



EXPLORING TEACHERS' PERCEPTIONS OF AUTHENTIC LEARNING IN GRADE SIX AGRICULTURE TECHNOLOGY MODULES IN SRI LANKA

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This research probes teachers' perceptions on the application of authentic learning in the Grade Six Agriculture Technology topic in the Western Province of Sri Lanka. The research problem that was addressed was the discrepancy between intended objectives of integrating agriculture technology into junior secondary education namely, enhancing practical skills, problem-solving, and real-life application and current teaching practices used in the classroom. Though genuine learning is acknowledged in general terms as an effective approach for vocational and technology subjects, the key to its successful implementation rests primarily on classroom practices and instructors' attitudes. The research objectives are to examine teachers' conception and implementation of authentic learning in agricultural technology courses, analyze the challenges teachers face, and explore the implications of authentic learning. A qualitative research approach was employed, making use of an interpretive research design for obtaining rich understanding of teachers' lived experiences. Systematic sampling method was used to select 140 agriculture teachers from IC, IAB, Type 1, and Type 2 schools, which offered different socio-educational contexts. Data were collected using focus group discussions, semi-structured interviews, and classroom observations. Thematic analysis was used in order to establish dominant patterns and draw conclusions. Three general themes were identified through the analysis: genuine teaching-learning processes, genuine learning settings, and genuine assessment strategies. The teachers emphasized bridging theory with practice agricultural activities such as gardening, composting, and crop experimentation. While 72% of the participants indicated positive attitudes towards authentic learning, underlining its capacity to engage students and develop practical and critical thinking skills, approximately 65% identified major barriers to implementation, including lack of resources, lack of professional development, rigid curriculum structures, and time constraints. The study argues that although teachers value the instructional potential of authentic learning, there are problems to be addressed in order for it to be successfully integrated into agriculture education. Policy and institutional strategies such as teacher capacity building, better infrastructure, and curriculum alignment are needed to expand authentic learning. The findings highlight the need to align classroom practice with Sri Lanka's 21st-century education vision.

Keywords: authentic learning, agriculture, technology education, teacher perceptions, grade six, general education

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INTRODUCTION

The idea of real-world learning has been attracting global interest in recent years as educational systems try to close the gap between learning in school and doing in the real world. Authentic learning encompasses meaningful, relevant, and purposeful learning experiences and provides learners with opportunities to problem solve, collaborate, exhibit social responsibility, and build knowledge. This allows students to apply their knowledge through real-world tasks (Chabeli et al., 2021). In the Sri Lankan context, agricultural technology education was incorporated into the junior secondary curriculum as per curriculum reforms to aid in the growth of students' employability and life skills. The Grade 6 agriculture module is geared towards introducing the students to environmental awareness, sustainable agriculture, and food production.

The effectiveness of pedagogically authentic learning in agriculture education will rely, in large measure, on teachers' awareness, willingness, and support structures in place. Teachers are the major conduit of authentic learning in their classrooms, and their design and implementation of activities suitable to local contexts that afford opportunities for assessment with meaning. However, the authenticity of learning experiences can be compromised by differences in resourcing, teacher preparation, and institutional support, especially between school types and locations.

Despite the fact that authentic learning has been internationally recognized as an effective pedagogical approach, nothing is known about how Sri Lankan agriculture teachers perceive, interpret, and implement authentic learning approaches in the Grade 6 agriculture technology module. Despite the curriculum intention to build sustainability, employability, and life skills, empirical studies on teachers' understanding of authentic learning, adopted approaches, designed learning environments, and assessment practices are limited. In addition, the extent to which supports and barriers—such as teacher preparedness, resource availability, and school climate—affect the actualization of authentic learning in agriculture education is understudied. This gap makes it challenging to determine whether policy ambitions are in line with classroom realities in the Sri Lankan junior secondary curriculum.

Research Aims

To explore agriculture teachers' perceptions of actual teaching and learning practices occurring in the Grade 6 agriculture technology module.



To analyze definitions of actual teaching and learning practices as understood by agriculture teachers.

To determine the types of actual learning environments teachers, create in their classrooms.

