

The Effects of Teaching Methods in Leadership Knowledge Retention: An Experimental Design of Lecture, Experiential, and Public Pedagogy

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Abstract

Finding an effective teaching methodology for leadership educators is daunting. In this experimental study undergraduate leadership students' retention of knowledge was tested after receiving leadership instruction via lecture, experiential learning, and public pedagogy. Results show lecture is an inferior method of teaching leadership while public pedagogy had effective and consistent results.

Introduction

Teachers of leadership face the difficult task of explaining abstract concepts and ideas to students. The lecture method has long since failed these educators as an effective way to present their information (Halpern, 2000). Therefore, exploring the efficacy of a variety of teaching methods for leadership educators is important due to the potential to determine best practices for classroom delivery.

Popular culture surrounds us in the form of mass media and social interaction. This constant exposure to cultural expression has the ability to teach its consumers, whether they are aware of it or not, through non-formal learning. When non-formal learning from popular culture can, and does, occur daily within the lives of adults, it might be a natural progression to move the site of learning into a formal environment (Callahan & Rosser, 2007). Adult educators have recognized the potential for popular culture to impact education and are subsequently utilizing it as a teaching method. More specifically, leadership educators have established the use of popular media in the classroom in an effort to assist students' in learning complex concepts such as leadership theory. This utilization of popular media in the classroom relies on the ability of popular culture to act as an educational tool, which is considered public pedagogy (Giroux, 2000).

Educators wishing to maintain the full attention of students, particularly those educators teaching subjects that have nebulous concepts such as leadership, may be interested in new instruction methods. Due to the lack of historical precedence regarding the best method for teaching leadership, further exploration of new teaching methods is required. Public pedagogy is one such new teaching method and has not been researched to determine its effectiveness when applied to leadership. For this study a static-group comparison design was utilized to test the knowledge retention of three sections of ALDR 3900 Leadership and Service students on the Kouzes and Posner (2007) leadership practice of Challenge the Process. The content was delivered to the students via lecture, experiential learning, or public pedagogy design.

Review of Literature

Educators and researchers have repeatedly acknowledged the drawbacks of teaching with a strict lecture format. This format has been referred to as “a method resulting in long periods of uninterrupted teacher-centered, expository discourse which relegates students to the role of passive ‘spectators’ in the college classroom” (Cooper, Prescott, Cook, Smith, Mueck, & Cuseo, 1990, p. 1). Having students serve as passive spectators in the classroom may encourage a drop in attention and decreases their retention of knowledge. Young, Robinson, and Alberts (2009) found that the drop in attention “is avoided when presentation is varied, though this is not necessarily associated with interactive participation techniques” (p. 41). The incorporation of popular culture into presentations provides for a variety in lecture and does not require interactive participation, thus serving as a viable way to avoid a drop in attention.

Popular Culture

“Recognizing the influence of popular culture in our own lives is the first step to harnessing its educational potential” (Thompson, 2007, p. 83). What exactly is popular culture? A variety of meanings exist, but Lull’s (as cited in Rogers, 2002) definition is the most applicable to this research: “commercially successful, mainstream, mass mediated cultural artifacts and personalities” (p. 190). These cultural artifacts include newspapers, books, the Internet, music and movies, all which serve to entertain and educate us. The effects of such entertaining and educating gives rise to two views on popular culture and its use for society.

One view of popular culture insists that it is “a space where learners are taught hegemonic ways of being in the world” (Wright & Sandlin, 2009, p. 126). This view, based on Antonio Gramsci’s (1971) idea of hegemony, casts popular culture in a negative light due to its influence on consumers. While it is acknowledged that popular culture can have a negative impact on consumers and critical media literacy is suggested, this view is beyond the focus of the proposed research.

A second, and more applicable, view of popular culture is as “a tool to promote learning in the classroom because it is deemed a way to connect with adult learners” (Wright & Sandlin, 2009, p. 125). Considering the previously mentioned cultural artifacts and their application to learning has generated the idea of public pedagogy (Giroux, 2000), or education that occurs informally and incidentally (Wright & Sandlin, 2009). Giroux (1992) has found popular culture can help create meaning and aid in the construction of knowledge, whether the consumer is aware of the act of learning or not.

