THE EFFECTS OF HIGH STAKES TESTING AND THE ROLE OF PROJECT BASED LEARNING WITH TECHNOLOGY IN EDUCATION

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ABSTRACT
This paper describes the problem in education in developing countries especially in Indonesia regarding high stake testing. Some facts have proven that standardized test or national examination causes many problems in Indonesia. It widens the gap between education and the real life because the focus of teaching and learning is on standardizing test. It also increases anxiety in all school stakeholders because test scores in national examination is the main benchmark of their success. Because of those problems, the author believes that there should be a reformation in education in developing countries. Instead of applying standardized test, students can do project-based learning. In 21st century education, technologies are improving exponentially and they are parts of students' lives. Therefore, the implementation of project-based learning with technologies can be one of effective tool to break the power of high stakes testing in developing countries. The possibility of using digital portfolio as an assessment tool is also discussed.

Keywords: High stakes testing, standardized test, national examination, Education, Indonesia, technology, project-based learning, Digital portfolio.

In developing countries, there is a mainstream perception about success in learning. Most parents, students, teachers, society and school stakeholders believe that success in learning is measured by test scores. Thus, all people struggle hard to help
students to achieve the best scores in examinations. This causes many problems in education. Teachers focus on drilling methods that emphasize more on helping students to answer test questions, parents push their children to prepare for meaningless exams, and anxieties increase in societies. For these reasons, the author believes that the quality of education has fallen and there should be a reformation in education in developing countries. In this digital era, technologies can create possibilities for more meaningful learning through project-based learning. Despite limited access and infrastructure available in developing countries such as Indonesia, the author believes that technologies can break the power of high stakes testing and improve the quality of education by opening possibilities for freedom in learning by applying creative and meaningful learning activities through project-based learning and utilizing alternatives to testing such as electronic portfolios.

High stakes testing is defined by the Wisconsin Education Association Council as “any testing program whose results have important consequences for students, teachers, schools, and/or districts.” (WEAC, 2006, par. 20). The test score has become the most important criterion when making important decisions in education. School as an institution needs the test scores as a benchmark to compare with other schools in order to improve their services to their students. Teachers need the test scores in order to measure their effectiveness in teaching their students. Students need the tests for grade promotion or for graduation and parents need the test scores to monitor their children’s progress in learning at school. Therefore, tests affect all students, parents, teachers, and schools.

In Indonesia, government creates national examinations as standardized tests to measure the quality of education in all provinces in Indonesia. There is mounting evidence showing
negative effects of national examinations on students, parents, teachers, and schools. One of the most tragic effects of such tests is illustrated by a news item that was reported by SCTV, an Indonesian TV channel, in 2008. A senior high school student from Sumba district committed suicide by taking a lot of malaria drugs after finding out that she failed a national test (SCTV, 2008). It is also reported that during the national examination of 2010, a high school student died after fainting while taking the examination. Her parents said that their daughter studied hard everyday until midnight before the exam (ANTARA news, 2010). These stories indicate that tests cause high pressure on students' psychology before, during, and after national examinations and create high levels of depression because the consequences of the tests are extremely high. High stakes testing also impacts parents. They don't want their children to fail in the examination because of many reasons such as love, prestige, and financial problems (in poor families). The test is so important for parents that they spent a lot of money and energy to help their kids to pass.

High stakes testing is commonly created by an institution, government, or other policy makers in the form of standardized tests for various purposes such as measuring and assuring the quality of education in a country and monitoring its progress. In Indonesia, the national examination was created by Badan Standar Nasional Pendidikan (BSNP), the National Board for Education Standards. This institution was established based on System of National Education Act number 20 in 2003, where chapter 59, paragraphs 1 and 2 briefly mention the right of central and local governments to carry out evaluation of managers, units, levels, and types of education. According to BSNP's official website based on government act 2005 number 19 chapter 66 paragraph 1, the national examination is held as one
of the considerations to measure the competency of students in certain subjects in science and technology. The test scores are used for mapping the quality of education, grade promotion, requirement for graduation, and to increase the quality of education by giving support to school units. (2010).

From these functions of the tests, it is clear that the Indonesian government believes in the behaviorism theory of stimulus-response that was developed by Skinner. "Skinner insists that actions are determined by the environment; behavior is shaped and maintained by its consequences." (Time, 1971, p. 2). That is the origin of reward and punishment theory. Skinner's behaviorism theory was tested first on animals then it was applied to humans. The success in applying the training to animals through reward and punishment created a basis for the theory to be applied in teaching and learning. Unfortunately this theory is ingrained in our modern education, especially in developing countries. I believe that humans cannot be treated as animals. People have emotions, feelings and intelligences that are more complicated than animals. If we train humans the same way as we train a guinea pig then that is a big mistake in education.

