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| **THEME 18. MIXED METHODS RESEARCH: PURPOSE AND DESIGN** |

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| Learning outcomes  This lesson offers you opportunities to:   * Gain an overview about mixed methods research; * Learn about the purposes of mixed methods research; * Develop note-taking skills while watching speech; * Develop the knowledge in conducting mixed methods research.   *Key-words: quantitative, qualitative, mixed methods research, research design, data collection, triangulation design, embedded design, explanatory design, exploratory design, iterative design, transformative design.* |

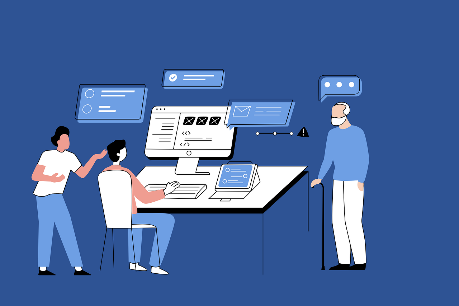
**Mixed Methods Research** is a methodology that combines qualitative and quantitative approaches within a single study or project. This integration seeks to leverage the strengths of both methodologies, providing a more comprehensive understanding of the study issue than either methodology could achieve independently.

The process involves the collection, analysis, and interpretation of both quantitative (numerical) and qualitative (non-numerical) data, employing methodologies that may be combined or integrated either concurrently or in sequence, based on the study design. Mixed methods research is particularly effective for addressing complex topics that require diverse perspectives or various forms of evidence.

**Purpose of Mixed Methods Research**

Mixed methods research integrates qualitative and quantitative techniques into a unified study to leverage the strengths of both disciplines. The aim is to deliver a comprehensive understanding of a research problem by combining numerical data and statistical analysis with in-depth insights and contextual interpretations.   
Mertens (2005) emphasizes that mixed techniques are especially beneficial for exploring issues located within complex educational or social contexts. She argues that many researchers have utilized mixed methods, as it seemed intuitively clear that combining and broadening the range of research strategies within a particular project would increase the investigation's scope and improve scholars' ability to draw conclusions about the issue under study. Dornyei (2007) outlines four specific purposes through which mixed methods research can offer a thorough understanding of a phenomenon.

***Complementarity function.*** Qualitative and quantitative techniques assess both overlapping and distinct dimensions of a phenomena, providing a comprehensive knowledge by showing, clarifying, or expanding on certain aspects. Qualitative research is used to investigate a novel occurrence and formulate an initial hypothesis, which is then evaluated for its prevalence among the community using a quantitative approach.

***Development function.*** Qualitative and quantitative procedures are used successively, allowing the outcomes of the first method to guide the formulation of the subsequent one. A focus group interview is used to generate questions for a quantitative questionnaire. 'Development' may also be interpreted to guide sample choices (for instance, a questionnaire is used to identify participants for a subsequent interview research).

﻿﻿***Initiation function.*** Results obtained through various methods do not consistently yield corroborating or complementary outcomes; nonetheless, differing results can also provide valuable insights. Consequently, researchers may deliberately employ diverse methods to create discrepancies, paradoxes, or contradictions, intended to provoke thought by reframing questions, ultimately aiming for new perspectives.

﻿﻿***Expansion function***. Researchers often endeavor to expand the breadth and depth of their investigations by integrating diverse elements. Qualitative approaches may be used to examine the processes of a particular educational program, while quantitative methods may assess the program's results.

Zoltán Dörnyei (2007) in study Methods in Applied Linguistics identifies the main categories of mixed methods study designs as follows:

***Triangulation Design*** is a mixed methods research strategy that involves the simultaneous collection and analysis of quantitative and qualitative data to compare and cross-validate results from both methodologies. The objective is to validate the findings acquired from one approach with those from another, so assuring a more thorough comprehension of the study issue.

This methodology assigns equal importance to both data kinds, with integration often occurring during the interpretation phase, when results are assessed for consistency or differences. It is often used to augment the validity and dependability of study findings.

***Embedded Design*** is a mixed methods research strategy in which one data type (qualitative or quantitative) serves a supplemental function while the other is the principal method. The objective is to tackle certain research inquiries or provide supplementary insights that the primary approach alone cannot adequately include.

The secondary technique is integrated into the main method, and the two data kinds are gathered either simultaneously or in succession. Integration transpires during data analysis, when the ancillary data enhances or elucidates elements of the original data. This concept is particularly advantageous when a singular technique fails to comprehensively address all facets of the research issue.

***Explanatory Design*** is a mixed methods research methodology whereby quantitative data is first gathered and evaluated, then followed by qualitative data to elucidate, expand upon, or provide deeper insights into the quantitative results.

This sequential approach emphasizes quantitative data, using it as the basis for comprehending the study issue. The qualitative phase aims to investigate the fundamental causes, contexts, or processes behind the numerical patterns or connections identified in the preceding phase. It is especially beneficial for research when quantitative findings need further elucidation or contextual interpretation.

***Exploratory Design*** is a mixed methods research methodology whereby qualitative data is first gathered and evaluated to investigate a phenomenon, discern principal themes, or formulate theoretical ideas. The first phase influences the design of the next quantitative phase, which tests or verifies the results from the qualitative study.

This sequential design emphasizes qualitative data and is especially beneficial when the research topic is poorly understood or when there is a need to create new instruments, frameworks, or hypotheses. The primary objective is to use qualitative insights as a basis for quantitative analysis, so fostering a thorough comprehension of the study subject.

