please contact scholcom@uwyo.edu.

Students' Perceptions of Lesson Design Impact on Engagement at the
Elementary and Secondary Levels

by

Craig Woodall

A Project submitted to the Department of Professional Studies

and the University of Wyoming

in partial fulfillment of the requirements

for the degree of

Doctor of Education

in

Educational Leadership

Laramie, Wyoming

April 2016

Abstract

Student engagement is a critical piece of student success in the classroom. Most research focuses on either students' overall perceptions of their engagement levels at school, or on teachers' perceptions of their students' engagement levels. Data such as drop-out rates, attendance rates, grades, and participation in activities are often used to assess a student's level of engagement. If students are surveyed, the surveys often are general and provide more of a global view of school involvement. This study examined students' levels of engagement during a specific lesson on a specific day. Teachers designed a lesson using one of Schlechty's ten design qualities, and then asked students to report on their levels of engagement during that lesson using response choices of engaged 'most of the time,' 'some of the time,' and 'not at all.' Data were collected at the secondary and elementary levels. The purpose of this study was to see which instructional design qualities yielded the greatest levels of student engagement at the elementary and secondary levels. This study concluded that the design qualities of Affirmation and Authenticity yielded the highest student engagement feedback at the elementary level and Novelty and Variety and Affiliation yielded the highest student engagement feedback at the secondary level.

Keywords: Student engagement, design qualities, student input

Student engagement is commonly researched but the term itself is very broad and the definition of student engagement varies between studies. The studies focusing on student engagement frequently examine factors such as student interest or the ability to complete school. Global student engagement studies consider variables such as drop-out rates, attendance, and passing grades as measures of student engagement. Students' motivation levels at school, their degree of boredom through the day, and how often they consider dropping out define student engagement in the classroom and at school (Yazzie-Mintz, 2009). Schlechty (2011) states the only person who truly knows a student's engagement level during a lesson is the student. Often principals and teachers attempt to observe if a student is engaged, but frequently students are simply compliant with teachers' requests and are not engaged. Student feedback is critical for teacher growth (Cantrell & Kane 2013; Schulz, Sud, & Crowe 2014). Therefore, this study is designed to examine the perceptions of students regarding their level of engagement as reported to their teachers.

Student engagement is more than students being on task. Teachers who engage students do so by connecting with students' background knowledge and experiences. Classrooms that have engaged students have teachers who conduct substantive conversations involving students using content specific knowledge. A key piece in an engaged classroom includes the students taking ownership of their learning. Engaged learners no longer sit passively and wait for teacher guidance. Instead, students are actively involved in making decisions and taking control of their learning. Jensen (2013) found that not only do students report that they enjoy engaged classrooms more, but students achieve at a higher rate as well (Fink & Markholt, 2011).

This study included students' perceptions of their levels of engagement in the classroom following a specific lesson. While most engagement studies are a review an entire school year, or

multiple years, this study attempted to identify what specific lesson design resulted in higher levels of student engagement. Most often, the teacher or principal will not have that insight into this level of student engagement. Teachers and principals could monitor levels of engagement by asking the students questions concerning engagement, and then reflect regarding their self-reported levels of engagement in order to create a strong learning environment. Students often feel more engaged in classes where they perceive their teacher cares about them (Cooper, 2014). This type of insight can only come from creating a method for students to give feedback to teachers. District leaders and building principals could benefit from identifying specific lessons which resulted in higher levels of student engagement. This information could also guide professional development opportunities for teachers and principals.

Teachers need to design engaging lessons for students, not just hope students are engaged during instruction. Frequently, the level of student engagement is in response to the personality of the teacher alone (Fink & Markholt, 2011). Schlechty (2011) created ten design qualities that make up lessons that increase students' levels of engagement. His ten design qualities are content and substance, organization of knowledge, clear and compelling product standards, protection from adverse consequences for initial failures, product focus, affirmation of performance, affiliation, novelty and variety, choice, and authenticity.

The goals for this study were to examine student feedback as to which lesson plan design quality yielded greater engagement during one specific lesson. One research question guided the inquiry: Which Design Quality yielded the highest levels of student engagement at the elementary and secondary levels?

Literature Review

The literature surrounding student engagement is grounded within two areas, namely (1) the importance of student voice, and (2) the components of student engagement including the teacher role in engaging students in the classroom. First, the concept of asking students to reflect on their engagement and experiences in school is critical to understanding student engagement. To this end, student engagement has frequently been the focus of national surveys. The High School Survey of Student Engagement (HSSSE) has been administered to over 400,000 students since 2006 in forty different states. Students from all demographics and ethnicities have been included in the thirty minute survey (Yazzie-Mintz, 2009). The National Survey of Student Engagement (NSSE) was administered at the post-secondary level starting in 2000. Approximately four million students have participated in the NSSE since 2000 with 1,554 colleges and universities administering the survey. The NSSE does not assess student learning; instead it provides colleges and universities information on what they are doing well to engage their students in college life and where improvement is needed. Each year the results are released detailing student input on what impacted their level of engagement (NSSE, 2014). The Measure of Effective Teaching (MET) project was a three year study sponsored by the Bill and Melinda Gates Foundation seeking out student input to find better ways to identify and develop effective teachers. Cantrell and Kane (2013) concluded student input such as the MET can provide meaningful feedback to teachers and help principals make decisions on professional development.