According to Sunny Cooper (2009), before B.F. Skinner, Edward Thorndike was the pioneer of behaviorism. The experiments that he did related to human and animal learning had major influence in the history of psychology. Therefore, many of Thorndike's works were followed by many behaviorists and adopted by schools until now. Thorndike's works in intelligence created an assessment tool for intelligence testing. His legacy is that, until this day our education systems rely on standardization of curriculum and testing to measure success. As a result, schools are not the place for real life education, but for achieving high scores in testing.
It is very unfortunate that in this modern era not only education in developing countries, but also in developed countries still rely on in high stakes testing or standardized tests as the main benchmark of success in education. As a result, schools, teachers, parents, students, and many stakeholders do not focus on meaningful learning, improving talents, and creativity but rather just on achieving the highest scores in tests. Therefore, for many students, learning becomes very difficult and boring. No wonder that cheerful, talented, creative, optimist, and competent students turn out to be stressful, anxious, uncreative, pessimist, and incompetent students. John Tylor Gatto in “The 7 Lesson School Teacher” wrote:

“...the seven lessons of school teaching: confusion, class assignment, dulled responses, emotional and intellectual dependency, conditional self-esteem, surveillance — all of these things are good training for permanent underclasses, people derived forever of finding the center of their own special genius.” (1992, par. 32)

Although some people may not think that this describes the truth in schooling, what Gatto said is the reality now and prediction of our students’ future. Schools cannot answer our children’s needs. It widens the gap between education and real world life. The problem of our education is not students or teachers, but the standardization and national examinations. Ideally teachers should educate students to be able to improve their own individual competencies and talents and educate them to survive in the real world, not teach them how to answer the questions on tests.

In contrast with Thorndike and other behaviorists, John Dewey in his pedagogic creed written in 1897 in his school
journal wrote:

I believe that the school is primarily a social institution. Education being a social process, the school is simply that form of community life in which all those agencies are concentrated that will be most effective in bringing the child to share in the inherited resources of the race, and to use his own powers for social ends.

I believe that education, therefore, is a process of living and not a preparation for future living.

I believe that the school must represent present life-life as real and vital to the child as that which he carries on in the home, in the neighborhood, or on the play-ground. (1897, par. 7-9)

What John Dewey refers to here is truly a real education where there is an inseparable relationship between schools and society; schools and real life experience. Dewey’s principles are the pure principles of education that we should follow. His ideas are against Thorndike’s and other behaviorists’ ideas that emphasized intelligences and testing. Dewey’s ideas emphasize authentic assessment and applying project-based learning in school.

Dewey’s principles in learning became the basis for project-based approaches which are meaningful rather than drilling methods that focus on answering questions. This kind of learning model can break the power of high stakes testing. It can lead to creative and meaningful learning, the real education that is supposed to be experienced by students. In project-based approaches, students will have hands-on experiences that are relevant to them that they can apply in their real life in order to
solve their real life problems at home and or in their societies. Jane Krauss wrote:

Good projects are authentic in nature, are relevant to the learner, and promote processes that generalize to future learning. In the best projects, students and teachers share decision-making responsibilities, and make choices together about what is learned. The more choice students have, the more meaningful their projects become, and the more invested they are in their own learning. (1998, par. 1)

When students have more freedom in learning it can motivate them to learn based on their own ability and talent. There is no place for losers as described by testing because all learners are the winners. Freedom in teaching and learning is incompatible with standardized testing.

Project-based learning can be done with or without technologies. However, in this 21st century era where students are familiar with technologies and because of the fast movement of information, students will be more engaged if they conduct projects by using appropriate digital technologies. In developing countries, especially in Indonesia, make use of technology for implementing meaningful learning through project-based learning approach is a rare thing to do even though in many situations especially in urban area, students have access to computer and Internet. In fact, utilizing technology to support project-based learning can be a powerful tool in education. Boss and Krauss in the book entitled Reinventing Project-Based Learning wrote:

By maximizing the use of digital tools to reach essential learning goals, teachers can overcome the boundaries and limitations of the traditional classroom. Some tools open new windows onto student thinking,
setting the stage for more productive classroom conversations. Others facilitate the process of drafting and refining, removing obstacles to improvement. Still others allow for instant global connections, redefining the meaning of a learning community. When teachers thoughtfully integrate these tools, the result is like a “turbo boost” that can take project-based learning into a new orbit. (Boss & Krauss, 2009, p.12)

The ideas above describes the possibilities that technologies can offer beyond the traditional project-based learning in Indonesia where there are no digital tools in the process. For example, instead of writing an essay, students can collaborate on the essay with students in other countries, or create a video and publish it on YouTube so that it can be beneficial for many people. Those kinds of digital projects will help students to be world citizens. It will also make students experience learning not only in school, but also outside school or even in other countries.

