

Theory and Practice: How Filming “Learning in the Real World” Helps Students Make the Connection

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This article describes an assignment, titled “Learning in the Real World,” designed for graduate students in a learning theory course. Students work in small groups to create high quality audio-visual films that present “real learning” through interviews and/or observations of learners. Students select topics relevant to theories we are discussing in class, such as interviewing expert and novice musicians to illustrate the development of procedural knowledge, interviewing a sister and brother regarding salient autobiographical events from their childhood, and filming students talking about strategies they use to comprehend and remember text information. In this article we discuss feedback on the assignment and how useful it can be for not only engaging students with learning theories and research, but also fostering the process of connecting theory to practice. Importantly, the assignment is relevant and adaptable for any classes, graduate or undergraduate, where theories play a large role and successfully helps all students see learning theory and research come alive through film.

As educators, we often look for ways to involve students in the learning process. We know intuitively, as well as from classroom experiences and research, that engaging our students will result in several positive outcomes (Angelo & Cross, 1993; Yoder & Hochevar, 2005). Investigators in higher education describe the focus on students’ involvement as a paradigm shift from teaching to learning, where students are active rather than passive recipients of knowledge. Bonwell and Eison (1991) define active learning as “anything that involves students in doing things and thinking about the things they are doing” (p. 2), and Kolb (1984) describes experiential learning as a “process whereby knowledge is created through the transformation of experience” (p. 38). Most experts agree that “active” or “experiential” learning, essentially learning by doing, is effective (Smart & Csapo, 2007).

Oblinger and Oblinger (2005) noted that a hands-on approach to learning is particularly appropriate for the Net Generation or Millennials, students born between 1982 and 1991, who prefer interactivity. Skiba and Barton (2006) urge faculty who are primarily Matures or Boomers, born between 1943 and 1960, to adapt their current teaching strategies to accommodate the learning needs of this newest generation. Net Generation students enjoy constructing their own knowledge and have a strong need to engage in the learning process. Exploration, discovery, and authentic activities are key for these learners who are both information and multimedia literate (Brown, 2000). “The TTT (talk, text, test) approach” (Oblinger & Oblinger, 2005, p. 213) in which students listen to lectures, read the text, and take tests, fails to meet the social needs of the Net Generation, who gravitate toward group work and view the teacher as mentor and facilitator of knowledge.

While creating active learning experiences is important and worthwhile in any situation, it is essential

in theory courses. Students in any discipline need a strong understanding of theory, research, and effective practice. The combination of all three areas provides an arsenal of tools and the expertise to apply those tools in the right way and at the right time in different circumstances. One achieves this level of expertise only with a critical, reflective understanding of theories, research, and practice. However, many students fail to connect theory knowledge to practice and may even view theories as information they are required to memorize for the purposes of completing a course requirement rather than information that can greatly aid their understanding of the world. Most instructors want to move beyond merely teaching theories to creating opportunities where theoretical knowledge actually transforms practice.

The purpose of this article is to discuss an active learning assignment designed to motivate students to understand and apply key learning theories to real world situations through film. Students work together in small groups and create a high quality audio-visual film that presents “learning in the real world” through interviews and/or observations of learners. The films provide real life examples of learning and relate actual learning experiences to the learning theories discussed in class. The assignment is an effort to make learning theories “come alive” for students through film while recognizing the characteristics of the Net Generation.

First, we provide an explicit description of how we implemented the assignment, titled “Learning in the Real World,” in an educational psychology course on learning theory. Second, we discuss how we assessed the effectiveness of our assignment in meeting our goal of helping students connect theory to practice. Finally, we conclude with our reflections on the benefits and challenges of filming real learning and underline the importance of connecting theory to practice for all students.

