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The Case for Participatory Education

Stephen Thornton-Taylor
Cleveland State University

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THE CASE FOR PARTICIPATORY EDUCATION

STEPHEN THORNTON-TAYLOR

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College of Graduate Studies by

Thesis Committee Chairperson, Dr. James Moore

Department/Date

Dr. Anne Galletta

Department/Date

Dr. Robert Shelton

Department/Date

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ABSTRACT

Participatory learning or “Participatory Education” as a formal declaration of either ideology or praxis has yet to be written and I would certainly not attempt to write one in the current educational capacity I now find myself in; however I have found myself in the unique position of actually being first to something and so have decided to enjoin the relatively scant sketches of, as far as the great blade of written history is concerned, cutting edge economic philosophy with the over-personal, absolutely singular experience of a student-teacher in Cleveland, Ohio.

The principles of Participatory Education are adapted from the book Participatory Economics by Michael Albert; however Albert is building the case for equitable economies and therefore far outstrips the scope of this small study. I have borrowed from Participatory Economics only the concepts of: **affective decision-making** or decision making by those affected; which engenders ownership of decision, **liberation theories**, regarding power—by the deed and the creed—and the use of power in the group, and **freedom of movement**, which ties in to both power and choice.

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CHAPTER I

INTRODUCTION

To make the case for participatory education one must first consider the nature of education as it is. Education throughout the eons of time has developed along side the cognition of its teachers, sometimes in lockstep, sometimes many steps behind. From the mystery schools in the caves of the great river civilizations, to the shaman's apprentice, to the classic libraries of Ashurbanipal or Alexander the Great; education has developed through the ages as our fellow humans have developed; from slave, to serf, to servant, to freedom the human experience has changed, from feudal to colonial to modern states the human society has changed with it. One must never assume that education can remain the same. It is not the case for what is best it is always the case for what is better.

Education, the act of educating, from the Latin *educatus* meaning literally "brought up" was traditionally a way of imparting cultural heritage as well as informational and procedural knowledge from one who knew to one who did not. It begins with a parent and a child, from the earliest moments of life, partially through

genetic heritage, but also through direct transmission from a mother to a child.

Thomas Verney in his article *The Womb - Your Child's First School*, shows how music, played or performed for the child in gestation, has a dramatic effect on the development of the child and how the early and possibly permanent temperament of the child can be determined by their experience with this outside stimuli (Verney, 2005).

George F. Kneller, philosopher of education put it this way, "In its broad sense, education refers to any act or experience that has a formative effect on the mind, character, or physical ability of an individual. In its technical sense education is the process by which society, through schools, colleges, universities, and other institutions, deliberately transmits its cultural heritage--its accumulated knowledge, values, and skills from one generation to another." (Kneller, pp. 20-21, 1970)

Kneller neatly lays out the inherent duality present in the definition and process of learning. First he broadly describes learning as anything that one does to further development. Then in his technical definition he describes a model of education whose purpose it is to preserve traditions or cultures; the collective maintenance of a group's habits both useful and otherwise. One can easily see how institutions of learning use the former aspect of education to carry out the latter aspect.

Through the medium of education the human family has shielded a legion of traditional practices throughout the ages, from the continually burning fires of the Zarathustrian temple to the Tibetan practice of illuminated art; from the volumes of

preserved recipes for traditional folk medicine and food; to the practice of passing down a musical folk lexicon through group performance. Education as keeper of tradition has its benefits, it has allowed us to gaze deep in to the past and develop a working history of human development. It has also allowed cultures to create a sense of cohesion and shared experience, with both helpful and dissonant results.

Currently in the world social forum we are seeing a crisis of cultural transmission. In the international conflicts of many of the world's developed and developing nations we are seeing the use of education to promote a continuum of religious and cultural habits that promote or at the very least allows for violence as a mode for rectifying perceived injustices. Education to promote violence is nothing new however and can be seen on both sides of the conflict.

I personally taught in a high school in an inner-ring suburb of Cleveland, Ohio and I watched as the staff promoted the heavy-handed reactions that many of our fellow U.S. citizens endorse. At the same time I watched both in the news and through personal interaction at home and abroad as the strict Islamist conducted religious schools to advance a very similar agenda—keep fighting no matter what. The strict Islamist says socio-religiously we are allowed to carry on in this way, while the modern American says we must separate religion out of our social plan, but continues to allude to some vague religious tenets concerning helping others while all the while employing violence to do so.

Take for example the Jewish or Arab American high school student who at 17 is

conflicted with choosing between freedom from tradition and fighting in a war for it, not to mention those 17 yr olds around the world who have no choice. By preserving our traditions of war heroes we create the next war.

With all of the benefits that education as preserver has brought the human family one must consider the negative side of maintaining cultural dogma. Dogma is the enemy of Participatory Education because it bars the possibility of emotional and psychological growth. Any current American can easily see how organized religion and politics, through mass media, have been used at various times throughout world history to both pass on tradition and maintain control over a subservient class of people who are unsure how to render the auto-didactic aspects of their own personal quest for answers to life's questions.

This is not an attempt to paint cultural transmission in a purely pejorative light. Clearly there is a multitude of ways in which it is both useful and productive to maintain a continuum of traditional memory or genetic muscle memory as it has sometimes been called. From the multi-generational music family or the legacy of a family trade or business, cultural transmission has its place, but when a thread of that cultural transmission claims dominion over another's culture and when that thread is said to have been imparted by some supernatural means, one must conjecture as to how that culture can continue to progress without constantly butting heads with other cultures.

As we weigh utility against efficiency, as each zeitgeist decries the declension of the

subsequent generation it is easy to see how the maintenance of a cultural continuum can work well for creating an internal cultural cohesion, but must be skeptically approached in a world where global unification of humanity is the goal.

While every parent or guardian teaches their child the basics of movement, language, and personal preservation one would be hard pressed to find a parent that encourages their child to ignore the lessons of tradition and forge a future independent of their own personal experiences. We as parents tell our children how it was when we were young. As educators we pass on anecdotes and aphorisms to our students based on lessons we have learned from others or experienced for ourselves.

It is in this sharing of knowledge and experience that we as educators are given the opportunity to motivate our students and put the tools of success in their hands, however this opportunity also puts the educator in a unique position. The educator must decide how much of their own bias they will include in the material of the class.

"I would like to call the attention of my readers to this idea: All the value of education rests in the respect for the physical, intellectual, and moral will of the child. Just as in science no demonstration is possible save by facts, just so there is no real education save that which is exempt from all dogmatism, which leaves to the child itself the direction of its effort, and confines itself to the seconding of its effort. Now, there is nothing easier than to alter this purpose, and nothing harder than to respect it. Education is always imposing, violating, constraining; the real

educator is he who can best protect the child against his (the teacher's) own ideas, his peculiar whims; he who can best appeal to the child's own energies.”

(Goldman, p. 166, 1911)

The Participatory Education model engenders emotional flexibility and avidity, it avails the possibility of a public education that is based around active transition and emotional maturation. With a system free of ideological dogma and constraint there will be a place where students will feel that their voices are heard and considered. In a classroom where students feel cared about their frustration can be minimized and their motivation maximized.

Hermann Hesse characterizes in his book *Demian: The Story of Emil Sinclair's Youth*, a model of education that is based upon manipulation. In this model the educator's goal is to persuade the student to find partiality towards what the educator is partial to and disdain for that which the educator disdains. Demian learns through relationships first how to manipulate others and then how to free himself from manipulation.

Paulo Freire in his seminal work *Pedagogy of the Oppressed* examines this type of manipulative approach. He used the term “narrative education” to describe an educator who speaks as an omniscient expert and coins the term “banking” to describe how the educator posits their ideas into the students' ready and waiting minds. Freire puts this approach in contrast to the “problem-posing” pedagogy that asks the students to search for the answers through their own discovery. (Freire, p. 43, 1968)

Freire demonstrates how “narrative education” is often developed by the veteran teacher as a strategy for eliminating challenges to their instructional position. As the adage goes “the best defense is a good offense” however the irony is that as the educators protect themselves from attack they defend themselves from new experiences and because they attempt to control every situation they often generate conflict instead of preventing it.

The book *Liberating Theory* by Michael Albert delves deep in to the notion of control as option for instruction. He shows how natural dualities such as male/female, rich/poor, and conservative/liberal are slow moving targets for the basis of developing strategies for classroom management. With the help of seven other writers he demonstrates in his book that it is in fact a singular force, that of control, that uses these dualities as a means for managing a classroom. (Albert et al, 1986) Carolyn Evertson in her book *the Handbook of Classroom Management* notes that the traditional view of “classroom management’ implies top down control—an end not a means.” (Evertson and Weinstein, p. 166, 2006)

This notion of control can be seen in the traditional American classroom as a ladder model of responsibility. The teacher makes the decrees, the groups find their leaders and then everyone else falls in line. It is a cynical cliché, but look at the law of the street and you will find the same ladder model there as well. This ladder model also works with blame; the leader sends the blame down the ladder to the lowest possible rung. In the

military, like many religions, the adherents are taught that it is commendable to accept blame from above. Command works the same way always in a downward pattern. The goal should never be to do away with the ladder of transfer, but instead to make the transfer of information and responsibility flow both ways along the ladder.

A quick review of the literature on the subject of project and action-based learning will shed light on a growing camp of educators that are taking a different approach to imparting knowledge and procedure. These educators are veering away from simply teaching their students how to maintain their culture as it is and instead are opting for teaching their students how to recognize themselves as world citizens in general and problem solvers in specific.