Non-formal Learning

Learning happens daily, whether through formal or non-formal applications. Non-formal learning, also called incidental learning, can happen through activities that are unplanned and informal (Foley, 2001). This non-formal learning can happen daily and through a variety of activities. Kamis, Muhamad, Junoh, Asmuni, and Idris (2005) found that 94% of adults in Malaysia participated in non-formal learning by watching television, video, and film. Such a high rate of non-formal learning supports Fieldhouse’s (1995) assertion that “it is arguable that broadcasting has been the major adult education agency of the twentieth century” (p. 81).

Certainly the popularity of television has increased the occurrence of non-formal education, particularly through the demand for, and support of, television channels that serve to educate while they entertain. In a study of women who watched the British television show *The Avengers*, Wright (2006) found multiple instances of non-formal learning. Additionally, Coles and Armstrong (2007) note that historical films and television are shows popular in the United Kingdom where not one, but two history channels are offered to television watchers. Similarly, a quick look through the types of channels offered in the United States such as Food Network, Discovery Channel, National Geographic Channel, and Science Channel also would support the idea that non-formal education is occurring while audiences are being entertained.

Non-formal learning also takes place via other popular culture media as found by Jarvis (2000). In a case study conducted throughout a cultural studies course examining popular romance books, Jarvis found “[v]ery few women chose ‘escapism’ as their reason for reading and were much more likely to say that they read ‘in order to learn more about people and the world’” (2000, p. 198). This non-formal learning via popular media also occurs through film as “cinema assumes a pedagogical role in the lives of many people” (Hooks as cited in Rogers, 2002, p. 2).

Adult Education

Knowles, Holton, and Swanson (1998) assert that adults’ learning is increasingly self-directed as they mature. This self-directed education occurs via popular

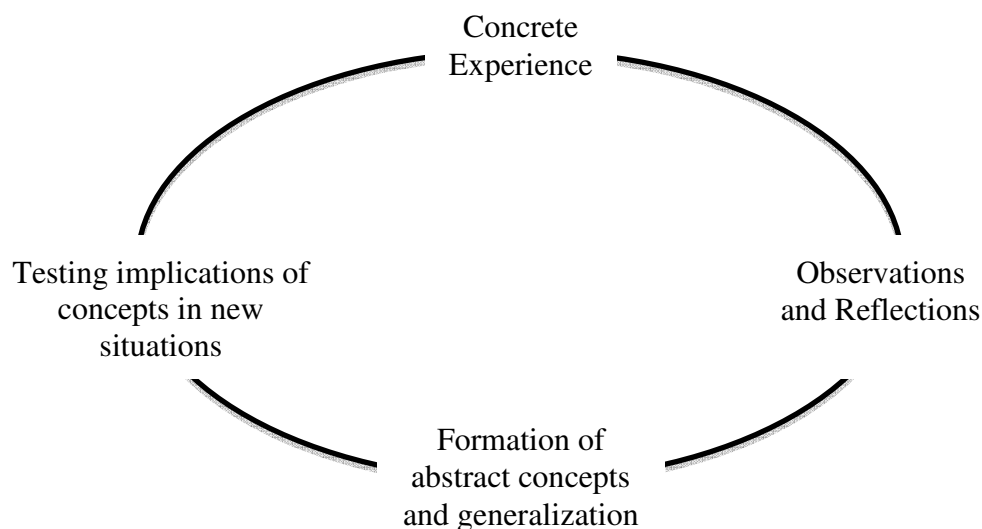
media (Kamis, Muhamad, Junoh, Asmuni, & Idris, 2005; Jarvis, 2000). Wright and Sandlin (2009) posit that educators “must recognize and use the power pop culture wields in the lives of adult learners if they are to fulfill a meaningful role in the education of adults” (p. 126). Teaching with popular media may help students determine meaning of the material because “concentration on words alone is not enough...no single code can be successfully studied or fully understood in isolation” (Hodge & Kress, 1988, p. vii). Wright (2007) builds upon Knowles, Holton, and Swanson (1998) finding educators should connect to the learning that occurs outside of the classroom to help learners make sense of their experiences. Educators who do not reflect on their personal engagement with popular culture “may find themselves ineffective in facilitating learning because they are too far removed from the lived experiences of the adults they seek to instruct” (Wright & Sandlin, 2009, p. 124).