Learning in the Real World Assignment

We inform students during the first class that our course includes an audio-visual group presentation that involves applying learning theories to “real world” settings through film. Students are divided into small groups of five or six, and each group must agree on an example of learning approved by the instructor and connected to research and learning theories discussed in class (e.g., classical and operant conditioning, social cognitive theory, cognitive and information processing theory, metacognition, self-regulated learning). Each presentation requires filming interviews or observations of one or two students or parents. In order to keep the focus on “typical” learning (the focus of our class), individuals interviewed or observed must not have any special learning problems. We provide a handout, “Guidelines for Group Presentation,” that provides detailed instructions and ideas for topics (e.g., memory, study strategies, learning skills, self-efficacy, reinforcement and punishment, beliefs about learning; see Appendix A). Students complete the majority of the group work for the presentation outside of class. The second half of two class periods is devoted to group work, and the instructor is available to answer questions and oversee student progress.

One component of the group project designed to increase collaboration and critical thinking requires each individual to write an annotated bibliography using the PsychINFO database on two articles related to his or her group’s presentation topic and related theory. Each member of the group must select two articles that support or refute his or her group’s learning topic and informally present this information to other group members. All of the group members must synthesize this research for the introduction of their presentation when they explain how their filmed example or examples relate to a theory and research findings in the literature. This process exposes group members to 10 to 12 different research studies related to different aspects of their presentation topic and allows a deeper, more integrated, learning experience than we could provide students solely through lectures, discussions, and textbook readings.

Evaluation of the “real learning” audio-visual assignment and annotated bibliography is straightforward and explicitly stated on the syllabus. For the audio-visual group presentation, each individual earns (1) a possible 50 points assigned by the instructor and (2) a possible 50 points assigned by the other members of the group for his/her contribution to the project for a total of 100 possible points. While the weight of the assignments toward the final grade varies by instructor, typically the

audio-visual group presentation counts 30%, the annotated bibliography (worth a possible 100 points) counts 20% of the final grade, and exams over lectures and textbook material count 50%. Students receive simple grading rubrics for the presentation and the annotated bibliography at the beginning of the semester.

Participants

The research was conducted at a large urban institution. Sixty students enrolled in two graduate courses on learning theory in educational psychology were given the opportunity to participate in the research study. Of those, 52 completed the assessment survey (86.7% response rate). Participant demographics were representative of overall enrolled graduate student demographics in the College of Education (COE) spring semester 2009 (Table 1).

Students enrolled in the course had a slightly higher GPA than overall COE graduate students (3.99 median range compared to 3.89 median range).

Assessment

To determine the extent to which the assignment successfully met our goal of helping students connect theory and practice, we created a simple survey that includes five Likert-type questions and one open-ended question on whether the assignment fosters engagement with the material (Appendix B). The survey Likert-type items are adapted from the *Four-Questions Technique* by Dietz-Uhler and Lanter (2009) that encourages students to engage in the active learning strategies of analyzing, reflecting, relating, and generating questions about material. Students voluntarily and anonymously completed the survey during the last class session. The reliability alpha for the survey instrument was .861.

Table 1
Demographics

	Participants (n = 52)	COE (N = 1207)
	%	%
Female	73.3	76.9
Male	26.7	23.1
Asian	1.7	2.5
Black	20.0	24.9
Latino/a	5.0	3.3
American Indian	1.7	.2
Mixed/Other	6.6	2.8
White	58.3	57.7
Non-reporting	6.7	8.5

Results

Because the survey instrument used a semantic differential scale from 1 (*not at all successful*) to 7 (*very successful*), we were able to generate means and standard deviations in order to best understand how students viewed the audio-visual assignment. Results indicate that the assignment was very successful in providing an opportunity for application of learning theory to real-world situations (mean = 6.50). Students also regarded the assignment as successful in making them think more deeply about the material and encouraging reflection on the psychological concept (mean = 6.21 for both items). According to students, the assignment was successful in encouraging them to ask questions about the material (mean = 6.12) and helping them relate the material to their personal life (mean = 6.04).

While the survey results reflected very positive ratings for the assignment (Table 2), the comments regarding the assignment really generated a clearer understanding of the overall learning experience. Table 3 and Figure 1 show overall thematic percentages and the percentage of each theme that could be coded positive, negative, or neutral. For example, 31% of the survey respondents commented on the assignment's real world application, and all comments but one were very positive (92.3%).