Willms, Friesen, and Milton (2009) surveyed students over a number of years to better understand the students' perspectives. They found that intellectual stimulus and challenging instruction were key factors to engaging students. Finding the appropriate level of rigor for

students and student confidence in their ability to meet the presented challenges was necessary. Himmele and Himmele's (2012) survey was specifically geared towards the very shy student or students with language barriers. They agreed that even with these students, having creative higher-order thinking prompts are essential to engage all students.

Student input is essential to understanding their level of engagement. The best way to measure the levels of engagement for students is to ask students themselves. Many large surveys have been created to gather student input on their levels of engagement at school and in the classroom. Schulz et al. (2014) believe that surveying students can be very helpful in improving teacher practice. Student input is very different than teacher and administrator perception of what is going on in the classroom. A teacher or an administrator doing an observation could be inaccurate in their assessment of a student's level of engagement, confusing true engagement with ritual compliance. Quaglia and Corso (2014) concur that student voice is important. Their study uncovered that if students feel their teachers understand their hopes and dreams, they are eighteen times more likely to be academically motivated.

School districts and individual teachers can benefit from surveying their students on their learning experience. Information garnered from asking the students seems to be the most useful and relevant to inform instruction in the classroom (Cushman, 2014). The impact of technology has changed the student experience today. Research on lesson design that engaged students even ten years ago can be outdated. Many students that would potentially rate low on some of the existing engagement surveys surely consider themselves engaged, but these surveys do not match current definitions of engagement. Education has changed, mainly with the influx of technology, and students' needs and goals are now different than they were twenty years ago. The voice of the students and their insight into what engages them is now more important than

ever (Taylor & Parsons, 2011).

Student voice on the issue of engagement is fundamental, but often educators believe they already know what is best for their students. Yazzie-Mintz (2010) stated that educators often dismiss students' negative comments about school and their engagement level. Some students believe that the educators in the building do not care what they have to say and do not respect their students. Many students expressed concern that the adults in the building cared more about the school's public image than about students. Yazzie-Mintz suggests that educators need to get to know what students are thinking about their experiences. They need to listen to their students and truly care about their concerns to create a culture of engagement. A school with an environment of engagement includes students in decision-making on effective teaching.

Pappano (2008) concurs with the idea that student voice is disregarded by educators. Students feel that surveys are meaningless because the results will not be utilized even in situations where schools have authentically reached out to their students. The key is not necessarily the survey, but the application of the survey results. Pappano (2008) described a school that reported out student survey results to the community. "The format they use ("We asked you...", "You said...", and "We're doing this...") lets students see that their input has an effect on their school environment" (p.6). Schools need to convince their stakeholders that students' survey results are important and will bring about change.

Feedback from students on engagement can be gathered in ways outside of a survey. Pink (2010) recommends some ways to engage the passive learner. He stated that teachers need to find areas of the students' lives where they are engaged: sports, church or music. This information would give tremendous insight into student motivation. The best way to get this information is to build relationships with students and ask them about their interests. Students

discussing their interests outside of education may be the best form of student input regarding engagement that a teacher can gather.

The second section of this literature review focuses on the components of student engagement including the teacher role in engaging students in the classroom. Teachers play a fundamental role in designing work that is engaging for students. Teachers cannot expect all students to walk into their classrooms and remain engaged throughout the lesson regardless of what the teacher does for that class period. Teachers need to see themselves as designers of engaging work rather than generic lesson planners (Schlechty, 2011). Dack and Tomlinson (2014) agree that teachers need to be intentional in designing instruction that is engaging to students. Teachers need to provide students with meaningful choices to demonstrate their learning and find the right balance between challenging and supporting students.

Fink and Markholt (2011) found student engagement to be such an integral part of the learning environment that they included it as one of their five dimensions of teaching and learning along with purpose, assessment, curriculum and pedagogy, and classroom environment and culture. They stated that there are three main components that make up the student engagement dimension: intellectual work, engagement strategies, and student talk.

Willms et al. (2009) agree that there are multiple layers to student engagement. They categorized their findings into three areas: social engagement, academic engagement, and intellectual engagement. Their results led them to a definition of student engagement that includes how students identify and value school outcomes, feel a sense of belonging, participate in both academic and non-academic activities, work to meet school requirements, and are invested in their learning. Schlechty (2011) uses four components to define an engaged student; attentive, committed, persistent, and finding personal value.

Teachers should design relevant lessons and help students find personal meaning and value in their work (Cushman, 2014; Washor & Mojkowski, 2014; Schlechty, 2011). Students also need guidance to make connections as to why the content they are learning is important, helping them see how certain topics associate with potential jobs in the future and how they will be able to apply their learning one day (Marzano, 2013). In order to design engaging lessons, teachers should learn students' interests and goals and give students choice to demonstrate their learning (Bundick, Quaglia, Corso, & Haywood 2014).