To examine the extent to which authentic learning is implemented by teachers under different school conditions.

To examine evaluation practices, which teachers use to measure learning outcomes for authentic learning.

To ascertain hindering and facilitating factors to the adoption of authentic learning in agriculture education in the Western Province.

Research Questions

What are agriculture teachers' perceptions of authentic learning in the Grade 6 Agriculture Technology module?

In what ways do agriculture teachers envision authentic teaching and learning practices in the Grade 6 Agriculture Technology module?

What are the pedagogical practices that teachers use to facilitate students' experiences of authentic learning in agriculture classrooms?

In what ways do teachers construct authentic learning environments in different school contexts?

What are the evaluation practices that teachers use to assess students' authentic learning achievements?

What are the obstacles to the implementation of authentic learning in agriculture education?

METHODOLOGY

The researcher used a qualitative research design to explore in-depth the teachers' views and experiences. A total of 140 agriculture teachers, all working to develop agricultural education programs, were formally recruited using systematic sampling by evenly representing agriculture teachers in different communities, urban, semi-urban, and rural (IAB, IC, Type 1, and Type 2 schools) and selected an even number from each type of school. Data were collected through focus groups (n=35), semi-structured individual interviews (n=65) and classroom observations (n=20) that allowed triangulation and verification of the data collected.

Thematic analysis was used to code and review the data. Verbatim transcriptions of the interviews and focus groups were used and a predominantly inductive analysis



and thematic approach was followed to identify patterns and themes demonstrating teachers' understanding, experiencing, and utilizing of authentic learning.

RESULTS AND DISCUSSION

The study results were organized around the specific themes that arose in the data, revealing connections to the objectives and research questions. Thematic analysis of interviews, focus groups, and classroom observations generated three major themes: (1) Perceptions of authentic teaching–learning practices, (2) Creation and management of authentic learning environments, and (3) Use of authentic assessment strategies. The discussion that follows provides insights about these themes as they relate to teachers' experiences and perceptions, as well as enabling and constraining factors.

1. Perceptions of Authentic Learning in Agriculture Education

72% of the teachers involved demonstrated a solid understanding of authentic learning, often through hands-on practice in real-world situations, interactive learning by students, and connections with contextual learning. Teachers described authentic learning as “learning by doing”, “solving real problems”, and “making links between what we learn at school and what we do in everyday life.” Many cited where agriculture is inherently authentic to learning and where hands-on learning and contextual learning took place, lent themselves to the nature of authentic learning.

Teachers reported using aspects such as garden care, compost preparation, and pest management as part of their teaching. They saw value in the activities and believed it fostered student engagement while supporting important life-skills such as responsibility, observation, and making decisions. A particularly valuable point mentioned was that genuine learning seemed to motivate students and encourage them to participate more, particularly those who may have mistrusted textbook or traditional forms of learning.

Despite a strong sense of appreciation for the idea, not all teachers were able to confidently plan and facilitate activities with continuity.

2. Authentic Learning Environments in Varied School Contexts

Teachers' capacity to create authentic learning environments was substantially variable by school type and geography. IAB and IC school respondents generally had land, and tools and materials available and were able to provide genuine real-life experiences through agriculture, unlike Type 1 (and to a certain degree Type 2) school respondents. For many teachers, mainly those working in urban areas or areas with high economic needs stated that they faced major constraints.



Approximately 60% of the teachers stated they did not have school wide facilities (school garden, water source, and places to store tools). One teacher stated, "We have the knowledge and the ideas, but we don't have the space or the support to enact them." In those instances, teachers used visual effects, story, or talked theoretically, which does not allow students any experience.

Several teachers demonstrated innovation however, such as using potted plants in their classroom, using home gardens and farms as tributaries. These adaptations are all indicative of the position of the teacher to provide authentic experiences for students despite poor space, social, economic, or educational circumstances.

Ultimately, whilst teacher perceptions of authentic learning environments varied considerably, the quality, and contiguous nature of the authentic experiences was directly contingent on the school's physical infrastructure, administrative support, and teacher agency.

