

Measuring Cognitive Empathy of Agricultural Students: An Exploration of a Cognitive Empathy Construct



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Introduction

- Cognitive empathy is considered one of the most valuable skills agricultural communications students need to develop (Chenault, 2008; Corder & Irlbeck, 2018).
- Scholars should investigate students' development of cognitive empathy and measure related skills using an instrument validated with agricultural student populations.
- Our study aimed to provide further construct validity evidence of the cognitive empathy scale originally developed by Reniers et al. (2011).

Framework

- Reniers et al.'s (2011) cognitive empathy scale served as the framework.
- The authors established construct validity of the scale using a PCA and CFA.
- Two subscales: 1) perspective-taking (10 items); 2) online simulation (9 items).

Methods

- Collected 106 responses from students enrolled in two agricultural communications courses.
- Kaiser-Meyer-Olkin test to assess sampling adequacy and Bartlett's Test of Sphericity to examine interrelationships between factors.
- Conducted an EFA and used a PCA approach to extract factors.
- Used the oblique rotation method since the subscales correlated and the a priori criterion and loaded items onto the two hypothesized constructs.
- Used Cronbach's alpha (α) to assess reliability.

Conclusions & Recommendations

- The factors loadings were consistent with the original scale.
- When implementing the cognitive empathy scale with agricultural students, we recommend...
 - Removing item 11.
 - Revising item 10 to *I can easily tell if someone does or does not want to discuss a certain topic with me* and determine if cross-loading is eliminated on the revised item.
- Our suggested modifications may allow scholars to measure agricultural students' cognitive empathy more accurately.

Results

- Kaiser-Meyer-Olkin measure = .85.
- Bartlett's Test of Sphericity = $\chi^2(171) = 755.92, p < .001$.
- Factor one ($\alpha = .87$) explained 32.98% of the total variance.
- Factor two ($\alpha = .80$) explained 11.61% of the total variance.

Factors and Items of Students' Cognitive Empathy after Factor Rotation

Cognitive Empathy Items	Factor	
	1	2
I can tell if someone is making their true emotion.	.87	
I am good at predicting how someone will feel.	.80	
I can easily tell if someone else wants to enter a conversation.	.79	
I can sense if I am intruding, even if the other person does not tell me.	.69	
I can pick up quickly if someone says one thing but means another.	.69	
I can easily tell of someone else is interested or bored with what I am saying.	.68	
I am quick to spot if someone in a group is feeling awkward or uncomfortable.	.65	
Other people tell me I am good at understanding how they are feeling and what they are thinking.	.54	
I am good at predicting what someone will do.	.50	
I can easily work out what another person might want to talk about.	.42	.33
Before I do something I try to consider how my friends will react to it.		
Before criticizing somebody, I try to imagine how I would feel if I was in their place.		.74
I try to look at everybody's side of a disagreement before I make a decision.		.74
I always try to consider the other fellow's feeling before I do something.		.69
When I am upset at someone, I usually try to "put myself in his shoes" for a while.		.66
I sometimes try to understand my friends better by imagining how things look from their perspective.		.61
I can usually appreciate the other person's viewpoint even if I do not agree with it.		.57
I find it easy to put myself in somebody else's shoes.		.53
I sometimes find it difficult to see things from the "other guy's" perspective.		.48