

Talking Drawings as a University Classroom Assessment Technique

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Abstract

Increased focus on assessment of student learning, within college classrooms, has lead many professors to routinely employ classroom assessment techniques as a means to make adjustments in teaching during the instructional process. This article describes a technique, Talking Drawings, which was developed by a high school teacher as a teaching strategy. The authors describe the reconceptualization of Talking Drawings, into a classroom assessment technique, which is appropriate for a variety of uses at the college/university level. The primary purpose of this technique is to provide the instructor with feedback as to the effectiveness of teaching and to find out what students are or are not learning. Illustrated, in this article, is the Talking Drawings classroom assessment technique, examples for application, and procedures for utilization within the classroom.

Keywords: Classroom assessment technique, formative assessment, summative assessment, assessment of student learning, Talking Drawings.

Since the National Commission on Excellence in Education's report, *A Nation at Risk* in 1983, there has been pressure for "schools, colleges, and universities to adopt more rigorous and measurable standards" (*A Nation at Risk*, 1983). The focus on measurability has lead to numerous assessment initiatives within education. One initiative is the focus on the use of both summative and formative evaluation.

Summative evaluations are those that provide information at a particular point in time, such as at the end of a course. These assessments are often used to make a judgment about the student's progress in relationship to content standards after a particular instructional period is over. Summative assessment is often seen in the form of exam scores, paper grades, course grades, and/or standardized tests.

Formative assessment, on the other hand, refers to assessment that is part of the on-going instructional process and provides information to the student and instructor during the course of instruction. Formative assessment allows adjustments in teaching and learning (Chappuis & Chappuis, 2007).

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Angelo and Cross have written extensively about classroom assessment techniques (CATs), which are valuable formative strategies that have applications across various disciplines (Goldstein, 2007; Eckert, Bower, Stiff, Hinkle, & Davis, 1997; Gaeddert, B.K. 2003; Hawkins, 1993; Mann, 2000; McNair S., 2000). This article will introduce a new classroom assessment technique developed for use in elementary, middle level, and high schools. This technique, like most classroom assessment techniques, is intended to provide the instructor with valuable information about his/her teaching effectiveness. The focus, therefore, is on formative assessment, as it is related to teaching, which allows instructors to evaluate how successfully they are meeting their teaching goals (Steadman and Svinicki, 1998). Instructors using classroom assessment techniques get feedback on their teaching, while the student gets feedback on his or her own learning (Steadman & Svinicki, 1998). The feedback given to the instructor provides “profound knowledge” (Deming, 1986) about which teaching strategies are having a positive impact on student learning.

Freshman Orientation Case Example

As I walked the familiar halls of the Humanities Building, I wondered if the students in this freshman orientation class would respond to the classroom assessment technique I had planned to use today. I had heard that this particular class was difficult to engage, and I wanted my guest lecture to go well. Having over twenty years of teaching experience, I felt confident that I had prepared appropriate material for my assigned topic, “Expectations for College Students”. However, I was hoping to engage the students and to give the instructor some feedback from the class. I was relying on one of my tried and true assessment techniques that I initially use when teaching high school students. I originally learned about this technique from an article by Suzanne McConnell in the *Journal of Reading* in 1993. Over the years, I’ve used it extensively in college teaching and came to realize that it was not only a strategy for assisting learners but also a classroom assessment technique.

Upon entering the room, the twenty-four students were largely quiet. Several students were sitting well to the back of the room with their heads on the desks. I distributed white paper and colored pencils. I asked the students to draw a picture, using a stick drawing, of their idea of the perfect college professor and to label the professor’s characteristics. For example, if their perfect college professor was a good listener, the stick drawing could have big ears with the label “good listener”. I told the students that I would give them five minutes to draw, and we would then share their drawings with the class. I was surprised. The students seemed very interested in their drawings, and several students asked for another minute to finish their drawings. I was very glad to grant this request, because all of the students appeared engaged and were working on the “perfect stick professor”. Next, I asked the students to share their ideas and drawings with a small group. As the students worked together sharing their pictures, the regular professor commented that she was amazed that all of the students were participating. I then asked the groups to share their ideas as I synthesized their ideas and drew a stick professor on the white board. The characteristics and the creativity of the stick professors were incredible. The students suggested the professor wear tennis shoes to represent the profes-

sors' ability to get the class actively engaged in the lectures. They put a cell phone in the professor's hand to represent the use of technology and the ability to communicate outside of class. One student, with red hair, suggested that the professor be given red hair, because "all the best professors have red hair". The class erupted in laughter. In the end, the drawing was very detailed and symbolized thoughtful ideas about college professors.