3. Authentic Assessment Practices and Challenges

Teachers generally accepted the potential of authentic assessment methods that involved real-world skills and learning processes. 68% of respondents reported using project work, observation checklists, garden logs, and group projects when assessing students. The assessments allowed the teachers to observe students' practical skills, creativity, collaboration skills and problem-solving abilities.

For instance, teachers assigned students planning a mini vegetable plot or keeping a journal on documenting plant growth. These activities allowed students to not only consolidate their learning but also crucially engage in reflection and develop ownership of the learning process. However, these types of practices were usually used informally and inconsistently between schools.

The issue that was raised was around the contradiction between authentic learning and established assessment. Although there were instances of authentic assessments, most formal assessments remained assessment centered and exam focused. This included putting emphasis on rote learning and not on how skills and assessment are very much applicable in the real-world context. Therefore, many teachers felt obliged to retreat back to formal assessment for term-end evaluations, which contradicted their goal of trying to use authentic assessments throughout a student's learning process.

Moreover, teachers expressed that there was a lack of an informed process (including guidelines and training) on how to design and assess authentic assessments. This suggests a need for some systematic support to develop assessment frameworks that would be aligned with the agriculture education aims/objectives of learning and authentic learning.



4. Facilitating and Hindering Influences of Implementation

The research identified both types of influences facilitating and hindering the implementation of authentic learning in agriculture education:

Facilitators included:

- Teachers' intrinsic motivation and positive beliefs about authentic learning
- Supportive school leadership, especially in resource-rich schools
- Infrastructure and community support
- Students who are interested and motivated in hands-on learning

Hindrances included:

- Inconsistencies in available resources across different school types
- Rigidity of the curriculum and time
- Limited teacher training providing guidance around authentic pedagogy and assessment
- A system-wide focus on exam-based learning

The findings indicate that a multi-level approach involving curriculum designers, education authorities, and school level leadership will be necessary to support and grow authentic learning in agriculture education.

The findings validate that authentic learning in agriculture technology education has substantial potential to reform experiences in schooling and emphasize practical, life-related learning. Teachers' perceptions were generally positive but van der Meij et al's (2021) contrasting realities and policy restrictions shaped their practices (Groff et al., 2023). To address the hindrances outlined in this study will be critical in enacting meaningful pedagogies in schools.

CONCLUSIONS

This research investigated agriculture teachers' viewpoints and engaging with authentic learning in Grade 6 agriculture technology module across different school types within the Western Province of Sri Lanka. Overall, 72 % of teachers display a positive perception toward authentic learning in agriculture education, acknowledging its value to engage students with purposeful, authentic tasks in the real world. However, how teachers use these methods practically varied considerably depending on the school context, available resources and applicable curriculum. The research identified three key themes such as authentic teaching-learning practices, authentic learning environments, and authentic assessment approaches. Teachers were able to show how committed they were to utilizing authentic approaches with authentic experiences such as school gardening, composting, observation based projects, etc. However, challenges such as limited land space, a lack of tools and/or materials (highlighted as an important challenge by over 60% of participants), rigidity of the curriculum, and lack of assessment hindrances prevented teachers



from consistently utilizing an authentic approach regardless of school type (more so for Type 1 and Type 2 schools).

Even with the aforementioned barriers to authentic learning, some teachers were innovative and flexible in creating authentic learning experiences from available classroom and community resources. Although there is a discrepancy between teachers' visions of authentic teaching and their assessment practices that stem from a heavy examination focus, approximately 68% of teachers said they used project-based and performance assessments informally, but they faced challenges making these informal project-based assessments fit into the formal system of assessment.

In conclusion, there is potential for authentic learning to enhance agriculture education and develop life skills for students, but systemic changes to education will need to occur to enhance authentic learning potential. These changes would include re-structuring curriculum to provide flexibility, investing in agricultural infrastructure at the school level, and offering in-depth professional development for teachers around authentic pedagogy and assessment.

When addressing policy and practice to develop educational practices with flexible, authentic, and student-centered approaches in Sri Lanka's general education system, the reality is that a "one-size-fits-all" approach will likely miss the opportunity of providing equitable, relevant, and authentic learning opportunities.

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