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# Developing Strong International Agricultural Education Programs by Understanding Cognition

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# Developing Strong International Agricultural Education Programs by Understanding Cognition


## Abstract

International experiences provide culturally rich, complex situations for learners to process in both the affective and cognitive domains. By better understanding how learners process the information they receive in international settings, educators can develop quality international programs that encourage learners to more fully develop their cognitive abilities. The purpose of this study was to explore the cognitive relationships between participants' learning styles, problem solving styles, and critical thinking dispositions in an international setting. Relationships were found between learning style preferences and critical thinking disposition, and learning style preferences and problem solving style. Given these results, instructors working in international settings should expect students to differ in terms of their cognitive processes and associated cognitive styles such as learning style. Instructors should be prepared to address these differences in style as they would in a traditional instructional setting. Further, instructors can use assessment tools to group students to work together most effectively and/or to achieve diversity in their thinking styles and approaches to solving problems.



## Keywords

Teaching and learning, Instructional design and delivery, Learner characteristics, Learning theory



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# Developing Strong International Agricultural Education Programs by Understanding Cognition

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International experiences provide culturally rich, complex situations for learners to process in both the affective and cognitive domains. By better understanding how learners process the information they receive, educators can develop quality programs that challenge learners. The purpose of this study was to explore the cognitive relationships among participants' learning styles, problem solving styles, and critical thinking dispositions in a study abroad setting. The relationships among the problem solving styles, learning styles, and critical thinking dispositions of students participating in a three week problem solving and experiential learning focused study abroad course were examined to gain an understanding of how the three relate. When learning style preferences were examined in comparison to the group average critical thinking scores those exhibiting an accommodating or converging learning style exhibited a high critical thinking disposition. Those exhibiting either an assimilating or diverging learning style exhibited a low critical thinking disposition. When learning style preferences were viewed in comparison to problem solving style individuals exhibiting a diverging learning style tended to have a low problem solving score (adaptor preference) while those with a converging learning style preference exhibited a high problem solving score (innovator preference). Individuals exhibiting accommodator or assimilator preferences had average problem solving scores, placing them in the center of the problem solving measurement scale. Relationships between problem solving style and critical thinking disposition were not found. A major practical implication from this study is study abroad instructors should expect students on international agricultural education trips to differ in terms of their cognitive processes and associated cognitive styles such as learning style. Instructors should be prepared to address these differences in style as they would in a traditional instructional setting. Further, cognitive assessment of critical thinking, learning style, and problem solving style should be utilized to help instructors understand the thinking and learning processes of students. Instructors can use assessment tools to group students to work together more effectively and/or to achieve diversity in their thinking styles and approaches to solving problems. Given this study was conducted in a single setting with a limited sample, further testing on these cognitive relationships in varied international settings and with diverse audiences such as adult learners should be done in order to make a stronger contribution to our understanding of cognitive processes activated by international experiences.