Action Research Project –
Problem Statement

Research question: Do students become more connected to lessons that call for the creation of visual products?

I am Bill McLaren. I teach at Groves High School, in Birmingham, Michigan. My action research project is going to focus on how visual technology or media can be a tool for expression, assessment, and engagement. Basically I want to examine how to use video presentations, PowerPoint, collages, anything visual to demonstrate understanding and encourage student ownership of the lessons. I am looking to develop my current uses of these technologies and media types so that they are more effective. As our students become increasing visually driven, how do I keep their interest and engagement? I want to find evidence that supports the idea that we can actually show understanding from some of the projects that our students create and demonstrate an increase in students’ engagement levels. The student that struggles to write a paper may be able to create an excellent collage, is there a way to show that I can justify giving the same credit to the collage that I give the paper?
Annotated Bibliography


“Mark Springer, an 8th grade teacher in Radnor, Pennsylvania, has broken the mold of traditional learning environments. After 11 successful years coordinating the nationally known Watershed program (Springer, 1994), he secured permission from administrators and parents to design a curriculum integration program with student-generated learning at its core. Each year in three of the past four years, forty 8th grade students have created this meaningful learning environment with guidance from Springer and his colleagues.” – p.54 This is an ideal curriculum that would offer support for my question. Student driven curriculum would demonstrate what they found as useful, so I can see what students chose when they were given the opportunity to choose.

“When I describe Soundings, colleagues often suggest skeptically, "This program could only work with high-ability, self-motivated students who can work independently." But Soundings successfully operates contrary to that belief.” P.54-55 Empowerment of the student is the idea behind student driven curriculum. When people have a say and have control they tend to be more engaged and interested.

“Each year of the Soundings program begins with the same priority-development of a safe and trusting community with strong student-to-student and student-to-teacher relationships.” P.55 This aspect of the program is very important because it is what establishes the opportunity to the students. I will need to develop a similar trust and environment, if I want to find out which forms of assessment work to motivate.

p.55-56 The Question Activity sounds like a great activity to begin the process of self-analysis.

This article supports the idea of gathering authentic feedback from students about assessment and instruction. It offers examples and evidence that I can use to organize and structure my research, since ultimately the Soundings program is taking my research to the next level.

Select database.

The article is about how standardized testing can be “beaten” by authentic assessment. Offers other possible sources in her arguments.

“Teachers are increasingly being held accountable for students' learning under the guise of the standards movement where high stakes testing often determines the fate of a child's educational experience.” P. 4 This is the most frustrating aspect of the traditional testing/assessment system. My research is a quest to find evidence that supports the removal of this problem. The rest of the article offers some other people who have accomplished this task.


This article does a great job of arguing both sides of this topic. Authentic assessment is the driving force behind my research project; this article shows the good and the bad.

Is this more what you are looking for?

“Advocates argue that such an approach connects the classroom to life beyond the school, and advances the quality of teaching in the process. The claims are enticing, but may one safely assume that such assessment reforms bring only improvement?” P.24 – This is the heart of my question, do these visually driven assignments push students and connect the school experience to the life experience?

“Implicit in the movement to authentic assessment is the sense that traditional test results may be poor predictors of student performance beyond the school.” P.25 In all walks of life people need to be able to communicate, sometimes it is through written words, but often the communication must also be delivered in other formats. Visual presentations and verbal skills are as vital as any written skill, in the “real” world. This statement about the weakness of traditional testing addresses part of my goal in that it demonstrates some of the practical side of why would I use the alternative methods of assessment.

“In order to stand scrutiny and maintain authenticity, the assessment must provide a) criterion-based standards, b) multiple indicators of quality, and c) some provision for judgment reliability (Berlak, 1992; Darling-Hammond, Ancess. and Falk, 1995; Newmann and Archbald, 1992; Reckase, 1995).” This gives me a working method for proving that my visual based assessments actually work. Use these three pieces to determine whether or not my assessment is a good example or bad example of authentic assessment.

“Multiple indicators of quality has two dimensions: there ought to be
both multiple products and multiple indicators of each product's quality,” p.26 – This is a very significant factor in judging the effectiveness of an assessment. A single example doesn’t show enough to count, the process needs to be repeated to allow student to demonstrate mastery (or at least growth).

