

IDENTIFICATION OF QUESTIONNAIRE ITEM RESOURCES

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DEVELOPING NEW QUESTIONNAIRE ITEMS



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1 When to Develop New Items?



- ✓ When **no suitable existing instruments are available**.
- ✓ When the existing instruments **do not fully measure the intended construct** or research context.

2 Key Requirement



The developed items must **accurately measure the intended construct**.

Steps in Developing New Questionnaire Items



3 Why Developing New Instruments is Generally Not Encouraged?



Time consuming
Requires substantial time to develop, test and refine the items.



Requires expert input
Needs input from subject matter experts to ensure content validity.



Needs statistical analysis
Requires item analysis (e.g. item-total correlation, reliability) and refinement of weak items.



Multiple validation steps
Involves pilot testing, reliability and validity analysis (e.g. EFA/CFA) with a larger sample.



Recommendation

Developing new instruments is generally not encouraged unless necessary because it requires **substantial time and validation procedures**.

SOURCES FOR QUESTIONNAIRE ITEMS



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1

ACADEMIC DATABASES

Search databases such as:



Google Scholar



University library databases



Discipline-specific databases
(e.g., psychology databases)



2

HIGH-QUALITY JOURNALS

Use instruments published in reputable journals indexed in:

Scopus

Web of Science

These journals typically undergo rigorous peer-review processes.

JOURNAL
ARTICLE



3

ADDITIONAL STRATEGIES



Review appendices in theses and journal articles.



Trace citations from methodology sections.



Locate the original instrument source.



Cited by

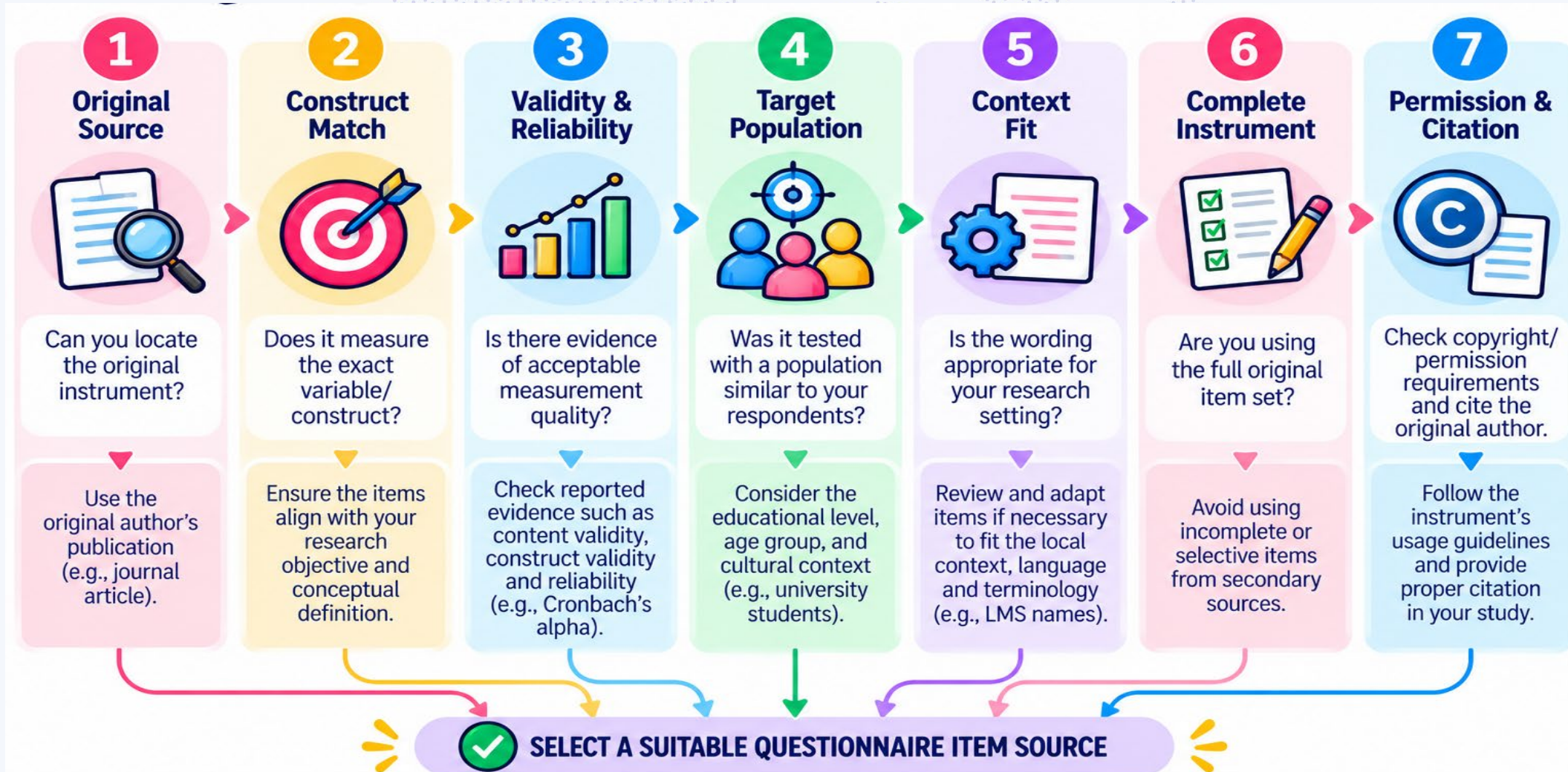
1.
2.
3.

