Examining Teacher Perceptions of the Agricultural Mechanics Industry-Based Credential in Louisiana

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Introduction

With the passage of the Strengthening Career and Technical Education (CTE) for the 21st Century Act, also known as Perkins V Act in 2018, significant changes were made to CTE programs across the nation. This legislation required states to implement one of the three following accountability indicators into their programs: Work Based Learning, Dual Credit courses, and Industry-Based Credentials (IBCs) (Advance CTE, 2020). In Louisiana, high school students must select a diploma pathway. These pathways include the Taylor Opportunity Program for Students (TOPS) University Pathway and the Jump Start TOPS Tech Pathway (Louisiana Department of Education, n.d.a). When students are enrolled to earn IBCs, they are classified as a Jump Start TOPS Tech Pathway (Louisiana Department of Education, n.d.a). The Louisiana career pathways offer IBCs ranging from Adobe to Agricultural Mechanics (Louisiana Workforce Commission, n.d.). Within Louisiana, career and technical education (CTE) students are classified as *Jump Start 2.0* students. *Jump Start 2.0* is the Perkins V CTE accountability program in the state (Louisiana Department of Education, n.d.b). Therefore, school-based agricultural education (SBAE) teachers are required to offer industry-based certifications to their students who are in the Jump Start program (Louisiana Bulletin 741, 2025).

Theoretical Framework

Ajzen's (1991) Theory of Planned Behavior (TPB) was the theoretical framework used throughout this study. The three independent components mentioned throughout the theory were a) attitude toward the behavior, b) subjective norm, and c) perceived behavioral control (Ajzen, 1991). In the context of this study, the survey assessed the participants' perceptions and what changes needed to be made to the Louisiana Agricultural Mechanics IBC and framework. The behavior of this study was the Agricultural Mechanics IBC. The intention of this study was to make changes to the IBC based on industry expectations assessed in this credential from teachers' perspectives.

Methodology

The main goal was to revise the current Louisiana Agricultural Mechanics IBC, as well as receive teachers' feedback about the development of an agricultural mechanics pacing guide. This study was conducted during all three weeks of the Louisiana FFA Area Leadership Camp. The participants were divided into groups of three and asked to complete open-ended questionnaires regarding their thoughts and priorities in making changes to the Louisiana Agricultural Mechanics IBC. There was a total of 14 participating groups. The participants were asked various questions including the strengths and weaknesses of the current IBC, and what skills should be removed or added. Additionally, if an advanced agricultural mechanics IBC was implemented what skills should be added to this IBC. Throughout this study, the grounded theory method was used to structure this research (Creswell & Poth, 2025). The state SBAE supervisor served as the administrator of this instrument. Open and axial coding were used to analyze the survey (Creswell & Poth, 2025).

Findings

The four themes identified throughout the responses were *achievable*, *safety*, *fairness*, and *real-world skills*. One of the common themes noticed throughout the strengths of the current Agricultural Mechanics IBC was that it is *achievable* by most students. Several groups of

participants indicated that this was an attainable credential for most students at a high school level. One group also mentioned it is hands-on and requires fewer academic skill expectations from their students. While the curriculum content is appropriate, some groups mentioned that skills, such as tool identification and changing oil and gas, should be removed from the final assessment as they lack the level of difficulty and rigor for an advanced credential.

The focus groups revealed that *safety* was the second recurring theme. Several groups mentioned that the current Agricultural Mechanics IBC does not implement safety. In addition, participants expressed that safety skills should be mandatory for this credential. When the participants were asked to develop a two-year pacing guide for agricultural mechanics, participants planned to implement a safety unit at the beginning of each course.

Another theme mentioned throughout the responses is *fairness*. Participants felt the performance evaluation is not administered in a "fair" and consistent format to accurately assess skill proficiency. The assessment contains a list of skills from which the IBC assessment administrator randomly selects for students to demonstrate. One group described the current credentialing assessment as "the luck of the draw, because of the inconsistency of the level of difficulty." Another group described the evaluation as "random". Several groups mentioned this credential should implement a standard measurement system or rubric, while one group mentioned that a written exam should be implemented.

Finally, there was a theme mentioned by many participants, which was described as *real-world skills*. Some participants mentioned that this credential developed their students' real-world skills. Other participants mentioned that this credential created well-rounded students in multiple areas of agricultural mechanics. Another group mentioned that a real-world workplace apprenticeship could be implemented to further advance strength of this credential.

Conclusions, Implications, and Recommendations

In conclusion, this study confirmed that the participants believed there were many strengths and weaknesses to the current agricultural mechanics industry-based credential. There were a variety of results concerning the recommendation of changes that should be made to the current IBC, however; two common changes mentioned included incorporating safety and standardizing the measurement or grading of the skills being assessed. The pacing guide component of this survey offered various results. Some groups did not offer enough details in this section to draw a conclusion of an ideal pacing guide for a two-year agricultural mechanics course structure. Further research should be carried out including interviews that would encourage more rich, descriptive answers from participants. The perspectives of teachers as well as industry professionals and IBC completers could provide additional details and recommendations for changes moving forward.

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