

Students' Perceptions of an Agricultural Communications Field Trip¹

R. Partyka², A. Riggs³ and D. Cartmell⁴
Oklahoma State University
Stillwater, OK



L. Cota⁵
University of Vermont
Burlington, VT

Abstract

This mixed-method research describes student perceptions of a collegiate agricultural communications course field trip to employers in journalism-related fields in a major metropolitan area. The trip provided an effective educational method related to enhancing students' perceptions of a broad communications-related skillset. However, the researchers found students may have trouble transitioning between the classroom and real-world newsroom and office settings. Students may also have trouble connecting their agricultural communications skillset to non-food and fiber industries.

Introduction

Field trips have been studied as an effective method of teaching children since the early 1900s (Falk and Balling, 1980). Lucy Mitchell, a pioneer of early childhood education, wrote in the 1930s that field trips were an important part of an effective social science curriculum (Taylor et al., 1997). Because field trips were proven as an effective means of applying, retaining, and transferring knowledge (National Research Council, 2000), there is justification for using them for learning (Gilbert and Priest, 1997; Hofstein and Rosenfeld, 1996). In kindergarten through 12th grade education, both the Council (1996) and National Science Teachers Association (1998) endorsed them as valuable learning opportunities. Field trips are often categorized as instances of experiential learning, and, more recently, short-term experiential learning (Scarce, 1997).

Scarce (1997) wrote "field trips may best be seen as an example of short-term experimental education" (p. 219). Wright (2000) notes the benefit of short-term experiential learning is that the length of time it requires often allows lessons to be taught in "a brief period of time, often lasting less than a day" (p. 117). The benefit

of short-term experiential learning, according to Wright (2000), is it is easily incorporated by an instructor who has little experience with experiential learning and simply wants to try out a different method of instruction.

Scarce (1997) noted students seem the most motivated to learn "when they concretely experience social phenomena through the everyday settings of field trips" (p. 220). The ability to use class field trips to observe real-world application of theories, understand research, and solidify material and lessons taught in the classroom make the trips a valuable, but often underused method of teaching, at least in higher education (Scarce, 1997). Scarce (1997) also tied class field trips to experiential education when he recalled Dewey's recognition that these types of events are critical for student learning as they are "lived social events that become ways of knowing" (p. 220).

In a case study of multiple instructors' sociology field trips, Wright (2000), in his analysis of a field trip, confirmed Scarce's (1997) findings that field trips provided short-term experiential learning beneficial in not only reaffirming course material, but also in showing students the real-world implications of their coursework. Wright (2000) wrote the class instructor "found the trip 'extremely effective,' noting that the value of experiential learning is that the subject is real and comes alive" (p. 121). Wright (2000) concluded short-term experiential learning is both flexible and adaptable.

Experiential learning is also effective in teaching mass communications and journalism to students at the collegiate level (Steel et al., 2007). Experiential learning methods that simulate a newsroom and real-world environments have shown "*students seemed to grow in confidence as they dealt with the chaos of their particular newsrooms, and this growth in confidence is*

¹This paper was presented in Minneapolis, MN, at the 2016 annual gathering of the Association for Education in Journalism and Mass Communications.

²MS Agricultural Communications, 2300 17th St. NW, Apt. 2, Washington, D.C. 20009; (301) 580-2562, RobParty@camcast.net

³Assistant professor of agricultural communications, 440 Agricultural Hall; (405) 343-2557, Angel.Riggs@okstate.edu

⁴Professor of agricultural communications and assistant director of the Master of International Agriculture Program, 545D Agricultural Hall; Dwayne.Cartmell@okstate.edu

⁵Director of Assessment, Data and Accreditation, College of Education & Social Services, 441 Waterman Bldg.; (802) 656-3878, lisa.cota@uvm.edu

Students' Perceptions

reflected in the student response" (Steel et al., 2007, p. 331). The most beneficial factor of experiential learning in communications and journalism instruction is the idea that students feel as if they are "doing it for real" (Steel et al., 2007, p. 330).

Pennington (2012) reported great success in using an experiential learning-based curriculum to teach high school agriculture students basic videography skills via a portable laboratory that the researchers called a "mobile classroom." Pennington noted the experiential aspect of the curriculum was largely credited for its successes. Parks (2015) boasted the success of using experiential learning methods in the journalism classroom. Parks found students who completed an experiential collaborative writing and editing exercise appreciated the "real-world, professional-style experience," found "pride in adapting creatively to problems in real time," and learned firsthand the "fast-emerging divide... that mirrored professional reporter/copy desk tensions" (p. 132).

