Evaluating Response Rates for Agricultural Educators

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Introduction and Need for Research

Agricultural educators lead busy and chaotic lifestyles (Hainline et al., 2015; King et al., 2013). Between teaching multiple classes, maintaining safe facilities, coordinating coaching teams, and facilitating advisory board meetings, a day in the life can fill quickly. When a teacher finally returns to their laptop while they are trying to enjoy their lunch or after a long day of teaching, the last item many want to see is a request to complete another survey. While we recognize our surveys are designed intentionally and strategically, it is difficult to have findings without participation from the target population—our agricultural educators. While work has been done in school-based agricultural education (SBAE) in regards to survey design (Chaudhary & Assan, 2024), limited work exists with timing. Further, while research exists regarding dissemination with general market research (McQuarrie, 2016), we recognize SBAE teachers are an anomaly and lead unique schedules which may influence best practices for survey dissemination. The purpose of this pilot study was to examine response rates among SBAE teachers. Objectives included: 1) evaluating the response rates of respondents at different times of the day and 2) evaluating the amount of time it took for respondents to submit the instrument.

Theoretical Framework

Homans' (1958) social exchange theory posits individuals engage in social activities which have low cost, low effort, and the potential for high reward either for themselves or for something they care about. We know timing is an important consideration in survey design (Dillman et al., 2014) and that time is costly (Homans, 1958) and limited for SBAE teachers. This study seeks to identify times which may be most convenient and least costly for SBAE teachers to maximize response rates. Since we value teachers' expertise and want their participation, we wish to minimize *cost* and communicate *high reward* so that we can increase *engagement* with SBAE teachers. Adhering to Homans' (1958) theory assists us in achieving this goal.

Methodology

An IRB-approved instrument was reviewed by an expert panel to assure content and face validity (Heale & Twycross, 2015; Thyer, 2010). We identified 4 states within the same time zone which had online teacher directories. Fifty teachers from each state, for a total of 200 teachers, were randomly selected and assigned to 1 of 4 groups: 6 a.m., 9 a.m., 3 p.m., and 6 p.m. (Creswell & Creswell, 2018). Each group was sent their instrument on Wednesday, May 14, 2025. Fifty educators were emailed the instrument and an IRB consent form. No incentives were offered in order to truly evaluate the willingness of the respondents to respond (Lavrakas, 2008). As a methodological study, we capitalized on Homans' (1958) theory in our recruitment emails, reminding respondents their engagement would have high benefit for SBAE and require minimal effort. Responses were collected via Qualtrics and analyzed using SPSS and Excel. As we were trying to measure response rates on the initial contact, no follow-up reminders were scheduled. A total of 27 educators completed the instrument, yielding an overall response rate of 13.5%; 17 were female, 10 were male, and they offered an average of 11.4 years of experience ($\sigma = 10.6$).

Results and Findings

Objective 1 sought to evaluate the response rates of respondents at different times of the day. Table 1 reveals the 6 p.m. group yielded the greatest response rate, doubling the rate of the second-best group, which was 3 p.m. However, respondents in the 3 p.m. group tended to take the most time to respond; only one respondent in this group was completed in less than 5 hours.

Table 1

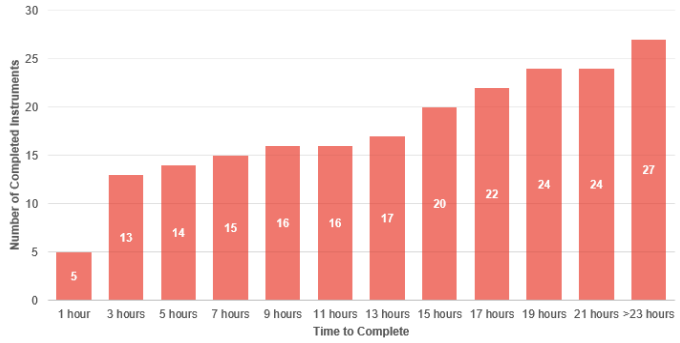
Response Rates for Each Distribution Time and Average Response Time

Time Distributed	Instruments Completed	Response Rate	Average Response Time
6 a.m.	5	10.0%	3.40 hours
9 a.m.	4	8.0%	2.75 hours
3 p.m.	6	12.0%	34.33 hours
6 p.m.	12	24.0%	9.92 hours

Objective 2 sought to evaluate the amount of time it took for respondents to submit the instrument. The graph presented in Figure 1 reveals the cumulative frequency of respondents submitting the instrument over time. Within 3 hours, nearly half (n = 13; 48.1%) of participants had submitted the instrument; the majority of respondents submitted the instrument within 24 hours of the initial distribution time, with only 3 (11.1%) submitting it over 24 hours later.

Figure 1

Number of Submitted Instruments Over Time



Conclusions and Recommendations

This pilot study revealed sending instruments out in the evening (6 p.m.) yielded the greatest response rates (n = 12; 24%), and that most individuals choosing to respond to an instrument did so within the first 5 hours of receiving it (n = 14; 51.9%). Limitations included the small sample size and only sending the instrument at four different times throughout one day. Further, while there was no attrition in the study, there is the chance that a more complex instrument may have yielded different findings and lower response rates (Creswell & Creswell, 2018; Lavrakas, 2008).

For research recommendations, a larger sample size would help generate more confidence within the findings. Further, using the same study design and examining trends in response rates over different days of the weeks may also reveal interesting trends. This study only examined response rates for respondents on a Wednesday in May. Further research may reveal additional times or days which are perceived as *lower cost* for teachers (Homans, 1958). Further, it would be valuable to compare how response rates are different for SBAE teachers at different points throughout the year, such as September or January. A final research recommendation would be to examine how many individuals choose to come back to and complete an instrument after initially opening it, potentially forgetting to complete it at a later time. As additional data is collected related to response rates in SBAE teachers, for professional practice, it is recommended to distribute instruments at times or days of the week which are most conducive to the busy schedules of SBAE teachers, as this will result in the most maximized response rates possible.

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