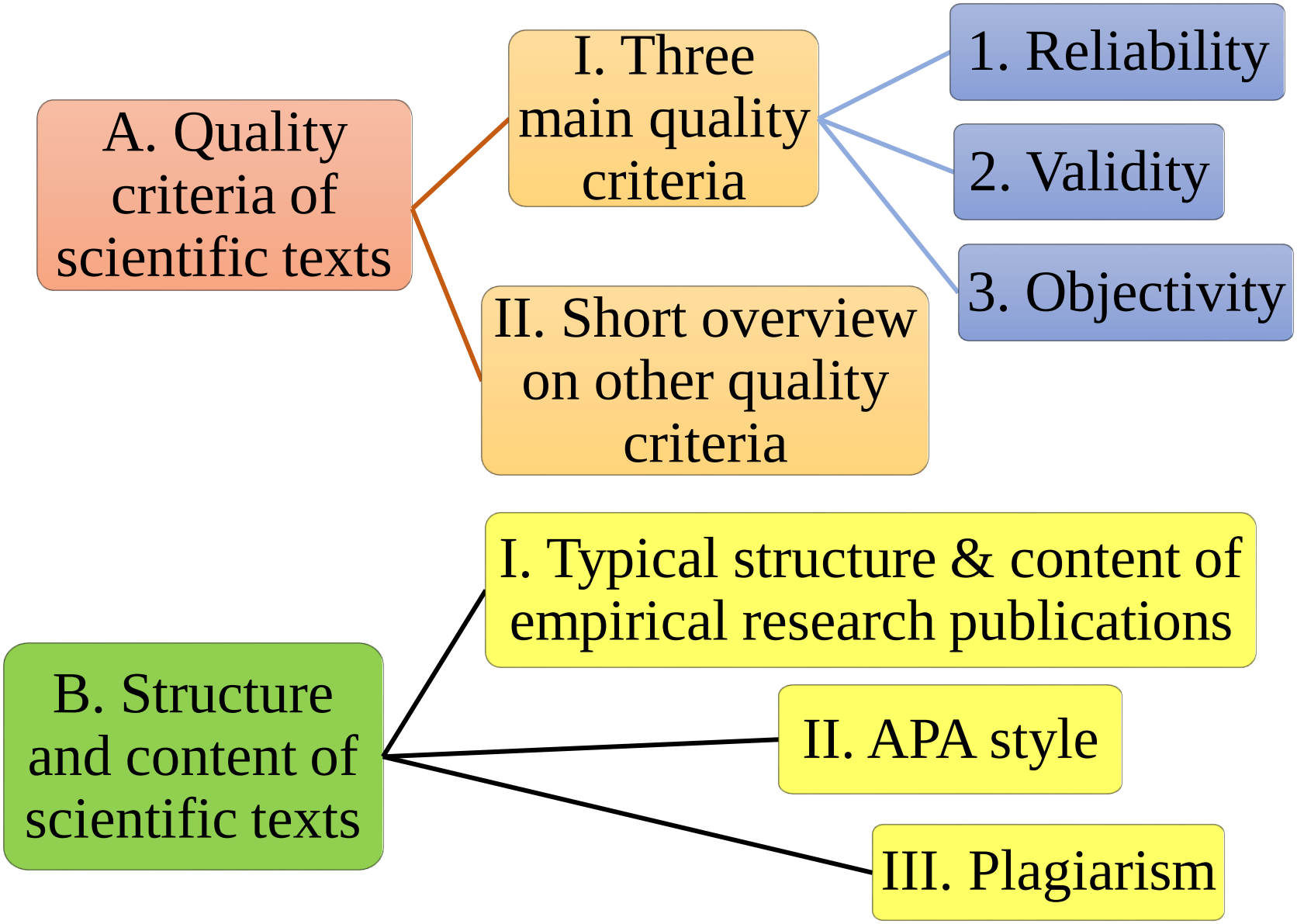
Quality criteria, structure and content of scientific texts

November 16th 2020

Lecturer: Miguel Angel Rejón Zamudio

Presenter: Thuy Duong Tran (Daisy)