Out-of-classroom learning can also have drawbacks. A potential drawback of out-of-classroom learning is students can be unprepared for learning if they are not aware of the goals and specific reason for the field trip (Orion and Hofstein, 1994). Research has also shown that if the teacher is unaware of their role in shaping students' experiences during the field trip, it can have a detrimental effect on retention of knowledge gained during the trip (Kisiel, 2005). In addition, "several researchers have noted that teachers may not have explicit goals for their visit and are unable to connect the experience to the classroom curriculum" (Kisiel, 2005, p. 937). Behrendt and Franklin (2014) highly recommended the teacher be prepared to "focus the students' mental and physical energy towards participation at the venue" (p. 239) to make the educational impact of the trip as successful as possible.

Most field trip-related research was constructed using experiential learning (Behrendt and Franklin, 2014). Previous research on field trips primarily focused on hard-science curricula taught at the elementary and secondary levels (Falk and Balling, 1980). What little research exists at the higher education level focuses primarily on out-of-classroom lab or clinical experiences. Although research overwhelmingly supports the use of field trips in grade school (Falk and Balling, 1982), few studies focus on the impact of trips at the collegiate level. Of the research regarding field trips at the collegiate level, most of these studies focused on the hard sciences (Francis et al., 2011; Hix, 2015). The researcher found no literature regarding college-level field trips combined with student expectations regarding writing and future communication-related careers.

The purpose of this study was to determine collegiate agricultural communications students' perceptions of a field trip by using surveys and a focus group as a means of investigation. The study was also intended to help instructors better understand how field trips in the social sciences influence students' expectations regard-

ing potential careers and real-world workplace expectations. This study allows educators in the social sciences to determine the value of adding short-term field trip experiences to the curricula.

Research objectives

1. Determine perceptions of agricultural communications students toward class field trips.
2. Describe the influence of a class field trip on agricultural communications students' career expectations.
3. Describe the influence of a class field trip on agricultural communications students' attitudes toward the relevance of writing in their future careers.

Methods

The field trip observed in this research included taking agricultural communications students enrolled in a junior-level writing course to various professional offices in the communications industry. This once-per-semester trip occurred late in the fall semester and included visits with a marketing and design professional at a major metropolitan area food bank, a political field representative, a public relations professional at a regional zoo, officials at a well-known public relations firm, and editors at a state travel-related magazine. The Oklahoma State University Institutional Review Board approved this research protocol Nov. 10, 2015. A signed consent form was obtained from each participant prior to their participation in this study.

The study's mixed methods design uses three instruments for data collection. The first instrument was a modified version of an instrument originally developed by Orion and Hofstein (1991) that assessed students' attitudes toward scientific field trips. This four-point Likert scale instrument was administered the class period before the trip and immediately upon the group's return from the trip, prior to any debriefing of the trip. The second was an open-response questionnaire also distributed with the pre- and post-test instruments. The third was a focus group session three months after the field trip.

The 32-question, four-point scale instrument was to investigate "past experience in the field, attitudes towards the subject matter, and previous attitudes towards field trips" (Orion and Hofstein, 1994, p. 1103). The instrument assessed five dimensions of students' attitudes toward the field trip.

Although the original instrument focused on students' experiences with a geology field trip, the authors recommended the instrument "be used to assess student perceptions in other scientific disciplines" (Orion and Hofstein, 1991, p. 520). The original instrument was modified slightly to accurately assess the topic, which was a communications-oriented field trip rather than a geology trip. The modified instrument was approved by a five-member panel of experts who are all academics and experienced researchers within the communications and journalism fields. Examples of selected questions

from each dimension of the instrument can be found in Table 1.

The second instrument was an open-response questionnaire consisting of 10 questions. Like the first instrument, the questionnaire was administered a few days before the field trip and then again immediately after the trip concluded. Questions included some demographic questions such as "What is your major/majors" and "How many internships have you completed for academic credit." The main purpose of the instrument, however, was to gauge students' thoughts about their careers before and after the field trip as well as to assess what skills they believe are relevant to their future careers. The face validity of the second instrument was also confirmed by the same panel of experts. Responses were coded using initial coding.

