When Every Hand is a Winner: Developing Critical Thinking with a Card Game

Deborah Davis
Velery Fasano
Jennifer Starling
Texas A&M University-Central Texas

Abstract

Increasing student's critical thinking is the focus of many current education discussions. Experts in reading agree that the keys to building critical thinking include: engagement, novelty, cooperative learning, and discussion. Wiggins and McTighe (2005) insist that deep learning and critical thinking can be developed by using questions based on six facets of understanding: explain, interpret, apply, see from various points of view, empathize with various participants, and thinking metacognitively about each subject or element of study. This article describes how these ideas were turned into a card game to not only motivate students to participate but to engage students in critical thinking.

Increasing the ability of students to think critically is at the forefront of discussions in education. In fact, a simple search of the Reading Teacher journal archives using the term "critical thinking" reveals sixteen articles from 2013 and forty-two from 2012. It is not just the authors from The Reading Teacher who are thinking about critical thinking, but the test makers, policy makers, teachers and parents also seem to be engaged in the conversations regarding critical thinking (Bloom, 2013; Obama, 2009; Texas Education Agency, 2012). The Texas Education Agency (TEA) demonstrated their commitment to critical thinking when they stated, "Even at the initial phase-in level, the STAAR passing standards require students to demonstrate more in-depth knowledge, critical thinking, and application skills than did the Texas Assessment of Knowledge and Skills (TAKS)" (TEA, 2012, para. 3). The California Superintendent of Instruction, Tom Torlakson, revealed that like Texas, California was also moving into a focus on developing critical thought, "like the new standards, state testing will focus on critical thinking and problem-solving skills" (Calvert, 2013, p. 2). The American Federation of Teachers President, Randi Weingarten, proves this is a national focus in her statement "the common core is about problem-solving, critical thinking and teamwork" (Bloom, 2013, p. 2). Even President Obama refers to the need for increasing critical thinking in the education of all students (Obama, 2009).

Critical thinking is not a new idea or topic of conversation for teachers. Teachers recognize the value of critical thinking in the process of educating children. This recognition is demonstrated in their efforts to take their students beyond the boundaries of teaching-to-the-test and just teaching what is in the book (Wiggins & McTighe,

2005). Unfortunately, critical thinking is hard to teach (Ennis, 1993). One method of teaching critical thinking is through the process of infusion. The infusion of critical thinking instruction in subject-matter requires the teacher to incorporate critical thinking through explicit teaching, modeling and scaffolding (Ennis, 1989) However, for teachers who have yet to metacognitively assess their own critical thinking skills, making this type of thinking explicit is difficult.

Motivation is certainly one of the most important factors in developing learning and increasing critical thinking abilities (Ennis, 1996; Williams & Williams, 2011). Games create an opportunity for students to become motivated because games, by nature, lead to some form of increase in knowledge (Garris, Ahkers & Driskell, 2002; Gee, 2003; Prensky, 2006). It is that increase in knowledge that produces an intrinsic appeal to the activity or situation. This appeal can result in repeated engagement, persistence, and focus (Jensen, 2005).

There are many ways to engage students, with novelty, emotional involvement, and cooperative learning being among the top characteristics found in the most engaging strategies and learning experiences. In addition, teachers should employ more cooperative learning, active learning, talking and collaborating (Zemelman, Daniels, & Hyde, 2005). However, these ideas of collaboration, engagement, and discussion are wonderful but cannot be expected to happen in a way that maximizes student learning unless the teacher intentionally sets up the discussion environment.

Wiggins and McTighe (2005) point out that the intentionality to create an environment in which students make relevant, deep connections to learning must enable the student to focus on a concept from many points of view. They must be able to explain, interpret, apply, see from various points of view, empathize with various participants, and think metacognitively about each subject or element of study. Teachers understand the need to provide these kinds of learning experiences in their classroom. The problem is that in today's test driven, over planned, sometimes scripted school day, the teachers are not sure how to effectively and efficiently provide opportunities to promote critical thinking.

Purpose of Study

Research has shown that helping students to thinking critically in today's classroom is difficult for a multitude of reasons. Thus, the purpose of this study is to examine how a new card game can help teachers provide this type of learning.