The following is a representative sample of the comments associated with real-world application:

- “Loved it! The “real world” application made the entire assignment so much more meaningful.”
- “It was very helpful to apply what we read in the textbook to the actual teaching/school environment. I think interviews with students are extremely helpful and engaging for us as teachers.”
- “Being able to see theories at work in real life . . . sometimes concepts were obvious, but they are quite exciting when you actually see them in action.”

An overwhelming majority saw the assignment as a positive learning strategy (88.9%):

- “It really took my learning to the next level. I feel like I moved this knowledge from working memory to long-term. Good way to deepen knowledge & understanding.”
- “In doing research for the project, I gained a deeper appreciation [for] the topic I studied. I think the project is an effective way of learning and applying what I learned.”

While 31% commented on the group-project structure, students were more divided over whether the group

learning experience was helpful. For most (53.8%), the group format was a positive experience, broadening their perspectives.

- “I enjoyed working w/ [*sic*] my group to put together this presentation. Being able to understand their perspective on the material helped me to expand my own.”
- “The interaction with other members of my group helped me to see the concepts from another point of view, which was helpful.”
- For others, the group project was made more difficult because of scheduling conflicts:
- “The group setting was hard to work in and led to one or two people doing most of the work. Because we all have such busy schedules, it was hard to work together.”
- “It was difficult to work in a group at times because of our conflicting schedules. This made it difficult to organize our presentation.”

It was in the area of “presentation format” that garnered the most comments (33.3%) and the most negative comments (71.4%). The majority of negative comments focused on time management:

- “One critique is that it said 20-25 minute presentation and most groups went way over.”
- “There should be a stricter limit to amount of time of the presentations.”
- “I just wish we had more time so that we didn't have to force in 3+ groups in one class—people tend to tune out after a while & [*sic*] that's not fair to the groups that put a lot of work into the projects.”

But many of the comments included recommendations for improvement. Most focused on the timing of presentations and the course topic:

- “I would recommend that the presentations are better spaced out throughout the semester & [*sic*] possibly correspond in timing with when we study the subject matter in class.”
- “I think it would be better to do the presentation individually & throughout the semester. Maybe each student could cover a portion (section) of the lecture for each class.”
- “I liked this assignment. But maybe next time have groups present their project around the same time we are learning that topic in class.”

Table 2
Student Feedback Survey Results

<i>n</i> = 52	<i>M</i>	<i>SD</i>
The audio-visual assignment provided an opportunity for application of theory to real-world situations.	6.50	.728
The audio-visual assignment made me think more deeply about the material.	6.21	.696
The audio-visual assignment encouraged reflection on the psychological concept.	6.21	.800
The audio-visual assignment facilitated relating the material to my personal life.	6.04	1.084
The audio-visual assignment encouraged me to ask questions about the material.	6.12	.832

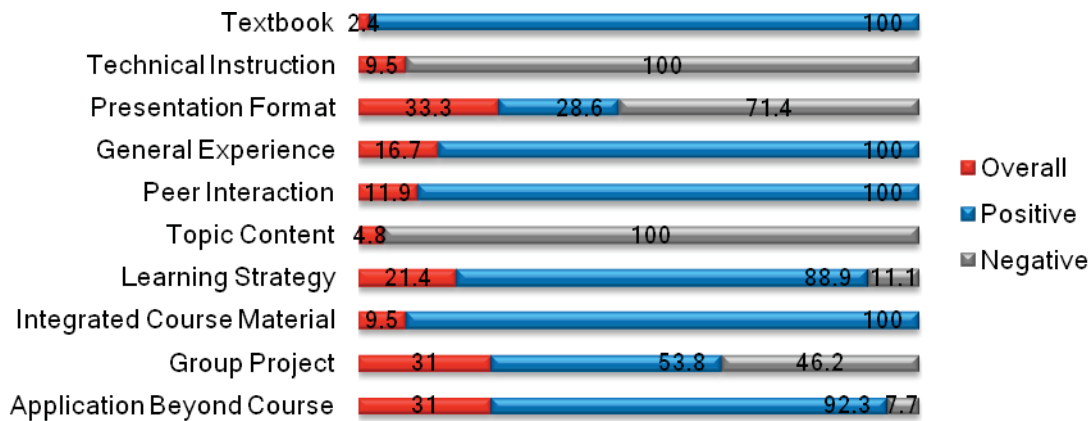
Note. Mean range: 1 (*not at all successful*) to 7 (*very successful*)

