VALIDATION RESEARCH BEHIND ECHO

ECHO
LISTENING PROFILE

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Validity refers to the soundness or cogency of a measurement instrument. Although there are several types of validity most assessments will have some combination of four primary types of validity: Face Validity, Content Validity, Criterion-oriented Validity, and Construct-oriented Validity. ECHO has undergone rigorous analysis in all four of these categories in conjunction with experts at the University of Mississippi.

FACE VALIDITY

Face Validity is the most basic type of validity. It asks, "Does the assessment make sense...on its face?" When you receive your profile, does it seem to describe you as a listener? If it does, it has face validity.

Another aspect of face validity has to do with whether the basic premise of the assessment makes sense. Are there obvious inconsistencies in the assessment model, or does the internal logic seem to add up? The ECHO Listening Profile makes sense intuitively because it measures listening against two dichotomies. The first pertains to whether a listener tends to listen "inward" or "outward" (Reflective vs. Connective). The second pertains to whether a listener tends to focus on what is literal (facts, details, and the tangible world) vs. abstract (ideas, possibilities, and the "big picture"). This is what we call Analytical vs. Conceptual Listening. Again, these dichotomies have an internal logic that make sense to most observers; they are an apparently reasonable way to order the universe of listening.

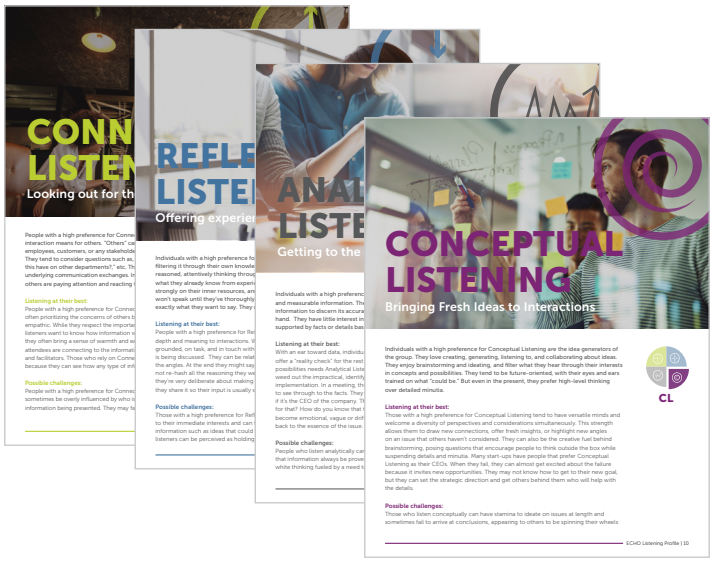
CONTENT VALIDITY

Content Validity measures whether the items (or "answers") in the assessment questions line up with the categories they are meant to represent. For example, does the item "I interrupt a speaker when nobody seems to be following along" line up with Connective Listening, the category it's supposed to match?

A systematic way to test this is to give all the items to listening scholars and see if they can match all the items back to the categories they are supposed to refer to. When scholars were asked to match each individual item to one of the four listening habits, there was 98% agreement.

CRITERION-ORIENTED VALIDITY

Criterion-oriented Validity (which includes three sub-types, namely predictive, convergent, and divergent validity), measures the degree to which the assessment items are related to items on another assessment that measures something similar. It is like using an older, more established assessment as an anchor to establish internal consistency and make sure the new scale (in this case the ECHO) is not merely duplicating something that already exists.



As an example, consider a hypothetical group of people taking both assessments. The assessments are different, so they will have different ways of categorizing people. At the same time, if people who are grouped similarly on the new assessment also show up similarly (relative to each other) on the older, more established assessment, this provides strong evidence of criterion-oriented validity for the new assessment. ECHO was tested side-by-side with an older assessment called the Listening Styles Profile – Revised (LSP-R) and showed strong results for criterion-oriented validity.