I then asked the students to turn their drawing over and draw a picture of what a professor would draw if she/he were asked to draw a stick figure representing the perfect college student and to label the characteristics. Again, I gave them five minutes to complete their drawings. After five minutes, I asked the class to describe some features of their "perfect college student". They began suggesting a number of the same characteristics they put on their drawing of the perfect college professor. They identified traits such as: promptness, active engagement, communication, listening, preparedness, flexibility, use of technology, excitement about learning, and humor. The students began to comment on how the student and the professor looked alike. They both even had red hair. The class erupted in laughter again.

Now, I asked the class to write a short paragraph describing the similarities and differences between their two drawings and how the student they drew represented the expectations for college students. They left their drawings and paragraphs with the regular instructor to allow her to assess their understanding of the expectations for college students. As the students filed out of the room, several of them stopped to talk with me. They commented on how much they had enjoyed drawing and how they could see that the expectations professors held for students were very similar to the expectations that they held for their college professors. All in all, this was a very successful guest lecture, and the regular instructor was very pleased with the amount of feedback she was able to receive from her "difficult to engage" class.

Culture of Assessment

During the mid-1980's, public elementary and secondary schools engaged in reform to improve the quality of students' learning. An important education summit with the nation's governors in 1989 resulted in federal legislation (Goals 2000: Education America Act) in 1994. By 2001, President George W. Bush signed legislation, the No Child Left Behind Act, which was a reauthorization of the Elementary and Secondary Education Act of 1965. These pieces of legislation increased emphasis on student outcomes and accountability within the public school system. States were charged with setting standards-based goals for all students, curriculum was aligned with the standards, and assessments were developed to determine how well students met the standards. This accountability movement reflected a major shift within the public school system to focus on outcomes for students instead of inputs into the public school system as a measurement of quality. Assessment became an important means to measure outcomes. These important pieces of legislation formed the contextual framework for an emphasis on outcomes at all levels of education.

The accountability movement in elementary and secondary education was followed by an important report from a commission appointed by Margaret Spellings, U.S. Secretary of education in 2006 entitled, *A Test of Leadership: Charting the Future of U.S. Higher Education* (U.S. Department of Education, 2006). This report discussed access to higher education, cost and affordability, student learning, and transparency and accountability. It was suggested that universities and colleges were accustomed to measuring quality by the amount of resources or inputs placed into the system. The report made strong statements encouraging institutions of higher education to focus on student performance. Since this report was released, there has been thoughtful conversation and direct action by many institutions of higher education focusing on accountability and assessment. One example includes the use of the Academic Quality Improvement Program (AQIP) in higher education, which continually seeks more effective ways to enhance student achievement through careful design and evaluation of programs, courses, and learning environments. Another example includes the National Council for Accreditation of Teacher Education (NCATE), where teacher education programs must monitor candidate performance using a comprehensive and integrated assessment system.

Through legislative action, important recommendations from the U.S. Department of Education, and renewed emphasis from educators and accreditation agencies, a culture of assessment developed that helped institutionalize assessment within all levels of education. Assessment formed the basis for determining how well students reached standards (summative assessment) and helped improve instruction and learning within the classroom (formative assessment). This culture of assessment helped to promote the use of classroom assessment. Although effective instructors have always engaged in meaningful assessment within the classroom, there is renewed interest in specific assessment techniques that better describe students' learning. Within this context, classroom assessment techniques help instructors "find out what students are learning and how well they are learning it" (Angelo & Cross, 1993, p. 4).

Classroom Assessment Techniques Defined

Effective instructors intuitively engage in classroom assessment to determine what students know and don't know so that they can adjust their teaching to improve student learning. For example, if a philosophy professor engages students in a large group discussion about the religion of Buddhism, the instructor will quickly be able to assess the depth of student knowledge by carefully listening to student comments. This informal assessment allows the professor to refocus and tailor instruction to meet student needs. Other classroom assessments could include observation, analysis of student work, and student perception questionnaires. Effective classroom assessment techniques are closely tied to instruction, occur early and frequently, result in adjustment of instruction, and demonstrate to the instructor the current level of student performance or what students learned as a result of teaching. CATs are often used to provide feedback to instructors on the effectiveness of his or her teaching, but at the same time "allows the student feedback on his or her own learning of the specific content" (Stedman and Svinicki, 1998 p. 13).