“The argument is that if teaching and learning improve because of the particular assessment, then it is valid.” P. 27 This is another important step to make; authentic assessment should focus on improvement of the teacher and student, therefore it must constantly be evaluated for its success so that it can be determined to be valid or dropped.

Then the article gives the typical negatives, but these definitions and methods of judging assessment pieces are very useful in helping me determine which activities I should study and how to be sure that I am choosing “valid” pieces.


Great article, assesses how well teachers and programs are prepared to truly teach multiple assessments. I like the constructive layout that offers how and what about this study. Another great part is the fact that it addresses the need for teachers and programs to be accountable.

“Wisconsin is one of several states that adopted performance-based measures to assess their teacher education programs (Dill, Massey, Williams, & Cook, 1996).” P. 391 This is good because it proves that I am not the only person searching for and looking into this line of research.

“Previous assessment practices relied heavily upon traditional indicators of student mastery such as objective tests and course and instructor evaluations. These measures were considered insufficient for assessing pre-service teachers' ability to apply skills from coursework.” P.391 Again this is offering support for my pursuit, if Colleges of Education are deeming traditional testing as “insufficient” than there is some merit to my pursuit of authentic assessment in my classroom.

“The development of a University-wide assessment plan was initiated by the Provost and Vice Chancellor for Academic Affairs in 1992. One of the three primary charges of this plan was for departments to develop strategies, methods, and models for assessing their respective major(s) beginning in the 1994-1995 academic year.” P.391 This type of accountability is what makes these studies, and the
programs involved, valid pieces to support my research. The University did not just say change, they told the departments to take ownership of their curriculums and design ways to evaluate their own effectiveness. This is exactly what I am planning to do with my classroom. I will be evaluating my former practices and asking the students to evaluate their former practices, giving both sides ownership and opportunity to change and grow.

The article explains a method that will be useful as I begin my research. One major difference is that they were a department, I am just focusing on myself, but this could extend my project and change more than just my classroom practices.


This is an excellent example of using authentic assessment in a classroom. Take educational content and put it to use as a real application in the classroom and watch as the kids become engaged.

“In Wisconsin, the air in a classroom that is not air-conditioned must be replenished at least six times in one hour.” P. 422 This is an interesting place to start, but it is important. I need to remember to attack the problem from all sides and look for opportunities in everything. This situation that is studied all stems from a real law that gave the study even more value and therefore more connection to the students lives. The breakdown of the experiment is not the most useful aspect of this article, although it reminds me to keep my data gathering techniques organized and scientific. Also the student sheet, identifying the expectations and responsibilities of the student is good, as an example of an authentic assessment tool.


The article addresses how assessments work. It discusses the strengths and the weaknesses of both traditional (standardized), and authentic, assessment. The article also delves into why people avoid the use of authentic assessment, where to start the implement, and how to create rubrics.

“As the students return to their tasks, Ms.Sidney wonders, 'how am I ever going to grade all this?’” p.193 This is the paradox of authentic assessment. It gives great opportunity to the students, but the teacher must learn a whole new format for grading and organizing the
due dates used. This is an important factor to consider as a design and begin to implement my data collection.

“True authentic assessment focuses on analysis, integration, creativity, and written and oral expression.” P.193 These are the higher order thinking skills and activities that any assessment should be affecting.

“Such projects can become a learning stew of multiples- multiple teaching styles, contents, intelligences, and learning styles.” P.195 This is an advantage of this type of assessment. Authentic assessment should allow for a blending of requirements that can easily include pieces of multiple content areas, part of the value of this is that our lives never operate in “a bubble” so we need to practice balancing and overlapping the different pieces of our days.

“Myers and Spalding (1997) see a "rubric" as a document that describes the achievement levels for a particular task. Typically, the rubric indicates acceptable and unacceptable performance; then the rubric is further divided into performance levels with definitive descriptions of work at each particular level.” P. 196 My goal is to identify what motivates and engages students, so I need to be able to quantify results to similar questions from various methods of assessment. Using rubrics for every objective, I can then evaluate whether success rates depended on the content of the lesson or the assessment type that was used.