Main content

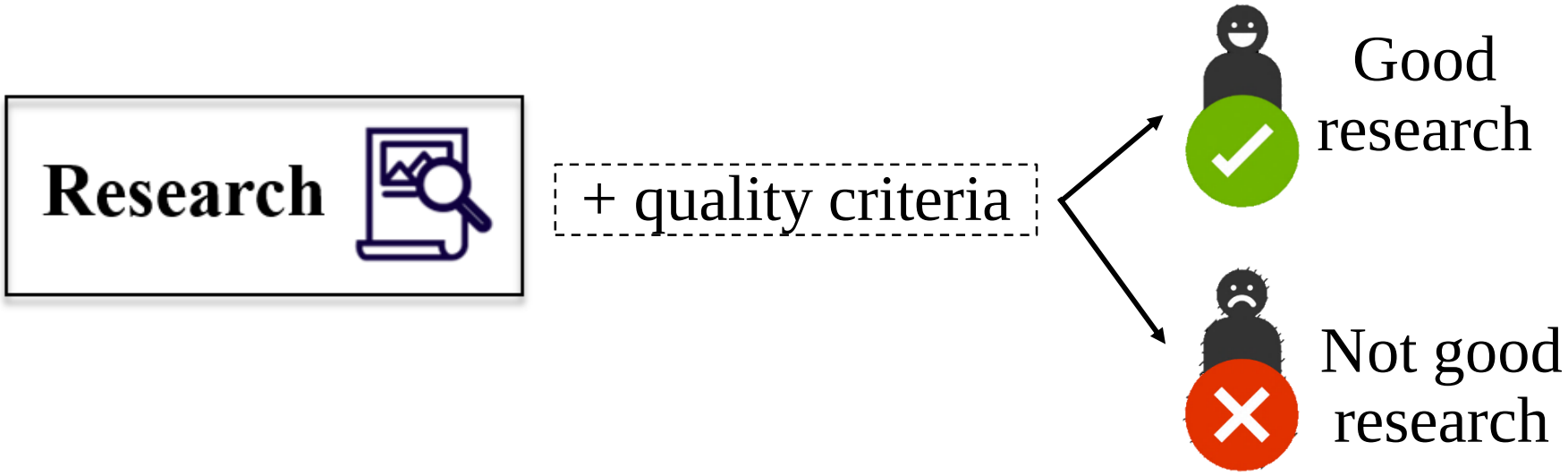


A. Quality criteria of scientific texts

What is quality criteria of scientific text?
What is it use for?