Many schools in developing countries do not apply project-based learning even though they have technologies to support meaningful learning. The main reason is the high stake testing that changes the focus of a school to just covering materials on tests. Computers and Internet are available but they are mainly used as tools for test practice. There are many educators who use computers as a tool to find materials for lecturing in class instead of utilizing Web 2.0 tools to enhance collaborative activities that can change the focus from teachers to students.

I believe that there must be a reformation in education in developing countries. Societies have to realize that standardized tests are just an instrument to measure specific narrow aspects of
cognitive ability. In fact, there are many intelligences or abilities that humans have which cannot be measured through tests. Standardized testing does not measure all competencies of a student. Each person is unique. The question is how teachers can help learners who have various learning styles. Firstly, we have to move away from monolithic instruction. Cristenson, Horn, and Johnson (2010) define monolithic instruction as a single instructional style for all students. In the book, entitled Disrupting Class, the authors explained in chapter one that there is no equivalent between standardization and the need for customization in learning. Thus, we cannot apply one instruction to fit all. Secondly, the authors suggested, “schools need to move away from the monolithic instruction of batches of students toward a modular, student-centric approach using software as an important delivery vehicle.” (Kindle edition, p.364-366). This customization of learning indicates freedom in learning where students can learn from all the resources through technologies.

There is a possibility that the thoughtful use of technology can help students to experience more meaningful learning. By using software and online resources, learning will become more interactive and student centered. There are thousands of online materials that students can access and learn for free. They also can collaborate with other students not only in their countries but also in other countries. Students also can get feedback on their projects from experts and have possibilities to collaborate with them everywhere without limitation of space and time. Thus, in utilizing digital tools in project-based learning, students can have more experiences in learning. They learn the materials because they are self-motivated instead of worrying about the consequences. Curtis J. Bonk (2009), wrote a book titled The World is Open which is truly an inspiration and also a wake up call for all educators to take the possibilities of
technologies for open learning in the transition of culture in the digital era. This book also gives hope for people in the third world countries, especially for poor people, that education is free. Everyone can have freedom to learn because, according to Bonk, "we all learn." In the videoconference conducted between students in the Masters in Education, Information Technology program at Western Oregon University and Dr. Bonk (on Tuesday, June 7th, 2011), the author mentioned an example of a rural area where people have limited access to computers and the Internet, but people can use a computer and the Internet to download materials and share them with many people manually. There are millions of open source software programs and materials that we can use to enhance learning. With the right use of technologies, learning will be more meaningful and relevant.

If project-based learning is incompatible with high-stakes testing, how then should we deal with assessment? In project-based learning, the assessment will be an authentic assessment. Students will work on projects and let the community assess their work. Students will get feedback from their teachers, peers, and experts in their community. All of the projects will then be combined nicely into an electronic portfolio that contains students' progress and achievement in learning in doing their projects. All the evidence of works and projects in the portfolio are in digital media. McMillan defines a portfolio as "a purposeful, systematic process of collecting and evaluating student products to document progress toward the attainment of learning targets or show evidence that a learning target has been achieved" (as cited in Bahous, 2008, p.383). Through the portfolio, teachers can monitor all aspects of students' progress in learning from year to year. Portfolios also help students to develop their own talents that will be useful in the future. It is just like a folder of life that can archive all students' progress and achievement, not
only in schools but also in their lives. Students will also be more creative and self-motivated if they are responsible for their own learning when they are asked to do research or a project to complete their portfolio. This portfolio will be used as their curriculum vitae that can be useful in their future. Portfolios can measure more aspects of learning and competencies than high stake testing.

The author believes that high stakes testing and standardized tests are big mistakes in education and should not be applied in schools. Students should have freedom in learning and have meaningful and relevant experiences in learning through project-based approaches. Technologies in this case will take a role as tools to boost the learning process that goes beyond experience in their own schools but also in the community and in other countries. In the process of assessment, students will be assessed based on authentic projects or products that they made. Those projects will be arranged and combined nicely into an electronic portfolio that can be useful in their future careers. In conclusion, there should be a reformation of education in developing countries by breaking the power of high stakes testing through empowering project-based learning with digital technologies and utilizing digital portfolios as one of the assessment tools for meaningful learning.

REFERENCES


