ENGAGING INNOVATIVE KNOWLEDGE THROUGH APPLIED
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UPP – Unpacking Pedagogical Potential

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Research Aims

- **Compare structured** evaluations of human-written lesson plans against ChatGPT-generated lesson plans.

- Identify **strengths** and **weaknesses** in both types of lesson plans.

- **Understand** the areas where ChatGPT excels or falls short in comparison to human educators.

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Research Objectives

1. To assess the **quality** and **comprehensibility** of **AI-generated** lesson plans

2. To understand the **pedagogical impact** of these lesson plans on **student engagement** and learning outcomes.

3. To evaluate teacher experiences with using artificially generated lesson plans in the classroom.

4. To **identify potential challenges** and **benefits** associated with the use of artificially generated lesson plans.

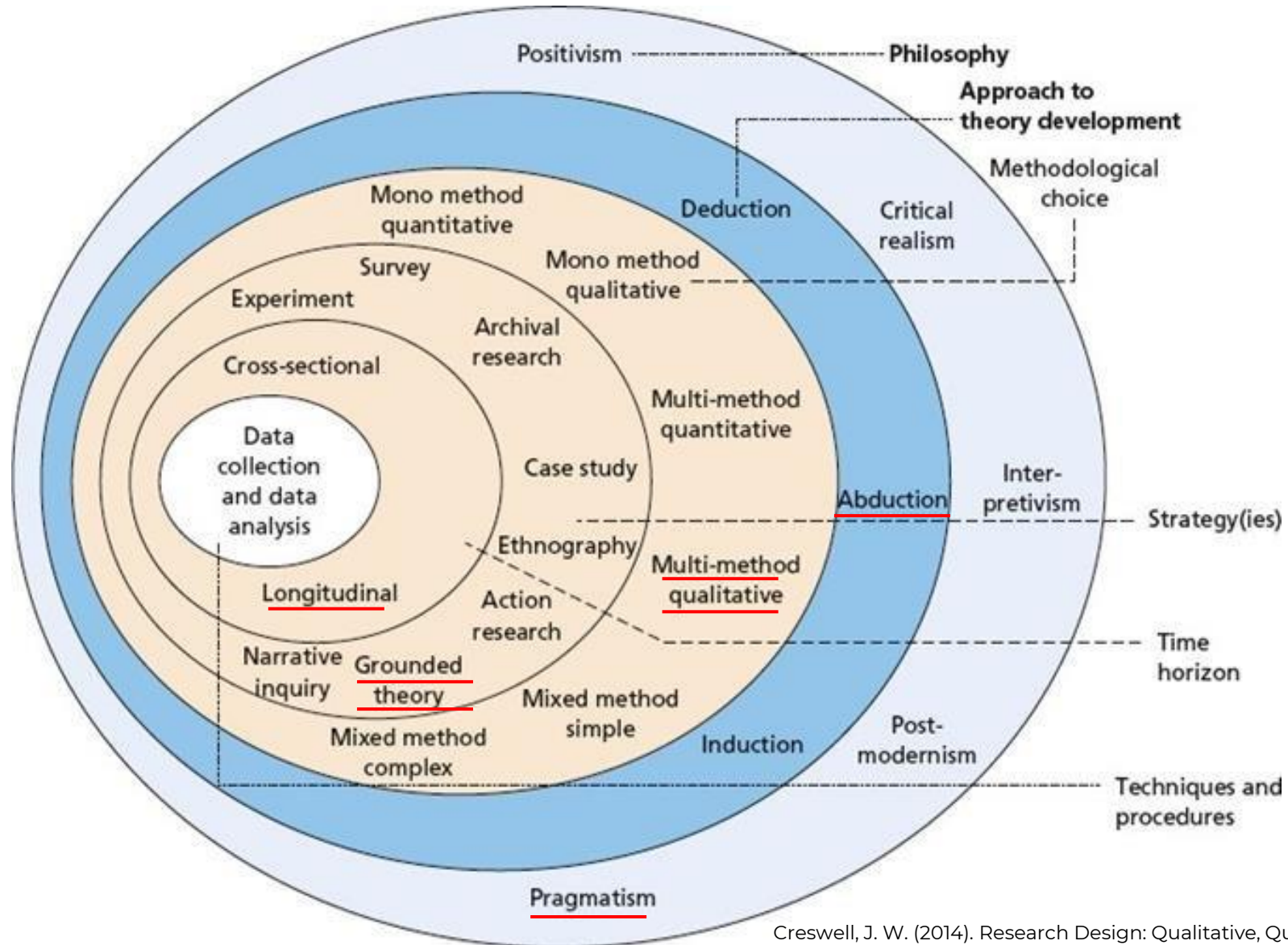ENGAGING INNOVATIVE KNOWLEDGE THROUGH APPLIED
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Methodology