The third and final instrument consisted of questions asked during a focus group. The participants were asked a total of six questions regarding their thoughts on the field trip and its effectiveness. The responses were transcribed and coded using in vivo coding, which uses participants' vernacular to develop codes (Saldana, 2016).

Participants

The population for this study included students majoring in agricultural communications at a large Mid-western land grant university. This population was purposive and chosen because of the goals of the research. The 14 participants in the first two data collection instruments were students enrolled in an agricultural communications media-writing course and who attended an optional field trip to various media-related professional workplaces. Students who attended this field trip via the same class during a previous semester were included in the focus group to provide more responses and adequate data.

Results of the first survey were entered into Idiogrid Version 2.4, a software program that provides Observation Oriented Modeling data analysis (Grice, 2011). Each of the five factors of the first instrument was analyzed in OOM. The other two data collection methods were analyzed in a qualitative manner, the first using initial coding and the second using in vivo coding.

Observation Oriented Modeling

Observation Oriented Modeling (OOM), unlike most traditional statistical analysis, provides researchers the opportunity to explore patterns in the observed data at the level of the individual, rather than the aggregate (Valentine and Buchanan, 2013); as such, OOM is an alternative to null hypothesis significance testing (Cota, 2017). Because of the focus on the individual, researchers have more freedom to "make inferences

Table 1. Sample Questions Regarding Each Dimension of the Modified Orion and Holstein (1991) Instrument

Dimension	Sample Questions
1. The field trip as a learning tool	1. Field trips help in understanding material learned in class
	15. Field trips are important because they demonstrate and illustrate concepts learned in class
2. Individualized learning as learning method during a field trip	21. Working individually during a field trip is important for understanding the material
	31. Field trips make me take an interest in, and search for, additional information
3. The social aspect of field trips	6. I would like to have more field trips since they are a lot of fun
	20. The good atmosphere with my friends during a field trip is the main reason for my enjoyment of the event
4. The adventure aspect of field trips	4. What I like in a field trip is the adventure; e.g. going to multiple places, fast-paced nature etc.
	8. I like field trips that involve a lot of walking
5. The environmental aspect of field trips	13. The AGCM (agricultural communications) field trip increases one's awareness of the communications industry
	22. Familiarity with different types of employers increases my connection to the AGCM industry

regarding causal explanations of patterns in observed data" (Cota, 2017, p. 1; see also Grice et al., 2012). Additionally, given the small sample size in this study, it is almost inappropriate to make inferences to population parameters, a defining feature of traditional statistical analyses. There are no population parameters in OOM, which makes it an ideal analytic tool for this study.

Ordinal Pattern Analyses

An ordinal pattern analysis in OOM considers the trends in data, requiring the user to specify a prediction of a pattern the data will take. The observations from the study are then compared to that pattern. If an observation fits the expected pattern, it is considered classified correctly; if the observation does not fit the expected pattern, it is considered classified incorrectly. The number of observations classified correctly is compared to the number of observations overall and is expressed as a percentage. In this study, the researchers believed students' attitudes toward field trips would be more positive after the field trip, which would be reflected through higher sum total scores on the post-test of the 32-question survey. An observation was classified correctly if a student had a higher post-test score as compared to their pre-test score; an observation was classified incorrectly if a student had a higher pre-test score as compared to their post-test score.

Results and Discussion

Quantitative Analyses and Results

Sum totals of the instrument for the 14 pairs of pre- and post-instruments were calculated and then analyzed using Idiogrid Version 2.4. Table 2 shows the classification results for the observations in the five dimensions of the first instrument. The ordinal pattern analysis showed that 9 of the 14 students (64.29%) had higher post-test scores on three out of five dimensions of the instrument: Field trip as a learning tool, Social

Table 2. Ordinal Pattern Analysis Results for Each Construct of First Instrument

Dimension Number and Name	Classifiable Pairs of Observations	Correct Classifications	Correct Classifications(%)
1. Field trip as a learning tool	14	9	64.29%
2. Individualized learning during a field trip	14	3	21.43%
3. Social aspect of field trips	14	9	64.29%
4. Adventure aspect of field trips	14	2	14.29%
5. Environmental aspect of field trips	14	9	64.29%

aspect of field trips, and Environmental aspect of field trips. Three of the 14 students (21.43%) had higher post-trip scores on the Individualized learning during a field trip dimension, and two of the 14 students (12.29%) had higher post-trip scores on the Adventure aspect of field trips dimension.

