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EDRS 821

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Homework Assignment #2

**Analysis**

1 (a): In total, the model presented does indicate that School Belonging and Perceived Teacher Expectancies are statistically significant when predicting self-efficacy (p = .05) with an R-square effect size of .053.

1 (b) School belonging time (p = .124) and perceived teacher expectancies (p = .057) are not statistically significant in moderating student self-efficacy when analyzed individually. However, the interaction of these two predictor variables is statistically significant as a moderator with a p value of <.05 and a delta R-squared change of .019.

**Discussion**

The effects of the continuous IV’s look different depending on the inclusion of the interaction. When using Haye’s statistical analysis tool, “School Belonging” is the least statistically significant with p = .124. “Perceived Teacher Expectancies” was not statistically significant, but close with p = .057. With the interaction, these two IVs are statistically significant in moderating perceived teacher expectancies as noted above. Additionally, the relationship between all IVs is enhancing (positively directional). Looking at the range of significance, the conditional effect of School Belonging on Student Self Efficacy with the moderator Teacher Expectancies is statistically significant when the moderator scores higher than .215 (at which p = .050).

Whereby the X axis is Student Self-Efficacy (DV) and School Belonging is the Y axis (IV, or predictor). With the addition of the moderator “perceived teacher expectancies,” there is a stronger relationship between the DV and the IV.

Homework Assignment #3

This study’s hypothesis proposes that Teacher Competency mediates the relationship between Effort and Overall Amount Learned. After conducting a Regression Analysis, the following information is shown: The direct effect between Effort and the Overall Amount Learned (path C in the graph below) is statistically significant (p < .001). The indirect effect between Effort and Teacher Competency (path A) is statistically significant (p < .001) as well as the indirect effort between Teacher Competency and Overall Amount Learned (path B, p < .05). Further the C’ relationship between Effort and Overall Amount Learned (with the mediator in the model) is also statistically significant (p < .05), which indicates this hypothesis is partially mediated by Teacher Competency given all direct and indirect relationships are statistically significant. Additionally, the Sobel Test shows a statistically significant indirect effect (a\*b = ?; z = 7.677; p < .001). Interpreting the relative strength as a percent of the effect of Effort and Overall Learning Outcome is mediated by teacher competency by 64 percent.

Co-efficient and statistical significance noted below.

Teacher Competency

(Mediator)

A = .426\* B = .649\*

\* p < .001

\*\* p < .05

Effort C’ = .153\*\* Amount Learned

(IV) (DV)

C = .430\*

Effort Amount Learned

Adding a second Mediator, Teacher Caring, we see the following (co-efficient and statistical significance noted below).

E = .501

Teacher Competency Teacher Caring

(Mediator) (Mediator)

A = .426\* B = .171\*

D = .499\*

Effort C’ = .131\*\* Amount Learned

(IV) (DV)

\* p < .001

\*\* p < .05

C = .430\*

Effort Amount Learned