CHECKLIST FOR SELECTING A QUESTIONNAIRE ITEM SOURCE



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USING EXISTING QUESTIONNAIRE ITEMS



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1 What is Using Existing Items?



Researchers are encouraged to use **instruments previously developed by other researchers.**

2 Criteria for Selecting Existing Items



Align with the research objectives

Choose items that match your research purpose and context.



Measure the intended variables accurately

Ensure the items reflect the constructs/variables you want to measure.



Demonstrate validity and reliability

Select instruments with evidence of good validity and reliability reported in previous studies.

3 Why It Is Important?



Selecting appropriate items is critical to ensure **measurement accuracy.**

4 Steps in Using Existing Questionnaire Items

1

Search for suitable instruments



Look for instruments from journal articles, books or reputable databases (e.g. Scopus).

2

Check alignment with your study



Ensure the items fit your research objectives and target population.

3

Evaluate validity and reliability



Review evidence of validity (e.g. content, construct) and reliability (e.g. Cronbach's alpha).

4

Adapt if necessary



Modify items to suit your context (e.g. language or minor wording changes) while maintaining the original meaning.

5

Cite the original source



Acknowledge the original authors and provide proper referencing.

Key Takeaway

Use **validated** and **reliable** instruments from previous studies whenever possible to **ensure accurate and credible measurement.**

ADAPTING EXISTING QUESTIONNAIRE ITEMS



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1 Use items from the original source whenever possible



- ✓ Use the items as provided in the original instrument to maintain the intended meaning and structure.

2 Avoid using incomplete versions from secondary studies



- ✗ Do not use shortened or modified versions from other studies, as important items may be omitted.

3 Include all relevant original items to avoid information loss



- ✓ Ensure all relevant items from the original instrument are included to capture the construct comprehensively.

4 Modify wording to suit the research objectives



- ✓ Adapt the wording, language or context to align with your research objectives while maintaining the original meaning.



ETHICAL REQUIREMENT

Researchers should **obtain permission** from the original author before adapting the instrument.



Identify the original author



Request permission



Obtain approval before use and adaptation



ARRANGEMENT OF QUESTIONNAIRE ITEMS



EXAMPLE 1: ORIGINAL PERCEIVED OF USE ITEMS



- 1 I often become confused when I use the electronic mail system.
- 2 I make errors frequently when using electronic mail.
- 3 Interacting with the electronic mail system is often frustrating.
- 4 I need to consult the user manual often when using electronic mail.
- 5 Interacting with the electronic mail system requires a lot of my mental effort.
- 6 I find it easy to recover from errors encountered while using electronic mail.
- 7 The electronic mail system is rigid and inflexible to interact with.
- 8 I find it easy to get the electronic mail system to do what I want it to do.
- 9 The electronic mail system often behaves in unexpected ways.
- 10 I find it cumbersome to use the electronic mail system.
- 11 My interaction with the electronic mail system is easy for me to understand.
- 12 It is easy for me to remember how to perform tasks using the electronic mail system.
- 13 The electronic mail system provides helpful guidance in performing tasks.
- 14 Overall, I find the electronic mail system easy to use.

EXAMPLE 1: HOW DO WE ADAPT?



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OBJECTIVE

To identify undergraduate students **perceived ease of use** towards using LMS.



DEFINITION OF TERMS

Perceived ease of use

Perceived ease of use is the degree to which an individual thinks that using the system is free of effort (Davis et al., 1989; Ngai et al., 2007).

In this study, perceived ease of use refers to the degree to which undergraduate students believe that using PutraLMS (UPM), iFolio (UKM), and Spectrum (UM) will be free of effort.



