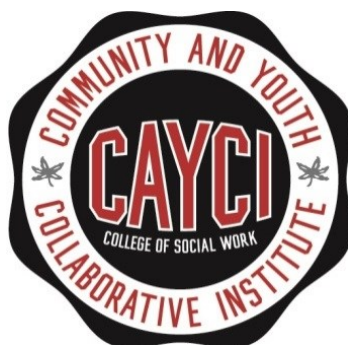Community and Youth Collaborative Institute
School Experience Surveys

Technical Report: Academic Motivation
Middle/High School Student Version

Produced By:
Dawn Anderson-Butcher, Anthony J. Amorose, Aidyn Iachini, and Annahita Ball

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

ACADEMIC MOTIVATION
Middle & High School Student Version

I. Definition of Construct
The Academic Motivation scale assesses students' general interest, engagement, and enjoyment in learning and school.

II. Relevance for Practice
Research has demonstrated that higher levels of academic motivation in middle and high school relate to improved academic outcomes, including better grade point average and standardized test scores (Anderson & Keith, 1979; Eccles, Wong & Peck, 2006; Ratelle, Guay, Vallerand, Larose & Senécal, 2007; Walker & Greene, 2009; Gottfried, 1990).

III. Scale Description and Instructions
A. Items
1. I have a positive attitude toward school.
2. I feel I have made the most of my school experiences so far.
3. I like the challenges of learning new things in school.
4. I am confident in my ability to manage my school work.
5. I feel my school experience is preparing me well for adulthood.
6. I have enjoyed my school experience so far.

B. Response Options
Response options for each item include the following:
1 = Strongly disagree
2 = Disagree
3 = Neither Disagree or Agree
4 = Agree
5 = Strongly agree

C. Instructions for Respondents
These questions ask you about your experiences at school. For each of the following statements, please fill in ONE circle that best represents your answer.

D. Instructions for Scale Administers
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 didn't 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 6 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 2124 middle school (6-8th grade; 38.2%) and high school (9th - 12[thth] grade; 61.8%) students from around the state of Ohio. The participants included 1047 males (50.6%) and 1022 (49.4%) females. The majority of students identified themselves as White/Non-Hispanic (88.8%), Mixed/Multi-Racial (5.5%), African American (1.9%), Latino/Latina (0.8%), or Asian (0.7%), and 43.2% 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. Some data were collected using the online instrument, whereas others were collected via paper/pencil survey.

B. Basic Descriptive Statistics and Relevant Group Differences

Sample	Mean	SD	Range	α
Full Sample (*N* = 2124)	3.77	.75	1-5	.82
Gender				
Males (*n* = 1047)	3.70	.78	1-5	.83
Females (*n* = 1022)	3.84	.71	1-5	.81
Race/Ethnicity				
White/Non-Hispanic (*n* = 1887)	3.79	.75	1-5	.82
Other (*n* = 237)	3.57	.79	1-5	.81
School-Type				
Middle School (*n* = 792)	3.75	.73	1-5	.79
High School (*n* = 1283)	3.78	.77	1-5	.84

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. Maximum Value Percentages and Classification of Scores

Percentages		Classification of Scores		
Maximum Value	½ *SD*	Excelling	Emerging	Needs Improvement
75.4%	7.5%	83+	82-68	<68

Note. The max value percentages reflect the scale mean divided by the number of response options in the scale. This value allows the subscale to be compared with other measured constructs measured in the CAYCI surveys, thereby providing relative information regarding the extent to which students' experiences are favorable across constructs. The classification of scores provides ranges of values based on the maximum value percentage plus or minus ½ SD percentage. Based on these cut points, schools may determine where they stand on students' experience of academic motivation relative to normed data.

