PHENOMENOLOGICAL ANALYSIS OF ELEMENTARY TEACHERS' STRATEGIES FOR INCLUDING AGRICULTURAL SCIENCE IN THE CURRICULUM OF LUBBOCK INDEPENDENT SCHOOL DISTRICT

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Introduction

Agricultural education plays a role in promoting sustainability awareness and interdisciplinary learning (Knobloch et al., 2007), yet its integration into elementary school curricula remains limited (Burrows et al., 2020).

The research questions of the study were:

- How do elementary school teachers in the ISD perceive the relevance of integrating agricultural sciences into their curriculum?
- How do students respond to agricultural science integration?
- What challenges do teachers encounter when implementing agricultural science education?

Theoretical Framework

- This study is grounded in constructivist learning theory and Dewey's experiential learning theory and emphasizes the value of real-world learning experiences that reinforce practical application (Soffer, 1993; Dewey, 1938; Kolb, 1984).
- The study also aligns with STEM education theory, which integrates science, technology, engineering, and mathematics with practical applications, making agriculture an ideal interdisciplinary tool (Kelley & Knowles, 2016).

Methods

- A hermeneutic phenomenological approach was employed to explore the lived experiences of elementary teachers.
- The sample was purposive with elementary school teachers in Lubbock, TX (n=7) who participated in semi-structured interviews conducted via Zoom.
- Data were transcribed verbatim and analyzed using Delve software, allowing for systematic coding and theme identification.

Results

Teachers' Perceptions of Agricultural Science Integration.

- Teachers viewed agricultural education as a valuable tool for enhancing real-world connections, interdisciplinary learning, and sustainability awareness.
- They highlighted its natural alignment with STEM subjects and its role in fostering critical thinking.

Students' Responses to Agricultural Science Integration.

- Teachers observed increased student engagement, curiosity, and participation when agricultural topics were introduced
- Experiential learning methods, such as planting projects, led to deeper inquiry and improved retention.

Challenges in Implementing Agricultural Science Education.

- Teachers faced barriers such as strict curricula, financial constraints, and time limitations, which hindered the effective integration of agricultural topics.
- A lack of administrative support further complicated efforts to sustain these programs.

> **"Agriculture allows students to think beyond the textbook, connecting concepts to real-world applications."**

> **"Students began asking more questions and taking an active interest in topics like plant growth and farming processes."**

> **"We have to justify every expense, making it difficult to secure materials like gardening supplies or animal care equipment."**

Conclusions

- Agricultural education has the potential to enhance elementary learning by making subjects more engaging and applicable to real-world contexts, aligning with Knobloch (2008) teachers recognized its interdisciplinary value but struggled with systemic challenges that limited its implementation.
- This study has demonstrated that the integration of agricultural sciences into elementary education is a multi-faceted endeavor, shaped by teachers' perceptions, student engagement, and the structural challenges faced in curriculum implementation.
- An example of this is the research done by Frederickson (2023) in an established agriculture program for elementary schools.

Recommendations

- We recommend increased professional development as teachers need targeted training in agricultural literacy and experiential learning strategies.
- Schools should collaborate with agricultural organizations, universities, and local farms to provide hands-on learning opportunities to create community engagement and partnerships.
- Further research should explore long-term student outcomes, cross-district comparisons, and effective teacher training models to enhance agricultural literacy.

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References