This growing camp of educators is dedicated to putting the tools of learning back in to the hands of their students and seeing to it that they remove their wills as much as possible. This group of educators comes from different parts of the world; they have experimented under the pressure of different political systems, but they have come to a similar conclusion; the student should be at the center of all-educational planning, their educational space should guarantee them freedom of movement and choice, and above all the work of all students should be carried out through active movement.

As we develop a modern educational form we must take the two aspects of education and unify them in a way that all humans are attracted to a workable model. We must develop a model for education that focuses on the informational and procedural

aspects of given subjects rather than focusing on the place that a given subject might have in an overall cultural agenda. The practice of educating along nationalist or “classist” bias has no place in the modern classroom; all must feel that they are part of the developing pedagogy that takes place within the classroom. The only way to develop a truly unified form of education is by allowing all those who participate in the learning process to have a say in the direction of that learning process.

This is the essence of Participatory Education; through the act of liberating the student the educator engenders an ownership of the classroom. With the control of one’s education firmly placed back in the hands of the student they are able to find interest and motivation that will drive them to discover. It is similar to owning one’s own business or home. Imagine someone fixing up a house they were renting without taking payment or making the beds and emptying the trash in a hotel room; on the flip side look at the difference between a neighborhood with a majority of homeowners versus renters. Without fail the neighborhoods with a majority of owners will fair better than those with a majority of renters. (Blomley, 2004)

Once the student has been freed to choose the direction of their own education they must be given various projects to choose from in order to learn in an active environment. Dean McManus explained how the teacher in the action-based classroom works to develop "a learning environment in which the student can learn to restructure

the new information and their prior knowledge into new knowledge about the content and to practice using it". (McManus, 2001, p. 427)

As educators we must remember while we research, experiment, and discuss our educational theories it is important to keep this in mind that no matter how much we conjecture otherwise the student will always know better than we do how best they learn, however they won't always have the language to express it. It is our job to be the patient observer who helps to keep them engaged, through active learning, long enough to discover how best they learn. Once we have figured out what works best for them it is our job to provide and adapt projects that are consistent with their style of learning. Once we have provided and adapted those projects it is our job to get out of the way so real learning can take place.

CHAPTER II

LEARNING TO UNLEARN

In the journal *Knowledge and Process Management*, Juan Gabriel Cegarra Navarro writes,

“The process of unlearning can serve as a basis for removing old knowledge structures. Unlearning makes it possible for new knowledge to be accepted, and for old structures to be changed or removed. However, since organizations have difficulties in changing when in fact they are successful, the transition from unlearning to learning is especially difficult, since success tends to preserve existing knowledge structures and behaviours, and organizations fritter away their resources in internal power struggles, instead of using them to bring about fundamental changes in behaviour.” (Navarro, et al., 2005, p. 163)

A new wave of education has been gaining steam in the United States and elsewhere based on the process of unlearning incorrect information; its proponents call it “unschooling” or “schooling without”. John Holt, considered the progenitor of “unschooling”, provides some insight with this quote, “Since we can’t know what

knowledge will be most needed in the future, it is senseless to try to teach it in advance. Instead, we should try to turn out people who love learning so much and learn so well that they will be able to learn whatever needs to be learned.” (Holt, 1977, p. 17)

Hermann Hesse was having his first psychological trials in Germany in 1910 when he began to develop his book *Demian: The Story of Emil Sinclair's Youth*. In it he tells the story of a young man in his search for meaning in his life. One day while Demian and Emil are drinking in a bar Emil reminds his friend “Fate and temperament are two words for one and the same concept.” Hesse uses his characters to convince the reader that they are bound to their lot in life and that there is little they can do to change it.

While Hermann Hesse was tucked away in the German Alps a few nations over Francisco Ferrer was sitting in a Barcelona cell awaiting execution on trumped up charges relating to an event, it was later proved, he had never been a part of. Francisco Ferrer had been targeted by the Catholic Church after founding 109 “godless” —according to the charges—“Modern Schools”. He also aided in the founding of over 300 more schools. (Goldman, 1909, p. 13)

Ferrer wrote frequently about the nature of modern education and had a very different view from that of Hesse regarding emotional development. He wrote, “Let us not fear to say that we want men [and women] capable of evolving without stopping, capable of destroying and renewing their environments without cessation, of renewing themselves also; men, whose intellectual independence will be their greatest force, who will attach

themselves to nothing, always ready to accept what is best, happy in the triumph of new ideas, aspiring to live multiple lives in one life.” (Ferrer, 1909, p. 53)

Ferrer also found that the educational system provided by the state had produced a child that was ill informed and superstitious by result. He wanted to develop a school system that removed restraint and refrained from harshly disciplining the child. He wrote in 1909, “I like the free spontaneity of a child who knows nothing, better than the world-knowledge and intellectual deformity of a child who has been subjected to our present education.” (Goldman, 1911, p. 167)

Our national mandate for educational performance in the U.S. public school system calls for a uniform test in order to ensure quality of education, but simply memorizing facts says nothing about one’s capacity to learn. Alec Bourne another proponent for “unschooling” put it this way, “It is possible to store the mind with a million facts and still be entirely uneducated”. (Bourne, 1921, p. 187) For the educator as much as the student flexibility and fallibility is key. In the Participatory Education classroom the educator or mentor will perform a different role than the traditional teacher.

In the Participatory Education classroom teachers will serve more as guides and tutors rather than the voice of expertise. It will be essential for these teachers to come from a background of great experience in their field, but instead of the “narrative voice” they will provide a “problem-based” pedagogy using action related projects. It will be their

energy that drives the energy of the group, but through inquiry instead of dictums.

In many ways it is ironic that the computer and other modern forms of technology have allowed for a mode of learning that stresses action given that these devices were originally constructed with the goal of making life for humans more convenient and less toilsome. However in countless ways it is because of modern technological communication and computation that the possibilities for action learning have grown to such a global level. Technology has also provided the means for devising more democratically based action learning via increased opportunities for communication and sharing.

CHAPTER III

PARTICIPATORY EDUCATION

This study implemented a model of education borrowed from a social study of economics. The original completed an economic survey with the intent of offering an alternative to the corporate model of top-down command. The isolated study undertaken in this piece of action research incorporated only the principles related to work, on the basis of action, ownership, and the freedom of movement. It showed how the goal of a functional education system should be to produce quality labor; the social implications of Participatory Economics were a good fit with the ideas of action-based learning.

As mentioned before Participatory Education is a social approach to education adapted from a socio-economic plan and because education is just one small element in the overall economic landscape the effects of persistent decision opportunities and project ownership are much easier to track in the single classroom versus the nation; making P.E. much more usable on the small scale.

“The three domains of learning” alternately expressed, as “the three domains of knowledge” are central to educational planning. These three domains are sometimes delineated as knowledge, attitude, and skills and at other times as cognitive, affective, and

psychomotor. One might also interpret them as the three basic nature-states of the human experience, biological, psychological, and sociological—the body, the mind, and others.

These three states present a perennial challenge for the educator to integrate and develop. Though any student of life may be deficient in one or all of these areas they continue to live within these boundaries and so form natural divisions for examining Participatory Education. The three cognitive domains can be developed through the development of some skill within those domains like working out to change ones physical appearance or learning to inventory emotions in order to develop ones psychological dexterity.

Howard Gardner, an educational psychologist, demonstrated through his extensive work on learning, how biology or physical development plays a key role in informational acquisition. In fact he defines intelligence as, “the capacity to solve problems or to fashion products that are valued in one or more cultural setting[s]”. (Gardner & Hatch, 1989)

In his work on “Multiple Intelligences Theory”, Gardner shows how each person in the human family approaches learning in varying degrees of adeptness from seven different directions. He calls these seven access points “intelligences”. Gardener’s 7 “intelligences” align easily with the three nature-states, biological (linguistic, musical, bodily-kinesthetic, spatial), (psychological) logical-mathematical, intrapersonal, and (social) interpersonal.

For the purpose of this study the breakdown of the three domains will follow the

three nature-states model. Participatory Education will be viewed through the lens of each of these domains or states. This model is more versatile for whereas the domains of psychomotor and disposition respectively can include aspects of the bio/psycho nexus or address issues of emotional development neither can cover the broad range of issues that the general studies of biology and psychology are able to cover.

Biology

The domain of psychomotor development is roughly defined as muscular avidity aided by environmental stimuli. It is in practice the physical function of learning under the direction of socio-psychological demands. It is the nexus of body, mind and environment and it is the palette on which the emotional paints are mixed and drawn from in order to develop our social selves. Even though it is the combination of the three nature-states it is heavily weighted in action and physical development and will therefore come under the heading of biology.

Biology, in this case the human body, is the first and most central of the three domains. It is the least alterable of the three states yet the most central to the development of the other two states. If you are born a female you may have the appearance of your gender changed, but there is no genetic treatment where one might turn an XX chromosome in to an XY chromosome. Genetically we are fixed by this initial match-up of chromosomes between the male and female contributor, the biological mother and

father.

Because the bio-state is the least alterable the educator will have the smallest amount of effect on the biological aspects of the child over their respective tenure with the student; however it is in the aspects of biology that some of the most basic educational organizing takes place, in such areas as nutrition and overall health or gender identity which can lead to the psycho-social issue of gender dominance.

Though one facet of our nature state cannot exist without the other, i.e. a body without brainwaves is considered a dead entity whereas brainwaves without a body is reserved for the world of science fiction, it is still important to recognize the fundamental differences between the three states of nature and how they can be addressed in order to plan for a classroom where maximum-potential can be achieved.

