Farm Field Days as a Learning Model for Agricultural Literacy

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Introduction/Need for Research

Many of the counties in Utah have been conducting farm field trips or farm field day events—some for more than 20 years. The intended outcome of these farm field day experiences is an increase in agricultural literacy among the elementary students that attend (Utah Agriculture in the Classroom, 2016). While it is known that these field trips occur statewide and involve hundreds of volunteers, state Extension staff, farm organization staff, several thousand elementary students, and their teachers, little is known about specific numbers reached, the field day event configurations, or how these events influence or impact participant agricultural understandings.

The American Association for Agricultural Education National Research Agenda (Roberts, Harder, & Brashears, Eds., 2016) establishes seven research priorities to address issues related to agricultural education. Research Priority 1 outlines the need for research related to "Public and Policy Maker Understandings of Agriculture and Natural Resources" (p. 10). Within this priority, one specific research question asks, "What methods, models, and programs are effective in informing public opinions about agriculture and natural resource issues" (p. 10)? Farm field days in Utah are programs organized and promoted by farm organizations and county Extension leaders to educate elementary school students about agriculture to increase agricultural literacy.

Farm field days are not unique to the state of Utah; a Google search using the terms "farm field day" returns links to over 38,000 pages describing multiple locations and types of experiences nationwide. While the number of educational programs is substantial, "the amount, type, accuracy, and quality of agricultural information provided to the general public is unknown" (Enns, Martin, & Spielmaker, 2016, p. 15). Farm field day impacts in Utah have not been measured; however, this model is similar to other field trip experiences and have the potential to increase the agricultural understandings of future policy makers. Fieldtrips have been found to enhance the understanding of academic content (Pawson & Teather, 2002), using all the senses for memorable experiences (Balliel, Duran, & Bilgili 2011). Hofstein & Rosenfeld (1996) found that significant learning occurs on field trips and that this learning is retained over a long period of time.

Theoretical Framework

This descriptive study was designed to objectively study the variables of the farm field day model in Utah to develop descriptive categories or constructs for impact research (Gall, Gall, & Borg, 2015). This foundational benchmark data documents student and organizer participation, event durations, field day event seasons (i.e., fall, spring), the agricultural content presented, the types of resources used by field day presenters, the experiential activities provided, the types of student assessments used, and the use of teacher evaluations.

Methodology

An email was sent out to every [University] county Extension office statewide asking if they were the coordinator of their county farm field day and, if so, would they be willing to complete a 5-10 minute survey on their county farm field day. If they were not the coordinator of the event, they were asked if they could provide the name and contact information of the coordinator in their county. County offices not responding to the email were contacted with a

second email two weeks later with the same request. Counties that did not respond to this second email were then contacted via phone and asked if they would prefer to take the survey over the phone, or if they could provide the contact information of the coordinator for data collection.

An online survey with 19 items was developed to gather descriptive data regarding the following variables: participant numbers; grade level participation; the event season; location (urban, suburban, rural); the venue; the duration of the event, learning station topics; time spent at each learning station; number of students at each learning station; presentation selection procedures; practices for vetting presenters; the use of Agriculture in the Classroom resources; the use of student assessments, and to determine if teacher evaluation data had been collected.

Results/Findings

Data was collected from 28 counties (STATE has 29 counties, but two county offices have been combined into one). Of these 28 counties, 17 conduct an annual farm field day event, and two of the 17 conduct two or more events annually. The grade level of students participating ranged from preschool through sixth grade, for a total of 15,250 students. Most (37%) of the farm field day events are held in the spring (three for multiple days). Three counties held a farm field day in the spring and the fall. Farms and fair grounds were equal as venue choices accounting for 14 of the venues.

The number of the stations at each event ranged between six and fourteen, with students' time spent at stations ranging from six to thirty minutes. Station topics were determined based on local agriculture production, willing commodity group participation, related school curriculum topics, and the popularity of previous presenters. Learning stations included presentations on animals, including but not limited to, pigs, chickens, cattle and horses (100% of the events), farming/farm tour (82%), soil (76%), and healthy eating (59%). Two field days also reported opportunities for students to touch or hold baby animals.

Fifty-three percent of the farm field day organizers provided teachers with Utah educational resources that could be used after the farm field day. After the event, 41% of the farm field day coordinators asked teachers to complete an evaluation, 35% said they didn't request an evaluation, and 18% said they sometimes asked for an evaluation. Seven counties (42%) assessed student agricultural knowledge with only three (18%) doing it consistently.

Conclusions

This descriptive data indicates the widespread use of farm field days as a model in Utah for increasing agricultural understandings or agricultural literacy. However, with an average of 50,000 students per grade level in Utah, this model is potentially impacting only 30% of the target audience; additionally, with only 18% of the counties conducting student assessments, this model may not be as effective as other models for increasing agricultural understandings. Finally, research suggests an experience can be enhanced by the setting. With more than half of the venues being off-farm, the experience may be limited.

Implications

This descriptive study obtained baseline data regarding farm field day variables. The results indicate a need to measure the outcomes among students to determine the model's effectiveness. As this learning model (farm field trip) used in many states, this data can be used to develop constructs and conduct comparison and correlation studies to measure farm field day impacts.

References

Balliel, B. D., Duran, M. & Bilgili, S. (2011). Effects of field trip-observation method on the motivation of students. *2nd International Conference on new Trends in Education and Their Implications.* Paper presented at Antalya-Turkey (1016-1020). Siyasal Kitabevi. Retrieved from http://www.iconte.org

Enns, K., Martin, M., & Spielmaker, D. (2016). Research priority 1: Public and policy maker understanding of agriculture and natural resources. In Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). *American Association for Agricultural Education national research agenda: 2016-2020.* (13-18). Gainesville, FL: Department of Agricultural Education and Communication.

Gall, M. D., Gall, J. P., & Borg, W. R. (2015). *Applying educational research: How to read, do, and use research to solve problems of practice*. Hoboken, NJ: Pearson Education, Inc.

Hofstein, A. R. & Rosenfeld, S. (1996). Bridging the gap between formal and informal science learning. *Studies in Science Education, 28,* 87-112. Retrieved from http://www.bobpearlman.org/BestPractices/Israel/Bridging%20the%20Gap.pdf

Pawson, E. T. & Teather, E. K. (2002). Geographical expeditions: Assessing the benefits of a student- driven fieldwork method. *Journal of Geography in Higher Education, 26*(3), 275- 289. doi:10.1080/030982602200001986 4

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). *American Association for Agricultural Education national research agenda: 2016-2020.* Gainesville, FL: Department of Agricultural Education and Communication.

Utah Agriculture in the Classroom (2016). Farm field days. Retrieved from http://utah.agclassroom.org/htm/outreach/farmfield