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| **THEME 15. LONGITUDINAL VERSUS CROSS-SECTIONAL RESEARCH** |

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| Learning outcomes  This lesson offers you opportunities to:   * Gain an overview about longitudinal research; * Learn about main types of longitudinal design; * Develop note-taking skills while watching speech; * Develop knowledge on cross-sectional research.   *Key-words: Longitudinal research, Cross-sectional research, Panel study, Cohort study, Trend study, Case study, Qualitative longitudinal research, Quantitative longitudinal research, Mixed-methods longitudinal research* |

**1. Definition and Purpose of Longitudinal Research**

 Longitudinal study entails the repeated observation or measurement of identical variables over a prolonged duration. In contrast to cross-sectional studies, which provide a singular temporal picture, longitudinal studies emphasize change and growth across time.

The main objective is to monitor developmental patterns, ascertain causal links, and analyze the dynamics of processes such as language learning, attitude changes, or proficiency enhancement. These investigations elucidate the mechanisms and rationale of change, rather than just presenting the facts.

**2. Longitudinal Research in Applied Linguistics**

Longitudinal designs are very beneficial in practical linguistics for examining phenomena such as second language acquisition (SLA), bilingualism, and sociolinguistic transformations. They facilitate comprehension of the progression of learners' language abilities over time.

**3. Main Types of Longitudinal Design**

**Panel Study**: A panel study is a longitudinal research strategy that entails gathering data from the same cohort of people, referred to as a panel, at various intervals. This technique emphasizes monitoring changes or advancements among the same participants, making it suitable for assessing individual or group trajectories across time.

**Principal Characteristics of a Panel Study:**

* **Repeated Measurements:** Data is collected from identical patients at consistent intervals.
* **Emphasize Continuity:** The examination of the same persons offers insights into the temporal variations of variables.
* **High Consistency:** Reduces variability stemming from participant differences by using the same group.

**Example in Applied Linguistics:**

*Monitoring the language ability of a group of second language learners by the administration of standardized assessments and interviews at the commencement, midpoint, and conclusion of an academic year. This facilitates the identification of skill evolution and the elements that impact advancement.*

 **Cohort Study**: A cohort study is a longitudinal research strategy that entails following a certain group of persons (a cohort) who possess a shared feature or experience over a designated time period. Data is gathered from this cohort at various intervals to assess changes, advancements, or results over time.

**Principal Characteristics of a Cohort Study:**

* **Defined Cohort:** Participants are chosen based on common characteristics, such age, educational background, or language competence level.
* **Temporal Tracking:** Observations concentrate on alterations or advancements within the cohort throughout a designated timeframe.
* **Predictive Insights:** Assists in assessing how collective experiences or attributes affect future results.

**Example in Applied Linguistics:**

*A cohort study could monitor a group of students who commenced learning English as a second language in kindergarten, examining their language proficiency, motivation, and academic performance throughout primary and secondary education. This method facilitates the examination of the impact of early language acquisition on long-term results.*

**Trend Study**: A trend study is a form of longitudinal research design that investigates changes or trends within a population over time. Unlike panel studies, it does not necessitate the examination of the same individuals at each time point. Rather, various samples from the same population are surveyed or observed at multiple intervals.

**Essential Aspects of a Trend Study:**

* **Population Focus:** Monitors alterations within a specific population or group instead of individual cases.
* **Multiple Time Points:** Data is gathered at different intervals to identify trends or changes over time.
* **Dynamic Samples:** Each phase of data collection may incorporate a new sample that represents the same population.

**Example in Applied Linguistics:**

A trend study may explore university students' attitudes toward learning English by conducting surveys with various cohorts of freshmen annually over a ten-year period. This design will demonstrate the evolution of attitudes within the population without the necessity of tracking the same students over time.

 **Case Study**: A case study represents a comprehensive research approach that emphasizes a thorough analysis of a singular case or a limited number of cases within their actual context. The subject of the case may encompass an individual, group, organization, or event, with the objective of conducting a thorough exploration of intricate phenomena, frequently utilizing various data sources.

**Example in Applied Linguistics:**

A case study may examine the language acquisition process of a bilingual child moving from a home setting where a minority language is utilized to an educational setting where the majority language prevails. The study offers a thorough examination of the linguistic, cognitive, and social factors affecting the child's development by gathering data through observations, conducting interviews with the child and family, and analyzing school performance.

**4. Longitudinal Qualitative Research**

Qualitative longitudinal research emphasizes the collection of narrative data, including interviews, journals, or observational notes, over an extended period to investigate participants' experiences, perspectives, or interactions.

**Significance in Applied Linguistics:** Analyzes individual language acquisition experiences. Examines alterations in identity, motivation, or social practices associated with language utilization.

**Benefits:** Offers detailed, contextualized narratives of personal experiences. Identifies subtle variations frequently overlooked in quantitative methods.   
**Challenges:** It necessitates meticulous planning to ensure consistency in data collection. The analysis of data can present challenges owing to the substantial volume of qualitative information.

**5. Quantitative Longitudinal Data Analysis**

Utilizes statistical methods to examine variations in quantitative data gathered over time. Illustrations include test scores, survey outcomes, or experimental metrics.   
**Principal Techniques:**

* **Growth Curve Modeling:** Analyzes the trajectories of change within people or organizations.
* **Repeated Assessments ANOVA:** Analyzes data over several time intervals to detect significant changes.
* **Time-Series Analysis:** Examines patterns or trends in consecutive data points.