Educators who utilized public pedagogy found that students were able to critically analyze topics seen within the popular media (Marshall, 2001), and became more critically conscious (Jarvis, 2000). Wright’s (2007) findings that a popular British television show from the 1960s informally educated viewers lead her to determine that “[e]ducators in all disciplines can benefit from incorporating popular culture into their teaching” (p. 70).

Theoretical Frame

The concept of public pedagogy is a variation of the Kolb (1984) experiential learning model and the notion of constructivism in education. The theoretical framework of this study is a combination of Kolb’s experiential learning model and Dewey’s (1938) theory of authenticity in constructivist education. Basing his work on Piaget and Dewey, Kolb describes four steps in the experimental learning cycle. Figure 1.1 denotes Kolb’s model.

Figure 1.1 Kolb’s Model of Experiential Learning.



Kolb defines concrete experience as a “here-and-now” incident in which the learner has full involvement. The observation and reflection stage is where the learner reflects on the experiences from multiple perspectives. In the formation of abstract concepts and generalization stage, students integrate theoretical concepts into their actions. The final stage of Kolb’s model, testing implications of new concepts in new situations, encourages students to utilize new theories to make decisions and problem solve (Knowles, Holton, & Swanson, 1998). Svinicki and Dixon (1987) note Kolb’s model integrated into the collegiate classroom has been shown to increase students’ retention of material.

Constructivism “stresses all knowledge is context bound, and individuals make personal meaning of their learning experiences” (Knowles, Holton, & Swanson 1998, p. 142). Dewey (1938) stresses the importance of not only contextualizing material, but assuring the contextual frame is familiar to the student. Public pedagogy is a pedagogical tool which not only contextualizes theories and concepts for the student, but also allows the student to be guided through the Kolb cycle.

Methods

Hypothesis

H₀: There is no difference in the rate of knowledge retention between students taught the leadership behavior of Challenge the Process using lecture, experiential learning, or public pedagogy.

Population and Sample

The population of this study consists of all students at The University of Georgia enrolled in ALDR 3900, Leadership and Service (n=70). Students were enrolled in three sections of ALDR 3900 on the Athens campus. They represented the sophomore, junior, and senior classes. Subject selection was made by randomly assigning each section of ALDR 3900 taught during the Fall of 2009. One of three teaching methods was used in each section including lecture, experiential learning, or public pedagogy. Section A had an enrollment of 18, section B had an enrollment of 20, and section C had an enrollment of 32.

Instrumentation

Researchers developed the instrument utilizing Challenge the Process (Kouzes & Posner, 2007) material as a basis. Eight questions consisting of six multiple choice and two fill-in-the blank were developed using the sub-constructs highlighted by Kouzes and Posner as essential learning in both the Leadership Challenge (4th ed.) and the Student Leadership Challenge (2008). The instrument was sent to a panel of experts to test face validity.

Design

A static-group comparison design was utilized for this study with the groups consisting of the three sections of ALDR 3900 (Fraenkel & Wallen, 2008). Traditional lecture was treated as the control group while experiential learning and public pedagogy methods were treated as the experimental groups. To lessen experimental bias, the researchers were not the instructor of record for any class sections in the experiment.

Section A was randomly selected to receive the contextual information of Challenge the Process via public pedagogy. Popular media clips including the music video for *Here it Goes Again* by Ok Go, a College Sports TV story on a deaf NCAA football player, and a Nike commercial featuring Michael Jordan were infused into the base power point to illustrate conceptual points. Discussions on iPods vs. Zunes, different symbols of change, and examples of Challenge the Process seen on campus were discussed to aid in their assimilation of content to popular culture.

Section B was randomly selected to receive the contextual information of Challenge the Process via traditional lecture. A base power point was created to teach the two main conceptual points of Kouzes and Posner's Commitment 5 – (a) search for opportunities and (b) experiment and take risks. In addition, the five sub points of (a) seize the initiative, (b) exercise oversight, (c) treat every job as an adventure, (d) question the status quo, and (e) send everyone shopping for ideas were used in the study (Kouzes & Posner, 2007).