Developing the Card Game

Picking the Words on the Card

The words on the cards were selected specifically to provide a framework for defining understanding as a multi-faceted process so the student would begin to know the process of understanding is more than just memorizing to pass a test. The words for the game are intentionally selected to teach on many levels associated with the new

Bloom's Taxonomy as well as the qualifications for Wiggins and McTighe's Six Facets of Understanding (2005) as demonstrated in Table 1 located at the end of the article.

Because the words are selected in a way to provide students with a learning experience that looks at information from a variety of difficulty levels as well as a variety of viewpoints, students are guided into a process for developing critical thinking. As the students discuss from the varied viewpoints, their knowledge base is deepened as well as widened with the addition and refinement of information thus scaffolding critical thinking.

Creating the Discussion Guide Card

The development of critical thought can be easily achieved through a discussion guide set within a simple card game. Using the card game as a motivator, as well as the structure for the discussion, students will talk about the text topic using the discussion words from their winning hands. If the student is able to discuss the topic using the word, he/she gets to keep the winning points. The words printed on the deck of cards serve as the guide for discussion (Table 2*).*

Although these words appear to be very high-level, students at any age may be led into an understanding of what the words mean and how to use them. Students will experience a greater success rate if the words are pre-taught as well as modeled. The cognitive skill necessary to use these words to guide discussion also needs to be pre-taught and modeled. These words may be used to discuss any topic or text. The possibilities are limitless.

Playing the Card Game

The game was used to help the graduate students prepare for their final exam. The class of 24 students split into groups of four to six. Each group was provided with a deck of pre-made cards, an exam study guide, containing study topics from class, and a guide to explain the words. The guide to explain the words was provided because there was not enough time to pre-teach the words. Students were then instructed to play any card game with the stipulation that at the end of each hand the winner would select the topic from the study guide and a word from the winning hand for the group discussion. After class, two of the students came forward with a desire to relay their experiences and collaborate on the composition of an article.

Velery's Experience

Within the college study group, Go Fish was the chosen, and whoever won each hand was to pick a subject from the study guide to discuss. This was a very engaging cooperative activity that promoted problem solving skills, and created a comfortable environment to teach and learn. As the group discussed, all participants were teaching each other, while learning from each other, as well. It was exciting to see who was going to win the hand by obtaining a pair of cards and what they were going to pick from the guide as our discussion topic. It boosted all of the participant's critical thinking about the concepts on the study guide and helped everyone feel like prepared for the test.

It also created a powerful and engaging learning atmosphere.

Jennifer's Experience

This group had fun playing the card game. It was easy to learn while being engaged in the game and discussion. While holding the cards, one could look through the words accessing prior knowledge to determine personal understanding of the topic. When it was time to talk about the information, participation in the group discussions was easier. The opportunity to discuss the information in an engaging way provided an exciting learning experience that inspired writing on this activity.

Based on these retelling of these experiences with the game, it is clear that the card game provided an engaging opportunity to participate in an active cooperative learning experience. Moreover, this game provided the venue for each to expand their critical thinking skills through engagement, discussion, cooperation and focused attention to recall related to a discussion guide. It is evident that the card game has the potential to promote learning in a way that educationally and emotionally impacts the student. Apart from the student experience, it is important to keep in mind that this deck of cards is designed to produce a change in what students perceive it means to understand.

Conclusion

There are several expectations of the card game. First, as students are given the opportunity to repeat the game, they will begin to tailor their personal learning to enable them to discuss the topic or information using the words found on the card discussion guide. Second, once this thinking process becomes internalized, students will abandon surface memorization and adopt a more thorough understanding of information which is necessary for critical thought. Third, the type of thinking developed through the use of the discussion cards embodies the principles and processes for critical thinking and creates the opportunity for these principles and processes to become habit.

This is certainly an exciting time to be a student. With the focus on critical thought and the information and tools available to guide and motivate students, there is no reason for the classroom to be anything other than exciting, engaging and educational. By engaging students, using a variety of words to guide discussion and focusing on the many facets of understanding, this card game has the possibility to become a powerful and indispensable tool in the educator's toolbox.

