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| **RESEARCH PAPER TEMPLATE** |
| **North American University**  **Education Department**  **M.Ed. in EDLE & CUIN**  **EDUC 5312: CURRICULUM AND INSTRUCTIONAL DESIGN** |
| **Name:\_\_\_\_Ayse Ardahanli\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_ 2/28/2016\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **Instructional Project 3**  **Directions:**  This is a research assignment. Use your textbook, web articles, and NAU library to conduct research when writing this paper.  Use APA style references and in-text- citations. You need to use at least 3 different resources besides Castronova (2002), and Moore (2015). |
| **Part 1. DISCOVERY LEARNING:**  **Download and read the following article:**   * **Castronova, J. A. (2002). Discovery learning for the 21st century: What is it and how does it compare to traditional learning in effectiveness in the 21st century. Action Research Exchange, 1(1), 1-12. Retrived from** [**http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.594.6363&rep=rep1&type=pdf**](http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.594.6363&rep=rep1&type=pdf) * **After reading this article and conducting additional research, answer to the following questions.** |
| **What is discovery learning?**  According to Balim “Discovery learning is a method that encourages students to arrive at a conclusion based upon their own activities and observations (2009)”. These activities, exclusively science activities, raise the students’ curiosity and help to explore their qualification. The students can also learn to remove some error by involving these activities (Balim, 2009). Castronova states in his paper about discovery learning are “student driven” method rather than teacher driven (2002). So, students take an active role their learning way instead of passively accepting information from the teacher (Castronava, 2002). |
| **How does this form of teaching compare to traditional, teacher-centered instruction?**  Firstly, discovery learning is more active than traditional learning method. Then, process is based on the discovery learning. But, content is based on learning in the traditional instruction. Failure and feedback has a big importance in discovery learning rather than teacher-centered instruction. Finally, there is a deeper understanding in discovery learning than other one (Castronava, 2002). |
| **What educational theories support the discovery learning model?**  John Dewey, Jean Piaget, and Lev Vygotsky theories all support to form the discovery learning method. According to Dewey, kids’ motivation comes naturally if they are active participant in their learning (1916/1997).  As the prominent philosopher Piaget agree with Dewey, he cites an important theory is that the best understanding is coming from discovery. Also, he said that “children were not “empty vessels” to be filled with knowledge, but active builders of knowledge (Piaget, 1954, 1973)”.  The third theory is belonging to Lev Vygotsky. He emphasized that kids can solve difficult problems with any assistant such as teacher, peer or parent. Also, discovery learning consolidates the kids’ cognitive development ( Vygotsky, Rice & Wilson, 1999) |
| **What is the most important thing you discovered about discovery learning?**  In his article, Balim cited a study that happened with 7th grade 57 students to identify the students’ perception of inquiry learning skills, academic achievement, and retention of knowledge. There were two groups that are experimental and control group. After a subject taught them, a pre-test was given to both group and 30 days later one more test (post-test) was given to them. According to the results, it can be easily said that there was a noticeable difference between the experimental group (using discovery learning method) and the control group (using traditional method) about learning success. (Balim, 2009) The most important thing about discovery learning is permanent knowledge that are easier to learn and to remember as much as. |
| **How can you apply this method to your future classroom?**  Fraction museum idea:  When I searched on YouTube, I found this video that had an example about discovery learning in 3rd grade students. In the video, the teacher was teaching fraction by using some colorful Lego. Firstly, he showed two little examples how it will be done and how it will be represented on the flash card. Then, he checked the students and guided them. After all finished to build different Lego fraction, he gives them a paper to write some notes when they visit their friends’ studies in the Fraction Museum. All kids looked actively participating and enjoying. |
| **Part 2. ADDITIONAL CHAPTERS**   * **Select one of the following chapters to conduct research: Chapter 2, 3, 5 or 12. Review the chapter and respond to related questions for that chapter by conducting your own research.** |