Dack and Tomlinson (2014) agree that students need to make personal connections to the material and that teachers should focus on interesting topics versus simple mundane facts. Washor and Mojkowski (2014) agree and list relevance as one of their ten expectations that students have for their teachers if they are to be engaged. Cushman (2014) found that if students valued an activity personally they would be more motivated to stay engaged in a lesson. Bundick et al. (2014) expanded on the idea and stated that teachers need to learn student interests and goals because students are constantly evaluating the relevancy of the material. Giving students choices on curriculum and methods to demonstrate their learning can also help in generating student interest and lead to more authentic learning.

A common theme regarding student engagement was positive student-teacher relationships. Cooper (2014) surveyed and interviewed high school students on engagement and different teaching techniques. She found that connective teaching, which she defined as caring for students and helping them find relevance was seven times more effective in fostering student engagement than having academic rigor or lively teaching such as games and hands-on projects. Bundick et al. (2014) explain that there are many ways a teacher can show they care about a student including showing them respect, listening to them, showing interest in them as people,

giving assistance when asked, using humor, using names, and not embarrassing students in front of their peers. Student perception that their teacher cared for them had a high impact on student's level of engagement.

Other researchers found that teacher-student positive relationships correlated to higher levels of student engagement. Willms et al. (2009) stated that it is the students' perceptions of how teachers treat them and how supported they feel that impacts their level of student engagement. Washor and Mojkowski (2014) examined students who graduate and satisfy high school requirements but are ill-prepared for the next level. These students often are unnoticed because they do not generate intervention data, unlike students with poor attendance or potential dropouts. These students listed positive relationships as one of their ten expectations that students have of their school and their teachers. Hattie (2012) found that positive teacher student relations have a .72 effect size on student achievement. In his meta-analysis study, anything with a .40 effect size or higher should be replicated. In contrast, teacher subject knowledge had an effect size of only .09.

Bunce, Flens, and Neiles (2010) studied the attention spans of students in university science classes. They discovered that students experience frequent one minute lapses in their engagement levels and that students began to disengage as early as four or five minutes into a lecture as well. Although student lapses in engagement are to be expected, successful educators know how to vary their methods to keep things interesting. Marzano (2013) uses the term "maintained interest" (p. 81). He challenges teachers to ask themselves if they are making things interesting for their students. It is important for educators to be aware that engaging students is determined by designing lessons that have a variety of delivery methods and move to the next transition quickly.

Teachers need to be intentional in their planning to engage students. Fink and Markholt (2011) state that teachers need to make specific pedagogical decisions concerning engagement to get all students to participate. Teachers need to take into account the background knowledge and experience of their students as well as work to ensure that all student have access to and are expected to participate in the learning. Teachers need to create a safe, caring, and energetic learning environment (Cushman, 2014) and work to maintain their students' attention. Strategies such as calling on students randomly and allowing for debate can lead to enhanced student engagement (Marzano, 2013). Mentally challenging work is necessary for students to feel engaged in their learning. Teachers need to design challenging intellectual work including problem solving, making meaning, and giving students' ownership of their learning to engage students (Fink & Markholt, 2011; Willms et al., 2009).

Axelson and Flick (2011) agree that student engagement is not just the responsibility of the teacher, but is instead a shared responsibility between teacher and student. Student engagement definitions need to include how involved students are in their own learning as well as how involved schools and teachers are with their students. They believe that student engagement should be defined simply as student involvement in a learning process. This definition removes any debate of responsibility and instead focuses on the action in the classroom.

Cooper (2014) took a different approach and created a list of strategies that are common mistakes that teachers make in an attempt to engage students. The common mistakes that teachers make are telling students that they 'have' to do something rather than taking the time to explain 'why' they will be doing something. Teachers that downplayed their subject area as boring, or unnecessary, lost many of their students as well. Teachers often try and tell their

students that this will matter to them down the road rather than finding the relevance today.

In an effort to define relevancy, teachers will sometimes become too specific. Teachers will point out how one particular profession may use this skill and alienate most of the room. Instead, teachers should focus on general themes and ideas for relevancy. Another common mistake is to convince students to engage in a lesson because they may need it for college has been found to be ineffective as well. Lastly, teachers mistakenly create games for students to play to learn material rather than give them real-life hands on activities that draw them into the content.

Students that are engaged in school are also the students involved in things outside the classroom. Willms et al. (2009) uncovered that students who participated in both academic and non-academic activities felt more engaged with their school. The connection to their school through their extra-curricular activities transferred over to greater connection in the classroom as well.

Elementary students benefit a great deal from working in cooperative groups if teachers create them based on academic levels. Traditional classrooms where students work alone or are called on individually miss out on some key components. Grouping students, allowing them to discuss with each other and then have the opportunity to share out can increase academic achievement and even lead to a reduction of achievement gaps if students are grouped properly (Clowes, 2011).

Method

This study examined student feedback regarding which lesson plan design quality yielded greater engagement during that instructional period. This feedback was generated by teachers surveying students following an instructional period. One research question guided the inquiry: Which Design Quality yielded the highest levels of student engagement at the elementary and

secondary levels? All teachers that participated in the study were part of a large school district with approximately 27,000 students and fifty schools.