Section C was randomly selected to receive the contextual information of Challenge the Process via experiential learning. The base power point lecture was used and two experiential activities were added. The Kolb (1984) model of experiential learning was used to process the activities. Students were asked to tell, pair and share an example of change they have been a part of, and role-played the children's book *The Little Engine that Could*.

The instrument was given to students post instruction as a closed note, closed text quiz by the researcher. Two weeks after the initial experiment, the regular instructor gave the students the instrument again. Four weeks after the initial experiment, the instrument was given a third time to the students by the instructor.

Table 1 shows the number of students participating in the treatments and subsequent quizzes.

Table 1. *Participation in quizzes*

Method	Quiz 1	Quiz 2	Quiz 3
Group A	15	12	13
Group B	13	16	12
Group C	25	19	24

Analysis

Due to absences of the students over the period of experimentation, 38 students were present in class to take all three quizzes (54% retention rate). Data was entered into the Statistical Package for Social Sciences 18.0 and means were calculated and compared to delineate differences between and among the treatments. Mean differentiation and summation was chosen as the proper statistical methodology due to the low n for this study.

Findings

The null hypothesis of this study postulated there is no difference in the rate of knowledge retention between students taught the leadership behavior of Challenge the Process using lecture, experiential learning, or public pedagogy. A comparison of the quizzes using descriptive analysis showed a difference between mean scores between treatments. An analysis of summated means showed differences in the mean scores. By both measures, the null hypothesis is rejected.

Retention of Material

Quiz 1

After each class period, students were given the first of three quizzes (instruments). Table 2 shows the descriptive results. Section A, public pedagogy, had the highest mean (76.39), Section C, experiential, had the second highest mean (73.33), and Section B, lecture, had the lowest mean (62.50). It is interesting to note the range between public pedagogy and traditional lecture.

Quiz 2

Two weeks after the experiential treatment, the quiz (instrument) was given to the students by the instructor of record. Table 3 shows the descriptive results. Again, section A, public pedagogy, had the highest mean (73.61), Section C, experiential, had the second highest mean (67.50), and Section B, lecture, had the lowest mean (47.22). There was more than a 30 point range between public pedagogy and traditional lecture.

	M	SD	Min	Max	Mdn
Quiz 2					
Section A (n=9)	73.61	15.87	50.00	87.50	75.00
Section B (n=9)	47.22	24.83	12.50	87.50	50.00
Section C (n=15)	67.50	22.56	12.50	100.00	62.50

had the second highest mean (67.50), and Section B, lecture, had the lowest mean (47.22). There was more than a 30 point range between public pedagogy and traditional lecture.

Quiz 3

Four weeks after the experiential treatment, the quiz (instrument) was given to the students by the instructor of record. Table 4 shows the descriptive results. Section C, experiential learning, had the highest mean (76.67) followed closely by Section A, public pedagogy, (73.61) and 30 points lower was Section B, lecture, (48.61).

Table 4. *Quiz 3 Scores*

	M	SD	Min	Max	Mdn
Quiz 3					
Section A (n=9)	73.61	15.87	37.50	87.50	75.00
Section B (n=9)	48.61	23.75	12.50	87.50	50.00
Section C (n=15)	76.67	19.40	25.00	100.00	75.00

It should be noted Section C had completed a test two days prior to the third quiz which may account for the increase in mean between the second and third quiz.

Teaching MethodsTable 2. *Quiz 1 Scores*

	M	SD	Min	Max	Mdn
Quiz 1					
Section A (n=9)	76.39	11.60	62.50	87.50	75.00
Section B (n=9)	62.50	17.68	37.50	87.50	62.50
Section C (n=15)	73.33	19.97	37.50	100.00	75.00

Analysis of the summated means of the three treatments and the three quizzes compared to the grand mean resulted in a discrepancy between public pedagogy and experiential learning and lecture. Public pedagogy's summated mean of 74.54 and experiential learning's summated mean of 72.50 was above the grand mean of 67.68, while the summated mean of traditional lecture fell below the grand mean with a value of 51.04. Table 5 shows the differences between the summated means and grand mean.