Understanding the biology of the human body is crucial to understanding the needs of the student. The effects of proper nutrition on the developing body play a huge role in the motivation of the student and subsequent processing of information. Howard Taras showed in his study how students who did not receive proper nutrition were less likely to do well in their studies. He also showed how these students tended to miss more days and participate less while in the classroom. (Taras, 2005, p. 199)

In the Participatory Education classroom proper nutrition will be promoted through discovery and integrated into an overall program that emphasizes body, mind, and society. The Participatory Education classroom will allow for the consumption of

healthy food during lessons and will encourage students to maintain good practices within and without the classroom. Action shares a central role in Participatory Education and good nutrition is at the heart of an active lifestyle.

By guaranteeing freedom of movement and promoting a healthy diet that produces the most energy the Participatory Education classroom will become a workshop where both knowledge and process will share the same space. Students tend to be most motivated in classrooms where some activity is performed, like chemistry class or metal shop.

Seymour Papert, the progenitor of the Constructionist model of education, proved that learning is most productive when connected to action. "I am convinced that the best learning takes place when the learner takes charge." (Seymour Papert, 1993, p. 25) He felt that education devoid of authentic activities is one of the main causes for poor learning. Papert stated that, "learning is most effective when part of an activity the learner experiences as constructing a meaningful product". (Papert & Haral, 1991, p. 51)

In project-based learning the lessons are taught through activities that compel the students to do something in order to make a connection with the material. It is by personally connecting with the projects that the students are able to make the information relevant to their own lives. When students see the information as relevant they will be more motivated to stay interested and engaged. Students are often asked to remember information, but they are rarely told why; students who form their own answers will do so

because they care about the information and that is something that cannot be taught.

Seymour Papert, a tenured professor at MIT, was a student of Piaget the well-known psychologist who developed a prominent psychological model of his own, similarly titled to Papert's. Papert's theory was that through action students are able to develop energy for motivation that can be applied to any subject.

When students feel they are making something worthwhile they tend to care more about what they are learning and they stay engaged longer. Interest and motivation are both linked to the student's need for work ownership and authentic activities provide an appropriate way for them to make that link.

Papert showed that project-based learning could help improve student motivation. His learning theory proved that students given project-based lessons in an authentic activity tend to acquire information faster and retain that information longer. DeVries described it as, "the dialectic or interactionist process of development and learning through the student's active construction." (DeVries, 2002, p. 32)

Psychology

The psychological domain might be thought of as the middle domain. It allows for much greater adaptation and development than the biological domain, meaning the body in this case. The average human reaches a peak in bodily development around 18 years of age, yet continues to develop the psyche throughout the rest of their lives. One can live

alone and therefore avoid developing socially, but one cannot live in a group without developing in some way psychologically.

Psychological development is one of the pillars of Participatory Education. As the psyche of the student develops so does their view of themselves. When the students' view of themselves improves so does their role in the social setting. The psychological development of the student is absolutely central to Participatory Education. The freeing of the student from fear and the empowering through success is what makes Participatory Education so attractive and successful.

Sebastian Faure once put it this way, "We leave nothing undone to gain their confidence and love; that accomplished, understanding will replace duty; confidence, fear; and affection, severity." (Goldman, 1911, p. 156)

Jean Piaget once cogitated aloud that Seymour Papert was the only student he had ever had that understood his theories. Piaget was a Swiss psychologist who pioneered many developments in the field of developmental psychology. Piaget's theory of Constructivism dealt with the way humans learn and focused on the *accommodation* and *assimilation* of information in the learning process. Piaget spent many years developing his model using group projects to show how cognition through language development is carried out through a series of "constructed packages" similar to the way learning phrases plays such a large part in learning a new language.

Albert Ellis, one of the foremost authorities on Cognitive-Emotive psychology,

showed how language forms the basis of thought in his book *A Guide to Rational Living*. (Ellis, 1975) Warren Shibles, Carl Jung and Carl Rogers worked on similar areas of cognitive psychology. Shibles worked on language development through associations while Jung and Rogers worked with language development through individuation and/or differentiation. (Jung, 1969) (Rogers, 1980) Shibles called his language units “metaphors”; the strings of language related to certain ideas. (Shibles, 1971) This is similar to what Piaget taught as “schemes”, or packages of knowledge that are associated and disassociated to further clarify usage and meaning in common communication. (Piaget, 1977)

Participatory Education bases its model of psychology on the same principles found in these theories and integrates them in to a working strategy where students are free to think aloud. In this space students feel comfortable making mistakes. Unlike the conventional classroom where students are under so much pressure that they are typically ridiculed for making an error in reasoning, in the Participatory Education classroom students are encouraged to take risks under the assumption that error is nature’s guide to correct thinking.

Classroom management often utilizes classroom arrangement to produce strategies for reducing counter-productive behavior. Project-based lessons focus on how to promote advantageous behavior and less on how to control disruptive behavior. This provides a much more pro-active approach and reduces the possibilities for

confrontation. Focusing on negative behavior is counter-productive and distracting for learning. By creating an active environment for the students to work in you create a place where negative criticism is kept at a minimum due to the level of preoccupation with their projects. Participatory Education combines the force of a project-based classroom with the freedom of a co-operatively managed workspace.

Harry Stack Sullivan building on the work of the above mentioned psychologists and many others devised what he termed the “self-system”. In this system he described how the individual when stressed and/or frustrated develops what is called a “parataxic distortion”. This is a distortion of reality based on one’s inability to think clearly or process information due to internal distraction. Sullivan coined the term “interactional” to describe the mental relationships one role-plays in one’s mind. Sullivan spent years experimenting with his ideas in the clinical setting and stressed the importance of reducing frustration in order to make problem solving more attainable. (Sullivan, 1953)

In the Participatory Education classroom frustration will be reduced to a minimum through focus-enhancing exercises and confidence-enhancing routines such as skill set building like resource use, composition, and reflection. The Participatory Education student will not be afraid of making mistakes because they will have learned to trust those around them. As the trust and confidence of the student grows the frustration and hopelessness is decreased. It is in this space that real learning not just memorization can take place.

Sociology

School since the beginning has always been about sharing, the collective job of society and every one of its members. Most often in recorded history the worldwide school model has been based around protecting a given people through the preservation of cultural legacy, but the United States has become sufficiently distinct as a world entity, thus making our intra-diversity of less and less consequence. America is a nation whose intra-diversity is of a much greater complexity than most countries in the world. The U.S. is a repository of eastern hemispheric (read world) culture, the world (read Europe) having extinguished the previous one.

There has been much heated debate in the United States about our education system and how it has fallen short of the goals set by legislators when it comes to providing an adequate education for our students. The Obama administration's approach has been in the form of "turnaround teams" based on the corporate model. The national secretary of education Arne Duncan, was the former CEO of the Chicago Public School system and had worked both with small schools and "turnaround teams".

There is also no shortage of blame when it comes to determining a culprit; some say curriculum, others say funding, and others that it is the fault of the educators and their, depending on who you ask, too traditional or too progressive teaching strategies.

The federal government's No Child Left Behind Act has taken the "quality control" approach to improving learning, using the purse strings to guarantee a "quality" product; they set standards, monitor loosely and then average numbers to determine funding for schools. However this sends the message to educators that they are alone in their responsibility to improve our nation's schools and that somehow the federal government's job is done once the checks have been signed.

Perhaps some would argue that it is not within the federal government's purview to fund the entire education system and that furthermore it couldn't accomplish such an ambitious goal if had to. It is easy to wonder whom this dubious honor would fall to. One can easily see the voters turning more heavily on the state level for funding, county and municipal sources being stretched to the limit, institutes of higher learning sharing in the burden, or the corporate world tightening its belt, however the law heavily protects all of these sources. They form a strained dynamic that keeps most schools in tenuous positions over their existence and development. The one person left to pay this hefty difference is the taxpayer.

The American notion of individualism is often exposed when it comes to issues of funding education and health care, oh the irony. This issue seems to be at an impasse; if there is no one to fund education how will it ever improve, if it never improves how can we develop into a nation that can provide better education? The simple answer is to take money out of our disgustingly bloated defense budget and use it to start rebuilding the

American school system anew.

Since the Cold War we have been warned to “beware the military industrial complex” and this is one glaring reason why. The United States spent more than \$600 billion on its national defense budget in 2009, including additional money to fight the (world) war on terror; that’s more on defense than the rest of the world combined. China ranked a distant 2nd with \$65.5 billion. This phenomenon is a hold over from the Cold War era and has been the thrust behind the national agenda ever since.

If an alien were looking in they might think the United States would prefer to train its citizens to fight a war rather than give them a decent education. The federal government reminds us that in order to maintain our way of life we must make national security the number one priority and put like that it is hard to dispute, but if the modern school wants to see its graduates “do something with their lives”, it has very few options but to teach it to them.

The Participatory Education model espouses an owner-operator class of graduates. It teaches a model of learning that could be easily adapted to fit in to the structure of an owner-operated workplace be it a factory, retail store, or company. The graduate of the Participatory Education model would be an easy hire for any employing the Participatory Economic model.

A short walk down the hall of any one of our nations urban high schools will reveal the level of sociality involved in the learning process, but that sociality is largely

learned outside those four walls. The modern school model must set for itself the goal of becoming the central socializing factor in society. The only way to achieve the goal of becoming the central socializing factor is by preparing the students for a specific kind of work, but in the Participatory Education system they aren't trained for a particular kind of job they are trained for a particular kind of economy.

The project-based Participatory Education learning strategy presents a hopeful remedy for what ails our schools. The problem of lagging interest, poor comprehension, and low motivation must be addressed in our schools; project-based learning creates authentic experiences and these experiences will aid in ameliorating this situation and prepare our students for something after school.