Research Design and Procedure

Based on the nature of this study, a quantitative method and pre-experimental design was chosen to help collect data needed to answer the research questions. This study was a pre-experimental design because there will be no control group for comparison (Creswell, 2014). All student data were generated by students impacted by one of the design qualities. Teachers created a minimum of three lessons using one of Schlechty's ten design qualities. At the conclusion of the lesson, they asked students to rate their level of engagement as being engaged 'most of the time', 'some of the time', or 'not at all'. All students in the class responded using clickers and an interactive white board. Teachers then gathered that data on a spreadsheet including grade level, design quality used, and the number of student responses in each category. Teachers collected the data using headings of grade level, number of students in each response category, and design quality used. Teachers had complete freedom to choose whichever design quality they wished for the lesson.

An example of an elementary poetry lesson using the design quality of Product Focus would add an additional layer for the students. A common poetry lesson may include reading some poetry, talking through it, and perhaps even writing a poem. A lesson using the design quality of Product Focus would allow students to create a Poetry Journal that included their favorite poem read in class, one they had written and illustrations for both. This product could then be sent home to be shared with parents or kept as a gift to be given on Mother's Day.

An example of a secondary political lesson using the design quality of Authenticity may include an invite to a local politician. Students may not be as engaged if they are asked to create

questions that they would want to ask a candidate for office. If they knew that a candidate would be standing in their classroom, or on Skype, to answer their created questions, students' level of engagement may increase due to the 'real' and authentic nature of the assignment.

Sample

The teachers that were invited to participate in the study participated in district-created professional development regarding student engagement. Eighty-four teachers participated in training that included four professional development trainings to deepen their understanding of student engagement and Schlechty's design qualities. The training included student engagement presentations, readings, reviewing videos of teachers, and discussing best practices. Based on an average class size of twenty-five, there were roughly 2,100 students potentially participating in the study. Written approval for surveying the teachers regarding student engagement was received from the district's assistant superintendent as well as the University of Wyoming's Institutional Review Board (see Appendix A).

Instrumentation

A two-way ANOVA was used to analyze the data to discern if there was a significant difference between engagement levels based on different design qualities used during the lesson. The ANOVA compared the means of each group and displayed if the difference was significant for each design quality at both the secondary and elementary level.

The form was specifically designed for this research project (see Appendix B). The form included a list of the design qualities with a brief description. The form was formatted to include Grade Level, Design Quality used for the day, and an area for results. Students were asked to report on their own engagement level using 3-Most of the time, 2- Some of the time, and 1- Not at all. The intent of this study was to examine which design qualities led to the greatest number

of students saying they were engaged 'most of the time.'

Schlechty's design qualities (2011) were used for this study. The basis for these design qualities comes from Pink's (2010) idea of intrinsic motivation. Teachers spend much time planning, and not enough time designing work that will elicit an intrinsically motivated response. Students should have the opportunity to design and create in the classroom rather than memorize and repeat (von Zastrow, 2010).

For the purpose of this study, the following definitions of Schlechty's (2011) ten design qualities were used.

Product Focus- Student work focuses on creating a product, performance or exhibition intentionally connected to the learning goals;

Content and Substance- Teachers creatively construct the work to be more interesting even when the subject material holds very little interest to the student;

Organization of Knowledge- Knowledge and skills are organized in ways that are most likely to appeal to the largest number of students by considering preferred learning styles;

Clear and Compelling Standards- Standards need to be meaningful, relevant, challenging, and attainable;

Protection from Adverse Consequences: Teachers need to separate punishment from failure- students are encouraged to take risks and feel protected to do so;

Affiliation- Students are social beings and they value group effort and discussion: work is designed to provide opportunity to work with others;

Affirmation- Students receive concrete feedback that informs the student that he or she is making progress and how to make adjustments in learning tactics;

Novelty and Variety- Work is uniquely designed and students are provided the opportunity to

employ a wide range of media and approaches;

Choice- Students are given the right to choose how they will work on a product and/or the actual product they complete;

Authenticity- The work has meaning and significance in the student's life today and includes recognition that their current perspectives on the world shape the way they respond.

Limitations

This study generated data from students' perspectives regarding their levels of engagement and revealed what strategy yielded the greatest increase in their levels of engagement. This study allowed students to share their insights regarding engagement level and provided useful data. Teachers also explained the concept of student engagement to the students before they gathered student feedback. Ideally the student feedback accurately reflected their engagement level rather than other confounding factors. It is possible that students had teacher bias that could impact the study. Students may give high ratings to teachers they like simply because they like them as people. The importance of honest responses referring only to the lesson that day was emphasized to the students. Also, with teachers having complete control over which lessons to select, it is possible that all lessons would not be distributed evenly.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used to examine the data. Data were analyzed descriptively and inferentially. Descriptive analysis included means and standard deviations for the entire sample which were disaggregated by design quality and by level (elementary or secondary). Inferential statistics included a two-way ANOVA with both the level and design qualities serving as independent variables and the student's level of engagement response serving as the dependent variable.

Results

Sixty-three of the eighty-four teachers in the professional development class elected to participate in the study (75%). There were a total of 214 lessons taught by these sixty-three teachers. Based on an average of twenty-five students per class, there was roughly 5,350 student responses given on their engagement level immediately after the lesson. The sample consisted of both elementary (68%) class periods and secondary (32%) class periods (middle and high school).

