

Assessing and Studying Global Region Maps in 10th Grade World Geography

The new world of lightening fast access and technology has changed the current generation's perception of the value and use of geography. Hundreds of years ago, maps were some of the only windows into far away lands; maps also provided direction and security. Today's world of GPS technology seems to shadow printed maps' relevance or importance in the eyes of most current students. Maps exciting sense of discovery, lost to the generation with a globe fully labeled by satellite image; all geographic mysteries seemingly solved. This opinion, stated my students, leads way to poor performance on map assessments in my 10th grade world geography class. In an attempt to refurbish the students understanding of maps and improve test scores, research was made to learn effective map instruction and practice methods. Taking this research and what I knew about my individual students, I began to create an action research project to address the low map quiz scores.

In order to begin such a project, I had to first outline an agenda and a control with a default sample to gauge test results on. Pulling from research, I decided to tamper with the formating and introduction style of instruction. Typically, students are assesed about maps once a week. They are given blank outline maps of the region they will be studying currently in class. Students are asked to label the map with the locations listed in a word bank attached to the blank map. Some time is given in class to do this, however, the majority of the map labeling is required to take place outside of class time. When the students complete the map, it then provides them with a study guide and practice before the official map assessment. By the end of the week, each 10th grade world geography student would take the same quiz, the same day, with the same amount of time. These maps were created by the same individual and used successfully by other classes the last 8 years. Week by week I would slowly adjust random variables in an attempt to single out positive or negative actions in my map instruction and assessment. To create a control, each student would receive the same map assessment at the same time,

and have the same amount of time to complete it. I also needed to provide a default sample assessment to gauge other test scores with. This default would be the first map quiz given to the students.

The default map was handed out to students, and covered the USA and Canada major physical and political features. Students were given 10-20 minutes to work on the map in class using their class assigned textbook atlas maps. At the end of this timeframe, students were then told to please complete the rest of their map at home for homework. The class would not spend any time in the future reviewing the maps. A study of 12 students, all of the children in my 1st period, shows the majority of the class struggled, even with the USA/Canada region most familiar to them. I began to question their ability/willingness to complete labeling the maps for homework, and decided to see if completing the maps in class would boost quiz scores.

The 1st map assessment given with different instruction techniques belonged to the region of Latin America. For this assessment, I extend the amount of time to complete labeling the maps using the textbook atlas with the help of partners and teacher during class time to 30-40minutes. A study of 12 students in my 1st period shows this extra time labeling did not seem to effect their scores too greatly. I thought back to our time labeling maps in class. I distinctly remember (and found in my reflection of the day) that students had a hard time using the textbook atlas due to the way the company had bound the book, thus cutting the maps information from the students in strange locations. From this, I drew the conclusion that simply having the time to label maps in class was not enough because students were still having trouble finding locations to even label.

The 2nd map assessment given with different instruction techniques belonged to the region of Europe. I looked back closer to my research and noted discussion concerning generation shifts in belief and ability (_____). With this in mind, I wanted to study the differences in students working with the physically cut and printed maps verses maps on a digital source. For this Europe unit, I asked students to only use their smart phone or the smartboard to locate and label their maps. Most students

used google maps on their smartphones, while 3 or 4 students used google maps and a magic pen to zoom in and out, or the keyboard to physically search locations on the smartboard. A study of 12 students in my 1st period shows that this too did not seem to have an effect on the students ability/willingness to receive higher scores on their map quizzes. I then wondered if they simply were not used to studying or labeling maps, and needed much more scaffolding and relevance.

For the 3rd and final map assessment in this project, I decided to incorporate the map labeling activity into my lecture on the physical geography of the Russia and Central Asia. Every slide had visuals of the country's political boundaries and all students were given time to find and label on their own map. Physical features of the region were accompanied by different physical maps and photos of each feature for visual learners. A study of 12 students in my first period class shows that this approach seemed to work the best as test scores went up much higher than any other technique I had implemented before.

DATA RESULTS – student test scores on different map assessments

Student	DEFAULT MAP	More time in class using textbook	More time in class using digital source	More time in class incorporated in direct instruction
Student #1	25	42	45	80
Student #2	65	53	70	80
Student #3	65	82	70	85
Student #4	76	82	70	75
Student #5	85	74	65	90
Student #6	65	70	70	90
Student #7	76	70	85	70
Student #8	95	90	95	100
Student #9	85	70	45	80
Student #10	85	63	50	90
Student #11	30	45	25	55
Student #12	45	63	50	85

The data collected throughout this project were the different variables changed for study, and the student's test results for each assessment. Overall, the data reflects more scaffolding, time, and visuals students get, the better they perform on map assessments in this world geography class. Issues with my instruction and introduction of maps arose by sending students home to study with no scaffolding or visuals at all. Granted, some students are still failing the map quizzes in the class, however, they are also failing the class. This may lead to the conclusion that perhaps the students do not study the maps at home, and in general, do not pay attention or participate in class. That set of students would, unfortunately, require an entire different project.

This graduate action research project was an amazing contribution and addition to my student teaching experience. It truly let me learn and practice action research in a classroom environment. Before student teaching we were asked to design this project based on our own interest in the classroom we would be working with. Originally, I researched teaching with artifacts in a social studies classroom for visual learners. As I became involved in my class, however, I realized there were reoccurring majority fail map assessment results. In an attempt to save the students' grades, but also try to save their impression of maps (bad grades and hard assessments were making the students dislike maps) I would research "instructing and assessing maps in social studies. The research I found provided me with some awesome starting points and ideas to put to use in the classroom. I created a scaffolded agenda and calendar using my own experience with those students and my research to begin the implementation in March 2013. I took each step quiz by quiz, week by week, attempting to either highlight or eliminate variables of confusion/poor instruction. This process of implementation and search will provide useful for other action research I will perform as an educator. I will always incorporate new ways and content of my subject; action research provides a logical, stable, scientifically organized process of doing that as well as perfecting my curriculum and instruction.