There is also a clear connection between participatory-based learning and social justice; both view learning and education as key factors in helping to create a more just society. By giving the students tools we are preparing them to be active participants not only in their own lives, but in society as well; capable of connecting the informational dots for themselves and with any luck inspiring them for a career.

The modern American school must help its students regain their rights in the classroom, the right to a fair and equal educational experience, the right to be wrong, the right to control the direction of their own studies, the right to be informed of the overall educational plan, the right to question everything, the right to study in an environment where one is not intimidated, and all of the attending responsibilities that come with these

rights.

The modern American school can survive, but it needs to become a major priority in the overall national agenda. Americans must come to terms with the state of their educational system and begin the reform process immediately. By implementing a system like the Participatory Education system the U.S. will be in a place to create viable futures for its citizens with liberty and justice for all.

CHAPTER IV

METHODOLOGY

Sample

This study was conducted at Warrensville Heights High School in Warrensville Heights, Ohio. This area is right outside of the city of Cleveland proper and is home to a predominately African-American community. The total population for this area is 15,109 people, with 6,325 households. The area is roughly 90.4% African-American as of the 2000 census. The high school itself is the only high school in the Warrensville Hts. city school district and is 99.9% African-American, with a roughly 57% to 43% female to male ratio.

The study was conducted in a senior government class, with U.S. government being a required course for graduation. There were five classes with a total of 73 students. One of the five classes was an advanced placement course being conducted for college credit through Kenyon College.

Procedure

The second through the fourth week of class was used to carry out the study. A pre-test and a post-test were given to assess the efficacy of the teaching strategy and familiarity of the subject matter. Working portfolios were developed throughout the study

and were graded based on a rubric, which was given to the students.

The working portfolios not only showcased the work of the students, they were also used as tools after the various resources were collected. The portfolios were then presented along with a ten-minute presentation at the end of the study. The criteria for grading the portfolios were based on quantity of content, quality of content, and variance of content.

Students were given a rubric that was explained along with a class tutorial on how the Participatory Education model operates. They were then introduced to the resources they would need to complete the assignments. They were given a quiz on their ability to use the resources available to them, e.g., computer, reference books, and textbooks.

Each class started and ended with a ten-minute talk led by the instructor. The opening talk generally consisted of questions regarding the previous class and information related to the projects. Some time was typically devoted to a brief discussion of the history being studied within their projects. The after-class talk typically reflected on the work accomplished during the class and suggestions on how to better search for answers. A graphic organizer was distributed to aid in addressing questions that remained.

The classroom arrangement was unique to this study and was loosely based on the workshop model developed by Lucy Calkins (1994). The four corners of the room were dedicated to one area of study, such as geography, history, oral/visual history, and/or sociology. These corners contained tables, chairs, and reference resources assisted the

students in their search for the answers regarding a given project-question. Each corner of the classroom was given to one of four groups. Each group was given its own set of class resources. These would include a computer with Internet for each group, notebooks, pens, magazines, etc.

The class was broken in to four groups. Group sizes were based on the size of the individual class. Each group was given a slightly different assignment, which was then explained to them. This was done to reduce copying between groups and helped to promote group-specific interest. The class maintained a workshop environment i.e. working both at high tables, on their feet, and sitting in groups. This was done to stimulate self-ownership of work and produce motivation and interest among the students. The students' work was evaluated at the end of each week, using a rubric to assess progress in the overall project. They also met with the instructor personally to discuss areas of need and to share personal accomplishments.

At the end of the four weeks the students were asked to present with their groups each of the individual portfolios they had created. The presentations were assessed according to a rubric as well, provided to the students, and both the students and the teachers were given feedback. The students were asked to perform certain skills such as reading a brief from a constitutional court case and/or searching the Internet to locate facts related to the project questions they are given. The project questions were given to challenge the students to produce a chart of information regarding an area of history

related to one of the units they would be studying, such as the Civil Rights Era.

The instructor moved between the groups observing the procedures used by the students and asking questions to help guide students toward more specific information regarding their projects. Each group elected a leader, for that day, which would present their findings in the group discussion at the end of class. The students were asked to formulate questions, which were to be brought up in the end-of-class discussions; reciprocal questioning compelled the students to evaluate and apply the information they were discovering as opposed to merely remembering it.

Pilot Study

The pilot study began with a pre-test devised to test for both previous knowledge and pre-conceived opinions about the effectiveness of group projects. The lessons were given using the textbook of the lead teacher and reflected the current unit the students had already been working on, such as the Enlightenment period for Western history. A small portfolio was constructed using the materials gathered while working on group projects; even though the students worked together, the portfolios were developed individually.

Each class had a ten-minute discussion time at the beginning and end in order to present suggestions for the day's work and to work through problems from the previous day.

Instruments

The pre-tests and post-tests were formulated to test for knowledge that was already taught and should have been retained (see Appendix A). The information was tested again following the end of the project. The results of both tests were compared to show how the students learned in a group setting. The tests also had questions regarding student opinions of the project-based method, which asked students if they felt they learned more under the conventional system versus the Participatory Education system.

The portfolios were graded and returned following the students' presentations. They were graded according to the guidelines of the rubric (see Appendix B). The criteria for the portfolios included, but were not limited to, quality, quantity, accuracy, usefulness, and aesthetics.

The presentations were graded along different criteria, which were outlined in a separate rubric (see Appendix C). The criteria for the presentations included, but were not limited to thoroughness of subject, expertise of subject, creativeness of style, and ease of articulation. A checklist was devised to record student involvement and engagement (see Appendix D).

Data Analysis

The pre-test and post-test were graded and the grades were compared to show the gain or lack of gain made by the students. Quantitative data was assessed using a bar graph to show the range of overall scores (see Appendix E). The portfolios were graded according to the criteria of the rubric (see Appendix B). A checklist was used to show the

level of student engagement and had four criteria: how well students stayed on task, how much work they completed, higher order thinking skills used, and time taken to complete work.

CHAPTER V

DISCUSSION

This study was extremely limited in both the scope of its reach, the diversity of its participants, and the universality of its findings. If it had been conducted while over the course of the year or two with five to ten classes it might have provided the bare minimum needed to perform an accurate study whose findings could be used to prove a point with any sort of certainty.

This study was done in one class with a more or less homogeneous demographic and socio-economic make-up. The class was broken up in to five groups and each group had both academically and socially strong and weak members. The groups differed little between each other. However because each student was in the “advanced placement” section of the course because of their academic prowess they tended to more involved overall compared to the other sections of the class.

The study was done over a couple of weeks and each day we would begin the class with a review of the previous day and a discussion over ideas acquired from the preceding lessons. These discussions were typically very lively and well participated in. They were also very helpful as “bell-work” for setting the tone for the class and aiding in the focus of

attention on the task at hand.

The students had access to various resources and these resources allowed them to get up and move around the space. They were allowed to both sit and stand to work. The movement around the classroom provided the feel of a workshop and because of this students tended to focus more on their work feeling that they had a job to perform where others were dependent on them. The discussions within the groups were also very lively with the search for answers providing the motivating energy for progress.

Conventional government classes rarely provide the option for an action-based curriculum however it is possible to create exercises that allow for motion. The reality of the constraints on this study did not lend the opportunity for huge amounts of physical interaction, but with more time there is great potential for action-based projects. One might consider doing a mock legislature to teach about the law making process or a mock election to explain voting; another idea might involve an exercise in the legal system where some students act as Supreme Court justices and other students write briefs concerning a legal issue currently in the court system. There are so many possibilities for action-based learning within the government classroom and with the necessary time to carry out these activities it is possible to create lessons that can have a lasting impact on the education of our students.

CHAPTER VI

SUMMARY

It was such a joy to work with the Warrensville Heights graduating class of 2009. I had fears when I first entered the classroom that I might not be able to relate to the students in such a way needed to provide the necessary motivation for such a radically different style of learning, how wrong I was. They not only participated whole heartily, but took an active part in helping me to develop my teaching plan and overall direction of activity.

The students at Warrensville Hts. High School come from largely lower middle class to lower class economic situations. They are 100% African-American and have similar interests within the school in terms of music, sports, and popular culture. I come from an upper middle class economic situation, I am European-American and my interests in terms of music, sports, and popular culture vary greatly from those of the students in my class. I do enjoy hip-hop, sports, and watching movies of all kinds so I knew we wouldn't be at a total loss for common ground, but what I found was something that goes well beyond the shallow levels of names, lyrics, or titles. What I found was a mutual need to be respected, loved, and cared about.

Through our mutual endeavor to teach and to learn we came to many simultaneous conclusions. One of the more profound conclusions that we arrived at was that when someone deeply cares about your opinion you are naturally motivated to try harder. We learned together that focus can be contagious, that many minds make light work, and that “work is what happens when you stop having fun.” (Campbell, 1991, p. 83)

I worked hard to present the model for Participatory Education through my planning and execution of lesson plans. I wanted to show my students a form of “integral education” that did not make a distinction between those “cut out” for academics and those “cut out” for manual labor. James Guillaume wrote in 1876 that “the education of children must be integrated; that is, it must at the same time develop both the physical and mental faculties and make the child into a whole man.” (Dolgoff, 1972, p. 373)

Participatory Education puts an end to the idea of learning only through words. It stops the notion of trivia as education, the incessant filling of the brain with disjointed facts. Participatory Education starts the process of creating whole students; those who can both understand and integrate complex ideas and perform a useful skill. This is the education that our students need and this what Participatory Education can provide. As Pestalozzi put it, “the first rule is to teach always by THINGS rather than by WORDS.” (Monroe, 1907, p. 12)

CHAPTER VII

REVIEW OF THE LITERATURE

Annotated Bibliography #1

A) Gultekin, Mehmet (2005). The effect of *project based* learning on learning outcomes in the 5th grade *social studies* course in primary education. *Educational Sciences: Theory & Practice*, 5 (2) 548-556.

