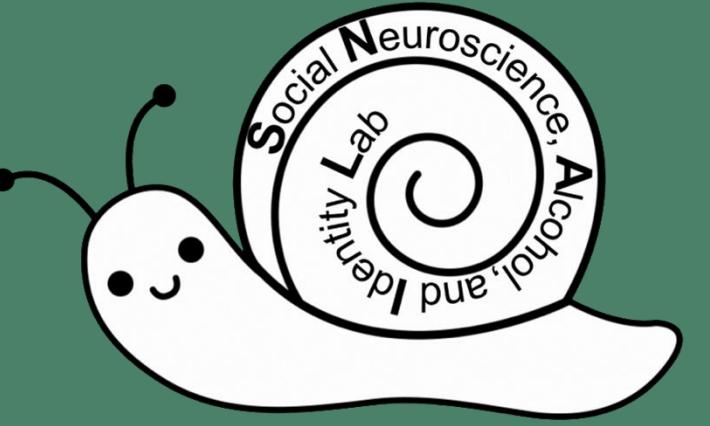


Developing a Scale to Determine the Motivating Factors for Students' use of Large Language Models (LLMs)

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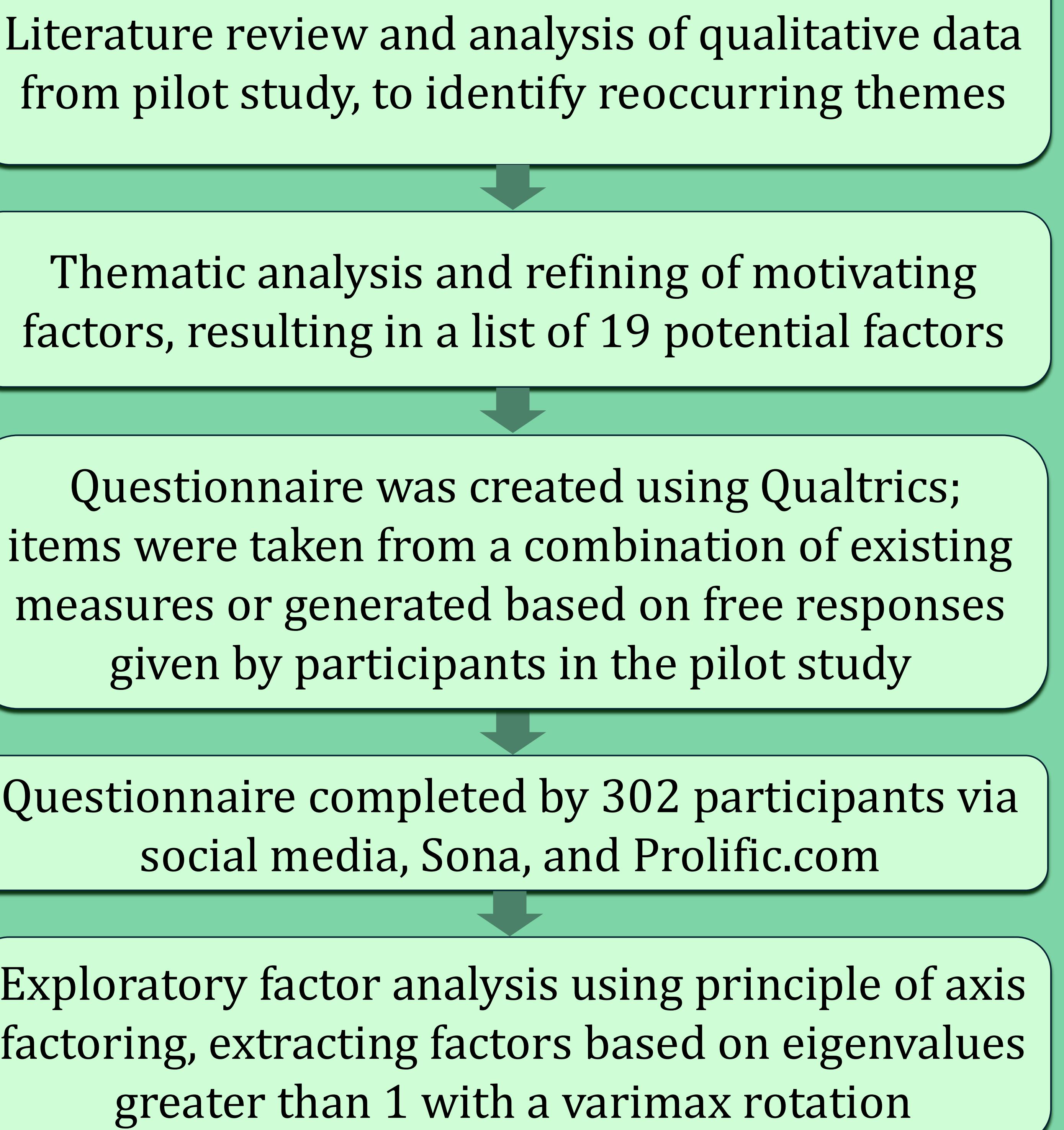


Introduction

Aims

- To **develop a questionnaire** measuring what factors motivate students to use LLMs.
- To gather insight into extent to which factors like **depression, anxiety, loneliness and self-efficacy** motivate students' use of LLMs.
- The Russel Group (2023) endorsed the use of AI tools in the classroom, recognising their **potential to enrich teaching and learning**.
- Students use LLMs to help with **Social Anxiety** and appreciation of **support, escapism, fantasy fulfilment** (Hu et al., 2023, Selim et al., 2024).
- Use of LLMs for **companionship** is positively associated with users' **depression** (Lai et al., 2025).
- Students reported **concern about deskilling and dependence** on AI tools (Selim et al., 2024).

Methods



Results

Factors	Example Items
<i>Mental Health/ Loneliness</i>	<ul style="list-style-type: none">• I have nobody to talk to• I felt sad and depressed• I experience worrying and/or nervousness
<i>Peer Pressure/ Conformity</i>	<ul style="list-style-type: none">• Other people expect me to use it• I feel like I have to• Everyone else does
<i>Productivity/ Study assistance</i>	<ul style="list-style-type: none">• find answers to my questions, faster than if I were to browse the internet.• give me a starting point for my projects• help me structure my essays
<i>Perceived Competence/ Trustworthiness</i>	<ul style="list-style-type: none">• I believe that LLMs act in my best interest• I believe that LLMs will do their best to help me if I need help• LLMs perform their role very well

Discussion

- Perceived Competence is unique to the Technology Acceptance Model (Davis & Davis, 1989), indicating that motivating factors for LLM use may overlap with acceptance of LLMs as an emerging technology.
- Factors such as **Peer Pressure/Conformity** and **Perceived Competence/Trustworthiness** consistent with Wang et al. (2025), suggesting that **performance expectancy** and **social influence** predict students' LLM use for academic writing.
- Al-Obaydi and Pikhart (2025) found motivating factors including **perceived utility**, with **loneliness** and competence of AI tools highlighted as key risk factors for AI addiction, consistent with factors found in this study.
- Future research should continue to examine the four motivating factors for LLM use established in this study, determining which factors best capture problematic versus adaptive use of AI tools (e.g., frequency and quantity of use).
- **Limitations:** Factors derived from UK undergraduate students, so may not apply to general, non-student populations.

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