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Finding and Using Tests and Instruments for Research

Randy Miller

Liberty University, rlmiller5@liberty.edu

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You need to distinguish whether you are doing qualitative or quantitative “original” empirical research (where you are generating new data) as opposed to just philosophical or theoretical or “review of the literature” research. All research, even “original” research such as this requires a review of the literature to determine the gap the researcher will fill. For quantitative research in particular, it is crucial that you use a reliable and valid instrument.

- **RELIABILITY** is how consistently a test measures what it attempts to measure.
 - Cronbach's alpha (sometimes called coefficient alpha) is often used as the measure of reliability.
 - You are generally looking for a score of .80 or higher.
- **VALIDITY** is how well an instrument measures what it claims to measure, and whether the measured “quality” is meaningful.
 - Validity is generally determined for a specific population and so if you are using it for a population for which it was not originally developed, the validity may need to be tested.
 - Validity is also based on the original instrument, given as directed and not a modified or edited version.

For any particular instrument, there could be several things available:

- **ACTUAL INSTRUMENT**
 - All of the questions, means of administration, population to be tested – adults, teens, children, etc. scoring method, etc.
 - For standardized educational tests, is this a norm referenced (comparing one student to others) or criterion referenced test?
 - Usually “commercially available” instruments are not available free online. Other instruments may be.
 - We have some sample commercially purchased instruments in our curriculum library (but these are for evaluation purposes and can't be used for conducting actual research without you purchasing them from the developer).
 - Often, they won't send samples of commercially available tests except to legitimate researchers.
 - Sometimes specialized training or permission is needed to administer or score an instrument and the publisher won't sell it to you unless you have that training.
 - Sometimes researcher developed instruments are available either as an appendix in a scholarly article or dissertation. In other cases, you may have all of the questions (if they do an item by item evaluation in a scholarly journal article), but you may need to cut and paste and format to put into a form that you can distribute.
 - Scoring methods and instructions are very important. Sometimes certain individual questions are reverse scored.
- **PUBLISHER'S OR DEVELOPER'S WEB SITE**
 - For commercially available tests, the website will usually include pricing information. May also include research about the instrument and its development, reliability and validity. May include sample questions.
 - For researcher developed instruments, may contain copies of the instrument, means to obtain permission to use, research etc.

- **REVIEWS or DEVELOPMENT INFORMATION**

- Reviews of the instrument and a description of how it was developed and the validity and reliability tested are often in Mental Measurements Yearbook.
- Another database that contains journal articles reviewing test instruments is Health and Psychosocial Instruments (HAPI). It is an Ebsco database listed under databases that begin with the letter “H.”
- Researcher developed instruments often are described in peer-reviewed scholarly articles or doctoral dissertations.

- **INSTRUMENT USED IN RESEARCH**

- Scholarly journal articles describing how the particular instrument was developed or used in actual research.
- For instance, an article about the effects of school uniforms on academic achievement used the Stanford Achievement Test as its instrument to measure achievement. While the Stanford Achievement Test was mentioned in the article this was not an article about the test or its development.
- These articles aren’t ABOUT the instrument, but rather show how one researcher used the instrument to measure a factor.

FINDING INSTRUMENTS (To find these subscription databases go to www.liberty.edu/library and type the name of the database – such as Mental Measurements Yearbook - in the search box and see the results under “Databases.”)

- **Mental Measurements Yearbook**

- Produced by the Buros Center for Testing at the University of Nebraska, this database provides users with a comprehensive guide to over 3,000 contemporary testing instruments.
- There is an open access Buros website that will offer to sell you their reviews. We have a subscription database with this information available to you at no charge. Don’t ever pay for test reviews or scholarly articles. Likely we either have them or can obtain them from another library.
- All MMY entries contain descriptive information (e.g., test purpose, publisher, pricing) and edited review(s) written by leading content area experts.
- To be included in the MMY, a test must be:
 - commercially available
 - published in the English language
 - and be new or revised since it last appeared in the series.
- Beginning in The Fourteenth Mental Measurements Yearbook, tests also must provide sufficient documentation supporting their technical quality to meet criteria for review.
- The MMY database also includes Tests in Print (TIP) which serves as a comprehensive bibliography to commercially available tests that are currently in print in the English language. Now in its Eighth Edition, TIP provides vital information to users including test purpose, test publisher, in-print status, price, test acronym, intended test population, administration times, publication date(s), and test author(s).
- A score index permits users to identify what is being measured by each test.
- Different ways to search for tests
 - You may enter type of test (achievement, aptitude, etc.) to view tests of that type
 - You may enter the name of the test (Stanford Achievement Test)
 - You may enter an acronym by which the test is commonly known
- When you find a reviewed test, realize that there are two separate reviews usually only separated by one blank line. You can cite these as two separate sources in your bibliography (using the reviewer’s names) or the entire entry as a single entry for the test itself.

- **Health and Psychosocial Instruments (HaPI)** HaPI provides information on the following:

- Checklists
- Coding Schemes
- Indexes

- Interview Schedules
- Projective Techniques
- Questionnaires
- Rating and Other Scales
- Tests
- Vignettes/Scenarios
- One problem with this database is that the “title” listed is the title of the instrument, not the article describing the instrument. So sometimes it will say we don’t have an article when really we do have it. If it is telling you we don’t have the article, try cutting and pasting the name of the article into Google Scholar.