Angelo and Cross (1993) suggested the following purposes of university classroom assessment.

- Helps the instructor know what students learn as a result of the instruction.
- Helps determine student misunderstandings or gaps in knowledge so that teaching can be refocused.
- Helps understand different perceptions students may have about a particular idea or concept.
- Helps the instructor improve student learning early with formative assessment, as opposed to later using summative assessment.

Angelo and Cross (1993) also discuss assumptions about classroom assessment that include these ideas.

- The quality of student learning is related to the quality of teaching.
- Teachers need to express clear and explicit goals to students and obtain feedback on the extent to which students are meeting the goals.
- Students need early and frequent feedback to improve learning.

Classroom assessment techniques address the issues related to the increasing pressure in higher education to account for student learning and create a culture of evidence based decision making (Shavelson, 2007). When used as an on-going component of instruction, CATs improve the quality of the student's learning experience and students feel more involved in the process of learning (Soetaert, 1998). The following is an introduction to one effective and useful classroom assessment technique, Talking Drawings, which can assist university professors in determining what students are learning..

Talking Drawings Defined

As illustrated in the case above, the Talking Drawings technique was described in 1993 by Suzanne McConnell (Journal of Reading). The strategy "involves translating the mental images that we develop into simple drawings. The drawings then become the basis for exploring our understanding and a bridge for assisting and enhancing learning" (McConnell, 1993, p. 260). Because student drawings can be used to document and improve both teaching and learning (Drawing on Education, 2008), Talking Drawings allows feedback to both the professor, in regard to teaching, and the student, in regard to learning. Like most classroom assessment techniques, the strategy is a simple method that allows faculty to easily collect information from students concerning their understanding of the content.

The strategy begins by asking students to create a mental image, before they become engaged in the content, either by reading or through lecture. Then, the students are asked to draw a picture that symbolizes their mental image and to label the parts of the drawing. These initial drawings are often very global and lack detail. After the students have learned content information, though lecture or reading, they are asked to draw another picture of their mental image and label the parts of the drawing again. This picture "de-

picts the newly learned knowledge” (Wood & Taylor, 2006, p.1). Finally, the students are asked to write a short paragraph telling how their drawing has changed. Figure 1 illustrates the difference in the amount of detail a student exhibits before and after a lecture on the parts of a flower. The use of Talking Drawings allows the professor to evaluate the student’s background or prior knowledge about a topic, gain feedback on students’ knowledge of the topic after the lecture, and requires the student to reflect on how his/her understanding of a topic changes following instruction. These drawings provide a visible and clear record of learning (McConnell, 1993).

In order to move the Talking Drawings strategy beyond a teaching strategy to a classroom assessment technique, one only has to collect the drawings and use the information to make adjustments in classroom instruction. It is easy to see from Figure 1 that this student grasped the content presented in the lecture on flower parts. Because the information is visual, it can be scanned quickly and misconceptions are easy to identify. The professor is now able to use that information to make adjustments in teaching. The professor might decide that the class is ready to move on to new content, re-teach the content, review the content providing more examples, distribute a handout or other material on the content, or assign on-line readings that will allow students to individually refine their understanding. All of these options allow the professor on-going, formative, assessment data which facilitates mid-course adjustments.

There are significant benefits for the college student as well. For the learners, this strategy provides a visible example of the construction of knowledge. It allows them to check their own comprehension and to adjust their study habits. Students who are unable to add specific detail to their second picture quite easily see that they need to take steps in order to master the content. Coupled with the professors’ ability to adjust his/her teaching or offer additional materials, the student then has the resources available to ensure success in the course.