One research question guided the inquiry: Which Design Quality yielded the highest levels of student engagement at the elementary and secondary levels? To answer these questions a two way ANOVA was used to examine the effect of the different design qualities using a significance level of 0.05.

Table 1 lists all ten design qualities used in the study and their frequency. Each design quality was used both at the elementary and secondary level to see if students at both levels responded significantly that one of these ten yielded greater engagement than the other.

Table 1
Design Quality Frequency for Elementary and Secondary

Design Quality	Elementary n=146	Secondary n=68	Overall n= 214
Affiliation	14	7	21
Affirmation	2	1	3
Authenticity	5	6	11
Choice	27	5	32
Clear and Compelling Standards	9	2	11
Content and Substance	23	12	35
Novelty and Variety	30	19	49
Organization of Knowledge	16	8	24
Product Focus	11	1	12
Protection from Adverse Consequences	9	7	16

Note. Due to teacher control of lesson planning, not all design qualities were used evenly.

Overall, Novelty and Variety was used the most (49) and Affirmation was used the least (3). At the secondary level, Novelty and Variety was the most common lesson design quality (19) and both Affirmation and Product Focus were used the least (1). At the elementary level, Novelty and Variety was used the most (30) and Affirmation (2) was used the least.

Table 2 lists the between-subject effects for grade level, primary design quality, and their interaction. A two-way ANOVA was used to analyze the effects of grade level and design quality on student engagement.

Table 2

Test of Between-Subjects Effects of Design Quality on student level of engagement

	DF	MS	F	Sig
Grade Level	1	.25	5.89	.02
Primary Design Quality	9	.05	1.12	.35
Grade Level and Primary Design Quality	9	.05	1.16	.33
Error	194	.04		

Table 2 shows that the two-way ANOVA showed that there was a significant main effect between elementary students ($M = 2.77$, $SD = .21$) engagement level responses overall compared to secondary students ($M = 2.70$, $SD = .14$) engagement level responses. Elementary students, regardless of the design quality used, reported that they were significantly more engaged than secondary students. The two-way ANOVA yielded no overall significant difference between the interaction of grade level and design quality on students' perceptions of their engagement levels. There was no significant difference when comparing Design Qualities overall.

Table 3 summarizes mean and standard deviations for elementary responses. This table is important because it ranks the order by mean of students' responses to their engagement level after teacher taught a lesson with a specific design quality. Response choices for engagement level were 3-Most of the time, 2-Some of the time, or 1-Not at all.

Table 3

Elementary responses ranked in order by Mean

Design Quality Ranking Elementary	M	SD
Affirmation	2.97	.05
Authenticity	2.93	.07
Choice	2.81	.14
Protection from Adverse Consequences	2.80	.23
Novelty and Variety	2.79	.18
Clear and Compelling Standards	2.78	.21
Content and Substance	2.75	.23
Product Focus	2.73	.23
Organization of Knowledge	2.72	.23
Affiliation	2.70	.28

At the elementary level, students reported the highest level of engagement with the design qualities of Affirmation and Authenticity. The two lowest responses were Organization of Knowledge and Affiliation.

Table 4 summarizes the mean and standard deviations for secondary responses. This table is important because it ranks the order by mean of students' responses to their engagement level after teacher taught a lesson with a specific design quality. Response choices for engagement level were 3-Most of the time, 2-Some of the time, or 1-Not at all.

Table 4

Secondary responses ranked in order by Mean

Design Quality Ranking Secondary	M	SD
Novelty and Variety	2.77	.16
Affiliation	2.76	.14
Protection from Adverse Consequences	2.74	.14
Authenticity	2.74	.15
Clear and Compelling Standards	2.73	.03
Product Focus	2.70	-
Organization of Knowledge	2.67	.28
Affirmation	2.63	-
Content and Substance	2.61	.27
Choice	2.52	.34

At the secondary level, students reported the highest level of engagement with the design qualities of Novelty and Variety and Affiliation. The two lowest responses were Content and Substance and Choice.

Table 5

Overall responses mean and standard deviation comparing Elementary and Secondary

Design Quality Ranking Secondary	M	SD
Elementary	2.77	.21
Secondary	2.70	.21

The two-way ANOVA did find that elementary students, regardless of design, reported that they were significantly more engaged than secondary students. In other words, on average, elementary students reported that they were more engaged than secondary students.

Discussion

This study, limited to quantitative methods and to students in a large Colorado district, was conducted to explore student perception regarding level of engagement in the classroom. The results of the study can be summarized as follows: overall, elementary reported that they were significantly more engaged than the secondary students. There were no differences in reported engagement based on design quality of the interaction of grade level and design quality.

The finding that elementary students are more engaged than secondary students aligns with Collier's (2015) work. Collier states that elementary students are more eager to absorb new ideas and information but that they lose that spark as they become teenagers. Lopez (2014) studied elementary and secondary students and found that elementary students were more likely to rate their future as hopeful than secondary students noting that high schools are now homes for psychological dropouts less engaged in their studies.