“Teachers at many schools may find that despite their interest in integrating computers with instruction, implementation of an effective lesson can be hindered when each computer has to be shared with five or more students (Hester, 2002).” P.24 This article offers evidence that supports the use of laptops in the classroom, which is not related to my research directly, but does connect as another example of the positive effects of empowering the students. The best lesson affords each individual the same opportunity that the group has, this means that each student having a laptop takes away questions of equity.


“The use of portfolios as a means of authentic assessment has become
widespread in the field of education (Herbert, 2000). This type of assessment is a tool that demonstrates preservice teachers' proficiencies and developmental growth in the art of teaching over time (Goldsby & Fazal, 2000). Additionally, this method of assessment allows pre-service teachers to demonstrate desired outcomes through real-life performances (Lankes, 1999) and provides a window into student learning and progress that are comprehensive in nature (Georgi & Crowe, 1998)." P. 36 This is an excellent way to coordinate all of the types of assessment that I will be comparing over the course of the year. For all the reasons suggested, collecting the work of students in the form of portfolios offers good opportunity to me and to the students.

Having a set of national standards to work with is also good for validating my data and findings.
Implementation/Instructional Plan

Describe what you will do to address the problem you are investigating

How will you address the problem?
*My problem is focused on the ideas of motivation and active learning. I want to find out if visual representations of learned content cause for higher levels of motivation in students and what cause them to become active learners, in those assignments that work. I will address this by using a wide variety of assignments and types of work (inside and outside the classroom). I will try to find ways to organize the assignments and students so that I can track performance and attitude for the work done during the year. Surveys, discussions, and interviews with students will also serve as methods of data collection. Using a portfolio structure (either digital or paper) that organizes the work and leads students toward/through the drafting process will allow me to track and compare easily as the year develops.

Describe your general plan, including the materials and methods you will use.

*My specific methods will depend on what specific classes I am teaching, but once I find that out I will tailor some general approaches to the needs and requirements of those classes. I will establish early that I am interested in authentic assessment and feedback from the students. I will encourage them to be critical of me and specific about what works and what doesn’t because I want to be better, but also because they need to be able to describe themselves as learners. This will set the stage for an honest environment, which will lead to better results from surveys and interviews. Using the “Question activity” (mentioned in #1 in the Annotated Bibliography) would be the type of thing I will do at the beginning to establish the type of classroom and the expectations I have for the students.

Discuss the learning theories, ideas, or perspectives that have influenced your plan. Your plan should be justified on the basis of these ideas.

*Multiple intelligence theory and constructivist approach to knowledge and learning are the strongest influences from which I will draw to justify this research. My belief in the multiple intelligence theory is the base of the entire project, since I am trying to establish that the production of visual content can be used to supplement and sometimes replace traditional “English classroom” assessments. Traditionally the assessments were simply focused on skills, like defending arguments, supporting a thesis statement, grammar usage, etc. My study will continue to do these things, but also pair them with a more authentic assessment so the results can be
evaluated and compared. The constructivist approach is really what I will use to make the data collection process manageable. Using the idea that we construct knowledge by actively doing things, or practicing concepts, as a bridge, I will lead the students in a quest for understanding about how we learn. I will create an environment where people are free to try ideas and speak their mind, so I can easily document breakthroughs and real opinions from real students. To build this environment, I will challenge them to challenge me — I will use personal examples and actively participate in classroom activities to establish that we are all learners on some level.

Explain how technology will be used in your plan.

Be specific about the role that technology will play.
*Technology’s role will be partially dictated by what I am teaching, but it will be used— Imovie, PowerPoint, Inspiration, web authoring software/skills, flash, anything students want to use to create and give presentations will be viable and allowed. I will encourage the use of technology as a tool that can help us as long as we are controlling it and not letting it control us. I will always be looking for ways to connect technology to lessons and activities. I will model the use of the tools by creating and using a class website, keeping the rubrics and assignments in an online portfolio type system, and introducing all technologies to which I have access to the class.

Justify technology's role in address your problem (i.e., what does the technology bring to the project?)
*Technology supports my entire concept – how do we become motivated...well here try this...it simply offers an array of tools that may or may not spark interest levels that have in the past been left at the disengaged mark. PowerPoint may be great for a student who hates summarizing reading; he or she can summarize using a new slide for each concept, inserting clip art to demonstrate ideas, and use other various features to create a complete summary. Essentially the technology may offer a method for production, it may offer a hook that catches someone’s attention, or it may fill any number of other roles depending on the student and assignment.