Qualitative Analyses and Results

The responses to the questionnaire were analyzed for word usage frequencies as well as coded using initial coding protocols. Participants were asked to list as many career options as they could think of for an agricultural communications graduate. Participants listed a combined total of 94 career options before the field trip, and also listed 94 as a combined total after the field trip. This makes for an average of 6.7 career options per participant.

Analysis of the open-ended instrument found that students valued social media and design courses much more after the field trip than before. For example, when asked to list classes they thought would be most useful in their future careers, participants listed their program's new media course one time, and a layout and design course six times. However, after the field trip, when asked the same question, the new media course was listed seven times, and the layout and design course was listed 10 times.

Participants were also asked to describe how important they believed writing skills would be in their future careers. Before the trip 10 out of 14 participants used the word "important." Others used words like "crucial," or described how good writing was necessary to their perceived future. One participant explained that writing is a "good indicator of how you can communicate," while a different participant expressed that "writing will become a major part of many careers that I am interested in."

Similarly, after the trip, eight out of 14 participants used the word "important" when asked to describe how important they believed writing skills would be in their future careers. Additionally, the responses after the trip contained a much higher frequency of positively connotated adjectives such as "very" and "super." One participant reported that they would "write for every job you will ever have in this industry," with another stating that "every professional career involves writing."

The third and final data collection method was a focus group. Five of the 14 participants in the focus group had attended the field trip in the previous semester, while others attended further in the past. The conversation during the focus group was recorded, transcribed, and coded using an in vivo method.

Themes Resulting from the Focus Group Interview

Not a cookie cutter job. Participants learned their degree was extremely versatile with a diversity of potential jobs. All participants expressed they enjoyed the variety of employers they visited.

When asked what they enjoyed about the field trip, Participant 1 said she liked "the variety of places we went to...they were so different." Participant 3 agreed, saying she "liked the fact that we got to see so many different things." Participant 4 built upon that statement by saying the trip "showed you the different things you could do. Or the different organizations you could work for, depending on what route you go."

Participants also expressed that the point of the trip was to show the versatility of their degree. Participant 5 said the point was "to see how versatile our ag-comm degree is." Participant 3 also expressed her appreciation for the field trip and the variety of employment options: "I don't know how I would of gotten the opportunity any other way, to, like, see those types of companies." Participant 4 also expressed enjoyment in the trip's ability to show how tasks across similar jobs varied saying "it was really neat to see that even if you're just in journalism or P.R., that there is variety of things to do in that, which was neat."

Writing was their main thing. Five participants said writing was the skill employers found most important. When asked if anyone disagreed, no one spoke. When asked why they thought writing was the skill most valued, participants expressed they believed it was their job. Participant 9 noted "most of them [employers visited] were writers"

Always have to be on their toes. Participants also expressed that the field trip opened their eyes to things about the workplace that they do not think they would have learned in the classroom. One participant expressed her surprise in how much work goes on at some of the workplaces visited: "Whenever we went to (a state travel magazine) like I guess I didn't realize how much work goes into what they do and their jobs just seem very overwhelming, but it good for us to see that before we get ourselves into that situation if we weren't prepared for it."

Another participant expressed a similar feeling, saying it was nice to see that not everything is as it seems in the college classroom: "I feel like some of the employers focused on on-the-job training too, you get the impression in college that everything you learn in class is going to be perfect and you're going to know it and pretty sure you only know like half the job." Participant 3 built on that comment, adding: "Each place is different and they have their specific ways of doing things. They'll teach you how they want it done."