ITEMS

- 1 The process of using PutraLMS/iFolio/Spectrum is clear.
- 2 The process of employing PutraLMS/iFolio Spectrum / is understandable.
- 3 It is easy for me to become skillful at using PutraLMS/ iFolio/Spectrum.
- 4 PutraLMS/iFolio/Spectrum is easy to handle whenever I encounter a problem.
- 5 My interaction with PutraLMS/iFolio/Spectrum does not require me to think a lot.
- 6 Learning to use PutraLMS/ iFolio/Spectrum is easy for me.
- 7 It is easy to get materials from putraLMS/iFolio/ Spectrum.
- 8 Overall, I believe that PutraLMS/ iFolio/Spectrum is easy to use.



EXAMPLE 2: ORIGINAL PERCEIVED USEFULNESS



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- 1 My job would be difficult to perform without electronic mail.
- 2 Using electronic mail gives me greater control over my work.
- 3 Using electronic mail improves my job performance.
- 4 The electronic mail system addresses my job-related needs.
- 5 Using electronic mail saves me time.
- 6 Electronic mail enables me to accomplish tasks more quickly.
- 7 Electronic mail supports critical aspects of my job.
- 8 Using electronic mail allows me to accomplish more work than would otherwise be possible.
- 9 Using electronic mail reduces the time I spend on unproductive activities.
- 10 Using electronic mail enhances my effectiveness on the job.
- 11 Using electronic mail improves the quality of the work I do.
- 12 Using electronic mail increases my productivity.
- 13 Using electronic mail makes it easier to do my job.
- 14 Overall, I find the electronic mail system useful in my job.

EXAMPLE 2: HOW DO WE ADAPT?



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OBJECTIVE

To identify undergraduate students **perceived usefulness** towards using LMS.



DEFINITION OF TERMS

Perceived usefulness

Perceived usefulness is the degree to which an individual believes that using a system will increase his/her performance (Davis et al., 1989; Ngai et al., 2007).

In this study, perceived usefulness refers to the degree to which undergraduate students believe that using PutraLMS (UPM), iFolio (UKM), and Spectrum (UM) would enhance their learning performance.



ITEMS

- 1 Using PutraLMS/iFolio/Spectrum improves my academic achievement.
- 2 PutraLMS/iFolio/Spectrum makes it easier for me to learn at university.
- 3 PutraLMS/ iFolio/Spectrum gives me more control over my learning.
- 4 PutraLMS/ iFolio/Spectrum helps me to learn more efficiently.
- 5 PutraLMS/iFolio/Spectrum system makes my learning more effective.
- 6 PutraLMS/iFolio/Spectrum has a positive effect on my learning.
- 7 When I use PutraLMS/iFolio/Spectrum, my friends think my knowledge of ICT is updated.
- 8 Overall, PutraLMS/ iFolio/Spectrum is beneficial for my learning.

ADOPTING vs. ADAPTING QUESTIONNAIRE ITEMS



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ADOPTING A QUESTIONNAIRE ITEM

(Use the item as it is)

Adopting a questionnaire item means using the original item from a published instrument **without any changes**.

Original item (from published instrument)

“The electronic mail system is rigid and inflexible to interact with.”

Source: Davis et al. (1989)
Technology Acceptance Model (TAM) instrument.



Adopted item (no change)

“The electronic mail system is rigid and inflexible to interact with.”



Key points when adopting

- ✓ Use the item exactly as it is.
- ✓ Keep the original wording, meaning and structure.
- ✓ Suitable when the context is similar.
- ✓ Cite the original author.



ADAPTING A QUESTIONNAIRE ITEM

(Modify the item to suit your context)

Adapting a questionnaire item means **modifying the original item to fit the research context, population or setting**.

Original item (from published instrument)

“The electronic mail system is rigid and inflexible to interact with.”

Source: Davis et al. (1989)
Technology Acceptance Model (TAM) instrument.



Adapted item (modified)

“PutraLMS/iFolio/Spectrum is rigid and inflexible to interact with.”



Key points when adapting

- ✓ Modify the wording to fit your research setting.
- ✓ Keep the same meaning and construct.
- ✓ Requires validity check after adaptation.
- ✓ State in your study that the item was adapted from the original source.





REMEMBER: FIND → CHECK → USE → ADAPT → VALIDATE



Good questionnaire design begins with a good measurement decision.

1 FIND

Identify a reliable source of questionnaire items.



2 CHECK

Evaluate if the instrument is suitable for your research.



3 USE

Adopt the items (if no changes are needed).



4 ADAPT

Modify the items to fit your context (if needed).



5 VALIDATE

Ensure the adapted instrument is valid and reliable.



YOUR TURN!

Complete the following activities to check your understanding.

1 Crossword Puzzle



Answer 10 questions related to key terms in this module.

2 Drag & Drop



Drag and drop the correct items to complete the statements.

3 Assessment



Answer 10 multiple-choice questions to test your understanding.



3 attempts

Pass $\geq 60\%$



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THANK YOU