Talking Drawings Applications in Higher Education

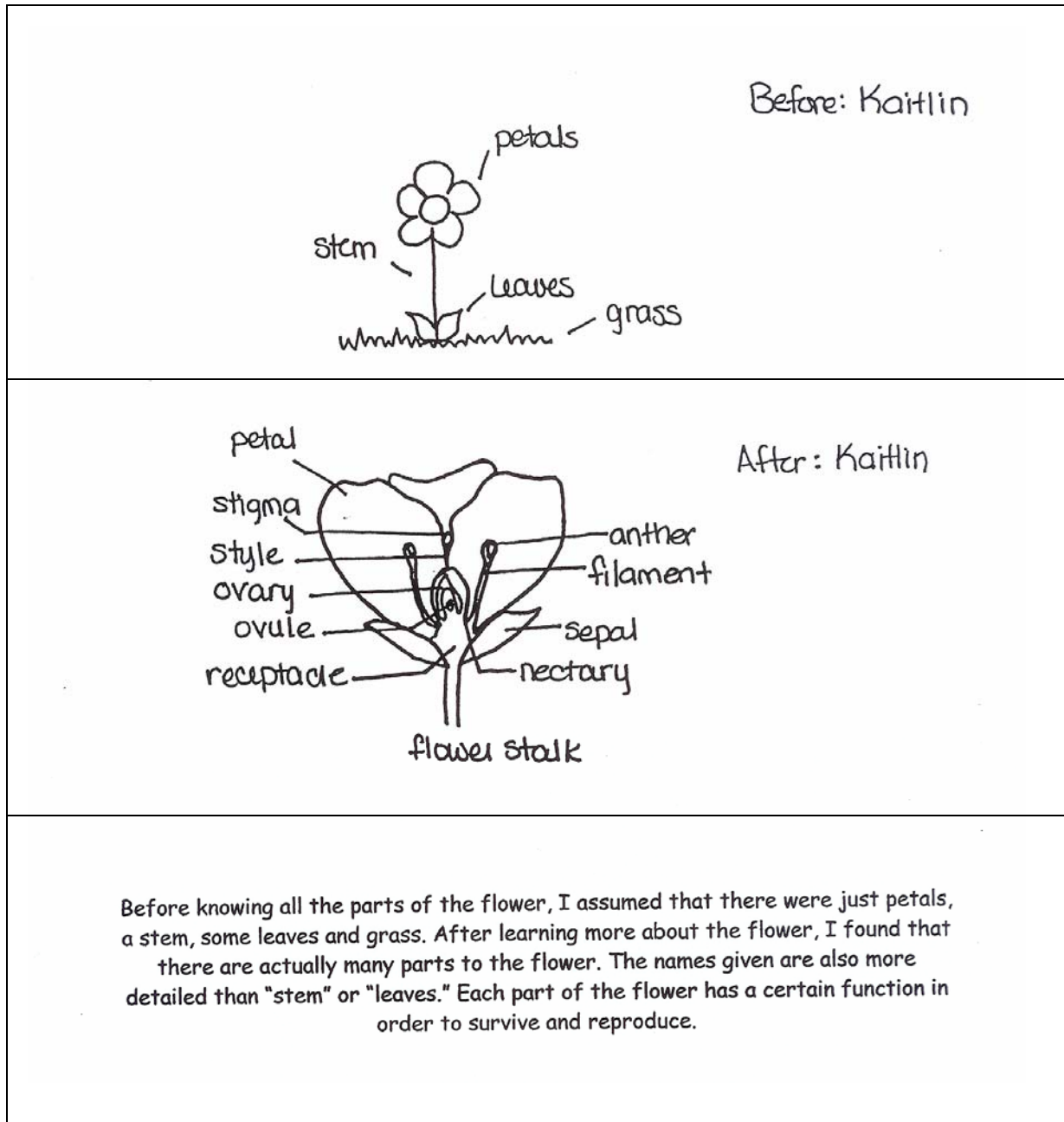
Talking Drawings is a very versatile classroom assessment technique. McConnell (1993) presented ideas for application in subject areas, such as science, social science, geography, and literature. In the area of literature, for example, the students were asked to draw a representation of a literary character, setting, topic, or event from the reading. After reading and discussion, the picture was re-drawn to reflect changes that occur during the evolution of the plot. The following section describes specific case examples illustrating different uses for the Talking Drawings technique.

Literature

I typically assign the book *The Secret Life of Bees* by Sue Monk Kidd to students to allow them to gain an understanding of racial tension in the South in the 1960s. As part of the class, I asked the students to do a drawing of T. Ray Owens.

In the book, T. Ray is the abusive father of a teen-aged girl, Lilly, growing up in a racial segregated town in South Carolina. The story describes the death of T. Ray's wife during a marital argument in which she is accidentally shot by four year old Lilly. Throughout the book the readers are left to wonder if the shooter was the child or T. Ray.