Switch up the locations. Although students seemed satisfied overall with the field trip, they did express some displeasure with a few aspects of the trip. Among the first things participants expressed was that while the trip

included a variety of places, it would have been nice to consider student input when planning the trip. Participant 2 also thought it might be nice to see other places, besides the same locations visited year after year: *"Maybe different locations for different students? So we get a broader, I mean we got a broad range going, but I think it would be cool to visit other places too besides the regular places every year."* Participant 6 also mentioned perhaps using student input to plan the locations as well: *"Maybe, like, form a list [of possible locations] and then pass it out during class and then have students check off which places are most interesting"*

Another problem the participants noted about the field trip was they felt that none of the locations dealt with agriculture. Participant 7 noted this was not an issue for her, but she said she heard other students gripe about it: *"I didn't really care, but, um, not many of them were very ag-based, it being, like, an ag-based major."* Participant 5 agreed with the statement of Participant 7, adding: *"I don't want to do ag, so it really isn't that big of a deal, but I can see it being a point, [the major] being in ag."*

Discussion

Conclusions related to Objective 1. Objective 1 was to determine perceptions of agricultural communications students toward class field trips. It is not surprising participants in this study found the field trip to be an adequate learning tool, as several focus group participants expressed the field trip opened their eyes to the inner workings of the communications industry. Multiple participants suggested they would not have learned about the workplace without an experience like the field trip and noted they appreciated how seeing it in person gave them a better understanding of what post-graduation life might entail. This finding reflects Eshach's (2006) view that a field trip "changes the routine" (p. 197) of everyday learning. The ability to move outside of the routine classroom and experience the industry was also something they believed was important to their futures. The ability to see first-hand what a job is like behind the scenes proved to be a powerful tool in the eyes of undergraduate students. The old mantra of "when am I ever going to use this" truly comes to life during the field trip as students see and experience that what they learn in the classroom is directly related to the workplace and is something that employers look for in candidates. These findings also align with Wright (2000), who wrote that field trips allow the subject to "come to life" (p.121) for the students.

Perhaps the least surprising finding is that so many students gained an appreciation for the environmental aspect of field trips, as reflected in higher post-trip scores on that dimension as compared to their pre-trip scores. The entire field trip revolved around showing participants different work environments and exposing them to potential employment scenarios. The results of the focus group supported these findings as participants repeatedly said they enjoyed the myriad of places visited

and the differences among the locations. The exposure to different places and environments seemed to have left an impression on the participants, as it was one of the first topics discussed during the focus group. The students were engaged and expressed enjoyment in not visiting similar locations. By keeping the students moving to and from different locations, the instructor created a sense of excitement and novelty, something they thoroughly enjoyed.

Contrary to the expected pattern of higher post-trip versus pre-trip scores, students overwhelmingly had lower post-trip scores on the Individualized learning (n=11) and Adventure aspect (n=12) dimensions. Perhaps students may not have been inclined to learn individually during the field trip because there was no academic pressure for them to do so; the instructor did not require them to complete any activities or post-trip assignments, as the main purpose of the trip was to expose them to potential career opportunities. Furthermore, the small number of participants who went on the trip (n=14) may have made it easier for them to group together and gain experiences as a cohort rather than at an individual level. The results of the Adventure aspect may be partially accounted for due to the instrument's adaptation from its original use for a geology field trip to one that focuses on social sciences; because the trip did not involve any sort of natural exploration, it comes as no surprise that participants did not find the trip to be an "adventure."

Conclusions related to Objective 2. Objective 2 was to describe the influence of a class field trip on agricultural communications students' career expectations. These findings show that students have a secure grasp on where they believe they will be employed after graduation. Even after seeing different employment locations, students seemed increasingly dedicated to their desired career path. This could be a good thing, as the dedication that students have toward future employment in a specific area may be a strong indicator that they are willing to remain persistent in achieving their goals and dreams. It also shows that even after students see the inner workings of an industry, students are as determined as ever to work in those settings. While students learned how busy a magazine newsroom or public relations office may seem, they remain passionate in their desire to work at those locations.

These findings align with Steel et al. (2007) who noted students reported the "chaos" and fast pace of the newsroom helped them learn. It is important to note that while students in the Steel et al. (2007) study participated in a simulated newsroom, the participants in this study simply observed one.

The findings of the relevant skills portion of the open-ended instrument also present interesting results. Before the field trip, six participants said the layout and design would be useful in their future careers, and only one student wrote that the new media course would be useful in their future career. However, after the field trip, 10 students said the layout and design course would be

Students' Perceptions

useful in their future, and seven students listed the new media course. The slight increase in those who mentioned the layout and design course could possibly be related to visiting a magazine newsroom, as an idea of working in that location was fresh in their minds. The spike in mentions of the new media course is an interesting finding. This increase may be attributed to the employers' stating that social media is an emerging technology that is extremely important in their organizations.