Table 1

Alignment of Words

Six facets of Understanding	Bloom's Taxonomy	Card game Words		
Explanation	Remember/ Understand	Explain	Articulate	
Application	Application	Apply	Use	
Interpretation	Analysis	Analyze	Interpret	
Empathy		Consider	Empathize	
Perspective	Evaluate	Experience	Associate	Perceive
Self-knowledge		Self-Illuminate	Self-Explicate	

Table 2
Card Discussion Guide

Card Value	Word on Card	Explanation of the Word Adapted from Wiggins and McTighe (2005)
Ace	Explain	Tell all you know about the topic. Give examples, make connections to other ideas, and prove your knowledge.
King	Interpret	Show or tell the importance of the learned information. Make sense of it. Show the meaning by telling a story.
Queen	Apply	Demonstrate how the information may be used. Tell how it is used in real life or why it is important in real life.
Jack	Empathize	Tell how this information would affect someone else or how someone else might look at it.
10	Associate	Make connections to other knowledge or situations.
9	Consider	Think how this information can/might affect you personally. What can you do or avoid by having this knowledge?
8	Self-Illuminate	What do you think you understand and how do you know you understand it? Talk about what you are unsure of.
7	Experience	Think about your involvement with this information and describe your experience with the information and the learning process.
6	Articulate	Explain all you know about the information. Give examples, make connections to other ideas, and prove your knowledge.
5	Analyze	Determine the different elements in the information and tell how they fit together. Verbally take the information or idea apart.
4	Use	Demonstrate how this information may be used. Tell how it is used in real life or why it is important in real life.
3	Perceive	Think how this information can/might affect you personally. What can you do or avoid by having this knowledge?
2	Self-Explicate	Explain what you think you understand and how you know you understand it. Talk about what you are unsure of.

References

Bloom, M. (2013). AFT President Randi Weingarten's New and Improved Definition of the Common Core. Retrieved from http://stateimpact.npr.org/ohio/2013/05/14/aft-president-randi-weingartens-new-and-improved-definition-of-the-common-core/

Calvert, K. (2013). *New state exams will test critical thinking, problem solving*. Retrieved from http://www.kpbs.org/news/2013/jan/08/new-state-exams-will-test-critical-thinking-proble/ Facione, P.A., (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. Millbrea, CA: The California Academic Press

Ennis, R. H. (1989). Critical thinking and subject specificity:clarification and needed research. *Educational Researcher, 18*(3), 4-10. Retrieved from http://www.jstor.org/stable/1174885

Ennis, R. H. (1993). Critical thinking assessment. *Theory into Practice, 32*(3), 179-186. Retrieved from http://www.jstor.org/stable/1476699

Ennis, R. H. (1996) Critical thinking. Upper Saddle River, NJ: Prentice-Hall.

Garris, R., Ahkers, R. and Driskell, J. (2002). Games, motivation and learning: a research and practice model. Simulation and Gaming, 33(4): 441-467.

Gee, J. P. (2003). What videogames have to teach us about learning and literacy. New York: Palgrave Macmillan.

Jensen, E. (2005). *Teaching with the brain in mind*. Alexandra, VA: ASCD.

Obama, B. (2009). Presidential Address to Congress. Retrieved from http://www.whitehouse.gov/the-press-office/fact-sheet-expanding-promise-education-america

Prensky, M. (2006). *Don't bother me mom, I'm learning*. St. Paul, MN. Paragon House

Texas Education Association (TEA, 2012). *Initial STARR results released*. Retrieved from http://www.tea.state.tx.us/news_release.aspx?id=2147507166

Wiggins, G. & McTighe, J. (2005). *Understanding by design*. Upper Saddle River, NJ: Pearson.

Williams, K. C., & Williams, C. C. (2011). Five ingredients for improving student motivation. *Research in Higher Education Journal, 12*(August), 1-23. Retrieved from http://www.aabri.com/manuscripts/11834.

Zemelman, S., Daniels, H. & Hyde, A. (2005). *Best practice: Today's standards for teaching and learning in America schools.* Portsmouth, NH: Heinemann.