

## DISCUSSANT'S REMARKS

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### COGNITIVE LEARNING AND STUDENT ACHIEVEMENT IN SECONDARY-LEVEL AGRICULTURAL EDUCATION: A SYNTHESIS WITH IMPLICATIONS FOR FUTURE RESEARCH

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One of the stars in the constellation of papers I have been asked to review synthesizes the cognitive learning and student achievement in secondary-level agricultural education. This study focused on “what has been *said* about what *ought to be* occurring” in secondary level agricultural education in regards to cognitive learning and student achievement. A second goal was to suggest implications and foci for future systematic research about cognitive learning and student achievement in secondary-level agricultural education. In my opinion, the author/researcher addresses both purposes with intensity and completeness.

This paper presents a thorough examination of what has been said. Numerous references were cited, dating from 1956 to a work in-press at this 2003 Western Agricultural Education Research Conference. This review carefully balanced the work of agricultural educators, comprehensive applied technology educators, and several of the larger, broader thinkers in education philosophy and policy. In the findings section of the paper, 15 paragraphs review, in almost machine-gun furry, previous work in cognitive learning and instructional approaches. The conclusions, discussion/implications, and recommendation section, the author/researcher weaves together a fabric that waves our success in achieving the goal of cognitive learning. Eminent educational researchers (Bloom, Carroll, Darling-Hammond & Falk, Glaser, Rettig & Canady) are used as the benchmarks against which we can measure our “best practices”.

The synthesis with implications for future research tells us we need to seek to support learning across the curriculum; it is time to ally with science, mathematics, and even reading educators. How can we accomplish this fine goal without losing our identity as agricultural educators -- as what once appeared as shiny stars awash in the bright lights of the big city?

Here are a number of questions to ask, using the constellation Orion and associated stars for metaphoric relief:

Are we passively standing by (Orion stands by the river Eridanus)?

Are we chasing the rabbit (Orion's dogs Canis Major – our Ph.D. students and Canis Minor – our M.S. students hunt the rabbit Lepus)?

As agricultural education researchers, are we spreading more bovine (Orion chases Taurus in the east-west sky)?

Or will high stakes testing, the No Child Left Behind legislation and liberal arts and science education become our Scorpius (Orion's tragic life ended when he stepped on Scorpius, the scorpion)?