Why is this use of technology meaningful and significant?
*Success in our world depends on a person being resourceful, open-minded, and prepared. Technology opens doors to all of these pieces. It is certainly a tool and success can be achieved without it’s aid, but the more you know the more you can do, so any opportunity I can offer the students to try new things, problem solve, and think on their own is a good opportunity. Using software to solve problems or produce solutions is great practice for their futures. Experience with different technologies, both in use and application, is valuable to all employers. All chances I can give the students to take ownership of their learning, identify what motivates them, and pursue
why they are motivated will result in chances for students to grow. I will use the technology as one tool that will create those chances.

**How will the technology alter the cognitive requirements of a task or contribute to student learning?**

*Both of these things will be affected by the different uses of technology. As far as cognitive requirements, it all depends on the class and the technology I am trying to use. If I ask students to use Adobe Photoshop without explaining the concept of layers, success will certainly depend on whether they are able to grasp the concept of layers without instruction. Contributing to student learning will also depend, most of the time it will function as a stepping stone or scaffold to connect or allow for students to make the next step in a process or idea. Once the concept of layers is explained and the students have the cognitive ability to conceptualize their work as layers, Photoshop can become a powerful tool in various contextual frameworks.*

**How is the use of technology connected to your understanding of how people learn?**

*Technology is too broad of a term to really explain this idea. I think all tools employed by people as they learn are forms of technology, so I think it is a very important part of people learning. On the other hand it is the thinking behind the tool that makes the biggest overall impact on the person. This means that technology is a catalyst or an enhancing agent in the learning process. It opens doors, or closes them, depending on your level of experience with the technology. A pencil is not more useful than a branch from a tree if we don’t understand how to use it. All technology functions on that same continuum – we learn more when we understand why we are using it. Its power comes from the fact that it offers many different ways to deal with the questions that we pursue.*

**Describe the setting of your project:**

**Who will participate? Be as specific as possible about the numbers and characteristics of participants in your project and in your school in general. How does the makeup of your class (or other group of learners) compare to the ethnic/economic status of the school population? Include any special characteristics of your students that might be of interest to a reader.**

*The students available attend a high school in an affluent, well-directed district. They will certainly cover the spectrum as far as needs and available resources, but their school facilities are top notch. There is some diversity on all levels, but they will generally fit the middle to upper middle class profile. I plan to be focused on 4-10 students by the end of the project, but I plan to begin by looking a many more and narrowing the field as time progresses. The criteria for narrowing will be developed as some of my questions*
about what I will be teaching and what grade level my students represent. I will be looking for students who struggle with the traditional type of assessment and a few that don’t to use as control samples.

Where will you conduct your project? Describe the location, connections to the American school system or the Department of Defense, its size, etc. Include any information that might be of interest to a reader.

*All studies will be conducted at Birmingham Groves High School. I will not be reporting to the department of defense because Tom Ridge and I don’t get along, even after a barrel of Bell’s Oberon (I would blame it on his boss, but he won’t talk about it). My location and info collected will be drawn from one of the best public schools in the state. Therefore, some will discount it as inaccurate or unrealistic due to their “advantage”. I plan to show that my discoveries are valid for any students that are given an environment that helps and encourages learning, sharing, and the pursuit of knowledge.

What will you do to implement your intervention/instructional plan?

*Describe the details of how the plan will unfold and who will be responsible for various parts of the plan.

*This really depends on what I end up teaching. I will be responsible for creating the opportunity for students to be honest and evaluate their learning, my teaching, and the methods being used by both parts of the classroom. This will be accomplished by using everything already mentioned – various teaching methods, teaching to multiple learning styles, and trying to give real context to all lessons.
Evaluation plan

What scores will you examine?
What items will be included on your posttest?
What questions will you ask of students in an interview or survey?