At the secondary level, students reported the highest level of engagement with the design qualities of Novelty and Variety and Affiliation. Content and Substance and Choice had the two

lowest response rates. Secondary students responding with Novelty and Variety aligns with the research. Cooper (2014) found that a common teacher mistake is to downplay their subject area as boring. Increasing the novelty and variety levels in short bursts with those aspects of the work most likely to provide intrinsic rewards (Pink, 2010) can lead to higher engagement. Students' favorable response for Affiliation aligns with the research as well. Schlechty (2011) mentions that students are social beings and that student engagement level increases when the student's role is perceived to contribute to others. Jensen (2013) concurs that students, especially those from poverty, benefit from cooperative groups where students feel responsible for not just their own effort but the overall effort of the team.

At the elementary level, students reported the highest level of engagement with the design qualities of Affirmation and Authenticity. The two lowest responses were Organization of Knowledge and Affiliation. Students' favorable responses for Affirmation aligns with the research. Hattie (2012) found that expert teachers provide positive feedback when they sense interest is waning. Jensen (2013) stresses the importance of students having a positive attitude about their own learning potential which comes from teachers expressing their belief that all students can learn and encouraging students to persevere through tough situations. These findings concur with Dweck's (2008) work about the importance of the growth mindset and the teacher's role in building up students for their hard work. Students' favorable responses for Authenticity aligns with the research as well. Dack and Tomlinson (2014) stated that connecting to interesting topics, not just simple facts better engaged the learner. Bundick et al. (2014) expanded on that concept and stated that teachers need to take the time to learn student interest and goals to truly design relevant and authentic lessons for students. Cushman (2014) found that

students were more motivated if they personally valued an activity due to its meaning and significance.

Implications

The results of this study provide implications for students, teachers, and principals. Student voice is vital in understanding what engages them most in class (Taylor & Parsons, 2011). This voice is often disregarded by educators because they seem to be more concerned about the school's public image (Yazzie-Mintz, 2010). If students feel they have a voice, they are more motivated academically (Quaglia & Corso, 2014). The goal of the educational system today is learning. For students to be in the best position to learn, they need to be engaged. This study is significant to teachers, principals, and to districts because it details exactly what students say engages them in the class.

Teachers can benefit from this study because it points out directly what students believe works to engage them in the classroom. Many studies focus on teacher or administrator impression of engagement, but teachers could benefit from this direct information straight from the students themselves. This study provides teachers direct feedback that they could not gather by observing the perceived engagement of their students.

Teachers are very aware that students these days live in a world of constant connection, sending out information to friends in a variety of methods all day long. They are more inclined to perform well when collaborating with others, which is called Affiliation in this study. Jensen (2013) believes that cooperative teams can be the glue that holds a class together. This can have an overall impact on positive behavior in the classroom which will lead to greater engagement. Secondary students have all the information the world has ever known at their fingertips, so it takes a great deal more than content to engage them now. Bunce et al. (2010) found that frequent

lapses in engagement are common today and that teachers need to be aware of these lapses and design lessons with a variety of delivery methods. Novelty and variety are necessary to keep up with their world of technology and interruptions.

With so much access to constant dialogue and the world around them, students are exposed to many negative influences as well. Hattie (2012) points out that mobility and welfare policies have very high negative impacts on students. Affirmation, or positive feedback makes sense to combat the negative and often hopeless messaging students encounter throughout their day. Elementary students are already looking for relevance in their activities as shown with their positive response for affiliation. Teachers too often make the mistake of telling students that this will matter down the road (Cooper, 2014). There are many more careers and alternative settings now that teachers need to be aware that students need to find significance and relevancy in their learning for there to be true engagement even beginning at the elementary level.

Principals can benefit from this study because it gives them data to use in conversation with teachers. This data provides them clues as to what works in the classroom to truly engage students. This data would be crucial for principals to be able to share with teachers to help improve learning. It is possible that principals can attempt to replicate this study in classrooms and help construct a forum for teacher and student to discuss what engages them on a regular basis.

School districts can benefit from this study as well. Districts attempt to design professional development around effective teaching. This study state areas that students have stated engage them in the classroom. Districts should look to develop opportunities for teachers to collaborate around the ten design qualities with specific attention to Authenticity, Novelty and Variety, Affirmation, and Affiliation.

Recommendations for further research would include expanding this study to more than one district and running it over a greater amount of time. Perhaps limiting the ten Design Qualities down to four would increase chance for significance as well. In collecting the data, if each student response was collected as an individual data point, rather than each class collectively as a data point, there would potentially be a greater chance to find significance in specific lesson design.