CONSTRUCT-ORIENTED VALIDITY

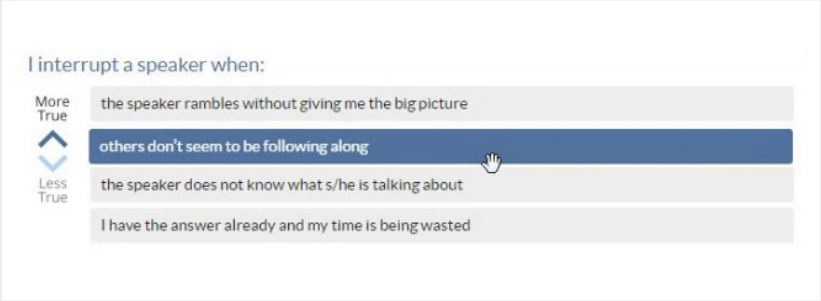
Construct-oriented Validity is the most complicated of the four types of validity to test, and its goal is to show that the assessment actually measures the underlying categories (in our case habits) that it purports to measure. Evidence for construct validity shows that all the question items are correlating with real categories (what scholars call "latent variables"). For ECHO, our latent variables are Connective Listening, Reflective Listening, Analytical Listening, and Conceptual Listening. What Construct-oriented Validity asks is whether all items for Connective Listening, for instance, are actually helping to determine a test-taker's tendencies toward connection and not some other construct. So a person is making choices in their listening, and the latent variables (i.e., the four listening habits) are what account for these choices.

In the case of ECHO, Construct-oriented Validity has been tested through a series of confirmatory factor analyses (CFA). CFA can provide a range of useful estimates including model fit, parameter values (i.e., factor loadings), internal consistency, and three types of error (random, specific factor, and transient). It is most typically used in listening research to provide evidence that items on an existing or newly constructed test are valid indicators of a single latent construct; when multi-dimensional scales are created, researchers can test whether the multiple dimensions proposed line up with those underlying collected data.

Why Does the Assessment Only Have Ten Questions?

Because ECHO uses an ipsative or "forced-ranking" questionnaire, the profile is technically 40 items clustered into 10 groups of four. Each group of four offers six comparative data points, for a total of 60 data points gathered through the questionnaire. To illustrate, if a test taker ranks their four choices in this order:

1. A
2. B
3. C
4. D



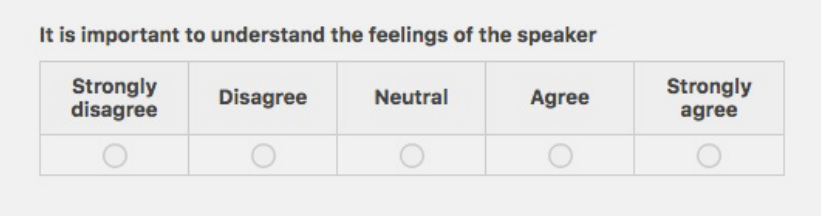
We gather six data points:

This person prefers A over B
This person prefers A over C
This person prefers A over D
This person prefers B over C
This person prefers B over D
This person prefers C over D

Many other assessments will ask the same question six different ways to gather the same information ECHO gathers in only one question.

So why don't all assessments use forced-ranking since it's more user friendly and time-efficient? The reason is because statistical validation is a much more arduous process for forced-ranked questionnaires. But the researchers at ECHO believe the advantages far outweigh the methodological complexity.

Another very widely used form of questionnaire used for scaling is the Likert format (i.e. strongly agree-strongly disagree). This type of scaling also requires a high number of items to generate standard estimates of internal consistency. An additional difficulty with this scaling method is that when respondents are asked to make a choice and "agree" or "disagree" to seemingly good or seemingly bad ways of being (e.g., interrupting at all for any purpose, as with one of ECHO's item sets) they will tend to agree with items that sound good and disagree with items that sound bad. Respondents are able to effectively say, "I don't interrupt, regardless of the situation."



Example of Likert format question

Test takers are not allowed the same luxury with the ECHO. By utilizing ranked order scaling, respondents are forced to choose among options, as opposed to being able to agree with all the supposedly positive items and disagree with all the supposedly negative items. Such an approach further enhances the validity of the scale over more traditional scaling methods.