***Iterative Design*** is a mixed methods research methodology defined by a cyclical process whereby qualitative and quantitative methodologies are alternated to revise, inform, or enhance one another over numerous stages.

The approach enables discoveries from one phase (qualitative or quantitative) to inform the succeeding phase, fostering a dynamic and adaptive research process. This iterative method is very beneficial for investigating intricate research inquiries, evaluating changing hypotheses, or progressively enhancing treatments or tools over time. The integration of methodologies transpires continually throughout the investigation.

***Transformative Design*** is a mixed methods research methodology guided by a distinct theoretical framework, often emphasizing social transformation, empowerment, or the resolution of challenges related to inequality, power dynamics, or marginalization. In this strategy, qualitative techniques mostly assume a key position, whilst quantitative methods serve to support or augment the qualitative results.

The transformational method aims to champion social justice, facilitate good change, and amplify the voices of marginalized or disadvantaged people. The study aims to enhance knowledge while also impacting policies, practices, or social institutions to benefit underprivileged populations. This design amalgamates qualitative and quantitative methodologies in a manner that corresponds with transformational objectives and principles.

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| **Activity 1. Reading. Read the text and answer the following questions.** |

1. What is the primary purpose of mixed methods research, and how does it differ from purely qualitative or quantitative approaches?
2. What are the key characteristics of the Triangulation Design, and why is it commonly used in mixed methods research?
3. How does Iterative Design ensure a dynamic and responsive research process, and what are its benefits for addressing complex research questions?
4. Compare and contrast the Explanatory Design and Exploratory Design in terms of the sequence and priority of qualitative and quantitative data collection.
5. What distinguishes Transformative Design from other mixed methods designs in terms of its objectives and application?

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| **Activity 2. Watch the video about “Peer-review”, take notes while watching.** |

You tube link: <https://www.youtube.com/watch?v=7Vc5bgyAXSU&ab_channel=DeakinLibrary>

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| **Activity 3. Speaking. Answer the following questions.** |

1. What is peer-review?
2. What does peer-review aim for each publication?
3. How does the peer-review process work?
4. What happens after author submit a paper for publication?
5. Who evaluates and comments on the paper?
6. How the editor decides whether or not to publish the paper as an article?
7. How do we identify a peer-reviewed article?
8. What alternative names do peer-reviewed articles called?
9. What features are usually found in peer-reviewed articles?
10. Does the peer review process guarantee the published information is correct?

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| **Activity 4. Listening. Complete the notes below. Write ONE WORD ONLY for each answer.** |

**Peer review**

Peer review is a quality control process where it authors scholarly work or research is 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by experts in the same field.

The process is aims that published works are 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_, original and of high quality.

**The peer-review process:**

* An author begins by submitting a paper for publication;
* The journal’s editor assembles a 3\_\_\_\_\_\_\_\_\_\_\_\_\_ of experts from the relevant field and invites them to evaluate and comment on the paper;
* They carefully read the paper and prepares their review 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;
* Then the reviews return to the editor, each with a recommendation to accept, reject, or make changes to the paper and 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;
* The editor, then decides whether or not to publish the paper as an article;
* Finally, the author is advised of the 6\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and if successful the paper is published.

**Peer-reviewed articles as assessments at University:**

Peer-reviewed articles are sometimes called refereed articles or even 7\_\_\_\_\_\_\_\_\_\_ or academic articles;

Limit your database search to peer-reviewed by clicking the relevant checkbox;

Look up the journals official website or find a 8\_\_\_\_\_\_\_\_\_\_\_\_\_\_ copy of the journal.

**Another way to identify a peer-reviewed article is to look for these features:**

* Scholarly and technical language;
* Abstract or summary;
* Methodology;
* Results;
* Key recommendations or conclusion;
* References;
* Authors academic 9\_\_\_\_\_\_\_\_\_\_\_\_\_\_;
* No advertising.

Peer-review cannot possibly check every aspect of the original work or redo the research. So, incorrect or flawed information can be overlooked. However, the peer-review process helps strengthen the 10\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of information so that the research can be taken seriously.

**Listening. Key:**

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| 1. Scrutinized 2. Valid 3. Panel 4. Comments 5. Resubmit | 1. Outcome 2. Scholarly 3. Current 4. Affiliations 5. Credibility |
| **Activity 5. Vocabulary. Match the words with an appropriate definition.** | | |

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|  | **Words** | **Definitions** |
| 1 | Affiliation | a) the act of making information or writing available, esp. in a printed form |
| 2 | Assessment | b) related to a subject or to something happening or being discussed |
| 3 | Credibility | c) to examine something very carefully in order to discover information |
| 4 | Database | d) to formally send a document, plan, etc. to a person or group in authority so that they can decide about it |
| 5 | Methodology | e) becoming part of or form a close relationship with a group or organization |
| 6 | Publication | f) the fact that someone can be believed or trusted |
| 7 | References | g) a large amount of information stored in a computer system in such a way that it can be easily looked at or changed |
| 8 | Relevant | h) a writer or a book, article, etc. that is mentioned in a piece of writing, showing where particular information was found |
| 9 | Scrutinize | i) a system of ways of doing, teaching, or studying something |
| 10 | Submit | j) the process of considering the amount or value of something, or the decision that is made |

**Activity 5. Vocabulary. Key:** 1.e, 2. j, 3. f, 4.g, 5. i, 6. a, 7. h, 8. b, 9. c, 10. d.

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| **Public Domain Images** |

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