Agricultural Education, Communications, and Technology
AEED-MS Assessment Report 2019-20

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2. **Department Mission**

AECT prepares people with the technical expertise in agricultural science and technology-related disciplines with the human science skills necessary to provide transformational leadership in the agricultural industry and within their local communities. Specifically, we prepare educators for both formal and non-formal teaching roles in agriculture, communications specialists for diverse agriculturally related disciplines, agricultural technology managers, and rural community leaders.

3. **AEED-MS Program Goals**

   - Develop technology transfer specialists with strong communication skills and problem solving abilities who are prepared to serve diverse populations.
   - Stimulate intellectual capacity in students for integrating multi-disciplinary knowledge, technology and values.
   - Enhance the leadership skills of future professionals in agriculture, food and natural resource careers.
   - Produce graduates with broad technical skills in agricultural science and technology.

Key Expected Outcomes for Graduate Students, 2019-20

Assessment efforts in 2019-20 focused on student's critical thinking skills related to technical agriculture and technology transfer delivery systems, with a special emphasis on graduate students' thesis research.

Student Learning Outcome 1. Students will apply critical thinking skills related to technical agriculture and technology transfer delivery systems.

   Assessment Measure 1
   - Master's student theses and oral exams will be evaluated for evidence of the application of critical thinking to develop an approach to solving a specific research problem.

   Acceptable and Ideal Targets (not required for indirect measures)
   - Minimum score for passing is 60 out of 100 possible points
   - Acceptable target: 70% of AEEDMS students pass thesis defense
   - Ideal target: 100% of AEEDMS students score 70 or above on thesis defense

   Key Personnel (who is responsible for the assessment of this measure)
   - AECT Graduate faculty (Wardlow, Graham, Johnson, Shoulders, Estepp, Miller, Rucker, and Cox)

   Summary of Findings.
   A thesis defense rubric (Appendix A) developed in 2018 was employed to evaluate student theses individually as well as in the aggregate. Only two students defended their theses in the 2019-20 academic year. For the second year in a row, 100% of students' theses earned a score

higher than 70%. This meets the ideal target for the outcome. In the previous year (2018-19), areas for improvement in thesis research included (1) more clearly defining research problems and questions, (2) identifying research assumptions and limitations, and (3) connecting conclusions and recommendations to previous research and theory. This year's evaluation showed improvements in one of these areas—connecting conclusions and recommendations to previous theory and research, but scores remained low for "Assumptions" (which underlie the problem), "Limitations," and "Significance of the Problem."

Recommendations (<u>not required</u> for indirect measures)
Improving the quality of students' thesis research projects has been a practical priority for AECT faculty over the last several years. The development of seminar classes focused on proposal development and technical communication as well as individual faculty members' efforts to meet more regularly with their thesis advisees are tactics that should result in general improvements in thesis quality. Specific to the areas that remain weak according to the results of applying the thesis rubric, curricula in the two thesis writing courses as well as in the research methods course that focus on development of research problem statements should be adjusted to emphasize helping students more clearly explain the context of their research problems. Discussions in these courses focusing specifically on clarifying the significance of the research problem (based on previous literature and/or observations in practice) and on explaining the assumptions underlying the research problem and the limitations of the study are particularly important. These topics should also be prioritized in one-on-one meetings between thesis advisors and their advisees.

Action Plan
All thesis advisors will make the identified areas for improvement priorities in their discussions with their thesis track students in the coming year. These areas for improvement will also become points of emphasis in the AGED 5001 thesis development seminars (taught by Jeff Miller) as well as in AGED 5463, Research Methodology in the Social Sciences (taught by Kate Shoulders).

Supporting Attachments
- Appendix A: AECT Thesis rubrics

Appendix A
AECT Master's Thesis Project Rubric

Research Project Grading Rubric   Name_____

Title is appropriately representative of project	_____ 3 pts

Chapter 1: Introduction

Need for the Study (brief, use lit. and/or cite problem in the field)	_____ 3 pts
Statement of the Problem	_____ 3 pts
Overview of Literature	_____ 2 pts
Significance of the Problem	_____ 2 pts
Research Questions (or Objectives or Hypotheses)	_____ 3 pts
Assumptions (which underlie the problem)	_____ 2 pts
Limitations (here or chapter 3)	_____ 2 pts

Chapter 2: Theoretical Framework

Background of the Problem (from the related literature)	_____ 3 pts
Presentation of the Literature (to address the research questions)	_____ 5 pts
Conclusions from the Literature	_____ 3 pts

Chapter 3: Methods

Statement of the Problem (same as Chapter 1)	_____ xx
Purpose of the Study	_____ 3 pts
Research Questions / Objectives / Hypotheses (if applicable)	_____ 2 pts
Design of the Study – explained / illustrated	_____ 3 pts
Subjects	_____ xx
Subject Selection	_____ 3 pts
Population / Sample	_____ 3 pts
Sampling Procedure/process	_____ 3 pts
Instrumentation	_____ xx
Instrument Development -- explained	_____ 3 pts
Instrument Validity – how established?	_____ 3 pts
Instrument Reliability – how established?	_____ 3 pts
Treatments (if experimental; or variations among subjects)	_____ 3 pts
Conditions of Testing (if experimental; or variations among subjects)	_____ 2 pts
Procedures for Data Collection	_____ 3 pts
Analysis Plans	_____ 2 pts

Chapter 4: Analyses / Findings

Analyses are appropriate to the study	_____ 3 pts
Analyses match the purpose/objectives	_____ 3 pts
Analyses are detailed and well-presented	_____ 3 pts
Are the findings appropriately interpreted	_____3 pts

Chapter 5: Conclusions / Discussion / Recommendations

Summary of the findings	_____ 3 pts
Are relevant to the purpose/objectives	_____ 3 pts
Appropriately uses knowledge base / literature to interpret findings	_____ 3 pts
Ties everything together	_____ 3 pts
Identifies strengths and weaknesses of the study	_____ 3 pts
Includes implications for practice	_____ 3 pts
Provides direction for future research	_____ 3 pts

General comments:

Overall Score:	_____ 100 pts