Table 5.

Section	Grand M	SD
A	74.54	14.10
B	51.04	22.60
C	72.50	20.60
All	67.68	21.50

Conclusions/Implications

A main component of leadership development is education (Brungardt, 1996). As more colleges and universities continue to add collegiate leadership theory and application courses, it becomes more imperative for pedagogy of teaching leadership to be studied (Williams, Townsend & Lindner, 2005). In this study three teaching methods including lecture, experiential learning, and public pedagogy were tested to determine the difference in student learning and content retention.

Faculty has a direct impact on the learning of their students. Dewey (2006) states that if the "habits of the teacher are so narrow and fixed, his imagination and sympathies so limited, his own intellectual horizon so bounded, he brings [ideas] to bear in a wrong way" (p. 549). Faculty must be open to modifying their teaching methods. For the millennial student "it is not easy for experienced instructors to recognize that the way they were taught and the way they have taught is not effective" (Taylor, 2006, p. 251).

The findings of the study showed knowledge retention was highest and most consistent over time for the students who received their information via public pedagogy. This supports the findings of Jarvis (2000), Marshall (2001), and Wright (2007) who found students engaged more in the curriculum when public

pedagogy methods were used. Kamis et al. (2005) noted that for adult learners engagement equals knowledge retention.

It can also be concluded that traditional lecture utilizing only slides with key information on them is ineffective in the knowledge gain and retention of the leadership practice, Challenge the Process. The dramatic decrease in mean scores for Section B between the first quiz and the subsequent quizzes show a severe lack of retention of the material. This finding supports the work of Young, et al. (2009) who found lack of engagement brought on by students being passive spectators in the classroom led to decreased retention in material. The summated mean scores of Section B being lower than the grand mean also shows it is an inferior way of teaching Challenge the Process.

It can be concluded public pedagogy and experiential learning are more effective ways of teaching Challenge the Process, with public pedagogy slightly more consistent and effective. This supports the work of Champoux (2005) who concluded that supplementing lectures with verbal and visual material enhances the learning of the student.

If this study is generalized, the implications for leadership educators are simple: lecture is ineffective. Understanding the teaching methodologies of public pedagogy and experiential learning are paramount in students' learning of leadership. To test this implication, more research should be conducted. Repeating this study on a larger scale, repeating with different leadership content, and looking at the use of public pedagogy with other adult learners will strengthen and add to the results of this study. As leadership education moves forward, connecting leadership theory to student's everyday world is imperative in the role of leadership educators.

References

- Brungardt, C. (1996). The making of leaders: A review of the research in leadership development and education. *The Journal of Leadership Studies*, 3(3), 81-95.
- Callahan, J. L., & Rosser, M. H. (2007). Pop goes the program: Using popular culture artifacts to educate leaders. *Advances in Developing Human Resources*, 9(2), 269-287.
- Callahan, J. L., Whitener, J. K., & Sandlin, J. A. (2007). The art of creating leaders: Popular culture artifacts as pathways for development. *Advances in Developing Human Resources*, 9(2), 146-165.
- Champoux, J. E. (2005). Comparative analyses of live-action and animated film remake scenes: Finding alternative film-based teaching resources. *Educational Media International*, 42(1), 49-69.
- Coles, J., & Armstrong, P. (2007). *Dumbing down history through popular culture: Communities of interest or learning as consumption*. Proceedings of the 37th Annual Standing Conference on University Teaching and Research in the Education of Adults, Queen's University, Belfast, Northern Ireland.
- Cooper, J., Prescott, S., Cook, L., Smith, L., Mueck, R., & Cuseo, J. (1990). *Cooperative learning and college instruction: Effective use of student learning teams*. Long Beach, CA: California State University Foundation.
- Dewey, J. (2006). Individuality and experience (1926). In *Forgotten Heroes of American Education*, p. 589-594.
- Dewey, J. (1938). *Experience and education*. New York: Macmillan.
- Fieldhouse, R. (1995). *Historical perspectives on future developments and diversity in British adult education*. Proceedings of the 25th Annual Standing Conference on University Teaching and Research in the Education of Adults, University of Southampton, Winchester, England.
- Foley, G. (2001). Radical adult education and learning. *International Journal of Lifelong Education*, 20(1/2), 71-88.
-

