Echoes in the Void: Agriculturalists Perceptions of Communicating with Non-Agricultural Populations

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Introduction

The challenges of developing disciplinary literacy between agriculturalists and non-agriculturalists has been elusive and is compounded by the complexity of agriculture in a decreasingly agriculturally literate society (Balschweid, Thompson, & Cole, 1998). Clemons, et al. (2018) documented the importance of parsing the difference of being literate and possessing literacy in agriculture. Disciplinary literacy refers to the knowledge and understanding needed for advanced study while being disciplinary literate is the ability to communicate through speaking, listening, and writing using specialized words and terms (Clemons, et al., 2018). Literacy focuses on knowledge and understanding while being literate is concerned with communication and learning through reading, writing and speaking (Harris & Hodges, 1995). Public perception of agriculture is often dictated by news organizations, personal experiences, and social media. Marketing and information are powerful measures for the promotion of food products when little regard is given for the limitations of agricultural literacy of the general public. Competing themes within agricultural literacy influence decisions the general public make when selecting goods and services originating from agricultural production. Many factors have historically influenced consumer choice when determining family food needs: store environment, pricing, assortment, and store image (Aylott & Mitchell, 1998). In comparison, today's consumer is weighing ease of access and technology in favor of clear and concise messages (Elms, DeKervenoael, & Hallsworth, 2016). It is then left to society to embrace the differences between agriculturalists and non-agriculturalists using analysis and reflection to make things better (Chambers, 1997).

Theoretical Framework

The theoretical basis for this study is based on Herzog's theory of Uses and Gratification (1940) and structured in the work of Shanahan and Shanahan (2008). Balschweid, et al. (1998) identified the importance of considering the nation's agricultural knowledge as means of being agriculturally literate. To address the perceptions for developing common disciplinary literacy between agriculturalists and non-agriculturalists three research questions guided this investigation: 1) How can agriculture literacy be promoted among non-agriculturalists? 2) What challenges are there to promoting agricultural literacy with non-agriculturalists? and 3) What personal characteristics influence agricultural literacy? This research addresses Priority One: Public and Policy Maker Understanding of Agriculture and Natural Resources (Enns, Martin, & Spielmaker). Enns, et al. (2016) postulated the need for agriculturalists to continue the search for methods which will best educate the general public and policy makers about agriculture.

Methods

A Delphi study approach was used to frame Herzog's theory of Uses and Gratification (1940) and was structured in the work of Shanahan and Shanahan (2008). The study consisted of three-rounds of investigation with identified experts (N = 15) using predetermined selection criteria. The instrument was developed using statements constructed from existing research in the field of agriscience education, disciplinary literature, and literacy research outside of agriscience education. Dalkey and Helmer (1963) of the RAND Corporation are generally

credited with the development of the Delphi technique. Hsu and Sandford (2007) noted it "is a widely used and accepted method for achieving convergence of opinion concerning real-world knowledge solicited from experts within certain topic areas" (p. 1). Experts were purposively chosen (N = 15) to participate in the study using established Delphi techniques as reported by Rayfield and Croom (2010) and supported by Conner and Roberts (2013). Panel members were recruited and selected based on their leadership roles and experience in agriculture. Participants were employed in the agriculture industry and served in a leadership capacity that provided opportunity for interacting with the public. The Delphi process consisted of three rounds and data was collected using open-ended and closed-ended response questions and statements. The first-round instrument consisted of three open-ended questions: 1) How can agriculture literacy be promoted among non-agriculturalists? 2) What challenges are there to promoting agricultural literacy with non-agriculturalists? and 3) What personal characteristics influence agricultural literacy?

Results

The first-round instrument was comprised of three open-ended questions and generated 65 responses generated into 19 statements in the round-two instrument. Round two statements were presented using a five-point scale: 1) Strongly Agree, 2) Agree, 3) Neither Agree or Disagree, 4) Disagree, 5) Strongly Disagree. Agreement levels of 80% (Dalkey, 1969) were used to determine consensus for each question in rounds two and three. This level of agreement is consistent with Rayfield and Croom (2010) where items receiving 80% agree or strongly agree determines consensus. Participants indicated their perceptions of how disciplinary literacy can be promoted among non-agriculturalists, the challenges experienced when discussing agriculture, and the personal characteristics which influence disciplinary literacy. The interpretation of the participant responses identified potential areas of dissonance when discussing disciplinary literacy outside of agriculture.

Conclusions and Implications

This study describes the need for further understanding of disciplinary literacy and the perceptions non-agriculturalists possess of the agricultural industry. Participants demonstrated a positive self-worth when discussing agriculture as related to disciplinary literacy. Their intrinsic understanding of the role of agriculture in society to enhance the life, food security, and need for transparency was overwhelmingly evident. Participants failed to identify the methods they use for translating this knowledge to non-agriculturalists. This finding reinforces the suspected gap in our field; disciplinary literacy is highly ingrained in our conversations with each other, however bridging the literacy gap to non-agriculturalists is elusive. Agriculturalists in this study felt strongly that disciplinary literacy best explains agriculture and through education non-agriculturalists will adapt. If both agriculturalists and non-agriculturalists fail to cooperatively develop a common vernacular, ambiguity, diversity, and plural realities become difficult to tolerate (Chambers, 1997). The greater implication of this study is "who's right" and how will agriculture rise to meet the challenges of a growing population that demonstrates less disciplinary literacy in agriculture?

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