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

Construct	$r =$
School Connectedness [a]	.71*
Academic Press [a]	.62*
Self-Reported Grades [b]	-.36*
Support for Learning [c]	.56*

*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 "On average what grades do you get in school?" with response options ranging from 1 (mostly A's) to 9 (mostly F's). [c] Average score on the Support for Learning Scale (Anderson-Butcher, Amorose, Iachini, & Ball, 2013). * relationship significant (p<.01).*

E. Differences in Academic Motivation scores across School Performance Designations

School Designation	Mean	SD
Academic Emergency		
Academic Watch		
Continuous Improvement		
Effective (*n* = 494)	3.83	.73
Excellent (*n* = 849)	3.73	.74
Excellence with Distinction		

Note. Designations were significantly different (p<.05), however the effect size (η^2) indicated that group membership accounted for less than 1% of the variance in the scores.

F. Factorial Validity

A confirmatory factor analysis (CFA) was conducting using robust maximum likelihood estimation procedures in LISREL 8.71 (Scientific Software International, Inc., Chicago). The CFA model specified that the 6 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 χ^2 = 73.37, *df* = 9, *p* = .00; RMSEA = .058 (90% CI = .046-.071), SRMR = .03; CFI = .99, TLI = .98. The table below presents the completely standardized factor loadings and uniquenesses for each item. Squared multiple correlations averaged .44. The modification indices did not suggest any major areas of local strain.

Item	*Loading*	*Uniqueness*
I have a positive attitude toward school.	.73	.46
I feel I have made the most of my school experiences so far.	.63	.60
I like the challenges of learning new things in school.	.66	.57
I am confident in my ability to manage my school work.	.60	.64
I feel my school experience is preparing me well for adulthood.	.69	.53
I have enjoyed my school experience so far.	.66	.57

VII. Past and Future Scale Development

Based on the data reported here and in Anderson-Butcher et al. (2012), the current recommendation is to use the 6-item version of the Academic Motivation measure as described in this report. Future scale development work may consider revising or possibly removing item #4 ("I am confident in my ability to manage my school work") given the relatively lower factor loading and higher uniqueness. Further work also is needed to validate the Spanish version of this scale.

VII. Summary

Overall, the results of the psychometric testing indicate initial support for the reliability and validity of the Academic Motivation scale with middle and high school students. The use of this measure could provide valuable information about demonstrate improved academic outcomes, including grade point average and standardized test scores.

VIII. References

Anderson-Butcher, D., Amorose, A.J., Iachini, A., & Ball, A. (2013). Community and Youth Collaborative Institute School Experience Surveys: Support for Learning Scale in Middle School and High School. Columbus, OH: College of Social Work, The Ohio State University.

Anderson-Butcher, D., Amorose, A.J., Iachini, A., & Ball, A. (2012). The development of the Perceived School Experiences Scale. *Research on Social Work Practice, 2(2),* 186-194.

Anderson, E. S., & Keith, T. Z. (1997). A longitudinal test of a model of academic success for at-risk high school students. *Journal of Educational Research*, 90, 259-268.

Eccles, J. S., Wong, C. A., & Peck, S. C. (2006). Ethnicity as a social context for the development of African-American adolescents. *Journal of School Psychology*, 44(5), 407-426.

Gottfried, A. E. (1990). Academic intrinsic motivation in young elementary school children. *Journal of Educational Psychology,* 82, 525-538.

Hu, L. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55.

Ratelle, R. F., Guay, F., Vallerand, R. J., Larose, S., & Senécal, C. (2007). Autonomous, controlled, and amotivated types of academic motivation: A person-oriented analysis. *Journal of Educational Psychology*, 99, 734-746.

Walker, C. O., & Greene, B. A. (2009). The relations between student motivational beliefs and cognitive engagement in high school. *The Journal of Educational Research*, 102, 463-471.

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., Iachini, A., & Ball, A. (2013). Community and Youth Collaborative Institute School Experience Surveys: Academic Motivation Scale in Middle School and High School. Columbus, OH: College of Social Work, The Ohio State University.

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

Anderson-Butcher, D., Amorose, A.J., Iachini, A., & Ball, A. (2013). Community and Youth Collaborative Institute School Experience Surveys. Columbus, OH: College of Social Work, The Ohio State University.