My goal is to determine what types of projects increase motivation. This means that I will need to find ways to compare multiple types of assessment for the same content. For example if I am teaching vocabulary with a novel, I will give a traditional “write the correct definition, next to the word” test. There will also be a part of the test that will ask the students to offer a visual explanation for what the word means. Students will either use a computer with clip art or paint, magazines, or some other drawing tools to represent the definition. When papers are assigned there will be a written piece with certain requirements and there will be a visual piece that is based on the same rubric. When presentations about literature are the goal, the traditional mode would be a speech; the alternative will be video or PowerPoint that does the talking for the student (but they still supply the content). I will be studying the results from these types of comparisons over the course of the entire semester. My research will consider the results from a small group of students that will be identified by the end of September.

The posttest will cover the conceptual side of my study. It will ask students to identify how they learned, more than what they learned. I want them to benefit from this as well, so the questions would ask them to apply the problem solving aspect of analyzing how we learn. They might be asked to answer a question that offers them a problem so that I can tell that they understand why the use of visual representation works better for them. For example I might include a question like this – Compare two of the major themes of Romeo and Juliet without writing a standard paragraph. You may use sentences or written labels, if you feel that they are necessary. At the bottom of your answer sheet, write a few sentences that explain why you think that this type of answer works for you or why it is simply a pain. I would also include some questions that asked the students to identify or rate the types of assignments that they felt were most helpful/useful to them. That part would allow me to evaluate whether they students felt connected to the tasks or if they simply were fulfilling them for the grade. Finally the posttest would have a space for their input, maybe they would be asked to read a short story and create an assessment tool that would show me that they understood the plot, setting, and characters used in the story. Their tool must include a visual piece and a written piece. By having them develop a piece on their own, I would be asking them to apply any discovery they had made during the year. It would be their chance to choose and use the type of assignment that they found most engaging. In surveys used throughout the process I would ask questions that pushed students to evaluate their own learning process. At the beginning of the year I would focus on the how questions – How do you
approach a writing project? How do you like to present information? How would like it if for every piece we read this year you had to make a movie about the story? How questions start the process and help people begin to identify what is actually happening when they do their work. As we have those conversations and become better at identifying the how, I would then push towards the why. Why do you dread reading assignments? Why do you like presentations that allow you to interact with the class, like game show based review games? The why questions tell us the most about motivations of the students, so they would be used most but also would be used carefully. If I try too hard to collect data it will be as bad as having none, since it will not be authentic. If the students’ think there is only one, correct, answer to the why questions, then I have pushed too far. The survey questions will also be used as interview questions, sometimes only answered verbally.

Data Analysis

Once these different types of data are collected. I will analyze them based on what the purpose was for each piece. Early in the semester my goal is simply going to be identify a baseline. For example a survey that I design with the intention of identifying the most commonly used presentation technique used by the students last year, would be judged on whether most students were able to choose one of the methods I offered as choices and did the results show me a pattern or correlation between the available choices and their opinions about those choices. My goals will become more focused as we proceed through the semester. I will identify students who are struggling so that I can try to find the strategies that will be helpful to others who are also having trouble. The data collected from those sources will be judged as to what types of assignments they are, how are they being used, and why are they helpful to the student. I will make observations and then corroborate what I see by interviewing individuals or posing questions to groups of students in a discussion format. The posttest will be designed with the intention of confirming my preliminary hypotheses. The questions will focus on factors and events that will support my findings, but also leave space for other ideas (in case I am mistaken in my preliminary analysis). The credibility of my findings will be questionable mostly due to my sample size. Even if I focused on all of the students I teach, I would only be studying about 150 people, which is not a large enough sample to have findings that can withstand the scrutiny of others. The data will be valid and will be useful to me as I try to create and implement a curriculum that motivates and engages as many students as possible. The written data collected will need to have the students name attached to it and will need to be generated as individual work (or separated into group generated feedback if it was created as a group) so that it can be considered authentic evidence. This research will be most valuable to me as a template for a bigger study or simply for the insight it gives me about what types of projects the students respond to and how they are motivated. I
think the data and conclusions will be trustworthy as long as the context is understood. I am not setting up a perfect research environment; I am performing the research in my classroom environment. Obviously this poses problems for gather bullet-proof data, but my goal works well with the idea of community that is part of my classroom anyway, so I don’t think it will compromise the usability of the data.