

Presentation: Measurement instruments validation process under scrutiny

Presentación: La validación de instrumentos de medida a examen

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In this issue, *Revista de Educación* carries out an interesting initiative. We have compiled a group of works around the critical analysis of an article recently published in this journal.

The purpose of any academic journal is to serve as a means of communication for the scientific community it serves. Technological means have made it possible for communication to be two-way and practically immediate. However, scientific journals still play the role of promoting the slow and thoughtful communication of the developments that occur in the scientific field of reference. But sometimes academics need to go one step beyond the reception of information, and have to be able to move on to an exchange of ideas, a contrast of arguments that allows clarifying the terms used and refining the accepted methodologies. In this case, the topic on which this enriching exchange occurs is that of the validation of the measurement instruments used in the educational field.

Validation is a fundamental process to guarantee that the information on the variables used has clear content and accurately reflects the reality that researchers want to measure.

In traditional science, the question of the relationship between the measuring instrument and the measured reality is a technical question that, generally, has as its greatest concern precision, that is, the correspondence between the number produced and the measured reality. But even in the most traditional scientific fields, a point has been reached in which the pure direct comparison of empirical reality

with the measuring instrument is impossible, and only through indirect procedures it is possible to successfully carry out the measurement. This raises the issue of whether what is being measured actually responds to the original objective.

In the social sciences in general, and in psychology and education in particular, this problem has been present since their beginnings as scientific disciplines. Are we really measuring what we say? Is there a true relationship between the magnitude that we define theoretically and the scale that we produce during the measurement? Is it the construct that we have defined theoretically that is determining the values of the scale, or is it the act of measuring that is creating the construct?

All of these concerns come from afar, and they are what have determined the procedures that have been refined to constitute a set of techniques that are used in a standard way by social scientists.

But this has never been a closed question. Concern about the validity of the instruments used in our scientific field is very justified. It is not in vain that we practically always try to measure characteristics of individuals that are not directly observable, and for which we can only obtain indirect evidence. That is why there is such a proliferation of validation studies in the scientific literature in our areas. And as Martínez Abad and Sánchez Prieto (2024) indicate in this same issue, the number of articles dedicated to construct validation has skyrocketed almost exponentially in recent years.

In number 402 of our magazine, the article 'Construct Validity of the Gifted Rating Scales (GSR 2) Parent form in Spain' was published (Tourón, Navarro-Asencio and Tourón, 2023). The particularity of this scale is that it does not try to directly measure the high capacity of individuals, but rather focuses on the information provided by parents as a source for prior screening. That is to say, if usually diagnosing a subject with respect to any latent trait means carrying out a measurement based on indirect evidence, here the situation is even more indirect, since we try to use evidence regarding the perceptions of the parents of those students to try to identify those who may have high abilities.

Logically, this leads us to wonder what the causal relationships are like between the elements of the measuring instrument and the reality we want to study. Is it that reality, high ability, that determines parents' perceptions, and these in turn are reflected in their responses to GSR2, or are the questions in GSR2 those that determine the reality we want to define?

Taking this work as a stimulus for his paper, Martínez-García (2024) makes a critical analysis regarding the reflective or formative nature of the proposed construct. What is the true direction of causality in the relationship between the instrument and the construct? Martínez-García relies on the critical analysis of the work of Tourón et al. (2023) to consider that possibly the standard established in construct validation work suffers from the lack of consideration of the possibility that the causal direction is the opposite, that is, that it is our questionnaire that is delimiting the reality that we measure. The consideration that with our questionnaire we may be delimiting a somewhat artificial reality, artificial even if real.

The management of *Revista de Educación* considered that the topic was important enough to dedicate the attention it deserves. That is why this issue publishes a monographic section dedicated to construct validation. It is a somewhat special monograph, since the original article that gave rise to this academic exchange was published in number 402. Current issue, number 406, includes the critical analysis of Martínez-García (2024), a contribution on the same topic by Martínez-Abad and Sánchez Prieto (2024) and the replica of the authors of the original work, Tourón, Navarro-Asencio and Tourón (2024). This set of four articles constitutes a dossier focused on some methodological considerations on construct validation that has the appeal of being centered around a concrete example and on a very current construct.

Revista de Educación considers that this is a high-level academic exchange, which can help improve our methodological practices. From here we want to thank the generosity of the participants in this academic exchange, which we know will be very beneficial for those who want to address the validation of measurement instruments in our field in the future.