- A **rubric** sourced from **existing** educational literature will be used to evaluate the **effectiveness** and **quality** of the lesson plans.

- Once the lesson plans have been evaluated, **peer review** will be carried out on each of the lesson plans using the defined rubric

- Finally, once the lesson plans have been peer evaluated, the evaluations will be presented in the light of the rubric and such findings will be presented as part of the **initial research deliverable** of the project.

Where the research is situated on Cresswell's Research Onion.

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.) Sage Publishing.

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Stage 1: Evaluating lesson plans generated by ChatGPT using the Lesson Plan Analysis Protocol (LPAP)

- The **development** of the LPAP provides **insights** into the lesson plans used in schools and has been validated as a reliable tool.

- It is intended to **help** educators strengthen **effective** teaching across all grades.

- The protocol can also be used for **teacher self-evaluation** before delivering a lesson.

Ndihokubwayo, K. *et al.* (2022) 'Lesson plan analysis protocol (LPAP): A useful tool for researchers and educational evaluators', *Heliyon*, 8(1), p. e08730.
Available at: https://doi.org/10.1016/j.heliyon.2022.e08730.

The rubric for assessing lesson plans allows for **independent assessment** of a specific lesson based on specific elements in the lesson.

This is a form that will be filled in by the peer reviewers for every lesson that will be delivered as part of the project.

Appendix A: Lesson Plan Analysis Protocol (LPAP) Coding Form

Teacher code: ………………………………..

Lesson subject: ………………………

Lesson plan coded no: …………………………...

Date of the lesson plan was taught: ……………………………………….

Duration planned: …………...min or (………… periods)

[Please tick with √ or mark with "Yes" in an appropriate box under one of four scales along with each italicized item. Please have in hand a syllabus before coding any LP. Please use the comment box for further clarification of your ratings or other observations apart from what you rated. Especially on section G, please write the teaching resources (TR), Formative assessment (FA), and active learning techniques (ALT) observed on lesson plan]

A. Key unit competence *(please tick once among single, double, or triple title box)*

Written and how it is written	Not written	Written but not related to syllabus	Written in summary and related to syllabus	Written in full and related to syllabus
Comments				

B. Title of the lesson

Format of the title	More than three	Triple	Double title	Single title
Time-bound	Definitely not	Probably not	Probably yes	Definitely yes
Syllabus connected	Definitely not	Probably not	Probably yes	Definitely yes
Comments				

Analysis

The rubric has 3 main sections: preliminary groups have 18 points, the body of the content has 30, while accessory groups have 6 points. Therefore, the total points of LPAP are 54. The following are the interpretation of a poor, fair, good, very good, and excellent lesson plan.

- Below 27 out of 54 (below 50%): poor lesson plan: This lesson cannot be taught.

- Between 27 and below 37.8 out of 54 (50-69%): fair lesson plan: This lesson cannot be taught.

- Between 37.8 and below 43.2 out of 54 (70-79%): good lesson plan: This lesson can be taught.

- Between 43.2 and below 48.6 out of 54 (80-89%): very good lesson plan: This lesson can be taught.

- Between 48.6 and above out of 54 (90-100%): excellent lesson plan: This lesson can be taught.

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What is Next?

☑Phase 1: Generation of lesson plans and qualitative evaluating across LPAP rubric.

❑Phase 2: Peer Evaluation through qualitative interview and revision of lesson plans.

❑Phase 3: Lecture is carried out and evaluation is completed by interviewing students/other lecturers.

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THANK YOU