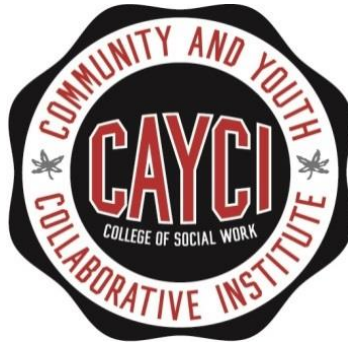


Community and Youth Collaborative Institute
School Experience Surveys – Technical Report



CAYCI Academic Motivation Scale
Elementary Student Version

Produced By:

Dawn Anderson-Butcher, Anthony J. Amorose, Samantha Bates, and Lauren Paluta

Community and Youth Collaborative Institute
College of Social Work
The Ohio State University



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COLLEGE OF SOCIAL WORK

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ACADEMIC MOTIVATION

Elementary Student Version

I. Definition of Construct

The *Academic Motivation* scale measures the extent to which elementary students feel encouraged to learn and progress in school.

II. Relevance for Practice

Educational research has shown motivation is related to outcomes such as curiosity, persistence, learning, and academic performance (Green et al., 2012; Vallerand et al., 1992). In fact, when student attitudes toward school are positive, their participation, engagement, and performance are enhanced (Green et al., 2012; Fortier, Vallerand, & Guay, 1995). An assessment of student feelings of academic motivations can inform stakeholders such as parents, teachers, and administrators about the school's learning environment; and, provide information on the need to better support academic growth and development among students.

III. Scale Description and Instructions

A. Items

1. I have a positive attitude toward school.
2. I like the challenges of learning new things in school.
3. I am confident in my ability to manage my school work.
4. I work hard at school.
5. I try my best at school.

B. Response Options

Response options for each item include the following:

- 1 = NO!
- 2 = No
- 3 = Yes
- 4 = YES!

C. Instructions for Respondents

These questions ask you about your experiences at school. Please mark how strongly you feel about each sentence.

D. Instructions for Scale Administrators

For complete instructions on how to administer the survey, reference the "Student Survey Directions" that are printed on the survey itself. Once each student has a survey, explain that the purpose of the survey is to learn more about their experiences at school. They should mark one answer per statement, selecting the choice that best reflects how they feel.

As students finish, look thoroughly through the surveys to make sure that they did not miss any items or questions. Please remember that students do NOT have to answer every question, but do encourage them to complete as much of the survey as possible. Remind students that their answers will help the school know how to best support them.

IV. Scoring Procedures

An average of the response scores from the 5 items should be calculated and used as an indicator of academic motivation, with higher scores reflecting greater levels of motivation.

V. Psychometric Properties of the Scale

A. Description of Sample

Participants used to test the psychometric properties of the scale included 1689 elementary school students from around the states of Ohio & Utah. This included 36.1% students in K-3rd grade and 63.9% students in 4th – 6th grade. The mean age of the students was 9.56 (SD = 1.53). Both males (48.3%) and females (48.6%) were represented. The majority of students identified themselves as White/Non-Hispanic (71.8%), Mixed/Multi-Racial (2.5%), African American (2.4%), Latino/Latina (11.4%), or Asian (1.1%), and 25.3% indicated they received a free or reduced lunch. Data on these students were collected as part of a needs assessment within each school’s improvement planning process. Data were collected using the online instrument.

B. Basic Descriptive Statistics and Relevant Group Differences

| Sample | Mean | SD | Range | α |
|-----------------------------------|------|------|-------|----------|
| Full Sample ($N = 1689$) | 3.55 | 0.44 | 1-5 | 0.69 |
| Gender | | | | |
| Males ($n = 816$) | 3.48 | 0.48 | 1-5 | 0.71 |
| Females ($n = 821$) | 3.61 | 0.38 | 1-5 | 0.61 |
| Race/Ethnicity | | | | |
| White/Non-Hispanic ($n = 1213$) | 3.58 | 0.42 | 1-5 | 0.67 |
| Other ($n = 476$) | 3.49 | 0.51 | 1-5 | 0.72 |

Note. Group specific data omits students who did not indicate their status. All groups were significantly different ($p < .05$), with the exception of school level. The effect sizes (η^2) for each comparison indicated that group membership accounted for less than 1% of the variance in the scores.

