Description:

A validated tool refers to a questionnaire format which has been that has been developed to collect systematic responses on a specific topic from a particular group of respondents. Usually respondents are given a scale with a brief description and asked to choose which best represents their viewpoint (e.g. using a Likert scale). The processes to validate the scale should have been completed through a testing process with a representative sample of respondents in a way that was designed to ensure the scale has adequate reliability and validity to enable it to be transferable to research with other groups of respondents. Sometime analysis involves looking at each question separately or sometimes the sums of all questions are used.

Application:

Some commonly-used psychological and psychosocial scales that have been pre-validated are potentially relevant to widening access work undertaken by higher education providers as a means of evaluating changes in the attitudes and/or dispositions of young people that occur as a result of their participation in outreach, participation and success activities. Using validated scales would potentially avoid practitioners having to validate their own scales (and could lead to useful comparative data between activities) however, further work is needed to assess the suitability of validated scales with particular groups in specific contexts. A helpful source is The Educational Endowment Foundation (EEF) SPECTRUM database, which contains information on Social, Psychological, Emotional, Concepts of self, and Resilience outcomes: https://educationendowmentfoundation.org.uk/projects-and-evaluation/evaluating-projects/measuring-essential-skills/ - closeSignup

Type of evidence:

Quantitative. Type 2 (empirical) and Type 3 (causal)

Strengths:

Measuring psychological constructs such as attitudes, aspirations and self-efficacy can be challenging and may involve quantifying data relating to qualitative concepts. Validated questionnaires have undergone a validation procedure to demonstrate that the tool accurately measures what it aims to (based on the researchers understanding of the construct under investigation), regardless of who responds: so these tools can reduce biases and ambiguities and provide high quality data on which to draw conclusions.

Pre-existing validated scales are in wide use in the measurement of constructs which are becoming increasingly recognized in widening participation and access work, such as self-efficacy and self-confidence (i.e. beliefs about one's own ability to succeed); locus of control and mindset (i.e. beliefs about one's ability to influence one's future); resilience (i.e. beliefs about one's ability to overcome challenges or setbacks) and engagement with school (i.e. motivation towards school work and relevant actions). Importantly, the academic literature[1] suggests that these constructs (and others) may be predictive in terms of educational attainment, which is known to be the main determinant of participation in higher education.

Weaknesses:

In general it is unlikely that existing tools developed for another purpose can just be applied 'off the shelf'. Validated tools are usually developed to measure other constructs that may not correspond to your conceptualization or fit with what you are trying to achieve.

Many of the validated tools would be unwieldy to use in a widening participation context with young age groups because of the number of questions involved.

Some validated tools have been developed commercially and there is a costs involved in using them.

If you do decide to adapt a validated scale for use with another population group, you should undertake additional tests to ensure adaptation has been done in a way to preserve the reliability and validity of the tool. Even when there is a close match between the construct in the tool and what you are trying to

1 Gutman, L. and I. Schoon (2013) The impact of non-cognitive skills on outcomes for young people: literature review. London: Education Endowment Foundation.

	measure, if you are using a validated tool you need to make sure it was validated under the same or very similar cultural conditions.
Mixed methods:	Depending on the aims, other types of research may be needed to capture changes not represented in existing validated scales, plus the data obtained through validated scales could be enhanced through qualitative research and investigation of the process involved in generating outcomes.
Indicators:	The use of pre-validated tools also obviously depends on the aims of the intervention, however the underlying premise is that there will be tools that have been validated in the past can be used to evaluate changes in attitudes and/or dispositions of young people that occur as a result of their participation in widening participation and student success activities, and which may be predictive of educational attainment.
Expertise:	High
Requirements:	See guidance on conducting surveys
Ethical considerations:	See guidance on conducting surveys
Work planning:	See guidance on conducting surveys
Analysis:	How you analyse will depend on your study design, although statistical analysis will be required to demonstrate changes. Pre-validated scales usually approximate to a normal distribution, permitting parametric analysis. For example, by calculating the means and standard deviations and comparing results using a Students T-test. Another approach is to analyse the data using categorical approaches (e.g. categorizing scores into high, average and low and using cut points). In order to validate a scale then extensive testing is required (usually involving factor analysis and the use of multiple samples).
Reporting:	Usually findings from validated scales will help inform changes which occur in target populations, although demonstrating causality will depend on the study design factors. Pre-validated scales are often designed to focus on group rather than individual-level differences.

The University had started working in partnership with local schools and colleges on a project designed to support improvements in academic attainment at A-level and university readiness (defined as knowledge, attitudes and skills to navigate HE admission processes). The design of the intervention drew on Bourdieu's concepts of intellectual capital and academic capital. Modules were designed to strengthen subject expertise, as well as offer study support an understanding of tacit 'rules of the academy'. The theory of change for the intervention was agreed by a stakeholder group with representatives from HE, FE and the student body. Previous analysis of a pilot scheme suggested that the type of readiness indicators correlating to good outcomes were measures of independence and self-efficacy, and therefore the design put the focus on sessions to develop individuals' self-efficacy as part of the initiative.

A series of group and one to one sessions were developed for college students, running over an academic year. The delivery team were interested in trying to quantify personal change, as an intermediate outcome measure at a student level. The evaluation also included use of long term outcomes, based on analysis of student attainment data and collation of HE progression information. Use of a pre-validated scale was seen as a means of strengthening the collection of self-reported measures. The aim was to have an evaluation tool which would be capable of teasing out impacts for individual participants over time. This required a lot of development work to decide on the measures, a lengthy process to collect data over time, as well as large enough sample to complete statistical analysis to validate the results (c800 participants).

As part of the programme delivery, data was collected through surveys of participants at three points in the programme (baseline, mid-term and final year). The measures were based on the Student Approaches to Learning Scale (SALS) – which is a 14 factor model offering comprehensive measurement of young person's engagement with learning. The tool was selected after an extensive review of the literature to choose an appropriate measure. The SALS was considered an appropriate approach as it has been validated across different countries with a large sample of young people (the validation process included data collected across 25 countries with 100,000 15-year-olds). It was therefore considered to have very strong validity, plus the language was appropriate for use with the target audience of young people.

The SALS tool comprises 52 items, and collects responses using a 4 point Likert scale. To make the evaluation more manageable the team extracted 12 items relating to 'Effort and Perseverance', 'Perceived Self-Efficacy' and 'Control Expectation'. Plus data was collected to inform measures of subject knowledge and academic capital.

The use of a subset of measures from a validated tool threatened the overall validity of using the tool, and therefore, time for some additional statistical analysis has been built into the data analysis phase, which means that the team will be able to test whether the tool is still valid in an abridged form.

The advantage of using a validated tool to collect intermediate outcome measures of self-efficacy, in conjunction with the use of long term outcome measures, is that as data becomes available the evaluation can go beyond summative conclusions by looking at the underlying elements of success for individuals.

References:

Marsh, H., K. Hau, C. Artelt, J. Baumert and J. Peschar (2006) OECD's brief self-report measure of educational psychology's most useful affective constructs: Cross-cultural, psychometric comparisons across 25 countries, International Journal of Testing 6(4): 311-360.