

## Instrument Validity

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### **Objective 1: to measure the degree to which a person appreciates modern art.**

This objective is a bit ambiguous due to use of the phrase “appreciates modern art.” This is open to a wide variety of interpretations; however, it appears that, generally, art appreciation refers to the ability to view a work of art and form one’s own opinion about that work (Art appreciation, n.d.). The use of the term “modern” is also somewhat open to interpretation as to whether it means art from modernism or postmodernism, or whether it is used in a more general sense, as in *contemporary* art. Additionally, in order for a person’s appreciation (informed opinion) of modern art to be useful, it must be formed within the framework of established standards. For this purpose, I will use an instrument that aligns with the Virginia Standards of Learning for visual arts, with particular attention to the category of *Judgment and Criticism* (Art I: Art foundations, n.d.). Included in these standards are AI.19 (use of critical evaluation skills and proper art vocabulary), AI.22 (differentiation between personal preference and informed judgment in discussing art), AI.23 (using established criteria for critiquing art), and AI.25 (classification of works as representational, abstract, nonobjective, or conceptual). All of these standards seem to directly relate to one’s level of art appreciation.

With this more focused, constitutive definition of art appreciation and these learning standards in mind, I will use a questionnaire consisting of 20 samples of modern art. I will include a diverse selection of samples of modern art that have been deemed high quality by experts within the Standards of Learning for visual arts. For each sample, the participants will choose either “representational,” “abstract,” “nonobjective,” or “conceptual.” They will then write an evaluation (short answer) for each sample. Each answer will need to be consistent with the aforementioned standards for art evaluation, including proper vocabulary, use of informed judgment as opposed to personal preferences, and the use of established criteria for critiquing art. The degree to which a person’s answers meet these standards will establish the level of the individual’s appreciation of modern art.

**Sample Item:**

Directions: For each art sample, circle the appropriate classification and, in the box provided, write a short critique that:

- Represents critical evaluation skills
- Correctly uses appropriate art vocabulary
- Represents informed judgment as opposed to personal preference
- Corresponds to established criteria for critiquing art.



1) This work is classified as:

- A. Representational
- B. Abstract
- C. Nonobjective
- D. Conceptual

Evaluation

This approach will provide valid measures because the instrument is so closely tied to the objectives that are being measured. Validity is all about ensuring the instrument is truthful in that it measures what it is intended to measure. I also feel this approach provides some support in terms of construct-related evidence of validity, in that the variable is clearly defined (degree of appreciation of modern art) and that a hypothesis is formed about how those who have a high level of the variable will behave/perform (i.e. meet the established learning standards) (Fraenkel & Wallen, 2009, p.153). I also feel this approach provides content-related evidence of validity in that it is formatted appropriately and covers the domain being measured (Fraenkel & Wallen, 2009, p.148).

Note that this could also be done as direct observation by using an evaluation checklist that outlines the specific behaviors that are indicative of modern art appreciation (within the criteria established by the SOL). If this option were selected, I would observe the individual in an art museum to check for those behaviors and qualities. I would have an expert in the field review the checklist and perhaps even

perform the observation to ensure the proper criteria are being measured.

**Objective 2: to measure the level of anxiety that exists among university students during final exam period.**

To measure test anxiety, I would use a psychometric device based on a Likert Scale. As with most instruments, I could either develop such an instrument on my own with thorough review by experts in the field, or I could administer an existing instrument, which is generally preferred (Fraenkel & Wallen, 2009, p.112) and is more likely to produce valid results because it has already been expertly evaluated for validity. I will use the Test Anxiety Inventory, or TAI, developed by Charles Spielberger. The instrument consists of 20 statements, each with a corresponding 4-point Likert Scale that allows the respondent to indicate how often they experience what is described in the statement (Test anxiety inventory, n.d. a). This instrument evaluates two main components of test anxiety: cognitive concerns and physiological reactions (Test anxiety inventory, n.d. b).

Since the objective is specifically interested in anxiety during final exam period, it may be helpful or even necessary to modify the instrument slightly to ensure it is focused on this specific area of interest. This could actually be accomplished by simply indicating during administration that we are speaking specifically about the final exam period, as opposed to test anxiety in general. Changing the instructions alone should satisfactorily focus attention on the final exam period without compromising the validity of the test, since little or no changes would need to be made to the instrument itself.

Since I have not seen the exact items used on the Test Anxiety Inventory, I have provided a sample of questions based on its premise of evaluating specific physical and mental characteristics of someone who experiences test anxiety:

**Sample Items:**

Directions: This inventory can be used to evaluate your level of anxiety during the final exam period. Read each statement and select your immediate response based on your own feelings during the final exam period.

1. Worrying about how well I will do interferes with my preparation for the final exam.

Strongly Disagree          Disagree          Agree          Strongly Agree

2. I cannot seem to physically relax before the final exam.

Strongly Disagree          Disagree          Agree          Strongly Agree

3. I never feel fully prepared for final exams.

Strongly Disagree          Disagree          Agree          Strongly Agree

4. My stomach feels queasy or upset during final exam period.

Strongly Disagree          Disagree          Agree          Strongly Agree

I feel this approach would provide valid measurements because it makes use of an existing, tested instrument that has shown sufficient evidence of convergent validity (Test anxiety inventory, n.d. a). A correlation of .82 to .83 between the instrument and another instrument called Sarason’s Test Anxiety Scale (TAS) provides criterion-related evidence of validity (Test anxiety inventory, n.d. a). Additionally, the changes to the instructions during administration of the instrument would not be significant enough to jeopardize the validity that has already been established, since the changes would only limit context without changing the content of the instrument.

I would also be interested in taking the study a step further by widening the the context to all tests, rather than just final exam period. This would involve administering the test as is, although this would be outside the scope of this specific objective.

**Objective 3: to measure attitudes of local residents toward the building of a new ballpark in downtown San Francisco.**

To measure attitudes of local residents toward building a new ballpark in San Francisco, I will use a common five-point Likert scale. I would prefer to use an existing instrument for such a measure; however I did not locate such an instrument on the Internet. Therefore, I will develop a collection of 30 or so statements that I feel measure the attitudes of local residents with regard to the new ballpark. Then, to ensure I remained objective and that the items truly measure what they are intended to measure, I will have some colleagues review the items. After those tweaks, I will meet with a panel of experts to review the items and narrow the instrument to the 20 questions that best drive toward the specified objective. Following is an example of what some of those items would look like.

**Sample Items:**

Directions: Read each statement and select your immediate response based on your own feelings about the building of a new ballpark in downtown San Francisco.

1. I support construction of the new ballpark.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2. I don’t feel we need a new ballpark.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3. The local economy would benefit from the new ballpark.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4. The new ballpark is a good move for San Francisco.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. Traffic will be a bigger problem after the new ballpark is built.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Since this is not an existing instrument, it is perhaps at greater risk in terms of validity. This highlights the importance of having it reviewed both by colleagues and experts to ensure the items truly measure the respondents' attitudes regarding construction of the new ballpark. With these reviews and resulting revisions to the instrument, I feel this approach would produce valid results, as long as the sample is random and of sufficient size to enable generalizability. If another instrument is identified (or developed appropriately by experts), validity could be further enhanced by comparing the results in order to establish criterion-related evidence.

## References

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