C. Relationship between Academic Motivation scores and other Student Perception Constructs

| Construct | $r =$ |
|-----------------------------------|-------|
| School Connectedness ^a | 0.63* |
| Academic Press ^a | 0.36* |
| Support for Learning ^c | 0.49* |

Notes. ^a Average scores on the respective subscale from the Perceived School Experience Scale (Anderson-Butcher, Amorose, Iachini, & Ball, 2013). ^b Students responded to the question Average score on the Support for Learning Scale (Anderson-Butcher, Amorose, Iachini, & Ball, 2013). * relationship significant ($p < .01$).

D. Factorial Validity

A confirmatory factor analysis (CFA) was conducted using robust maximum likelihood estimation procedures in LISREL 8.71 (Scientific Software International, Inc., Chicago). The CFA model specified that the 5 items loaded on a single latent Academic Motivation factor. The factor variance was freely estimated, as was the uniqueness for each item. No covariances between uniquenesses were modeled. The data were input using the asymptotic covariance matrix.

The overall fit of the model to the data was reasonably good based on commonly recommended cut off values for evaluating model fit (see Hu & Bentler, 1999), S-B $\chi^2 = 30.57$, $df = 5$, $p = .00$; RMSEA = .11 (90% CI = .093-0.129), SRMR = .03; CFI = .96, TLI = .97. The table below presents the completely standardized factor loadings and uniquenesses for each item. Squared multiple correlations averaged .47. The modification indices did not suggest any major areas of local strain.

| Item | Loading | Uniqueness |
|---|---------|------------|
| I have a positive attitude toward school. | .579 | .664 |
| I like the challenges of learning new things in school. | .505 | .745 |
| I am confident in my ability to manage my school work. | .649 | .579 |
| I work hard at school. | .851 | .275 |
| I try my best at school. | .787 | .380 |

VI. Past and Future Scale Development

Based on the data reported here, the current recommendation is to use the 5-item version of the Academic Motivation measure as described in this report. Future scale development work may consider revising or possibly removing item #2 (“I like the challenges of learning new things in school”) given the relatively lower factor loading and higher uniqueness.

VII. Summary

Overall, the results of the psychometric testing indicate initial support for the reliability and validity of the Academic Motivation scale with elementary school students. The use of this measure can provide valuable information about attitudes of elementary school students, as well as their current motivations for performing and trying their best in school.

VIII. References

- Fortier, M. S., Vallerand, R. J., & Guay, F. (1995). Academic motivation and school performance: Toward a structural model. *Contemporary Educational Psychology, 20*(3), 257-274.
- Green, J., Liem, G. A. D., Martin, A. J., Colmar, S., Marsh, H. W., & McInerney, D. (2012). Academic motivation, self-concept, engagement, and performance in high school: Key processes from a longitudinal perspective. *Journal of Adolescence, 35*(5), 1111-1122.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallieres, E. F. (1992). The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement, 52*(4), 1003-1017.

IX. Recommended Citation of Scale

When using the Academic Motivation scale for program evaluation or research purposes, we recommend using the following citation:

Anderson-Butcher, D., & Amorose, A. J. (2012). Community and Youth Collaborative Initiative School Experience Surveys: Academic Motivation Scale in Elementary School Students. Columbus, OH: College of Social Work, The Ohio State University.

If this scale is used along with additional Community and Youth Collaborative Initiative School Community Surveys, then the following citation would be appropriate to cover all scales:

Anderson-Butcher, D., & Amorose, A. J. (2012). Community and Youth Collaborative Initiative School Experience Surveys. Columbus, OH: College of Social Work, The Ohio State University.