B) This article was found in a peer-reviewed education journal. It is both a qualitative and quantitative study done in Turkey in a 5th grade classroom, showing the effects of *project-based* learning derived from *Constructivist* learning principles. The study addressed the outcome of the students work through the use of pre-and-post testing and informal review.

C) Project-based learning is built on the notion of learning-through-action, Gultekin (2005) suggests structuring project-based learning on Constructionist learning principles, which are based on Piaget's Constructivist learning theory. Piaget's theory expressed how humans construct mental models while learning; the Constructionist model is based on doing in the classroom. Papert showed how students who do learning through projects acquire information more readily, retain it longer, and are more motivated to learn (Gultekin, 2005). Gultekin (2005) echoed the need for teachers to continually create

relevant solutions to planning and classroom management.

Gultekin conducted a study on a sample group of 40 ten and eleven year old students. The students were placed in to two groups one an experimental group and the other a control group, each comprised of 20 students. The compilation of data included an achievement test, a “semi-structured” interview. The material for the study was prepared according to the Project-Based Learning Approach. The students were given group projects where they were asked to do things like “identify different ways that Turkey has helped to protect the environment and give examples and explanations as to why this is important for the country”. Using a two sided t-test the study showed a difference of .05% and greater in improvement, however the study focused more on the qualitative results concerning the empirical evidence of improved performance and increased interest.

His study found that project-based learning, “improves academic success, makes learning enjoyable, meaningful and permanent, and develops essential and important skills in students” (Gultekin, p. 6). The study was both qualitative and quantitative, addressing the outcomes of the students’ work through pre-and-post testing and informal interview. The results showed that there was a substantial increase in the progress of both the control and experimental groups.

Based on Constructivist theories of education this study attempted to evaluate the effects of project-based learning in a 5th grade classroom in Turkey. In 2004 and 2005 the

Turkish government enacted a series of policy changes that aimed at transforming the Turkish school system with the intent of improving overall test scores.

The areas of learning where the project-based pilot study took place were, social studies, science and technology, life sciences, mathematics, and Turkish language. The overall goal of the study was to develop methods that would be implemented in the following school year.

Constructivist principles under Piaget were premised around mental constructs and the notion of actively constructing thoughts and models about our world.

Constructivist theory was later adapted by Seymour Papert and others to take in to account the effect that action had on developing these mental constructs. The author took these principles in to consideration when arranging the details of the study and organized the structure around the concept of activity-based student decision-making.

These two questions guided the study:

- 1) Is there a difference between the academic achievements of experimental group students (in which the project-based learning approach was used) and control group students (in which the conventional teaching approach was used)?
- 2) What are the opinions of the students and teachers regarding the project-based learning approach?

The methods of the study were as follows: Quantitatively the study used the “*pre-test post-test control group*” design. Qualitatively the study used informal interview to learn the

opinions of the students regarding the project-based learning style and the effectiveness of their teachers.

This study was done in a 5th grade classroom, 40 students were involved and they were broken down in to two evenly numbered groups, experimental and control. The students were broken up in to two groups with placement based on grades in the class prior to the study, their gender, and their scores from an achievement test. The idea was to create a diverse arrangement with similar make-ups for each group.

The compilation of data included an achievement test, a “semi-structured” interview, and “instructional material prepared in accordance with the Project-Based Learning Approach”. The test covered topics related to problems with the environment and natural disasters in Turkey. It was developed from a unit entitled “Our Beautiful Homeland Turkey”. The informal interview consisted of five questions worded to illicit a response regarding the students’ feelings about the learning style. The instructional materials included 1) a power-point presentation with the fundamental facts from the chapter related to the achievement test, and 2) a second power-point presentation regarding the elemental structure of the project-based learning approach.

The experiment was carried out over a three-week period. An 11 stage project-based learning model developed by Moursund (1996) and revised by Erdem (2002) was used.

The 11 points for grading were as follows:

“(1) Identifying the objectives, (2) identifying and defining the task to perform or

the problem to deal with, (3) identifying the characteristics of the conclusion report and the format of presentation, (4) identifying the evaluation criteria, (5) forming the teams, (6) identifying sub/minor questions, (7) planning the information gathering process, (8) forming the time-frame, (9) identifying checkpoints, (10) gathering, organizing and reporting the information, and (11) presenting the results and the conclusion.” (Erdem, 2002, p. 174)

The study’s findings were in line with earlier studies that showed that project-based learning improves student interest and motivation Balki-Girgin (2003). The findings also supported research done that showed how project-based learning actually improves students’ research skills. This study also mentions a study done by Meyer (1997) that showed that “students get responsibility for designing a project by using higher level thinking skill and learning strategies”.

D) I see this article as another wonderful example of how alternative teaching styles are making a showing on the international education scene. It once again reaffirms the possibilities that the project-based teaching style holds for our future students. I would love to see this plan, a variation of this plan, or at the very least a teacher who understands how to implement these strategies in every classroom on planet earth.

E) The lessons on democratic education are endless here. Students’ rights are central to cracking the nut of maximum potential education.

Annotated Bibliography #2

A) Tangdhanakanond, Kamonwan, Pitiyanuwat, Somwung, Archwamety, Teara (2006).

Assessment of achievement and personal qualities under constructionist learning environment. *Education*, 126 (3) 495-503.

B) This article is from a peer-reviewed journal. It is both a qualitative and quantitative study that seeks to measure the effects of Constructionism in the classroom.

C) Tangdhanakanond Pitiyanuwat and Archwamety (2005) studied a Bangkok middle school classroom. They agreed with the need to keep strict adherence to Constructionist principles, which stress project-based learning. They implemented a project-based only curriculum in their classroom and used portfolios to assess the overall progress of the students and gave three criteria: academic outcomes, non-academic outcomes, and progress comparison.

“The analysis of student academic outcomes (math and Thai language) and non-academic outcomes (the four quotients) at three different points in time was performed using the one-way repeated measure ANOVA.” (p. 7) The four quotients, which are described in greater detail below, were a group of inventories devised for measuring specific aspects of student behavior, involvement, and improvement. In the academic outcomes the results showed progressive shifts forward ($p < .05$) between time periods 1-2 and 2-3 in every outcome. Tangdhanakanond et al (2005) showed conclusive evidence that student learning improved when working in groups.

The need to promote a form of education that encourages students to actively

participate in creating and governing their own learning experience is clear, when students feel that they are in control of the direction of their learning they are more willing to participate.

The literature suggests that students learn better in groups and when they are allowed to participate in the decision making process. This study will use these two categories as the framework to organize both the pilot study and the actual study.

These two questions will guide the study: 1) Does project-based learning promote improved information acquisition; and 2) Does student involvement in the decision making process improve motivation and interest?

The authors of this study are investigating the success and failures of project-based learning in an urban school in Bangkok, Thailand. This study focuses on group-based learning as understood in Constructionism. Constructionism as defined by Seymour Papert, the father of Constructionism, is learning based on an active process of creating cognitive associations and theories about the world around us. The learning in the Darunsikkhalai School in Bangkok is therefore project-based.

Twenty-three students participated in this study. They assembled portfolios, which were assessed three times during a nine-week period. The results looked at both academic (mathematics and Thai) and non-academic (emotional development, adversity handling, technology usage, and moral development). It was found that academic gain was higher than non-academic gain. "The average effect size of gain for mathematics and

Thai combined in the 1-2 period was 0.77, and that in the 2-3 period was 1.14. The average effect size of gain for the four desirable characteristics in the 1-2 period was 0.44, and that in the 2-3 period was 0.92.” (2006)

Background is given to propose the former preeminence of behavioral psychology and its subsequent decline giving way to “cognitivist” and “socio-cognitivist” theories of learning. The background was helpful for providing context for the Constructionist model.

The study attempted to reach the following objectives:

- (1) To use portfolios to assess the Darunsikkhalai School students' academic (mathematics and Thai) outcomes.
- (2) To use portfolios to assess the students' non-academic (emotional development, adversity handling, technology usage, and moral development) outcomes.
- (3) To compare the students' academic and non-academic progress.

The school was the only school in Thailand to be completely project-based at the time of publishing. The government of Thailand has mandated student-centered education for the public school system and research shows that many in the Thai educational system prefer Constructionism as a way of complying with that mandate.

Portfolios were chosen as the way to assess students' work. This style of

assessment was chosen in lieu of other more conventional models of assessment, such as paper tests or oral exams, which test only a cross section of the students' knowledge and proficiency in a subject. Portfolios allow the students to show their work over a wide range of proficiencies.

The instruments used to evaluate and assess performance consisted of three rubrics. 1. Mathematical skills, 2. Thai language skills, and the 3. The Four quotients—These were the schools conception of positive qualities to be emulated in Thai culture: 1. Emotional quotient (EQ), Adversity quotient (AQ), Technology quotient (TQ), and Moral quotient (MQ).

A three-rater system was devised to rate the students' portfolios. It was organized on a student, peer, educator platform. The students assessments would be weighted with the teacher having the greatest input at 40%, the student weighed in at 32%, and the peer a noteworthy 28%, these values were determined by the students in brain-storming sessions held prior to the lessons.

The procedure for the portfolio assembly followed an 8 step process: 1) plan the portfolio, 2) collect created products, 3) "selecting satisfactory products", 4) evaluate products, 5) revise products, 6) integrate knowledge acquired from products, 7) evaluate portfolio, 8) present portfolio.

