

REL Appalachia Ask-A-REL Response

Research Tools
August 2017

Question:

What valid and reliable instruments exist to measure student empowerment? How have the instruments been used in research studies, particularly with high school students?

Response:

Thank you for your request to our REL Reference Desk regarding evidence-based information about valid and reliable measures of student empowerment. Ask-A-REL is a collaborative reference desk service provided by the 10 Regional Educational Laboratories (RELs) that, by design, functions much in the same way as a technical reference library. Ask-A-REL provides references, referrals, and brief responses in the form of citations in response to questions about available education research.

Following an established REL Appalachia research protocol, we searched for research reports and descriptive study articles on measures of student empowerment. The search included terms for constructs that are similar to student empowerment: locus of control, self-efficacy, expectancy value, utility value, perseverance, and motivation. We focused on identifying resources that specifically referred to the validity and reliability of those measures. The sources included ERIC and other federally funded databases and organizations, research institutions, academic research databases, and general Internet search engines. For more details, please see the methods section at the end of this document.

The research team did not evaluate the quality of the resources provided in this response; we offer them only for your reference. Also, the search included the most commonly used research databases and search engines to produce the references presented here, but the references are not necessarily comprehensive, and other relevant references and resources may exist.

References

Beretvas, S. N., Suizzo, M., Durham, J. A., & Yarnell, L. M. (2008). A reliability generalization study of scores on Rotter's and Nowicki-Strickland's Locus of Control scales. *Educational and Psychological Measurement, 68*(1), 97–119. Retrieved from <https://pdfs.semanticscholar.org/0158/710d78666091810d7a6945eea50f9d2ea245.pdf>

From the abstract: "The most commonly used measures of locus of control are Rotter's Internality-Externality Scale (I-E) and Nowicki and Strickland's Internality-Externality Scale (NSIE). A reliability generalization study is conducted to explore variability in I-E and NSIE score reliability. Studies are coded for aspects of the scales used (number of response points, number of items) and for sample demographic descriptors (percentage female,

average age). Results indicate no statistically significant difference in the predicted internal consistency estimate for I-E Scale versus NSIE Scale scores. Only the percentage female variable is found to predict variation in internal consistency estimates. Testing interval length explains variability in test-retest coefficient estimates. Results and directions for future research are discussed.”

Berg, M., Coman, E., & Schensul, J. J. (2009). Youth action research for prevention: A multi-level intervention designed to increase efficacy and empowerment among urban youth. *American Journal of Community Psychology*, 43(3–4), 345–359. Retrieved from https://www.researchgate.net/profile/Emil_Coman/publication/24351146_Youth_Action_Research_for_Prevention_A_Multi-level_Intervention_Designed_to_Increase_Efficacy_and_Empowerment_Among_Urban_Youth/links/00b4952a1196cbebf0000000.pdf

From the abstract: “Youth Action Research for Prevention (YARP), a federally funded research and demonstration intervention, utilizes youth empowerment as the cornerstone of a multi-level intervention designed to reduce and/or delay onset of drug and sex risk, while increasing individual and collective efficacy and educational expectations. The intervention, located in Hartford Connecticut, served 114 African-Caribbean and Latino high school youth in a community education setting and a matched comparison group of 202 youth from 2001 to 2004. The strategy used in YARP begins with individuals, forges group identity and cohesion, trains youth as a group to use research to understand their community better (formative community ethnography), and then engages them in using the research for social action at multiple levels in community settings (policy, school-based, parental, etc.). Engagement in community activism has, in turn, an effect on individual and collective efficacy and individual behavioral change. This approach is unique insofar as it differs from multilevel interventions that create approaches to attack multiple levels simultaneously. We describe the YARP intervention and employ qualitative and quantitative data from the quasi-experimental evaluation study design to assess the way in which the YARP approach empowered individual youth and groups of youth (youth networks) to engage in social action in their schools, communities and at the policy level, which in turn affected their attitudes and behaviors.”