Participants on the field trip were told more than once by the employers they visited that social media is something they should keep in mind in their organizations. In one specific example, a public relations official with a city zoo told the field trip attendees that learning emerging and popular social media platforms is important because they are a huge part of her job. Also, the field trip might have helped these students realize that these technologies are important for businesses and organizations, not just for social entertainment and personal communications. They may not have appreciated how important staying relevant and keeping up to speed with technology is for business and media organizations.

Conclusions related to Objective 3. Objective 3 was to describe the influence of a class field trip on agricultural communications students' attitudes toward the relevance of writing in their future careers. Students both before and after the field trip noted that writing was an extremely important skill to hone. When asked the importance of writing skills on the second instrument, all students wrote that writing would be an important skill in their future careers. Furthermore, all of the participants in the focus group agreed that writing was important to each person and organization they visited. This shows they held a firm grasp on the importance of writing. They realize that writing is not only important to communicate to the public but also is used heavily in internal communications.

In addition, when asked what courses would be useful, there was no increase in the frequency of writing courses mentioned after the field trip when compared to the pre-trip results. This shows that instructors are doing an excellent job of conveying the importance of writing to their students. Furthermore, it shows that even students who wish to work in the design and layout niches realize the importance of writing.

Recommendations for Practice

Instructors should note that many participants in this study appeared surprised by how different the workplace can be from the classroom. Because of this, instructors should specifically describe the crucial differences between workplace and classroom; instructors should then engage their students in critical thinking activities that can simulate the ever-changing workplace environment, so they are not surprised when they enter the workforce. Instructors should also impress upon their students the importance of learning and mastering emerging technologies and social media.

The findings in this study indicate that students may feel that their communications-related education does not reflect the "agriculture" sector. During the focus group, one participant mentioned that while they enjoyed the trip, they did not believe it incorporated any sort of agricultural aspects. Two participants agreed with her statement. This may not reflect the skills-based education they receive as much as their interpretation of the subjective word "agriculture." Students, especially those who plan to work in a communications-related position, should have a better understanding of the broad agricultural industry. For example, participants in this study did not clearly see the link between the zoo and the agricultural industry. Furthermore, they did not associate a public relations firm as relating to agriculture, even though the host at this business explained that the firm had served agriculture-related clients. In fact, in three of the five stops during the trip, which included a major metropolitan food bank, students met with an alumnus of their agricultural communications program, yet they did not seem to relate the experiences to "agriculture." Instructors should note that their students may have a difficult time recognizing the broad industry of agriculture.

Recommendations for Future Research

Future research should expand on the importance and rationale for taking students in social-science majors on field trips, perhaps looking at what aspects of the trip are most beneficial for connecting the classroom to the real world. Additionally, future research should focus more on why students have unwavering determination when discussing their future career paths. It would also be interesting to know what impact talking to professionals and visiting workplaces within the industry have on the skills and courses students' value. Future research should also develop methods to broaden students' conceptualization of agriculture and its impact on the country and non-traditional industries. Another point of exploration may involve determining what specific aspects of certain workplaces students perceived as "chaotic," despite those places being seemingly calm environments to the researchers, and how that "chaos" might impact students' perception of that specific workplace or broader career field.

Summary

Agricultural communications undergraduate students attended a one-day field trip to various journalism-related workplaces in a major metropolitan area. Through analyses of a pre- and post- field trip survey, an open-response instrument, and a focus group, the researchers found that the experience enhanced students' appreciation for their major-related coursework. Additionally, students valued the importance of writing in all aspects of a communications-related career. However, despite the included workplaces having some connection to the agricultural industry, some students

seemed to have trouble recognizing a more-broad concept of agricultural-oriented workplaces outside of the food and fiber industries.