→ List of standards

→ Ensure the credibility of research publications

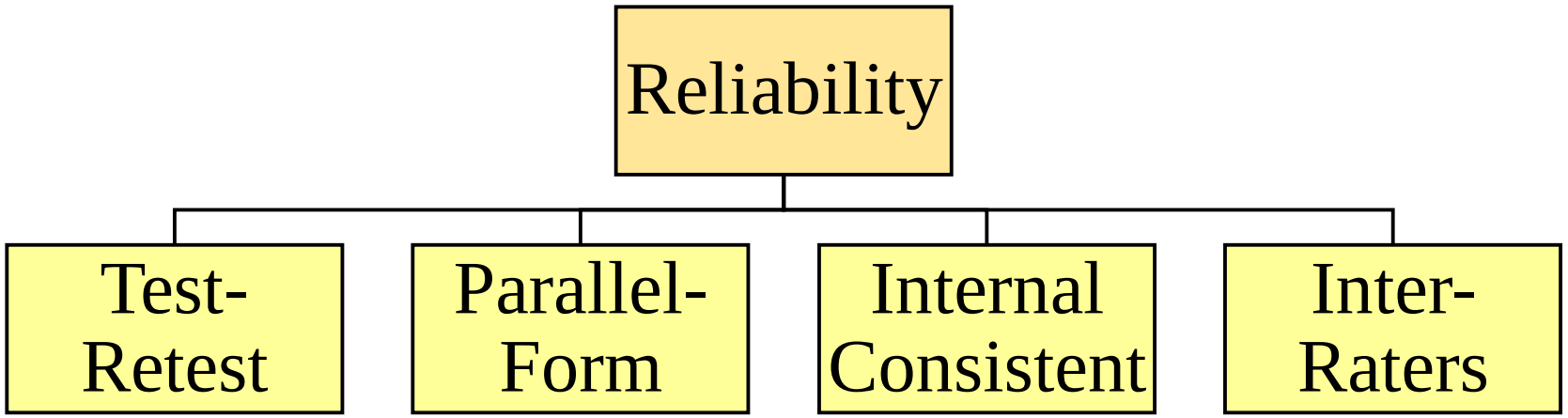


A. Quality criteria of scientific texts

I. Three main quality criteria

1. Reliability

Reliability is a degree to which an experiment or an instrument produces similar or consistent results each time it is used under similar conditions.

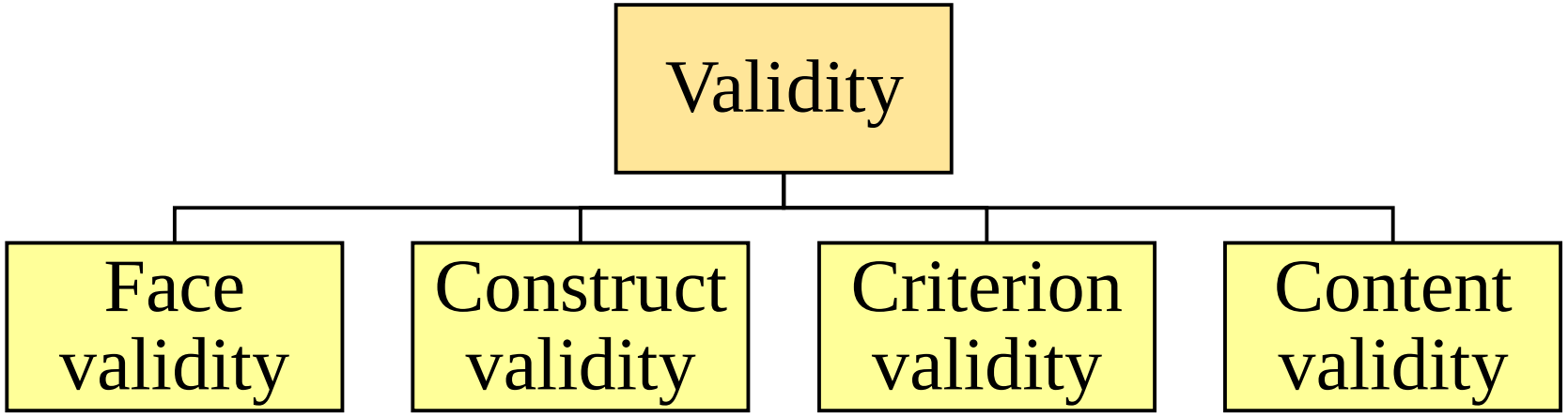


A. Quality criteria of scientific texts

I. Three main quality criteria

2. Validity

Validity is the degree to which an experiment or an instrument measures compared with what expected to get, or in other words, the accuracy of the experiment.



A. Quality criteria of scientific texts

I. Three main quality criteria

3. Objectivity

Objectivity is the degree to which an experiment or an instrument produces similar or consistent results each time it is used by different researchers (the results is independent with the researchers).

➔ A specific form of reliability

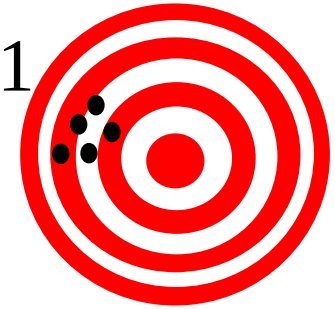
➔ Can be determined by the test-retest with different researchers.