Cleary, T. J., Platten, P., & Nelson, A. (2008). Effectiveness of the self-regulation empowerment program with urban high school students. *Journal of Advanced Academics*, 20(1), 70–107. Retrieved from <http://eric.ed.gov/?id=EJ835869>

From the abstract: “Impacting the academic performance of high school students in core academic content areas is important because of the high-stakes nature of secondary school course grades relative to their vocational and post-secondary pursuits. Getting students to become more active, strategic participants in their learning by teaching them empirically supported learning strategies as well as specific forethought and reflective thinking skills is an important pathway to academic success. The importance of self-regulation processes also has been established in recent survey research with teachers and school psychologists showing that students who are referred for academic problems often have self-regulatory

skill and motivation deficits. Intervention programs like the Self-Regulation Empowerment Program (SREP) can be conceptualized and implemented within the context of school-based service delivery frameworks. Tier I interventions typically occur at a classroom level and thus are designed to provide all students with the potential benefits of an intervention. With regards to classroom-wide self-regulation interventions, there are many empirically supported techniques that teachers can readily infuse into the daily routine of a school day, such as requiring all students to set performance goals, engage in progress monitoring, and utilize self-reflective processes. Students who do not respond (i.e., continue to exhibit poor test performance) to this general level of intervention support would be eligible to receive more intensive, Tier II pull-out programs, such as SREP.”

Fredricks, J., McColskey, W., Meli, J., Mordica, J., Montrosse, B., & Mooney, K. (2011).

Measuring student engagement in upper elementary through high school: A description of 21 instruments. (Issues & Answers Report, REL 2011–No. 098). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southeast. Retrieved from <http://eric.ed.gov/?id=ED514996>

From the abstract: “Researchers, educators, and policymakers are focusing more on student engagement as the key to addressing low achievement, student boredom and alienation, and high dropout rates (Fredricks, Blumenfeld, and Paris 2004). As schools and districts seek to increase engagement, it is important for them to understand how it has been defined and to assess the options for measuring it. One challenge educators and evaluators face in measuring engagement is determining the appropriateness of the available instruments, especially given limited time to review the literature. Instruments for measuring engagement also reflect different disciplinary perspectives and theoretical frameworks and are thus not easily compared. To address the information needs of education professionals, this report describes the 21 instruments for measuring engagement in upper elementary through high school identified through a literature review. The report does not include a technical review of the quality of each measure, nor does it recommend or identify strengths or weaknesses of particular instruments. Appendices include: (1) Instrument abstracts; (2) Methodology; and (3) Student self-report subscale information.”

Haggerty, K., Elgin, J., & Woolley, A. (2011). *Social-emotional learning assessment measures for middle school youth.* Seattle, WA: Social Development Research Group, University of Washington. Retrieved from <http://www.search-institute.org/sites/default/files/a/DAP-Raikis-Foundation-Review.pdf>

From the executive summary: “Children with strong Social-Emotional Learning (SEL) skills have been shown to excel in school, both socially and academically. SEL programs are imperative to address the social, emotional, and academic needs of students. However, reliable and valid assessment tools are necessary to conduct needs assessments and monitor the success of SEL programs over time.

“The purpose of the current review is to identify valid, reliable, and useable school-wide assessments for social/emotional well-being of youth and to help schools and districts

identify tools that could be useful in determining the success of the programs created to improve student social/emotional well-being.”

Kitsantas, A., Winsler, A., & Huie, F. (2008). Self-regulation and ability predictors of academic success during college: A predictive validity study. *Journal of Advanced Academics*, 20(1), 42–68. Retrieved from <http://eric.ed.gov/?id=EJ835868>

From the abstract: “Knowledge about self-regulation and motivation processes enables students to maximize their college career paths and allows universities to implement better intervention programs to encourage struggling students to persist and complete their educational studies. College administrators and instructors should focus on developing interventions to instill a healthy sense of self-efficacy in students and teach them how to manage their time effectively. Interventions in the form of learning how to learn courses and/or workshops should be designed specifically for first-year students to provide them with helpful adjustment strategies such as setting strategic goals, planning effectively throughout the first year of undergraduate study, and seeking help when needed. Furthermore, instructors of introductory-level classes should provide first-year students with successful peer role models to enhance their self-efficacy beliefs in completing their course requirements. For example, they can make available samples of past projects to their current students, which may allow them to observe successful peers and encourage them to believe that they can succeed. Equipping students with self-regulatory strategies and positive motivational beliefs earlier on in their studies will prepare and sustain their motivation for more demanding, upper level courses as they progress through their academic career.”