D) This article presents another glowing report of the positive potential of Constructionist based action learning. It is only one school and one small study considering the effects of

this relatively obscure theory of learning, but it is an honest and erstwhile venture in to alternative forms of education. This study shows the advantages of an adaptive style of learning; the possibilities are endless.

E) This program in Bangkok, Thailand is geared toward developing a system of education for the Thai people that will allow all students to perform at their optimum level of performance. The connection between students and content knowledge is implicitly woven in to the Constructionist concept. This study taught the Thai language and emotional development based on social norms. This article is an inspiring work of research, how three Thai teachers are able to further develop a model for education, is a reason to carry on and continue to modify these brilliant strategies. There is no doubt that I will be integrating the information here in to my overall plan to organize the classroom. With this and other articles like it I can build a solid philosophical foundation for modifying the traditional social studies classroom in to a completely new and different form.

Annotated Bibliography #3

A) Branch, Robert Maribe, Grant, Michael M. (2005). Project-based learning in a middle school: tracing abilities through the artifacts of learning. *Journal of Research on Technology in Education*, 38 (no1), 65-98.

B) This is a peer-reviewed journal. It is both a qualitative and quantitative look at project-based learning that produces computer-mediated learning artifacts. It is

specifically concerned with the individual differences and abilities of its participants.

C) Branch and Grant (2005), develop their research around the students' need to be involved in the decision-making process of any project-based plan. The authors assert that learning is a choice and that one must willingly decide to learn, this means that students must be included in the decision making process and that they must have a say concerning the direction of their own education.

The case study was intentionally assembled using five students randomly chosen out of 61 eighth grade geography students. The information was gathered using artifacts, observations, interviews, and report inventories. The *learning artifacts* were assessed on three separate criteria, system knowledge, domain knowledge, and metacognitive knowledge.

The study then takes an in depth look at the background of this type of study and shows how supporters of *individual differences* note aptitudes, skills, and preferences as innate to learners. The authors assert that learning is a choice and that one must willingly decide to learn, that he or she must be capable of learning, that the environment must engender learning, and that the instruction must be effective for the individual learner.

The authors attempt to cover some of the early research on this subject and show how the traditional form for measuring these somewhat disparate attributes was through separation into their relative categories. They then show how more recent studies have tended to view the student as a whole in order to show the learner as a more complete

picture. They contend that this shift in focus has contributed to the transition of education toward a more child-centered style of learning.

They then go on to show how project-based learning has presented itself as one of the more promising models for achieving these purposes. They maintain that project-based learning returns the ownership of learning to the student and allows them to be more that partially in control of their own learning.

They then go on to examine the various advantages of computer-assisted learning and discuss the many studies that have been done on the subject such as, authentic experience (Blumenfeld et al., 1991) and the reduction of cognitive workload via the use of cognitive tools and scaffolding (Oliver and Hannafin, 2000).

A thorough investigation is made in to the early history of project-based and experiential learning. The authors of this study review the Lave study (1990) and explain how it showed that learning is “contextualized for individuals”. They show how learners develop meaning through experiences with their environment.

The article also considers the results of Grant’s (2002) study, which attempted to create an exhaustive list of elements involved in project-based learning. The list included: 1) an introduction, 2) definition of *the learning* task, 3) procedure for investigation, 4) suggested resources, 5) scaffolding mechanisms, 6) collaborations, and 7) reflections and transfer activities.

The projects chosen for this study were based around geographical inquiries. The

students were asked to perform WebQuests related to a ten week study on human rights and human rights abuses around the world. The unit was broken down in to four parts. Section one was about understanding the physical geographies of the areas being studied. Section two was about defining human and civil rights. Section three required that the students write a research essay about one of the countries being studied. Section four had the students prepare a mock museum exhibit for a human rights exhibition.

The students participated in a pre-test that showed strengths in Gardner's multiple intelligences. These results were given a mean value and the students progress was plotted using a chart that compared pre-test scores, during-test scores and after test-scores. The students were interviewed throughout the study and "a semi-structured interview protocol was used with all five participants to allow variation in the order and phrasing of the questions".

The findings are admittedly specific to this one study and urge the reader not to generalize the findings beyond the scope of this study, however that said, the study did show overall improvement in the development of multiple intelligences.

D) This study is extremely limited in its scope and breadth and the intimacy of the observers to the observed renders the results almost irrelevant outside of the context of this study. Incidentally the students seemed to prefer a more active style of learning and I feel that it was this action that contributed to their success.

E) This study has a somewhat homogenous grouping with only one non-white

participant, however it does seek to uncover violations of human rights abuses and therefore adequately addresses issues of inequity as noted in the MUST outcomes. This type of study helps put the control of education back in to the hands of the student and therefore opens the possibilities for culturally relevant study.

Annotated Bibliography #4

A) Brown, Christine (2007). Learning Through Multimedia Construction--A Complex Strategy. *Journal of Educational Multimedia and Hypermedia*, 16(2) 93-124.

B) This article comes from a peer-reviewed journal and takes a qualitative look at authentic learning based on multimedia construction.

C) This article begins with a thorough description of how multimedia construction can be used to produce projects of an authentic nature. Rooted in Constructivist theory the author insists on the need for authentic experiences in order to let the students perform real life tasks; these tasks prepare the students for the real world and help them make the connection between the information and the action. Authentically based activities tend to put the ownership of learning back in to the hands of the student, engendering an intrinsic motivation for doing good work.

Brown (2007) emphasized the need to make action the central mode for the classroom. Brown (2007) writes about the need “to shift the curricula” of the classroom away from content-only information to a more problem based or “task-based” style of learning. Brown (2007) conducted a study to show the relationship between

task-engagement and project-based learning. She took 22 elementary students from a “gifted and talented” program and gave them computer-based activities to perform. Brown (2007) found as task-engagement increased the level of the students work increased. Electronic portfolios were chosen as the prime medium for constructing artifacts in the group arrangement. They were given the task of creating a video project using Hypercard software on Apple computers. The emphasis was on selection of material for presentation rather than on programming ability. The study took place over a 27-week period.

The method for collecting data was done in various ways. The qualitative data was collected through interviews, class notes and journals, and the students’ portfolios. The portfolio served as an ongoing repository for the students’ work. The author also found that prior experience with computer design made a difference in the students’ rate of acquisition and application.

Her study showed that students who were given the responsibility of completing their own projects were more likely to use higher order thinking skills and perform better. In addition students took greater control of their own projects, were more self-driven, and were more open to reflection. Brown’s study also found that “self-regulation was promoted by allowing students to make free and open choices about a range of different learning tasks” (p. 3).

This article begins with an examination of the study, why they chose this topic and how

they went about executing the process by which they would assess the students.

This study chose to use information and communication technology (ICT) to aid in the endeavor of designing project-based authentic-task learning. As for teaching the idea behind this study was to shift the “curricula” of the classroom away from content-only to a more problem based or “task-based” style of learning, Oliver (2000).

Electronic portfolios were chosen as the prime medium for constructing electronic artifacts in the group arrangement. The use of higher order thinking skills in compiling, analyzing, and applying information through electronic media sources causes the students to create more complex associations and by proxy of doing, more memorable ones as well.

The author mentions the Nix/Spiro study (1990) and their discussion on dignity in regards to working with computers. The study suggests that working with computers encourages students to pay more attention to “process and feeling, and to be unpredictable in a creative way.”

Nix & Spiro offered this comment regarding the use of the computer for synergizing group work:

The computer was a means for bringing together what the students were doing, and of presenting what they were doing in a manner that could be interacted with, enjoyed, and discussed by others. The computer was a means for enabling a focus on how to express the ideas being developed with each project. (Nix, 1990, p. 160)

The method for collecting data was done in various ways. The qualitative data was

collected through interviews, class notes and journals, and through student portfolios. The portfolios served as an ongoing repository for the students' work. The author also found that prior experience with computer design made a difference in the students' rate of acquisition and application.

The study showed that "self-regulation was promoted by allowing students to make free and open choices about a range of different learning tasks." The intention of this study was to see students take control of their own projects, be self-driven, sharing their ideas, and open to reflection.

The article goes on to note that team building was essential to this study. It discusses how groups made up of various skill sets will inevitably affect overall group output. The author also makes clear that the students must be told that a task is about team building and that their output should reflect that.

Brown goes on to say that students should strive to be experts in their projects and that their input should be trusted and considered along side of the teachers. She claims that this will foster interest and encourage greater participation. The author discourages team competition, and notes that it causes cross-goal orientation that will ultimately slow progress and discourage the effort of some.

Interestingly enough the author suggests that this style of project is good for both students and teachers and anyone who wants to build the skills to become a life long learner. The skills, she says, don't have to be "sophisticated" they simply need to have a

cursory comprehension of “metacognitive aspects of production”, i.e. be willing to consider your work.

Overall the author feels that when the students engage in an activity that is “personally meaningful [...] they exhibit high levels of motivation and task engagement”.

The students had to be flexible due to the nature of the evolving technology. The article advocated for students who see challenges not as “isolated and inert parcels of knowledge”, but rather as opportunities to acquire new information and skills.

D) This article was somewhat helpful for further research on project-based student directed learning. It was somewhat limited in scope and lacked the hard data that quantitative research produces. I will use this for related studies done on project-based learning, but found this one of only relative use.

E) This article touches on issues of self-motivated learning and poses a model that would be useful across gender, race, and socioeconomic status. Self-regulated work allows for culturally relevant outcomes and the potential for cultural expression. Self-regulated and self-owned work is the basis for democratic education.

Annotated Bibliography #5

A) Massey, Dixie D., Heafner, Tina L. (2004). Promoting reading comprehension in social studies. *Journal of Adolescent & Adult Literacy*, 48 (no1), 26-40.