A. Quality criteria of scientific texts

I. Three main quality criteria

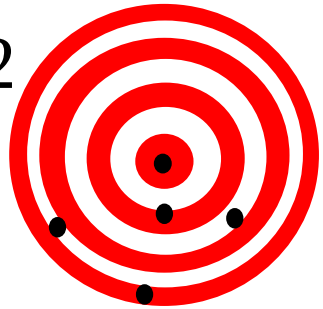
Relationship between main quality criteria

1



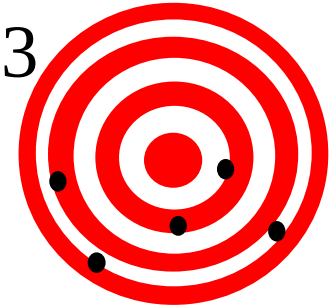
Reliable, not valid

2



Not reliable, low valid

3

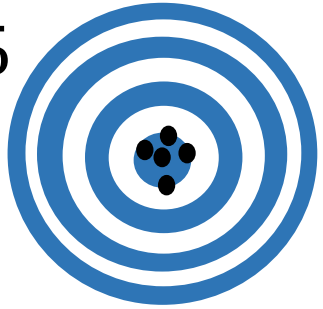


Not reliable, not valid

4

Reliable and valid

5



Reliable, valid and objective

A. Quality criteria of scientific texts

2. Overview on other criteria

Generalizability 

≈ **External validity**

Get the same expected results

Under different conditions

A. Quality criteria of scientific texts

2. Overview on other criteria

Falsifiability

Theories, hypotheses → Test. Prove or disprove

Before announcing results

Stop other researchers prove it wrong

B. Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Abstract

Introduction

Method

Results

Discussion

Conclusions

References

Appendices

B. Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Abstract:

+ a brief summary of a research paper (usually in 1 paragraph, 150 – 250 words).

+ indicate what the paper will assess, the purpose of the study, the key results, and a short conclusion

B. Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Introduction:

+ open a pathway for readers to understand the rest of your paper.

+ indicate the previous studies in this field, theories, hypothesis, objectives of the study and research question.

Abstract

- Short outline of the paper
- Contain brief background (~ 2 sentences)
- 1 paragraph
- Include methods or study designs, conclusions and results
- Avoid references or citations

Introduction

- First section the research paper
- Depth – information about the background of the subject field
- Normally 4 paragraphs
- Do not include methods, conclusions, results
- Cite or make reference

B. Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Method:

+ indicate the participants, how to collect, measure and analysis data (procedures, variables)

Results:

+ describe your findings in the research after testing your hypothesis or using methodologies mentioned above, and the secondary outcomes also (if have)

B.Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Discussion:

+ describe the meaning of your findings (compare to previous researches, indicate the limitations and open new ideas for future studies) -> shows the importance of your study and makes the connection with the Introduction.

Introduction	Discussion
- Using knowledge in prior researches -> problems and questions in your research	- Using knowledge in your research -> problems and questions in the next researches

B.Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Conclusion:

+ Restate the main argument, relevant evidences and the findings of your research.

Introduction	Conclusion
- Set the context for readers (move from general knowledge to specific knowledge in your study)	- Briefly summarize what readers just read -> help readers realize what they got after reading

B. Structure and content of scientific texts

I. Typical structure and content of empirical research publications:

Reference:

+ show all the resources of information that you use in your paper. (follow the APA style)

Appendices:

+ The last section of your paper, where you put tables or figures.

B. Structure and content of scientific texts

II. Introduction of APA style

What is APA?

APA is a style of document issued by American Psychological Association.

What is use for?

APA style stand as a standards for academic paper. Purpose when using APA style is help readers easier find sources referenced in your paper and ensure the copyright.

B. Structure and content of scientific texts

II. Introduction of APA style

7th edition of APA style released in October 2019

Manuscript format:

1. Margins: 1 – inch margins all sides
2. Typeface and size: 12-Time New Romans, 11-Arial,…
3. Alignment and line spacing: align left-hand margin, double space entire the manuscript.

…..

(More information in Link to resource)

B. Structure and content of scientific texts

III. Plagiarism:

What is plagiarism?

Plagiarism is using others' ideas or studies without citation.

What is the consequences if you plagiarize?

- Affect authors (reputation and motivation)
- Stop readers from searching academic sources
- Reduce other researchers' motivation for conducting works
- Affect the one who plagiarize (not actually gain knowledge, be criticized by others and receive some punishments)

How to avoid plagiarism?