Literature Cited

- Behrendt, M. and T. Franklin. 2014. A review of research on school field trips and their value in education. *International Journal of Environmental & Science Education* 9: 235-245.
- Cota, L.D. 2017. An examination of alternatives to null hypothesis significance testing (Order No. 10686232). ProQuest Dissertations & Theses A&I. (2061725556). <https://search.proquest.com/docview/2061725556?accountid=14679>.
- Eshach, H. 2006. Bridging in-school and out-of-school learning: Formal, non-formal, and informal education. *Journal of Science Education and Technology* 16(2): 171-190. DOI: 10.1007/s10956-006-9027-1.
- Falk, J.H. and J.D. Balling. 1980. The school field trip; Where you go makes a difference. *Science and Children* 17: 6-8.
- Falk, J.H. and J.D. Balling. 1982. The field trip milieu: Learning and behavior as a function of contextual events. *The Journal of Educational Research* 76(1): 22-28.
- Francis, C.A., N. Jordan, P. Porter, T.A. Breland, G. Lieblein, L. Salomonsson, V. Langer. 2011. Innovative education in agroecology: Experiential learning for a sustainable agriculture. *Critical Reviews in Plant Sciences* 30(1-2): 226-237. DOI: 10.1080/07352689.2011.554497.
- Gilbert, J. and M. Priest. 1997. Models and discourse: A primary school science class visit to a museum. *Science Education* 81(6): 749-762. DOI: 10.1002/(SICI)1098-237X(199711)81:6<749: AID-SCE10>3.0.CO;2-I.
- Grice, J. 2011. *Observation oriented modeling: Analysis of cause in the behavioral sciences*. Burlington, MA: Academic Press.
- Grice, J.W., P.T. Barrett, L.A. Schlimgen and C.I. Abramson. 2012. Toward a brighter future for psychology as an observation oriented science. *Behavioral Sciences* 2(1): 1-22. <http://doi.org/10.3390/bs2010001>.
- Hix, D.M. 2015. Providing the essential foundation through an experiential learning approach: An intensive field course on forest ecosystems for undergraduate students. *Journal of Forestry* 113(5): 484-489. DOI: 10.5849/jof.14-065.
- Hofstein, A. and S. Rosenfeld. 1996. Bridging the gap between formal and informal science learning. *Studies in Science Education* 28(1): 87-112. DOI: 10.1080/03057269608560085.
- Kisiel, J. 2005. Understanding elementary teacher motivations for science fieldtrips. *Science Education* 89(6): 936-955. DOI: 10.1002/sce.20085.
- National Research Council. 1996. *National science education standards*. Washington, D.C.: National Academy Press.
- National Research Council. 2000. *How people learn: Brain, mind, experience, and school: Expanded edition*. Washington, DC: The National Academies Press.
- National Science Teachers Association. 1998. *The national science education standards: A vision for the improvement of science teaching and learning*. Arlington, VA: National Science Teachers Association.
- Orion, N. and A. Hofstein. 1991. The measurement of students' attitudes towards scientific field trips. *Science Education* 75(5): 513-523.
- Orion, N. and A. Hofstein. 1994. Factors that influence learning during a scientific field trip in a natural environment. *Journal of Research in Science Teaching* 31(10): 1097-1119.
- Parks, P. 2015. A collaborative approach to experiential learning in university newswriting and editing classes: A case study. *Journalism and Mass Communication Educator* 70(2): 125-140. DOI: 10.1177/1077695814562068.
- Pennington, K.M. 2012. *Knowledge and perceptions of a visual communications curriculum unit in Arkansas secondary agricultural classrooms: An impact of experiential learning* Master's thesis. University of Arkansas, Fayetteville. ProQuest Dissertations and Theses database. (UMI No. 1508212).
- Saldaña, J. 2016. *The coding manual for qualitative researchers*. 3rd ed. Thousand Oaks, CA: Sage.
- Scarce, R. 1997. Field trips as short-term experiential education. *Teaching Sociology* 25(3): 219-226. DOI: 10.2307/1319398.
- Steel, J., B. Carmichael, D. Holmes, M. Kinse and K. Sanders. 2007. Experiential learning and journalism education. *Education & Training* 49(4): 325-334. <http://dx.doi.org/10.1108/00400910710754462>.
- Taylor, S.I., V.G. Morris and C. Cordeau-Young. 1997. Field trips in early childhood settings: Expanding the walls of the classroom. *Early Childhood Education* 25(2): 141-146.
- Valentine, K.D. and E.M. Buchanan. 2013. JAM-boree: An application of observation oriented modeling to judgements of associative memory. *Journal of Cognitive Psychology* 25(4): 400-422. DOI: 10.1080/20445911.2013.775120.
- Wright, M.C. 2000. Getting more out of less: The benefits of short-term experiential learning in undergraduate sociology courses. *Teaching Sociology* 28(2): 116-126. <http://www.jstor.org/stable/1319259>.

Copyright of NACTA Journal is the property of North American Colleges & Teachers of Agriculture and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.