B) This is a peer-reviewed journal. This article is both a qualitative and quantitative study of reading strategies for the middle and secondary social studies classroom. It includes 6

reading strategies and the methods employed by the teachers that used them.

C) This study opens with a discussion on the responsibility of teaching reading. It maintains that all teachers in middle and secondary school range should be reading teachers. It then goes on to describe the 6 strategies in the Scaffolded Reading Experience (SRE) developed by Graves et al and based on Vygotsky's and later Rogoff's concepts of assisted learning.

The article discusses the possibility of a national reading crisis, where students are not able to decode and therefore comprehend what they read. They discuss the phenomenon of reading fluency without comprehension. Essentially the article is saying that the typical teacher is not being taught how to teach reading and therefore is not prepared for the task of teaching reading through content knowledge.

Examples of how to use the Scaffolded Reading Experience are mentioned in the article, such as having the students read the bold type and chapter headings before starting the main body of the text. This would be done to facilitate concept acquisition before being expected to decode a large body of words.

The strategies are broken up in to pre-reading, during reading, and post reading. They take time to mention that this method can be used cross-genre with primary sources, artifacts, texts, and multi-media resources. The second point of interest is a reminder to view this method as geared toward those who struggle to read.

They assert that doing reading homework using the social studies text will allow

for an exceptional learning opportunity. The students are given various writing models to peruse; they are exposed to multiple styles and approaches to explain information.

The pre-reading focuses on two areas of concern, connecting students to the background surrounding the text chosen and connecting the reading with something one already knows.

*Pre-reading--Reading Strategy 1: Establishes the need for reading.

*Reading Strategy 2: Allows for inspection of a priori knowledge.

In the first Strategy one might inform the students that they are reading to discover the causes that led to the American Revolution. In the second strategy one might have the students recall stories they've heard relating to the American Revolution.

*During Reading--Reading Strategy 3: Is meant to aid in the arrangement of texts.

Teaching about text arrangement starts with teaching about external features of the text, such as indices, appendices, glossaries, maps and more.

One might ask students to read a work with an opposing view on the causes and consequences of the American Revolution. In this study Massey and Heafner used a graphic organizer to show the flow of causes to effects.

For building student independence the authors like the Jones, Pierce, and Hunter's (1988-1989) method, which consists of a five-step process for teaching students how to make outlines. 1. Skim, 2. Write predicted outline, 3. Read the passage, 4. Revise their outlines or organizers, 5. Use outlines to create oral summary.

*Reading Strategy 4: Making connections between the texts.

Once again the authors stress the need to expose students to a multitude of sources both primary, concrete, allegorical, abstract, and fiction.

*Post-reading—Reading Strategy 5: Monitoring comprehension.

The chosen mode for this strategy is *reciprocal questioning*, where students formulate their own questions as opposed to being asked questions. When students are asked questions the authors assert that they are simply relating information they already know instead of being motivated to formulate their own thoughts on the subject.

*Reading Strategy 6: Synthesizing information across texts.

The students are asked to choose among a variety of texts pieces that they'd like to have read. These personal contributions will inspire the students to make a personal association with this information.

D) I feel that this article makes a salient effort at bridging the text divide that separates our student from that information. Ultimately they could go farther along this line of thinking if they included project-based action research. The action of doing and implication of experiencing will make me owner of that concept.

E) This method for teaching reading in any classroom is attentive to the needs of all levels of learners from all stations of the socio-economic compass. With reciprocal questioning the students will be able to draw from their own experiences and add them to the cultural tapestry represented in the classroom. If I feel that the students are making connections

between their own experiences and the information I will be inclined to continue trying the same strategy. Democracy is based on personal ownership, one body one vote. These strategies give back to the student ownership over their own learning.

BIBLIOGRAPHY

Books:

- Albert, Michael, Cagan, Leslie, Chomsky, Noam, Hahnel, Robin, King, Mel, Sargent, Lydia, & Sklar, Holly (1986). *Liberating Theory*. Boston: South End Press.
- Albert, Michael (2003). *PARECON: Life After Capitalism*. London: Verso.
- Anderson, J. R., Reder, L. M., & Simon, H. (1998). *Radical constructivism and cognitive psychology*. D. Ravitch (Ed.) *Brookings papers on education policy 1998*. Washington, DC: Brookings Institute Press.
- Avrich, Paul (1980). *The Modern School Movement: Anarchism and Education in the United States*. New Jersey: Princeton.
- Balki-Girgin, A. (2003). *Proje temelli öğrenme yönteminin Özel Konya Esentepe İköretim Okulu uygulanmasna yönelik bir deęlendirme*. Yaymlanmam yüksek lisans tezi. Konya: Selçuk Üniversitesi Sosyal Bilimler Enstitüsü.
- Blomley, Nicholas (2004). *Unsettling the City: Urban Land and the Politics of Property*. New York: Routledge.
- Bonwell, C., & Eison, J. (1991). *Active Learning: Creating Excitement in the Classroom*. AEHE-ERIC Higher Education Report No.1. Washington, D.C.: Jossey-Bass.
- Bourne, Alec W. (1921). *Synopsis of Midwifery*. London: John Wright.
- Bransford, J., Brown, A. L., & Cocking, R. R. (2000). *How People Learn: Brain, Mind,*

- Experience, and School*. New York: University Press.
- Calkins, Lucy McCormick. (1994). *The Art of Teaching Writing*. Portsmouth: Heinemann.
- Campbell, Joseph (1991). *Reflections on the Art of Living: A Joseph Campbell Companion*. Diane K. Osbon (Ed.), New York: HarperCollins.
- Clark, R., Nguyen, F., & Sweller, J. (2006). *Efficiency in Learning: Evidence-Based Guidelines to Manage Cognitive Load*. San Francisco: Pfeiffer.
- Coser, Lewis A. (1977). *Masters of Sociological Thought: Ideas in Historical and Social Context*. Fort Worth: Harcourt Brace Jovanovich, Inc.
- Dewey, John (1961). *Democracy and Education: An Introduction to the Philosophy of Education*. New York: MacMillan.
- Dolgoff, Sam (Ed.) (1972). *Bakunin on Anarchy*. New York: Knopf.
- Dolgoff, Sam (1974). *The Anarchist Collectives*. New York: Free Life Editions.
- Ellis, Albert, Harper, Robert A., & Powers, Melvin (1975). *A Guide to Rational Living*. Chatsworth. London: Wilshire Book Co.
- Evans, F. Barton (1996). *Harry Stack Sullivan: Interpersonal Theory and Psychotherapy*. London: Routledge.
- Evertson, Carolyn M., & Weinstein, Carol Simon (Eds.). (2006). *Handbook of Classroom Management: Research, Practice, And Contemporary Issues*. Lawrence Erlbaum and Assoc.
- Ferrer, Francisco (1911). *The Origin and Ideals of the Modern School*. London: Watts &

CO.

Gagné, R. (1966), *Varieties of learning and the concept of discovery: A critical appraisal*.

Shulman, L. S. & Keislar, E. R. (Eds) *Learning by discovery: A critical appraisal*.

Chicago: Rand McNally and Co.

Gibson, Richard (1994). *The Promethean Literacy: Paulo Freire's Pedagogy of Reading,*

Praxis and Liberation. Copyrighted Dissertation, The Pennsylvania State

University.

Goldman, Emma (1909). *Francisco Ferrer and the Modern School*. London: LR.

Goldman, Emma (1911). *Anarchism and Other Essays*. New York & London: Mother

Earth Publishing Association.

Goldratt, Eliyahu M. (1984). *The Goal*. Great Barrington: North River Press.

Gross, Michael S. (1986). *Montessori's Concept of Personality*. New York: Univ. Press of

America.

Holt, John (1981). *Teach Your Own: A Hopeful Path to Education*. Cambridge: Persius.

Jung, Carl G. (1969). *Archetypes and the Collective Unconscious*. Princeton: Princeton

University Press.

Kafai, Yasmin (1995). *Minds in Play*. Hillsdale: Lawrence Erlbaum Associates.

Kearney, Richard (2001). *The God Who May Be: A Hermeneutics of Religion*. Indianapolis:

Indiana University Press.

- Kneller, George F. (1971). *Introduction to the Philosophy of Education*. New York: John Wiley and Sons.
- Lave, J. (1990). *The culture of acquisition and the practice of learning*. In J.W Stigler, R.A. Shweder & G. Herdt (Eds.), *Cultural psychology: Essays on comparative human development*. Cambridge: Cambridge University Press.
- Loewen, James, W. (1995). *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong*. New York: Touchstone.
- McEntee, Grace Hall, Appleby, Jon, Dowd, JoAnne, Grant, Jan, Hole, Simon, & Silva, Peggy (2003). *At the Heart of Teaching: A Guide to Reflective Practice*. New York: Teachers College Press.
- Monroe, Will S. (1907). *History of the Pestalozzian Movement in the United States*. Syracuse: Bardeen.
- Montessori, Maria (1948). *To Educate the Human Potential*. Adjar: Kalakshetra Publishers.
- Moursund, David (1996). *Project-Based Learning: Using Information Technology*. Eugene: ISTE.
- Nix, Don, & Spiro, Rand (Eds.) (1990). *Cognition, Education, and Multimedia: Exploring Ideas in High Technology*. Hillsdale: Lawrence Erlbaum Associates.
- Okoye, Felix, N. (1971). *The American Image of Africa: Myth and Reality*. Buffalo: Black

Academy Press.

Orem, R. C. (1971). *Montessori Today*. New York: Capricorn Books.

Piaget, J. (1975). *The Origin of the Idea of Chance in Children*. London: Routledge and Kegan Paul.