| **Chapter 2- Teaching Diverse Students**  **1. Teaching all students.** Remember that a teacher’s job is to teach all students and assume an attitude that all students can learn. Research techniques and strategies that can be used to accomplish this task. Sources of information include the library, the Internet, current journals, and recent books.  In old times, expectation from teachers was only teaching a subject every student in a same way by using traditional method. And they were not held responsible about any student failure. But, today many teachers are encouraged to accept the new teaching methods for all students can learn and accomplish. The most important goal of a teacher is know each of students with her/his special needs, learning style, cultural background and interests for dynamic instruction (Lanier, 1997).  There are some students with learning disabilities (LD), some gifted and talented (G-T) and some non-English-speaking students in our classes. As a teacher, we should start to do an effective preassessment test to get information to determine which students have enough background knowledge about subject. So, we can design our instructional planning according to the students’ need (Moore, 2014).  We can use RTI (Response to Intervention) method to support LD students. It means that we eliminate some barriers between instruction and students to achieve by working closely with specialists. For non-English speaking student (ESL), we should pullout them around 30min a day for attend special class to make more activities to more English proficiency (Moore, 2014).  **2. Intelligence profile.** Evaluate your own intelligence profile according to Gardner. In what frames of mind (intelligence areas) do you come out strongest?  According to Garner’s Eight Areas of Intelligence, my strongest learning profile looks like logical-mathematical. I usually enjoy solving a problem and my memorizing is better if any content is classification. I prefer number games rather than discussion or word games. |
| **Chapter 3- Managing Classroom Environment**    **1. Discipline approaches.** Analyze the three approaches to classroom management. Which approach, if any, do you prefer? Can you put together parts of the different approaches and come up with an eclectic approach that you think would work for you? Can you identify some basic concepts that appear to be true of all three approaches?  **2.   Causes of misbehavior.** Think back over the classes you have attended in which there have been disciplinary incidents. List the possible causes for any such misbehavior. How might knowledge of the causes of these incidents influence a teacher’s actions? Some behavior problems are teacher created and some are student centered. Can you think of examples? |
| **Chapter 5- Using Classroom Technology**  **1.** How does technology enhance the teacher’s ability to plan instruction? Use one of the available search engines to explore the web for technological tools such as lesson planning software, worksheets and puzzle tools, poster and bulletin board production tools, and time management tools that will assist you in planning. Share your findings with your class.    **2.** Technology offers tools that can help students learn. To what technology should students have access? Do you have any educational concerns about the use of these technologies in schools? If so, what are they? If not, why not? |
| **Chapter 12-**  **Teaching Effective Thinking Strategies**  **1. Teaching methods.** What teaching methods and procedures can be used to improve students’ critical thinking abilities? Creative thinking abilities?  **2.  Thinking.** What type of thinking is emphasized in most schools? Is critical thinking rewarded? Creative thinking? Is school success based on students’ ability to think critically? Creatively?  **3.  The environment.** What type of classroom environment would be conducive to developing critical thinking? Creative thinking? What problems can you foresee in establishing this environment? |
| **Part 3. REFERENCES:**   * **Cite at least 5 References in APA.** * **You need to use at least 3 different resources besides Castronova (2002), and Moore (2015).** * **You may use**  [**http://www.citationmachine.net/apa/cite-a-journal**](http://www.citationmachine.net/apa/cite-a-journal) **for citing your sources in APA style.** |
| **References:**  Balim, A. a. (2009). The Effects of Discovery Learning on Students' Success and Inquiry Learning Skills. *Eurasian Journal Of Educational Research (EJER)*, (35), 1-20.  Castronova, J. A. (2002). Discovery learning for the 21st century: What is it and how does it compare to traditional learning in effectiveness in the 21st century. Action Research Exchange, 1(1), 1-12. Retrived from ttp://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.594.6363&rep=rep1&type=pdf    Dewey, J. (1997). *Democracy and education*. New York: Simon and Schuster. (Original work published 1916)  Fraction Lesson: Teach your class fractions with Math Man. (2010, June 14). Retrieved February 27, 2016, from https://www.youtube.com/watch?v=lizNJthlpr8  Lanier, J. T. (1997, July 01). *Redefining the Role of the Teacher: It's a Multifaceted Profession.* Retrieved February 28, 2016, from http://www.edutopia.org/redefining-role-teacher  Moore, K. D. (2014). *Effective instructional strategies: From theory to practice.* London: SAGE.  Piaget, J. (1954). *Construction of reality in the child*. New York: Basic Books.    Piaget, J. (1973). *To understand is to invent*. New York: Grossman.  Rice, M. L. & Wilson, E. K. (1999). Says 1998 in text on pg. 19/20 How technology aid Constructivism in the social studies classroom. *Social Studies*. 90(1), 28-33. |