References

- Axelson, R.D. & Flick, A., (2010). Defining student engagement. *Change: The magazine of higher learning*, 43(1), 38-43.
- Bunce, D.M., Flens, E.A. & Neiles, K.Y., (2010). How long can students pay attention in class? A study of student attention decline using clickers. *Journal of Chemical Education*, 87(12), 1438-1443.
- Bundick, M., Quaglia, R., Corso, M., & Haywood, D. (2014). Promoting student engagement in the classroom. *Teachers College Record*, 116(4), 1-34.
- Cantrell, S., & Kane, T.J., (2013). *Ensuring fair and reliable measures of effective teaching. Culminating findings from the MET project's three-year study*. Bill and Melinda Gates Foundation. Retrieved from: http://www.metproject.org/downloads/MET_Ensuring_Fair_and_Reliable_Measures_Practitioner_Brief.pdf
- Clowes, G., (2011) The essential 5: A starting point for Kagan cooperative learning. *Kagan Online Magazine*. Retrieved from: KaganOnline.com
- Collier, L., (2015) Grabbing students. Researchers have identified easy ways to boost student success by increasing their engagement in learning. *Monitor on Psychology*, 46(6), 58.
- Cooper, K., (2014). Eliciting engagement in the high school classroom: A mixed-methods examination of teaching practices. *American Educational Research Journal*, 51(2), 363-402.
- Cooper, K., (2014). 6 common mistakes that undermine motivation. *Phi Delta Kappan*, 95(8), 11-17.

- Creswell, J.W., (2014). *Research design. Qualitative, quantitative, and mixed method approaches*. Thousand Oaks, CA: SAGE Publications.
- Cushman, K., (2014). Eight conditions for motivated learning. *Phi Delta Kappan*, 95(8), 18-22.
- Dack, H., & Tomlinson, C.A., (2014). Searching for the irresistible. *Phi Delta Kappan*, 95(8) 43-47.
- Dweck, C., (2008). *Mindset. The new psychology of success. How we can learn to fulfill our potential*. New York: Ballantine Books.
- Field, A.P. (2013). *Discovering statistics using SPSS: and sex and drugs and rock 'n' roll* (4th Edition). London: Sage.
- Fink, S., & Markholt, A. (2011). *Leading for instructional improvement. How successful leaders develop teaching and learning expertise*. San Francisco, CA: Jossey-Bass.
- Hattie, J. (2012). *Visible learning for teachers. Maximizing impact on learning*. New York: Routledge.
- High School Survey of Student Engagement. (2014). Retrieved June 5, 2014, from <http://ceep.indiana.edu/hssse/index.shtml>.
- Himmele, W. & Himmele, P., (2012). How to know what students know. *Educational Leadership*, 70(1). 58-62.
- Jensen, E., (2013). *Engaging students with poverty in mind*. Alexandria, VA: ASCD.
- Lopez, S.J., (2014). Not enough students are success-ready. *Business Journal*. Retrieved from gallup.com.
- Marzano, R.J., (2013). Art and science of teaching. Ask yourself: are students engaged? *Educational Leadership*, 70(6), 81-82.

National Survey of Student Engagement. (2014). Retrieved June 11, 2014, from:

<http://nsse.iub.edu/>.

Pappano, L., (2008). Answers and questions: Schools survey their students-and grapple with the results. *Harvard Education Letter*, 24(6). 4-6.

Pink, D., (2010). The pathway to high performance: An interview with author Daniel Pink.

EDge, 5(5), 3-18.

Quaglia, R.J. & Corso, M.J., (2014). *Student voice: The instrument of change*. Thousand Oaks, CA: Corwin.

Schlechty, P.C., (2011). *Engaging students. The next level of working on the work*. San Francisco, CA: Jossey-Bass.

Schulz, J., Sud, G., & Crowe, B. (2014). *Lessons from the field: The role of student surveys in teacher evaluation and development*. Bellview Education Partners.

Taylor, L. & Parsons, J., (2011). Improving student engagement. *Current issues in education*, 14(1). Retrieved from: <http://cie.asu.edu/>.

Von Zastrow, C., (2010). New designs for learning: A conversation with IDEO founder David Kelley. Retrieved from: www.learningfirst.org/visionaries/DavidKelley.

Washor, E. & Mojkowski, C., (2014). Student engagement: It's deeper than you think. *Phi Delta Kappan*, 95(8), 8-10.

Willms, J. D., Friesen, S. & Milton, P., (2009). *What did you do in school today? Transforming classrooms through social, academic, and intellectual engagement*. First National Report. Toronto: Canadian Education Association.

Yazzie-Mintz, E., (2009). Charting the path from engagement to achievement: A report on the 2009 high school survey of student engagement. Retrieved from:

http://ceep.indiana.edu/hssse/images/HSSSE_2010_Report.pdf.

Yazzie-Mintz, E., (2010). Leading for Engagement. *Principal Leadership*, 10(7). 54-58.

Appendix

A. IRB Approval

UNIVERSITY OF WYOMING

Vice President for Research & Economic Development
1000 E. University Avenue, Department 3355 • Room 305/308, Old Main • Laramie, WY 82071
(307) 766-5353 • (307) 766-5320 • fax (307) 766-2608 • www.uwyo.edu/research

May 22, 2015

Craig Woodall
Doctoral Candidate
Educational Leadership
University of Wyoming
Faculty Advisor: Dr. David Hvidston

Protocol # 20150522CW00811

Re: IRB Proposal "*Student Engagement: What do the students think?*"

Dear Mr. Woodall:

The proposal referenced above qualifies for exempt review and is approved as one that would not involve more than minimal risk to participants. Our exempt review and approval will be reported to the IRB at their next convened meeting June 18, 2015.