Piaget, J. (1977). *The Grasp of Consciousness*. London: Routledge and Kegan Paul.

Rogers, Carl (1939). *Clinical Treatment of the Problem Child*. Boston: Houghton Mifflin.

Rogers, Carl (1969). *Freedom to Learn: A View of What Education Might Become*.

Columbus: Charles Merrill.

Rogers, Carl (1980). *A Way of Being*. Boston: Houghton Mifflin.

Rogoff, Barbara (1990). *Apprenticeship in Thinking: Cognitive Development in Social Thinking*. New York: Oxford University Press.

Rousseau, Jean-Jacques (1979). *Emile or On Education*. New York: Basic Books.

Shibles, Warren (1971). *Metaphor: An Annotated Bibliography and History*. Munich: Language Press.

Sullivan, Harry Stack (1953). *The Interpersonal Theory of Psychiatry*. New York: Norton.

Vygotsky, L.S. (1997). *Educational Psychology*, Boca Raton: CRC Press.

Ward, Florence E. (1913). *The Montessori Method and the American School*. New York: The Macmillan Co.

Articles:

- Atkinson, R. K., Derry, S. J., Renkl, A., & Wortham, D. W. (2000). Learning from examples: Instructional principles from the worked examples research. *Review of Educational Research, 70*, 181–214.
- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palinscar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist, 26*(3 & 4), 369-398.
- Branch, Robert Maribe, & Grant, Michael M. (2005). Project-based learning in a middle school: tracing abilities through the artifacts of learning. *Journal of Research on Technology in Education, 38*(1), 65-98.
- Brown, Christine (2007). Learning Through Multimedia Construction--A Complex Strategy. *Journal of Educational Multimedia and Hypermedia, 16*(2) 93-124.
- Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review, 31*(1): 21–32.
- DeVries, Rheta (2002). Developing constructivist early childhood curriculum: practical principles and activities, 28-37.
- Erdem, M. (2002). Project based learning. *Hacettepe University Education Faculty Journal, 22*, 172-179.
- Graves, Michael F., & Fournier, David N. E. (2002) Scaffolding Adolescents' Comprehension of Short Stories. *Journal of Adolescent & Adult Literacy, 46*.

- Gardner, H., & Hatch, T. (1989). Multiple intelligences go to school: Educational implications of the theory of multiple intelligences. *Educational Researcher*, 18(8), 4-9.
- Gerjets, P., Scheiter, K., & Catrambone, R. (2004). Designing instructional examples to reduce intrinsic cognitive load: molar versus modular presentation of solution procedures. *Instructional Science*, 32(1) 33-58
- Goldman, Emma (1909). Francisco Ferrer. *Mother Earth*, 4, 275-77.
- Grant, M. M. (2002). Getting a grip on project-based learning: Theory, cases and recommendations. *Meridian: A Middle School Computer Technologies Journal*, 5(Winter).
- Greer, Jane (1964). Letting Our Students' Voices "Out at Last". *Pedagogy*, 4(2), 331-336.
- Gultekin, Mehmet (2005). The effect of project based learning on learning outcomes in the 5th grade social studies course in primary education. *Educational Sciences: Theory & Practice*, 5(2) 548-556.
- Harel, Idit (2002). "Learning new-media literacy: a new necessity for the young clickerati generation". *Telemedium*, 48(1) 17-26.
- Harel, Idit, & Papert, Seymour (1991). "Software design as a learning environment", *Constructionism*, 51-52.
- Holt, John (1977). *Growing Without Schooling, A Record of Grassroots Movements*, 1,

16-23.

Jones, B., Pierce, J., & Hunter, B. (1988/1989). Teaching students to construct graphic representations. *Educational Leadership*, 46(4), 20-25.

Kalyuga, S., Ayres, P., Chandler, P., & Sweller, J. (2003). "The Expertise Reversal Effect". *Educational Psychologist*, 38(1), 23-31.

Kirschner, P. A., Sweller, J., & Clark, R. E. (2006) Why minimal guidance during instruction does not work: an analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41(2), 75-86.

Massey, Dixie D., & Heafner, Tina L. (2004). Promoting reading comprehension in social studies. *Journal of Adolescent & Adult Literacy*, 48(1), 26-40.

Mayer, R. (2004). "Should there be a three-strikes rule against pure discovery learning? The case for guided methods of instruction". *American Psychologist*, 59(1), 14-19.

McManus, Dean A. (2001). The Two Paradigms of Education and the Peer Review of Teaching School of Oceanography and Center for Instructional Development and Research. *NAGT Journal of Geoscience Education*, 49(6), 423-434.

Meyer, D. K., Turner, J. C., & Spencer, C. A. (1997). Challenge in a mathematics classroom: Students' motivation and strategies in project based learning. *The Elementary School Journal*, 97, 501-521.

Navarro, Juan Gabriel Cegarra, & Moya, Beatriz Rodrigo (2005). Business Performance

- Management and Unlearning Process. *Knowledge and Process Management*, 12(3), 161-170.
- Oliver, K., & Hannafin, M. J. (2000). Student management of Web-based hypermedia resources during open-ended problem solving. *Journal of Educational Research*, 94(2), 75-92.
- Sanchez, Ralfe (2004). Peter McLaren, Che Guevara, Paulo Freire and the Pedagogy of Revolution. *Journal of Educational Change*, 2(2), 83-96.
- Schmidt, George N. (2008). From "Small Schools" to "Turnaround Teams": The Corporate Takeover Rushes Forward in Chicago. *Substance*, 74(2), 287-293.
- Skjærvø, Prods Oktor (1999), "Avestan Quotations in Old Persian: Literary sources of the Old Persian Inscriptions". *Irano-Judaica*, 4, 1-64.
- Sweller, J. (1988). "Cognitive load during problem solving: Effects on learning". *Cognitive Science*, 12(1), 257-285.
- Sweller, J., & Cooper, G. A. (1985). "The use of worked examples as a substitute for problem solving in learning algebra". *Cognition and Instruction*, 2(1), 59-89.
- Tangdhanakanond, Kamonwan, Pitiyanuwat, Somwung, & Archwamety, Teara (2006). Assessment of achievement and personal qualities under constructionist learning environment. *Education*, 126(3), 495-503.
- Taras, Howard (2005). Nutrition and student performance at school. *Journal of School*

Health, 75(6), 199-213.

Tarmizi, R.A. & Sweller, J. (1988). Guidance during mathematical problem solving.

Journal of Educational Psychology, 80(4) 424-436.

Verny, Thomas R., & Weintraub, Pamela (2005). The Womb - Your Child's First

School: How to provide a prenatal environment that nurtures your growing baby,

Mothering, 132(Sept.-Oct.).

Lectures:

Hilbert, T. S., & Renkl, A. (2007). Learning how to Learn by Concept Mapping: A

Worked-Example Effect. *Oral presentation at the 12th Biennial Conference EARLI*

2007 in Budapest, Hungary.

APPENDIX

APPENDIX A

Name: _____

Date: _____

Quiz A/B

Short Answer

1. What is Federalism?
2. Why is federalism important for maintaining order in a government?
3. What does the term delegated power mean and can you name one of the three types of delegated powers?
4. What is a grants-in-aid program? Can you name one example?
5. What does the 10th Amendment talk about?
6. Which clause is called the Elastic Clause?
7. Name one “expressed power” of the National Government.
8. What is an “act of admission”?
9. What does the “Full Faith and Credit Clause” have to do with?
10. What does extradition mean?

APPENDIX A (cont.)

Name:

Date:

1. What do you think project-based learning is?
2. Do you like to work in groups?
3. What is your favorite class, i.e. art, English, math, workshop etc.
4. Do you have a favorite area of the world that you like to study?
5. Do you speak more than one language?
6. How well do you know the area we are about to study?
7. Can you name three cities from the region we will study in this lesson?
8. What religion are the people in this part of the world?
9. What language do they speak?
10. What is the name of the money in the country we are about to study?

APPENDIX B

Section	1st Check	2nd Check	Final	
<u>Content</u> At least three artifacts in each section Artifacts correctly reflect section title Overall arrangement of portfolio	10.0 5.0 5.0	Total : 20		
<u>Organization</u> Dividers created and clearly marked Sections alphabetized Overall neatness	10.0 5.0 5.0	Total : 20		
<u>Practicality of content</u> Usefulness Relation to project question Overall agreement of materials	10.0 5.0 5.0	Total : 20		
<u>Use of resources</u> Correct use of maps Diversity of sources Cited all sources	5.0 5.0 10.0	Total : 20		

<u>Creativity</u>		Total		
Overall concept	10.0	: 20		
Use of images	5.0			
Original design	5.0			
Total Score	100.0			

APPENDIX C

Section	1st Check	2nd Check	Final	
<u>Content</u> Content Mastery Identify area of the world studied Explain one section of the portfolio	10.0 5.0 5.0	Total : 20		
<u>Communication</u> Articulation of concepts Eye contact Usage of terms from portfolio	10.0 5.0 5.0	Total : 20		
<u>Preparation</u> Overall readiness Two paragraph outline to refer to Questions answered	10.0 5.0 5.0	Total : 20		
<u>Use of resources</u> Correct use of maps Diversity of sources Cited all sources	5.0 5.0 10.0	Total : 20		

<u>Creativity</u>		Total : 20		
Overall concept	10.0			
Presentation	5.0			
Original idea	5.0			
Total Score	100.0			

APPENDIX D

Catagory	1 2 3 4 5
<u>Focused on task</u>	
<u>Participates in activity</u>	
<u>Works with group</u>	
<u>Enjoys activity</u>	
<u>Level of engagemment</u>	

APPENDIX E