- **PsycInfo**

- Do an advanced search by topics (you can use Boolean searching and truncation strategies), and you can limit to “Empirical,” “Quantitative,” “Qualitative,” etc. Then look at the most frequently used instruments.
- With that name, go to Google Scholar and see if you can find the article outlining the instrument’s development, reliability, and validity.
- There is a limiter in PsycInfo for “Test Measures Appended” which shows which articles include a copy of the instrument used.

- **ProQuest Digital Dissertations and Theses**

- You can do an “advanced” search so search for your topic and on a separate line search for “quantitative OR instrument OR test,” etc. Then look to see the names of instruments used in their research.
- With that name, go to Google Scholar and see if you can find the article outlining the instrument’s development, reliability, and validity.

- **CINAHL**

- This is a medical database, but does include counseling under the realm of psychiatry.
- Do a search for a particular topic within CINAHL and then choose “Research Instruments” under “Source Types.”

- **Google Scholar**

- Google Scholar bases their relevance rankings on how often an item is cited in the literature. These “seminal” articles about an instrument are frequently the most often cited.
- At the opening screen, go to “Settings” then “Library Links” and search for “Liberty University” and check all of the applicable boxes and click “Save.” This will tie Google Scholar to our subscription databases.
- You can’t do Boolean or truncation searches so you may have to try several variations on your topics.
- You can see all of the articles that Google Scholar knows about that have cited that original article. Search within the citing articles to see if there are any on your topic to add to your literature review.

OTHER TIPS AND TRICKS

- If you need assistance in finding instruments feel free to contact a Librarian (either me or your liaison librarian).
- If you are looking to see if anyone has made a test accessible on the web if you have some sample questions from the instrument you can try putting the sample questions in quotation marks and doing a search in Google. Just because someone has posted a “pirated” copy of a commercially available test doesn’t mean it is available for free use. But at least you can see what it looks like.
- There are many topics (including very specific questions) for which there has never been developed a reliable, valid measurement instrument. For instance, someone recently asked for an instrument to measure the level of discomfort people had in being proselytized in the workplace. Someone else wanted a validated instrument for a particular unit in a specific tenth grade science curriculum. Some of these very obscure or specific topics don’t have instruments.

- There are some things that cannot be measured or are difficult to measure, especially quantitatively. For instance, it is much easier to measure someone's religiosity than his/her spirituality. Religiosity includes things like whether they attend church, read the scriptures of their faith, pray, etc. rather than trying to measure how "spiritual" or "godly" they are. Read the questions carefully to see if this scale is measuring what you want to measure. For instance, I reviewed a spirituality scale that really measured agreement or lack thereof with certain Bible doctrines (young earth creationism, complementarianism in gender roles, biblical inspiration, etc.) as a measure of the person's spirituality. By this criteria, someone of another faith might have a vibrant spirituality but score poorly on this measure.
- Things involving feelings or asking "open ended" questions are more appropriate for qualitative research. Qualitative instruments often include coding instructions as to how to code the responses that may vary in exact wording.
- Most instruments are copyrighted. Some are "commercially available" which means you must pay to use them. Others are copyrighted, but may be used for free with appropriate permission or under certain conditions. There are very few tests that are actually in the "public domain" which means that they may be used freely without permission. These tend to older instruments.
- It is very important to obtain the appropriate permission to use a researcher developed test. There may be various conditions. For instance, some may require that all copies contain a certain copyright notice. Others may allow you to USE the test but not REPRODUCE the test in a public means (such as an appendix in your dissertation). Others may ask for payment if you are able to provide it, but if you are self-funded they will give permission to use it for free.
- If you include your actual instrument as an appendix in your dissertation, be sure you have written permission (or blanket permission granted in the author's article) to do so.
- Finding the developer's contact information can be difficult at times. Sometimes it is provided in the original article and that person was a faculty member at the institution. Others were doctoral students then and now, years later, teach at a different institution. If you search in Google for "site:.edu Person's Name" (omit quotation marks, then you are only looking for them within institutions of higher education. If you have a good idea of what school they're at, you can look specifically at that school's name. For instance, search Google for "site:liberty.edu Greg Smith." Sometimes it is helpful to add a discipline. For instance, if you search Google for "site:.edu Fernando Garzon" there is one who is a Counseling professor at Liberty and an engineering professor at another institution. So searching "site:.edu Fernando Garzon Counseling" will yield the correct one. Sometimes, professors have their own websites for an instrument such as this one <http://wai.profhorvath.com/>
- Sometimes the common name by which we know an instrument today is not the original name of the instrument from the "seminal" article. For instance, the instrument we now know as the Beck Depression Inventory was originally called simply "An Inventory for Measuring Depression."
- This brings up another important point. Make sure that the review or scholarly article you are using as the basis for reliability and validity matches the version or edition of the instrument you plan to use. So the current edition of the Beck Depression Inventory, for instance is the BDI-II (or the second edition). There is also the original version, a 1993 revision, and a Fast Screen version. So make sure that your supporting documentation is for the appropriate edition.
- Don't forget that all research involving human subjects requires review by the Institutional Review Board www.liberty.edu/irb.