

TROILS: Tromsø Information Literacy Suite

Source evaluation measure

The Source evaluation measure is designed to quantitatively assess students' abilities to critically evaluate sources. It is a variation of a technique devised by Walton and Hepworth (2012). This measure is used in assignments in which students must find and use reliable, academic sources. In this example assignment, students choose three academic sources for their term papers and write references to these sources in a bibliography. For each reference, students write an annotation describing why it is a reliable, academic source, and well suited to answering their research question.

Annotations in the bibliography are analyzed and scored with the following component scores (details below):

1. *Quality* of the source: ratings of each source on a scale of 0 (not academic) to 3 (academic), as judged by the teacher/librarian.
2. *Variety* of criteria: the number of different, unique criteria for source evaluation stated by the student (e.g. relevancy, accuracy, authority, etc.) in each annotation. Each specific criterion is allocated a score of '1'.
3. *Frequency* of criteria: the number of instances criteria for source evaluation appear in each annotation. Each criterion is allocated a score of '1'. (This will be different from the variety score if a criterion, e.g. relevancy, is listed more than once in the annotation.)

Quality

In this example assignment, students were provided with a definition of an academic source composed of three criteria:

- a) An academic source is written by professionals, for professionals.
- b) It builds on other academic sources, cites sources to substantiate claims and arguments, and provides complete references for these sources.
- c) The text has been the subject of a thorough, professional editorial process and has received constructive criticism before being published.

Scoring - quality:

- 0 points – none of the 3 criteria in the definition above (a, b, c)
- 1 point – 1 of the 3 criteria
- 2 points – 2 of the 3 criteria
- 3 points – all 3 criteria

Variety/frequency

Students received points if their annotations included criteria for source evaluation in this list:

- authority – e.g. author qualifications, affiliation
- accuracy
- objectivity – bias, self-interest
- currency – up-to-date
- coverage (sample size, e.g. meta-analysis)
- relevance to research question
- publishing channel – e.g. journal/publisher reputation, editors
- quality control – e.g. peer-review
- references provided
- credibility
- level – intended audience
- purpose – why was it published
- authenticity
- reliability
- cited by others – impact
- limitations of the study
- empirical research, IMRAD structure

Annotation example

Below is an example of an annotation to a source in the bibliography of a student whose topic was the effect of chronic pain on mental health:

This is a good, academic source because it is written by professionals from several universities, it is also peer reviewed and refers to academic sources. I think it may be relevant to include this because substance abuse is one of the consequences that can occur as a result of medication for chronic pain. (translated from Norwegian)

Quality: 3 points – the source was an article from a peer-reviewed journal, with references to academic sources, and therefore fulfilled the three quality criteria.

Variety: 4 points - one for each of the following unique criteria:

- authority - “*written by professionals*”
- quality control - “*peer reviewed*”
- references provided - “*refers to academic sources*”
- relevance to research question - “*relevant*”

Frequency: 5 points - in addition to the 4 criteria above, an extra point was given because the authority criteria was mentioned twice – “*from several universities*”

Scoring examples

See Table 1 for an example of the scoring of four students’ annotated bibliographies.

Averages of the quality, variety and frequency scores were calculated for the students’ three

sources, and then added together to calculate a final score. This score represents the students' ability to critically evaluate sources.

Table 1: Scoring of annotated bibliographies from four students, with component scores for quality (Q), variety (V), and frequency (F) for three sources.

Student	Source 1			Source 2			Source 3			Average			Sum
	Q	V	F	Q	V	F	Q	V	F	Q	V	F	
A	3	2	2	3	1	1	3	2	3	3.00	1.67	2.00	6.67
B	3	5	6	3	5	5	3	5	5	3.00	5.00	5.33	13.33
C	3	6	6	3	4	4	3	3	3	3.00	4.33	4.33	11.66
D	0	3	4	3	2	4	3	2	3	2.00	2.33	3.67	8.00

Reference:

Walton, G., & Hepworth, M. (2012). Using assignment data to analyse a blended information literacy intervention: A quantitative approach. *Journal of Librarianship and Information Science*, 45(1), 53-63. <https://doi.org/10.1177/0961000611434999>