Any significant change(s) in the research/project protocol(s) from what was approved should be submitted to the IRB (Protocol Update Form) for review and approval prior to initiating any change. Per recent policy and compliance requirements, any investigator with an active research protocol may be contacted by the recently convened Data Safety Monitoring Board (DSMB) for periodic review. The DSMB's charge (sections 7.3 and 7.4 of the IRB Policy and Procedures Manual) is to review active human subject(s) projects to assure that the procedures, data management, and protection of human participants follow approved protocols. Further information and the forms referenced above may be accessed at the "Human Subjects" link on the Office of Research and Economic Development website: <http://www.uwyo.edu/research/human-subjects/index.html>.

You may proceed with the project/research and we wish you luck in the endeavor. Please feel free to call me if you have any questions.

Sincerely,

Colette Kuhfuss
Colette Kuhfuss
IRB Coordinator
On behalf of the Chairman,
Institutional Review Board

B. Collection Form

Sample form that will be used for teachers to collect student responses each day

Student Engagement Results

Level

Design Quality selected

How many students responded with "Most of the time?"

How many students responded with "Some of the time?"

How many students responded with "Not at all?"

Submit

Never submit passwords through Google Forms.

Powered by
 Google Forms

This form was created inside of Poudre School District.
[Report Abuse](#) - [Terms of Service](#) - [Additional Terms](#)

C. Letter to faculty

Dear faculty,

Because you signed up for the student engagement course, I am asking that you be a part of a student engagement study. We hope to learn which engagement strategies yield the greatest level of student engagement with your students. The potential risk for you is that you will see that data that your student produce regarding their engagement level in your classroom; the possible benefit is that you will have an opportunity to reflect on your own teaching and what engagement strategies yielded the greatest levels of student engagement. Please be assured that we have no way of identifying you when you respond. And if you do identify yourself in any way, we will not use that identifying information.

During the time we are collecting data, the data will be stored online, using one of PSD's secure servers. As soon as the data collection period is over, the data will be downloaded to my personal computer and deleted from the server. It will be saved until I no longer need it for analysis.

If you are interested in participating in the study, please be assured that you will be completely anonymous and that your responses will be confidential. We will share only the combined responses for the entire group. Also, you are free to change your mind at any time throughout the study.

Thank you so much for your consideration and participation. If you have any questions about this study or if you are interested in obtaining the results after the data have been collected and summarized, please contact me. My email addresses and phone number is below.

Thank you,

Craig Woodall, (970) 488-7005, cwoodall@uwyo.edu

Doctoral Candidate, Educational Leadership

D. Letter to Students

Because your teacher signed up for a student engagement professional development course, I am asking that you be a part of a student engagement study. We hope to learn which engagement strategies yield the greatest level of student engagement by asking you how engaged you were after each lesson. The potential risk for you is that you will be challenged to honestly evaluate your engagement level using the options of 'most of the time,' 'some of the time,' or 'not at all.' The possible benefit is that you will have an opportunity to reflect on your own engagement level and inform your teacher as to which lesson design qualities you feel engaged you the most.

Please be assured that we have no way of identifying you when you respond.

During the time we are collecting data, the data will be stored online, using one of PSD's secure servers. As soon as the data collection period is over, the data will be downloaded to my personal computer and deleted from the server. It will be saved until I no longer need it for analysis.

If you are interested in participating in the study, please be assured that you will be completely anonymous and that your responses will be confidential. We will share only the combined responses for the entire group. Also, you are free to change your mind at any time throughout the study.

Thank you so much for your consideration and participation. If you have any questions about this study or if you are interested in obtaining the results after the data have been collected and summarized, please contact me. My email addresses and phone number is below.

Thank you,

Craig Woodall, (970) 488-7005, cwoodall@uwyo.edu
Doctoral Candidate, Educational Leadership

E. District Approval

3/30/15

Craig Woodall,

Please consider this document as formal approval for you to conduct research within Poudre School District based on your application materials originally received 3/26/15. Research project name: "Student Engagement: What do the students think?"

* Date of project: Between March 2015 and May 2016 (If additional time is needed to complete the study, please notify me via email).

* I would like to add two conditions: 1) It is requested that the researcher provide PSD an electronic copy of the project summary at the end of the project, and 2) if you decide to submit an article for publication, please provide an electronic version of the article to PSD when completed.

* Priority consideration for future research partnerships with PSD will be given to individual researchers that have a demonstrated track record of submitting final reports for PSD consideration.

* Please feel free to use this email in your correspondent with PSD schools and personnel regarding this research project.

This approval letter signifies that you have successfully met all PSD criteria for conducting research within PSD. Approval from building principals where research activities may occur is also needed prior to beginning research activities at any particular PSD school. Providing principal(s) with a copy of this letter is an important step in your communication with principals, but please keep in mind that principals have the right to refuse to participate in any proposed research activities that involve the students, teachers, or facilities that they are responsible for. Furthermore, a principal may exercise their right of refusal at any point during the implementation of an authorized research proposal. Thank you for considering Poudre School District as a research partner. Please feel free to contact me if you have any questions, and I look forward to reading your findings.

A handwritten signature in cursive script that reads "Dwayne Schmitz".

Dwayne Schmitz, Ph.D.
Director of Research and Evaluation
Poudre School District
(970) 490-3693
dschmitz@psdschools.org