Table 3
Theme/Code Percentages by Positive/Negative Analysis

Themes	Overall % (<i>n</i> = 42)	Positive % (<i>n</i> = 42)	Negative % (<i>n</i> = 42)
Application Beyond Course	31	92.3	7.7
Group Project	31	53.8	46.2
Integrated Course Material	9.5	100	0
Learning Strategy	21.4	88.9	11.1
Topic Content	4.8	0	100
Peer Interaction	11.9	100	0
General Experience	16.7	100	0
Presentation Format	33.3	28.6	71.4
Technical Instruction	9.5	0	100
Textbook	2.4	100	0

Note. Total percentage may be greater than 100% since multiple themes may be embedded in individual responses. While 52 students completed the survey, 10 students did not offer additional comments.

Figure 1
Thematic Analysis



Discussion

The Learning in the Real World audio-visual assignment was specifically designed with the goals of active learning and encouraging students to think more deeply about learning—not only through the rich

explorations in their own group but through the explorations of all groups within the class—and make the connection between theory and practice. This link between theory and practice is important for students in any discipline, but it is particularly so for teachers or aspiring teachers who often enroll in learning theory

courses. Rather than instructional techniques consisting of a “bag of tricks” developed through trial and error, or an overemphasis on any one theoretical approach, when teachers emphasize the connection between the most highly relevant theories as well as the connections between those theories and practice, they can strongly impact their students’ learning. We agree with Morrone and Tarr (2005) who use the phrase “theoretical eclecticism” to argue that student learning is enhanced when instructors draw on different theories of learning to inform their instructional decisions. The importance of making the connection between theory and practice is also addressed by Bowden (2008), who suggests that “faculty match strategies to theories to pedagogical activities to engineer the best possible learning environment” (p. 75). Results from our survey indicate that the audio-visual assignment fosters enthusiasm about exploring the connection between a variety of theories and learning. The student statements, while corresponding positively to the very successful ratings of the survey items, offered insight into how students viewed their overall learning experience (very positively) and highlighted areas of concern (e.g., group project format, presentation timing).

While implementation of the assignment does require planning and attention to details, we believe the benefits far outweigh the challenges. One important benefit is the very strong collaborative nature of the project. In order to make a film of quality, students must work together to create clear pictures with good sound quality, and they must engage in editing by selecting the most important parts of the video that underline theories and concepts. Since the approach to filming learning is wide open as far as narrating, interviewing, etc., students must also agree on their method. If the group decides to conduct interviews, for instance, they must learn to interview well, agree on questions, and be able to guide the interviews to again demonstrate application of learning theory.

Students’ comments identified challenges of working in groups, time involved in presentations, and when presentations occurred during the semester. Although it is often difficult to make sure that each member of a group carries his or her own weight, the peer evaluation where each member evaluates other members of the group (which counts 50% of the grade) helps to mitigate this situation. One suggestion we tried after receiving feedback from students regarding presentations going over the allotted time was to have a member of the class designated as “timekeeper.” The timekeeper is instructed to let members of the group know when they are 10 minutes away from the maximum time and then five minutes from the maximum time. We have found that knowing that this procedure will be implemented prevents students from going over time and alleviates the instructor from

having to be the one to cut short a presentation. The instructor also can urge students to practice and time their presentations before the due date. To avoid everyone making group presentations during the last several classes, we have since spaced out the presentations to begin earlier in the semester to match the particular theory being discussed during that class. Students have enjoyed the active learning nature of a presentation being included as part of the class on a particular theorist.