Kosovich, J. J., Hulleman, C. S., Barron, K. E., & Getty, S. (2015). A practice measure of student motivation: Establishing validity evidence for the expectancy-value-cost scale in middle school. *Journal of Early Adolescence*, 35(5–6), 790–816. Abstract retrieved from <http://eric.ed.gov/?id=EJ1069080>; full text available at https://www.researchgate.net/profile/Chris_Hulleman/publication/266394678_A_Practical_Measure_of_Student_Motivation_Establishing_Validity_Evidence_for_the_Expectancy-Value-Cost_Scale_in_Middle_School/links/563b792d08ae405111a75f6e.pdf

From the abstract: “We present validity evidence for the Expectancy-Value-Cost (EVC) Scale of student motivation. Using a brief, 10-item scale, we measured middle school students’ expectancy, value, and cost for their math and science classes in the Fall and Winter of the same academic year. Confirmatory factor analyses supported the three-factor structure of the EVC Scale, as well as measurement invariance across gender, academic domain, and time. Predictions of the EVC Scale’s relationship with domain-specific future interest and prior achievement provide convergent and discriminant validity evidence. The practical utility of the survey is highlighted by the short administration time and the alignment between observed and latent means, indicating that practitioners can use raw scores rather than latent values. Finally, we discuss methods of how to use the EVC Scale to provide actionable information for educational practitioners, such as identifying which motivation interventions are most needed for students and if those interventions are working.”

Usher, E. L., & Pajares, F. (2007). Self-efficacy for self-regulated learning: A validation study. *Educational and Psychological Measurement, 68*(3), 443–463. Abstract retrieved from <http://eric.ed.gov/?id=EJ792651>; full text available at <http://sites.education.uky.edu/motivation/files/2013/08/UsherPajares2008.pdf>

From the abstract: “The psychometric properties and multigroup measurement invariance of scores on the Self-Efficacy for Self-Regulated Learning Scale taken from Bandura’s Children’s Self-Efficacy Scale were assessed in a sample of 3,760 students from Grades 4 to 11. Latent means differences were also examined by gender and school level. Results reveal a unidimensional construct with equivalent factor pattern coefficients for boys and girls and for students in elementary, middle, and high school. Elementary school students report higher self-efficacy for self-regulated learning than do students in middle and high school. The latent factor is related to self-efficacy, self-concept, task goal orientation, apprehension, and achievement.”

Uwah, C. J., McMahon, H. G., & Furlow, C. F. (2008). School belonging, educational aspirations, and academic self-efficacy among African American male high school students: Implications for school counselors. *Professional Journal of School Counseling, 11*(5), 296–305. Abstract retrieved from <http://eric.ed.gov/?id=EJ817481>; full text available at <http://www.biomedsearch.com/article/School-belonging-educational-aspirations-academic/180860878.html>

From the abstract: “While academic self-efficacy is widely considered an individual cognitive variable, it may be influenced by a sense of belonging and connection to others in the school community. Using a correlation and multiple regression design, the study in this article examined the relationship between perceptions of school belonging, educational aspirations, and academic self-efficacy among 40 African American male high school students. Results indicated that feeling encouraged to participate and educational aspirations were significant, positive predictors of academic self-efficacy. Other components of perceptions of school belonging were not significant in predicting academic self-efficacy. Recommendations for future research and practical suggestions for school counselors are discussed.”

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*(6), 463–471. Abstract retrieved from <http://eric.ed.gov/?id=EJ842051>; full text available at https://www.researchgate.net/profile/Barbara_Greene/publication/249037504_The_Relations_Between_Student_Motivational_Beliefs_and_Cognitive_Engagement_in_High_School/links/54ad991b0cf2828b29fc11.pdf

From the abstract: “The authors examined relations among student perceptions of classroom achievement goals, self-efficacy, perceived instrumentality of classroom work, and sense of belonging within a classroom. Participants were 249 high school students. The authors also examined how cognitive engagement was predicted by those variables along with personal achievement goals (mastery and performance approach). The results indicate that the adoption of mastery goals was predicted by perceived instrumentality, self-efficacy,

and belonging, whereas cognitive engagement was predicted by belonging and perceived instrumentality. Last, the authors found that a classroom promoting a mastery orientation was predictive of a student's sense of belonging. They discuss the importance of mastery-oriented classrooms."