➔ Using APA style for citation

B. Structure and content of scientific texts

III. Plagiarism:

1. Citing references in text:

- Write author's surname and year of publication (paraphrase)

APA style uses the author-date citation system

Example:

- Weinberger (2011), indicated that…..
- In 2011, Weinberger's study of principle of transactive script in CSCL showed that…

B. Structure and content of scientific texts

III. Plagiarism:

1. Citing references in text:

- Write author's surname and year of publication (paraphrase)

- When using another person's exact words, write author's surname, year of publication, page number and include quotation mark

Example: "Scripts may built on various underlying principles that could explain why scripts are an effective instructional approach for CSCL" (Weinberger, 2011, p.190)

Structure and content of scientific texts

III. Plagiarism:

2. The Reference list:

- All citation in paper need to be in the reference list.

- Information is listed by the surname of authors (or first author's surname if there is more than one author)

- References include: author's name/names, publication date, title of the work, publication data

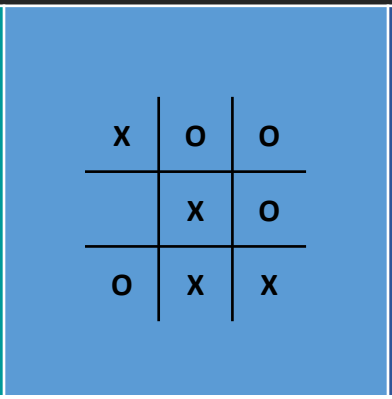
- Double space entire the reference list

- There are several kinds of references, such as: journal articles, chapter in edited book, entire book, conference proceedings…

(More information in Link to resource)

LET'S PLAY GAME! ☺

Kahoot.it




Thank you for listening!

References

https://www.youtube.com/watch?v=vZMxUcRmLMw&feature=emb_title
https://www.youtube.com/watch?v=KuT2n1w0Ixc&feature=emb_title
https://www.youtube.com/watch?v=9ltvDNAsO-I&feature=emb_title
https://explorable.com/types-of-validity
https://conjointly.com/kb/types-of-reliability/
https://cirt.gcu.edu/research/develop/research_ready/quantresearch/5
https://www.youtube.com/watch?v=BxgULyYtwo8&t=336s
https://www.youtube.com/watch?v=DN5ZuhwXq2o&t=752s
https://www.hydroassoc.org/research-101-generalizability/#:~:text=Very%20simply%2C%20generalizability%20is%20a,group%20of%20people%20or%20situations.&text=If%20the%20results%20can%20only,the%20results%20have%20poor%20generalizability.
https://guides.libraries.psu.edu/apaquickguide/books
https://apastyle.apa.org/style-grammar-guidelines/paper-format/font
https://uscmed.sc.libguides.com/c.php?g=477787&p=3266941#:~:text=Using%20In%2Dtext%20Citation&text=APA%20in%2Dtext%20citation%20style,numbers%2C%20use%20a%20paragraph%20number.
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/reference_list_articles_in_periodicals.html
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html
Link to resource
https://www.apa.org/education/undergrad/empirical-social-science.pdf
https://www.plagiarism.org/article/what-is-plagiarism
https://owl.purdue.edu/owl/research_and_citation/using_research/avoiding_plagiarism/index.html
http://fd-deutsch.uni-saarland.de/merkblaetter/plagiate.pdf
https://sherman.library.nova.edu/sites/learn/watch/using-apa-style-avoid-plagiarism/
Weinberger, A. (2011). Principles of Transactive Computer-Supported Collaboration Scripts. *Nordic Journal of Digital Literacy, 6*(3), p.189-202

Pictures
https://www.iconfinder.com/icons/5769649/behavior_don%27t_bad_good_do_icon
https://www.123rf.com/photo_66576838_stock-vector-external-link-icon-so-user-knows-they-will-leave-their-current-website.html
https://www.pinterest.com/pin/850969292076708466/
https://www.flaticon.com/free-icon/test_825590
https://www.vector4free.com/free-vectors/game-icon
https://www.vectorstock.com/royalty-free-vector/video-games-controller-icons-set-vector-2029714