Figure 1: Example of Talking Drawings Applied to Flower Parts[‡]



[‡] Students were shown a picture of flower parts from the website, <http://www.naturegrid.org.uk/qca/flowerparts.html>, as part of the class lecture.

After reading the first few chapters of the book, I ask my students to draw T. Ray. He is often pictured as the villain with an angry expression and labeled with the terms “cold hearted”, “cruel”, “racist”, and “tyrant”. However, in chapter twelve, the author reveals information about the relationship between T. Ray and his wife that makes the reader question T. Ray’s characterization as a villain. It is at this point that I ask the students to draw another picture of T. Ray. I also ask the students to write a paragraph comparing and contrasting their original drawing to the new drawing. After the students have had time to draw and write, I lead the class in a character analysis of T. Ray. I ask them to describe sources of information from the book that supports the changes they made to their drawing of T. Ray. I even ask the students to read aloud specific portions of the book relevant to their drawings. This discussion frequently leads them to the understanding that this character is neither all bad nor all good, and they regularly use the label “sad” and “heartbroken” to describe their new drawing. I collect the pictures and narrative to allow me an insight into the students’ understanding of the changes in the plot and character development.

Undergraduate Education Class

In my undergraduate special education course, Assessment of Students with Disabilities, students often come to class with little knowledge of assessment, other than their own personal experiences. At mid-term, I always see major changes in the level and depth of their knowledge about assessment. On the first day of class, I tell my students to think about their experiences with assessment and taking tests. I then lead them through guided imagery where they visualize their personal experiences with tests throughout their school years and their university experiences. I then tell them to draw a picture of what test-taking or assessment looks like. They are also asked to label the drawing and write a short paragraph describing the picture. We then talk in small groups, and then in a large group about what assessment “looks like”. Often, the descriptions and drawings reflect students taking paper/pencil tests by themselves while sitting at a desk. Some students suggest feelings of inadequacy and nervousness about assessment through their drawings and paragraphs. After this initial discussion, we proceed with readings, lecture, small group discussions, and projects about assessment. At mid-term, this exercise is repeated, and the outcome is very different. Students typically draw many different scenarios, some showing groups of students sitting in a circle engaged in discussion, others showing the teacher asking oral questions to students, and still others showing a student reading aloud to the teacher. The paragraphs that students write reflect these ideas: assessment is multidimensional, major decisions should never be made based on one assessment, students have different strengths, assessment must be fair and free of bias, etc. It is clear that my students have learned a great deal about assessment, and this learning is reflected in their drawings and paragraphs.

Talking Drawings Procedures

Implementation of the Talking Drawings classroom assessment technique is very simple and can be conducted at any point in the lecture or course. The procedure for Talking Drawings typically follows the format below:

1. Prior to formal presentation of the content, ask the students to draw a picture representing their understanding of the topic. Have the students label the important features or characteristics of the drawing.
2. After the students are engaged in learning the content, by either reading, lecture, or both, the students are asked to draw a second picture representing their reconceptualization of the topic. Again the students should label the features or characteristics.
3. Next, the students are asked to write a short description of how their drawing changed between the first drawing and the second drawing.
4. Finally, the instructor will collect the drawings and narratives describing the change in drawings. The instructor can quickly scan the pictures and writings to determine if the students have formed a good understanding of the topic or need additional support. The instructor can also determine the level of support needed.

In a very large class, the instructor might want to use a random sample for analysis. This would allow the instructor to obtain a quick diagnosis of student learning. As with the several classroom assessment techniques described by Angelo and Cross, Talking Drawings responses “can be read, tabulated, and analyzed quickly with limited effort” (1993, p. 152). It is important to remember that this assessment technique should not be overused. It fits nicely with content where drawings are appropriate, but might not be the best fit for all content areas or topics.

Discussion

These case examples illustrate how the Talking Drawings technique can be successful in engaging students while allowing the professor to collect feedback from the students regarding their understanding of content knowledge. The use of pictures and drawings often empowers even the most reluctant student to participate in his or his own learning which allows the learner to become self-aware of their knowledge and the professor to gain insight into what the students are thinking (Fabry, Eisenbach, Curry, & Golich, 1997). The continuous use of Talking Drawings, along with other CATs, allow faculty to monitor student learning, facilitate student engagement, evaluate teaching effectiveness, and move institutions forward in continuous quality improvement (Goldstein, 2007; Soetaert, 1998).

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