In conclusion, the Learning in the Real World assignment is an effective strategy on many levels. Students produced excellent films on very creative topics, such as on expert and novice musicians to illustrate the development of procedural knowledge; six-year-old twins discussing the first day of kindergarten to illustrate constructive processes in memory; a brother, sister, and father discussing the effectiveness and consistency of the punishment used in their home; a woman in her 80’s reflecting on the salient autobiographical events in her life; and students talking about strategies they use to comprehend and remember text information. Results from the survey and student comments in class indicate that this assignment is successful and meets our goals of more deeply engaging students with the material while also fostering the connection between learning theory and practice. Importantly, the assignment is relevant and adaptable for any classes, undergraduate or graduate, where theories play a large role (e.g., Human Development, Educational Psychology, Adolescent, Aging and Cognition). Illustrations of learning in the real world truly come to life in the personalities and stories of the individuals filmed, and students find filming a novel way to see learning theory and research come alive.

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Appendix A
Guidelines for Audio-Visual Group Presentation: “Learning in the Real World”

(1) **Length:** The audio-visual presentation should be approximately 30 minutes in length. Presentations should be rehearsed to insure that this length is adhered to.

(2) **Format:** Presentation will focus on filmed interviews and/or observations of one or two students or parents (can also focus on older or younger learners). Individuals interviewed must NOT have any special learning problems that you are aware of.

(3) **Distribution of time:**

Introduction: Approximately five minutes for telling the audience how the interview illustrates one of the learning theories (or research on learning) discussed or read about in class. Specify specific learning theories/research and provide background related to theory/research that would be helpful to your audience.

Audio-Visual Film: Approximately 20 minutes will be the presentation of the interview (or in some cases interview/observation)

Conclusion: Approximately five minutes for summary and questions from audience

(4) **Types of Questions:** During the interview, the emphasis should be on the student or the parent (NOT THE INTERVIEWER). In other words, the audience wants to see/hear the student or parent and what the student/parent is discussing. Do not ask a series of “Do” questions (“Do you like school?”) that can be answered with “yes” or “no” answers. Ask “how” or “why” questions that will get the student(s) or parent(s) to think about learning and elaborate on learning.

(5) **Distribution of Effort:** Each group member is expected to evenly share in the responsibilities of interviewing, editing, research, etc.

(6) **Examples:**

Topics of presentations may include:

- a. Memory, memory strategies, studying, study strategies (beliefs about memory or studying)
- b. Self-efficacy issues or self-regulation issues
- c. Observational learning issues (modeling of behavior)
- d. Memory in the real world (e.g., flashbulb memories, seniors reflecting back on their most salient life memories)
- e. Cognitive developmental issues (e.g., focusing on Piagetian stages or tasks or Information Processing stages or tasks)
- f. Development of memory, development of expertise in studying, beliefs about cognition or learning
- g. Use of reinforcement and punishment to influence the shaping of behavior (homework, real world behavior, doing chores)
- h. Senior citizens related to memory and learning (possibly with seniors who have gone back to school or begun working again)
- i. Factors that influence learning skills
- j. How one’s or other’s beliefs in abilities can affect learning
- k. Development of procedural skills (e.g., playing a musical instrument, developing expertise in basketball or soccer)

Appendix B
Student Feedback Survey

One requirement of EPY 7080 is a group project and audio-visual presentation related to the topic of learning. Please circle the number that best reflects the extent to which the audio-visual assignment was successful in meeting the following goals:

The audio-visual assignment provided an opportunity for application of theory to real-world situations.

1 2 3 4 5 6 7
Not at all successful Very successful

The audio-visual assignment made me think more deeply about the material.

1 2 3 4 5 6 7
Not at all successful Very successful

The audio-visual assignment encouraged reflection on the psychological concept.

1 2 3 4 5 6 7
Not at all successful Very successful

The audio-visual assignment facilitated relating the material to my personal life.

1 2 3 4 5 6 7
Not at all successful Very successful

The audio-visual assignment encouraged me to ask questions about the material.

1 2 3 4 5 6 7
Not at all successful Very successful

Please feel free to provide additional information on how the audio-visual assignment fostered your engagement with the material.