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Quantitative and Qualitative Instrument Validation Requirements

Purpose: This document's purpose is to specify student requirements for qualitative and quantitative instrument validation.

Quantitative Instrument Validation

Quantitative data collection tests hypotheses and answers questions on correlation and regression between two or more variables. The accuracy of the data solely depends on the validity and reliability of each measurement instrument or subscale derived from an authoritative source. **To conduct a reliable and acceptable dissertation study, researchers must locate valid quantitative instruments that have been published in peer-reviewed scholarly articles. If the researcher is a student, the instruments must be submitted to their chair for approval.**

The quantitative instrument must have an acceptable Cronbach's alpha to assess scale, testing items' reliability, or internal consistency. Quantitative instrument reliability depends on the strength of consistency in assessing those measurement items. Any Cronbach alpha coefficient that is less than .7 is not acceptable. Items that have ≥.7 are reliable measurement instruments for the specified variables.

Researchers shall not develop new instruments when previously validated data collection instruments exist. Additionally, per United States copyright laws, researchers must receive written permission from the author(s) or organization(s) with the rights and privileges to the instrument they would like to adopt before using or revising any preexisting instrument.

If there is no preexisting valid published instrument for the construct to be measured, researchers are encouraged to change the focus of their research. If the researcher maintains that they would like to develop their own instrument, they must follow the necessary procedures to test and validate their own instrument. Researchers must be cognizant that this process will most likely significantly increase the duration of completing their research study. Furthermore, if the researcher is a student, the chair must be qualified to lead the student in the validation of the new instrument. To guide in this process, the chair must have sufficient expert experience in instrument validation and have previously guided dissertation candidates in doing so and present evidence of such to the Westcliff University's Dissertation Department.

Researchers can use a translator to translate pre-existing instruments into another language after receiving permission from the owner(s) and/or author(s). Researchers must select at least two credentialed qualified language translators. If the researcher is a student, they are to submit to their dissertation chair the professional qualifications of the two credentialed qualified language translators before translating a pre-existing survey. One qualified translator is responsible for

translating the survey into the appropriate language of the population of the research study. The second qualified translator is responsible for translating the survey back into the language of the original survey. The researcher must then submit the original survey and the back translation to a panel of experts to assess the accuracy of the translation of the instrument. The panel must comprise at least three members and have experience with translation in the two languages in question and also have knowledge of the construct(s) being studied. If the researcher is a student, the chair must then review and approve (or not) the findings of the panel of experts with the dissertation candidate.

Qualitative Instrument Validation

If researchers use interview or survey questions for data collection, they must conduct a pilot study with a minimum of three participants meeting the inclusion criteria. The researcher should assess the instrument for understanding and ease of answering questions and make necessary revisions to improve the questions. Pilot studies must involve interviews if interviews are a data collection method.

In addition, researchers must have a panel of at least three experts in the development of qualitative research instruments to evaluate whether the questions align with the research questions, and meet standards of validity and trustworthiness (credibility, transferability, confirmability, and dependability). These experts should have relevant expertise, not simply experience writing qualitative questions or have conducted a few qualitative studies.

The researcher must provide the panel with the questions, revise them based on their feedback, and resubmit the revised questions until a consensus is reached among the experts that the questions are appropriate for the research goal and the research question(s). If the questions are changed in any way based on the review by the panel of experts, the researcher is required to conduct a second pilot study and further refine the questions based on the findings from the second pilot study.

Researchers must submit to the IRB a detailed review of how the questions align with the research questions. Include documentation of the expert panel's feedback, revisions made, and pilot study results including a discussion of findings, conclusions, and amendments made.

Data collection with the researcher's current employer organization is strongly discouraged and must be diligently assessed for ethical feasibility. Data collection with people whom the researcher professionally supervises, friends, or family members is prohibited.

If observations are used to collect data and the researcher is a student, the researcher is responsible for providing proof of their training qualifications to their chair to show they have the skills required for conducting observations.