- Franenkel, J. R., & Wallen, N. E. (2008). *How to design and evaluate research in education* (7th ed). Boston: McGraw-Hill.
- Giroux, H. (1992). *Border crossings: Cultural workers and the politics of education*. New York: Routledge.
- Giroux, H. (2000). Public pedagogy as cultural politics: Stuart Hall and the crisis of culture. *Cultural Studies*, 14(2), 341-360.
- Gramsci, A. (1971). *Selections from the prison notebooks*. New York: International Publishers.
- Halpern, D. F. (2000, March). Creating Cooperative Learning Environments. *APS Observer*, p. 14-15, 29-31.
- Hodge, R., & Kress, G. (1988). *Social semiotics*. Ithaca, NY: Cornell University Press.
- Jarvis, C. (2000). *Researching adult learners' reading histories and practices*. Proceedings of the 41st Annual Adult Education Research Conference (p. 196-200), University of British Columbia, Vancouver, Canada.
- Kamis, M., Muhamad, M., Junoh, A. M., Asmuni, A., & Idris, K. (2005). *Informal learning in Malaysia*. Proceedings of the 46th Annual Adult Education Research Conference, University of Georgia, Athens.
- Knowles, M. S., Holton III, E. F., & Swanson, R. A. (1998). *The adult learner* (5th ed). Houston: Gulf.
- Kolb, D. A., (1984). *Experiential learning: Experience as the source of learning and development*. Englewood-Cliffs, CA: Prentice-Hall.
- Kouzes, J., & Posner, B. (2007). *The leadership challenge*, (4th ed.). San Francisco: Jossey-Bass.
- Kouzes, J., & Posner, B. (2008). *The student leadership challenge: Five practices for exemplary leaders*. San Francisco: Jossey-Bass.
- Lull, J. (1995). *Media, communication, culture: A global approach*. New York: Columbia University Press.
-

- Marshall, D. M. (2001). *Thinking outside the box: Using popular culture to stimulate a critical thinking process*. Unpublished master of education thesis. University of Alaska, Anchorage.
- Rogers, E. E. (2002). *Waiting to exhale: African American women and adult learning through movies*. Proceedings of the 43rd Annual Adult Education Research Conference (p. 327-332), North Carolina State University, Raleigh.
- Svinicki, M. D., & Dixon, N. M. (1987). The Kolb model modified for classroom activities. *College Teaching*, 35(4) 141-146.
- Taylor, M. L. (2006). Generation next comes to college: 2006 updates and emerging issues. *Self-study and Institutional Improvement*, 2(2), 248-255.
- Thompson, P. M. (2007). The influence of popular culture and entertainment media on adult education. In E. J. Tisdell & P. M. Thompson (Eds.), *New directions for adult and continuing education: No. 115. Popular culture and entertainment media in adult education* (p. 83-90). San Francisco: Jossey-Bass.
- Williams, J. R., Townsend, C. D., & Lindner, J. (2005). Teaching leadership: Do students remember and utilize the concepts we teach? *Journal of Leadership Education*, 4(1), 66-78.
- Wright, R. R. (2006). *Popular culture, cult TV, and gender resistance: Informal learning from primetime feminism*. Proceedings of the 36th Annual Standing Conference on University Teaching and Research in the Education of Adults (p. 449-464), All Saints College, Leeds, United Kingdom.
- Wright, R. R. (2007). *The Avengers*, public pedagogy, and the development of British women's consciousness. In E. J. Tisdell & P. M. Thompson (Eds.), *New directions in adult and continuing education: No. 115. Popular culture and adult education* (p. 63-73). San Francisco: Jossey-Bass.
- Wright, R. R., & Sandlin, J. A. (2009). Cult TV, hip hop, shape-shifters, and vampire slayers: A review of the literature at the intersection of adult education and popular culture. *Adult Education Quarterly*, 59(2), 118-141.
- Young, M., Robinson, S., & Albert, P. (2009). Students pay attention! Combating
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the vigilance decrement to improve learning during lectures. *Active Learning in Higher Education*, 10(1), 41-55.

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