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166–183. Abstract retrieved from <http://eric.ed.gov/?id=EJ788053>; full text available at https://www.researchgate.net/profile/Barry_Zimmerman/publication/250184865_Investigating_Self-Regulation_and_Motivation_Historical_Background_Methodological_Developments_and_Future_Prospets/links/549483c30cf2ec133757e743/Investigating-Self-Regulation-and-Motivation-Historical-Background-Methodological-Developments-and-Future-Prospets.pdf

From the abstract: "The topic of how students become self-regulated as learners has attracted researchers for decades. Initial attempts to measure self-regulated learning (SRL) using questionnaires and interviews were successful in demonstrating significant predictions of students' academic outcomes. The present article describes the second wave of research, which has involved the development of online measures of self-regulatory processes and motivational feelings or beliefs regarding learning in authentic contexts. These innovative methods include computer traces, think-aloud protocols, diaries of studying, direct observation, and microanalyses. Although still in the formative stage of development, these online measures are providing valuable new information regarding the causal impact of SRL processes as well as raising new questions for future study."

Additional Organizations to Consult

Collaborative for Academic, Social, and Emotional Learning (CASEL): <http://www.casel.org/>

From the website: "Our mission is ambitious: to help make evidence-based social and emotional learning (SEL) an integral part of education from preschool through high school. As a thought leader, field builder, and advocate, CASEL uniquely spans three worlds:

- Research develops, synthesizes, and disseminates evidence documenting the impact of social and emotional learning.
- Practice demonstrates what is possible in classrooms, schools, and communities that prioritize SEL—including our work with partner districts.
- Policy helps pave the way for SEL practices that are scalable and sustainable, setting a new standard for high-quality education in the United States."

Methods

Keywords and Search Strings

The following keywords and search strings were used to search the reference databases and other sources:

- (“Student empower*” OR “learner empower*” OR “locus of control” OR “self-efficacy” OR “expectancy value” OR “utility value” OR perseverance OR motivation) AND (measur* OR instrument) AND “high school*”

Databases and Resources

We searched ERIC, a free online library of more than 1.6 million citations of education research sponsored by the Institute of Education Sciences (IES), for relevant resources. Additionally, we searched the academic database ProQuest, Google Scholar, and the commercial search engine Google.

Reference Search and Selection Criteria

In reviewing resources, Reference Desk researchers consider—among other things—these four factors:

- Date of the publication: Searches cover the most current information (i.e., within the last ten years), except in the case of nationally known seminal resources.
- Search priorities of reference sources: Search priorities include IES, nationally funded, and certain other vetted sources known for strict attention to research protocols. Applicable resources must be publicly available online and in English.
- Methodology: The following methodological priorities/considerations guide the review and selection of the references: (a) study types—randomized controlled trials, quasi experiments, surveys, descriptive data analyses, literature reviews, policy briefs, etc., generally in this order; (b) target population, samples (representativeness of the target population, sample size, volunteered or randomly selected), study duration, etc.; (c) limitations, generalizability of the findings and conclusions, etc.
- Existing knowledge base: Vetted resources (e.g., peer-reviewed research journals) are the primary focus, but the research base is occasionally slim or nonexistent. In those cases, the best resources available may include, for example, reports, white papers, guides, reviews in non-peer-reviewed journals, newspaper articles, interviews with content specialists, and organization websites.

Resources included in this document were last accessed on July 6, 2017. URLs, descriptions, and content included here were current at that time.

This memorandum is one in a series of quick-turnaround responses to specific questions posed by education stakeholders in the Appalachia region (Kentucky, Tennessee, Virginia, and West Virginia), which is served by the Regional Educational Laboratory Appalachia (REL AP) at SRI International. This Ask-A-REL response was developed by REL AP under Contract ED-IES-17-C-0004 from the U.S. Department of Education, Institute of Education Sciences, administered by SRI International. The

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