

Learning Theories to Teach First Grade Students Counting Coins

Amal alshehri

Dr. Matthew Berland

UTSA

IST5003

October 25, 2012

Learning Theories to Teach First Grade Students Counting Coins

Applying constructionism, and learning for use (LFU) theories as well as games may help to teach first grade students to count coins. Teaching first grade students about money and the process of counting coins is an effective way of presenting important mathematical lessons because children find money is so important. Moreover, teaching students how to count coins will offer skills which are extremely important in the real world outside of school. In addition, for first grade students counting coins might be a critical, practical skill. This paper discusses how to apply different theories to teach first grade students how to count coins effectively.

Teachers can apply constructionism theory to help first grade students learn to count coins. The concept of this theory in classroom is to help students learn by doing (Papert and Harel, 1991). Teachers can engage student in different activities that make them learn by making. For example, it will be helpful if the teachers ask the students to make the day's date in coins every day by using different tools until they become able to count coins well (K. 2009). Students have skills and ideas, which have not wholly materialized even though they have the potential of developing especially through the constructionism models of interaction with their counterparts. Constructionism further recognizes the importance of social influences on the intellectual development. Constructionists assert that knowledge constructed knowledge co-created by students interaction with each other within a specific social community (Jha, 2012). Every student has an opinion, knowledge, and experience from his or her background, which influences their way of to count coins

Teachers may facilitate first grade students to learn count coins by adding and conducting money transactions which is a good approach of keeping the learning active and fun. Teachers may engage student in group activities to create and design coin worksheets and create fake coins so they can identify each coin mount, name size and color. Also engage the

student to play Store in cooperative groups (K. 2009). In this activity students will communicate, advice and teach each other. These kinds of activities and drills make it easier for the children to understand the meaning and the worth of coins. As such, children should have the opportunity of learning counting through observations, conversations, and group activities. Additionally, students learn more by experiencing and exercising in long term (Harel, 1991). Constructivism learning allows children to make their own choices concerning the activities of learning how to count as it allows for their active participation during the counting process. The students try out different methods and materials until they achieve the most wanted result.

In addition, digital games would be an effective way to help students learn and understand the concept of coins. Teachers can use games to support learning and motivate student to learn. According to Squire (2005) “games create intrinsic motivation through fantasy, control, challenge, curiosity, and competition.” Money games assist children in becoming comfortable with managing money and let them learn to work and think as professionals (Salmani Nodoushan, 2009) In order for the children to master the technique of counting coins, they will understand the worth of every coin and have the capability of adding the values together. (Wenglinsky, 1998) found that students in classes which used games to teach mathematics made high scores on tests. Moreover, because children are totally social with games they would interact with each other to find ways to solve problem (GEE as cited in Sheffield, 2005).

Playing digital educational games will help children to review the counting concept and the value of coins. In addition, educational math games, including counting coins, would assist first grade students practice in a fun and rewarding way. It helps make learning to count coins fun with games, flash cards, worksheets, and activities. It also takes the frustration out

of practicing counting for students and makes it a fun and meaningful experience. According to Shaffer (2004) “games engage students in doing things that matter in the world”.

Teachers may use the Learning For Use model which according to Edelson (2001) characterizes as a three-step process motivation, knowledge construction, and knowledge refinement. Money is an ideal instrument for teaching since many children consider money interesting. Teachers can apply learning for use model by engaging and motivating students in some activities that encourage them to explore, explain, build new knowledge, connect knowledge and discuss their thinking about the value of coins.

Students will investigate the importance of counting coins by using them in real life. For example, they will explore coins used in everyday life through field trip to a store or school store which is a hands-on learning tool for students where they can learn about cost and profit and exchange real money and learn about the use of coins (School Store: An Operating Manual, n.d.). . In this activity teacher may increase students’ curiosity by asking questions about the concepts of using coins also answering their questions . When children understand how to count money, they can provide the accurate coins when purchasing items at a store. They can also identify whichever money pile is more worthy and count the money saved towards purchasing anything students will organize, communicate, reflect, observe and trade.

Finally, applying constructionism, games and learning for use (LFU) might assist first grade students in learning to count coins. There are similarities and differences between the three perspectives. In these concepts the responsibility of the teachers is to assist and facilitate students in whatever they do. However, in LFU teachers may provide an explanation to help students use coins well. Teachers give students the opportunities of exploring problems, attempting solutions, building on the fresh knowledge of making adjustments and growing

fresh solutions, result in the children becoming involved fully with the counting of coins by applying the three effective theories.

References

- Brandon Sheffield. (2005). WHAT GAMES HAVE TO TEACH US: AN INTERVIEW WITH JAMES PAUL GEE. *Game Developer*, 12(10), 9.
- Edelson, D. C. (2001). Learning-for-use: A framework for the design of technology-supported inquiry activities. *Journal of Research in Science Teaching*, 38(3), 355-385.
- School Store: An Operating Manual. (n.d.). *fbla-pbl.org*. Retrieved October 27, 2012, from <http://www.fbla-pbl.org/docs/elearning/docs/2012/1010/Sch>
- Harel, I. (1991). Children designers: Interdisciplinary constructions for learning and knowing mathematics in a computer-rich school. Norwood, NJ: Ablex Publishing.
- Harel, I. And Papert, S. (1991) “Situating Constructionism” in Constructionism. Norwood, NJ: Ablex Publishing
- Jha, A. K. (2012). Epistemological and pedagogical concerns of constructionism: Relating to the educational practices. *Creative Education*, 3(2), 171-178.
- K , A. (2009) Counting Coins (long). *The ProTeacher Collection* . Retrieved October 27, 2012, from <http://www.proteacher.org/org/a/56361>
- Salmani Nodoushan, M. A. (2009). The Shaffer–Gee perspective: Can epistemic games serve education? *Teaching and Teacher Education*, 25(6), 897-901.
- Squire, K. (2005). Changing the game: What happens when video games enter the classroom? *Innovate: Journal of Online Education*, 1(6).

Shaffer, D.W. (2004) Pedagogical praxis: The professions as models for post-industrial education *Teachers College Record*, 106 (7), 1401–1421.

Sheffield, B. (2005). What games have to teach us: An interview with James Paul Gee. *Game Developer*, 12(10), 9-12+.

Wenglinsky, H. (1998). Does it compute? The relationship between educational technology and student achievement in mathematics. Princeton, NJ: Educational Testing Service.