Dörnyei asserts that longitudinal research is essential in applied linguistics as it reveals the dynamic and developmental aspects of language acquisition and use. Although it requires more time, money, and preparation than cross-sectional research, the insights obtained are often more significant and applicable. By comprehending its classifications and methodologies, researchers may formulate rigorous investigations that encapsulate the intricacies of linguistic processes.

**6. Cross-sectional research** is a design that entails gathering data from a population or a representative sample at a certain moment in time. The objective is to examine and contrast variables within the dataset to discern patterns, correlations, or discrepancies without accounting for temporal changes.

**Principal Characteristics of Cross-Sectional Research:**

**1. Temporal Snapshot:** Acquires data at a particular instant, offering a "static" representation of the phenomena under investigation.

**2. Comparative Analysis:** Frequently used to contrast several groups or variables within the dataset.

**3. Extensive Population Coverage:** Facilitates the examination of substantial samples for generalization.

**Example in Applied Linguistics:**

*Cross-sectional research might examine the correlation between English proficiency levels and motivation among high school students by conducting a survey at a single time point. This method discerns relationships between proficiency and drive but fails to examine the evolution of these elements.*

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

1. What is the primary purpose of longitudinal research, and how does it differ from cross-sectional research?
2. Describe a panel study and explain its advantages and challenges in applied linguistics research.
3. How does a cohort study differ from a trend study in longitudinal research?
4. What is cross-sectional research, and what type of insights does it provide compared to longitudinal studies?
5. What are the key advantages and disadvantages of longitudinal research compared to cross-sectional research?

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| **Activity 2. Watch the video about “Types of academic writing”, make notes while watching.** |

You tube link: <https://www.youtube.com/watch?v=QVa8gTH1f6g&ab_channel=UoYWritingCentre>

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

1. What is academic writing? What does it require?
2. How can we write essays?
3. What can be discussed in reports?
4. How can you demonstrate yourself in an exam writing?
5. What do you do in reflective writing?
6. What is the purpose of academic posters?
7. When is it required to write a dissertation?
8. Where do we write primary or secondary data to test the hypothesis?
9. What is an extended literature review?
10. What does a thesis represent?

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| **Activity 4. Listening. Complete the notes below. Write ONE / TWO WORDS for each answer.** |

**Types of academic writing**

The various types of writing have different aims, structures and styles, but they all require 1\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ and analysis.

* Essays are a critical response to a question or statement, where you gather evidence from different sources and build your own 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Reports are critically analysing data in a highly structured way. They might discuss experimental or research data, evaluate project outcomes, or review policy 3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and make recommendations.
* In an exam writing, you demonstrate your understanding of a topic under 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ conditions.
* In reflective writing, you evaluate your development or learning, you might prefer practical skills, learning processes or as part of an 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ task.
* Academic posters concisely communicate ideas, and are particularly common to present research findings, and 6\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ visuals at graphs and diagrams.
* A dissertation is an 7\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ piece of structured writing found at the end of an undergraduate or taught master's program.
* In a research project, you use primary or secondary data to test the 8\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* In an extended literature review, you use evidence resources to 9\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ your argument in relation to a question.
* A thesis is the biggest most complex writing task for students and is found in a PhD and MPHIL and other research degree.
* The thesis is a major piece of work for representing the research done and contribute new findings that add to the overall 10\_\_\_

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**Listening. Key:**

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| 1. Critical thinking 2. Argument 3. Implementation 4. Controlled 5. Employability | 1. Incorporate 2. Extended 3. Hypothesis 4. Construct 5. Discipline |

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| **Activity 5. Vocabulary. Match the words with an appropriate definition.** |

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|  | **Words** | **Definitions** |
| 1 | Argument | a) a particular area of study, especially a subject studied at a college or university |
| 2 | Critical thinking | b) an idea or explanation for something that is based on known facts but has not yet been proved |
| 3 | Construct | c) the act of putting a plan into action or of starting to use something |
| 4 | Experimental | d) to include something as part of something larger |
| 5 | Discipline | e) the process of thinking carefully about a subject or idea, without allowing feelings or opinions to affect you |
| 6 | Employability | f) a reason or reasons why you support or oppose an idea or suggestion |
| 7 | Extended | g) to build something or put together different parts to form something whole |
| 8 | Hypothesis | h) using new methods, ideas, substances, etc. that have not been tried before, to find out what effect they have |
| 9 | Implementation | i) the skills and abilities that allow you to be employed |
| 10 | Incorporate | j) long or longer than usual |

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

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| **References** |

Brown, J. D. (2004). Research methods for applied linguistics: Scope, characteristics, and standards. In A. Davies & C. Elder (Eds.), The handbook of applied linguistics (pp. 476–500). Oxford: Blackwell.

Cohen, L., Manion, L., & Morrison, K. (2007). Research methods in education. Routledge, 301 p.

Cottrell, S. (2019). *The study skills handbook*. 5th edition, Bloomsbury Publishing.

Dornyei Z. (2007) Research Methods in Applied Linguistics: Quantitative, Qualitative, and Mixed Methodologies, Oxford University Press, 335 p.

Scarry, S., & Scarry, J. (2013). The writer's workplace with readings: Building college writing skills. Cengage Learning.

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| **Internet sources** |

<https://dictionary.cambridge.org/>

<https://www.youtube.com/watch?v=QVa8gTH1f6g&ab_channel=UoYWritingCentre>

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