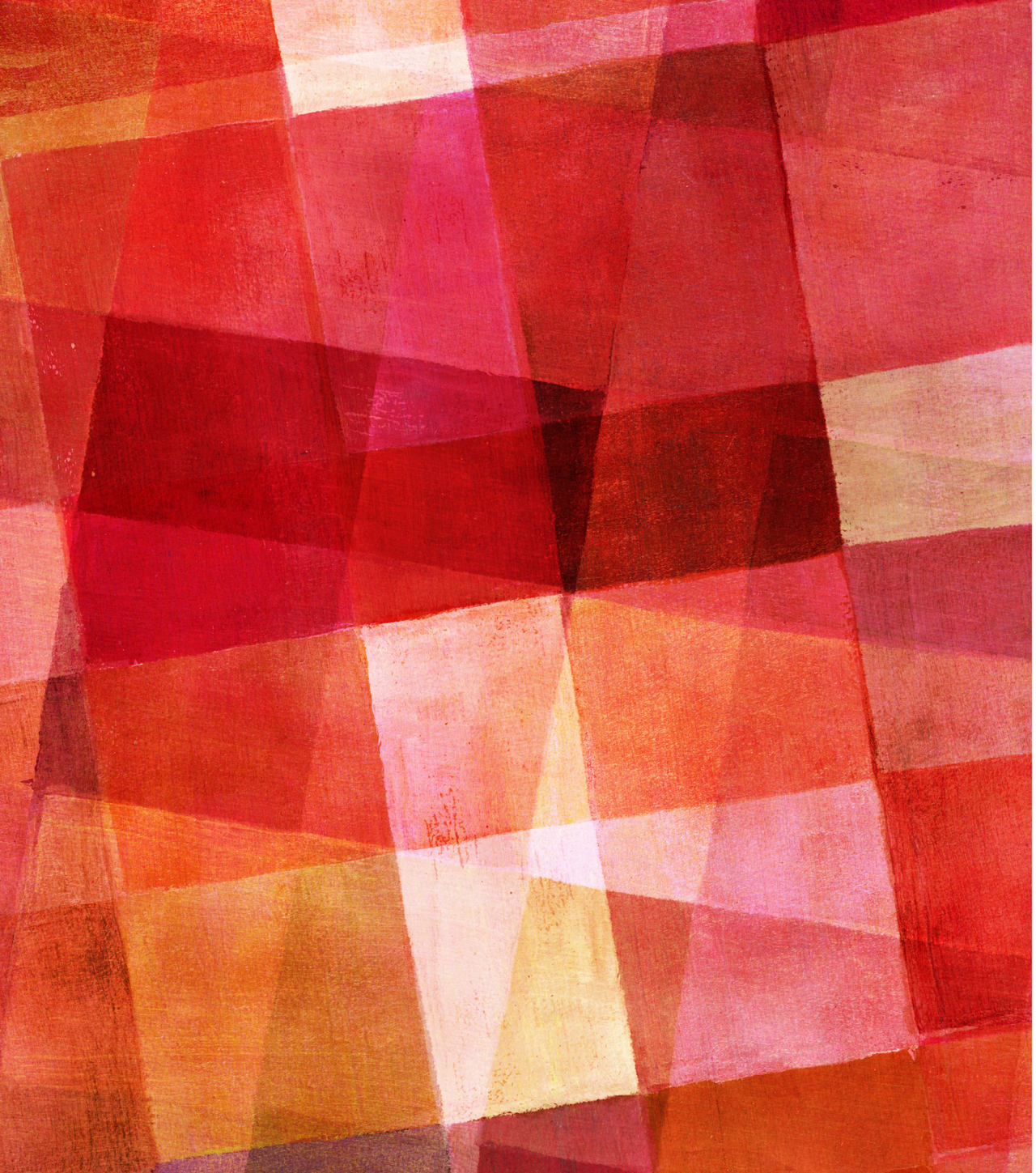
SMALL-SCALE RESEARCH PLAN

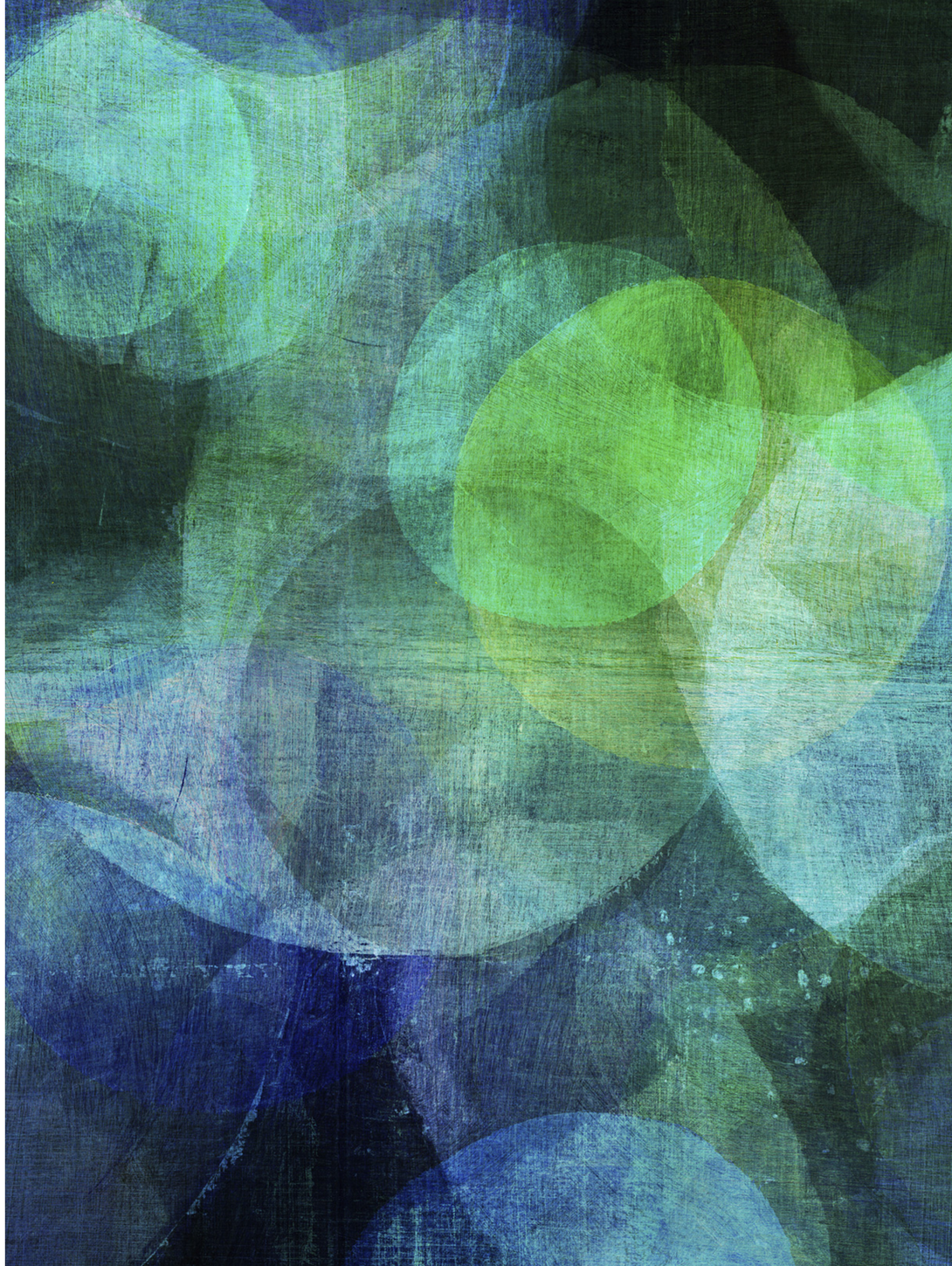
03/06/2025



CONTENT

- BACKGROUND
- AIMS AND OBJECTIVES
- LITERATURE REVIEW
- RESEARCH METHOD
- REFERENCES

1.BACKGROUND



Improvement of the Course Design of the " Building Construction" Course in Higher Vocational Colleges in China

- Policies like the Vocational Education Law, the "*20 Measures for Vocational Education*," and the *National Vocational Education Reform Implementation Plan* have driven significant reforms in China's vocational education.

- In construction-related fields, the implementation of the "1+X" certificate system has enabled students to obtain supplementary technical qualifications, such as the 1+X BIM Certificate.

RESEARCH QUESTIONS

- Main research question:

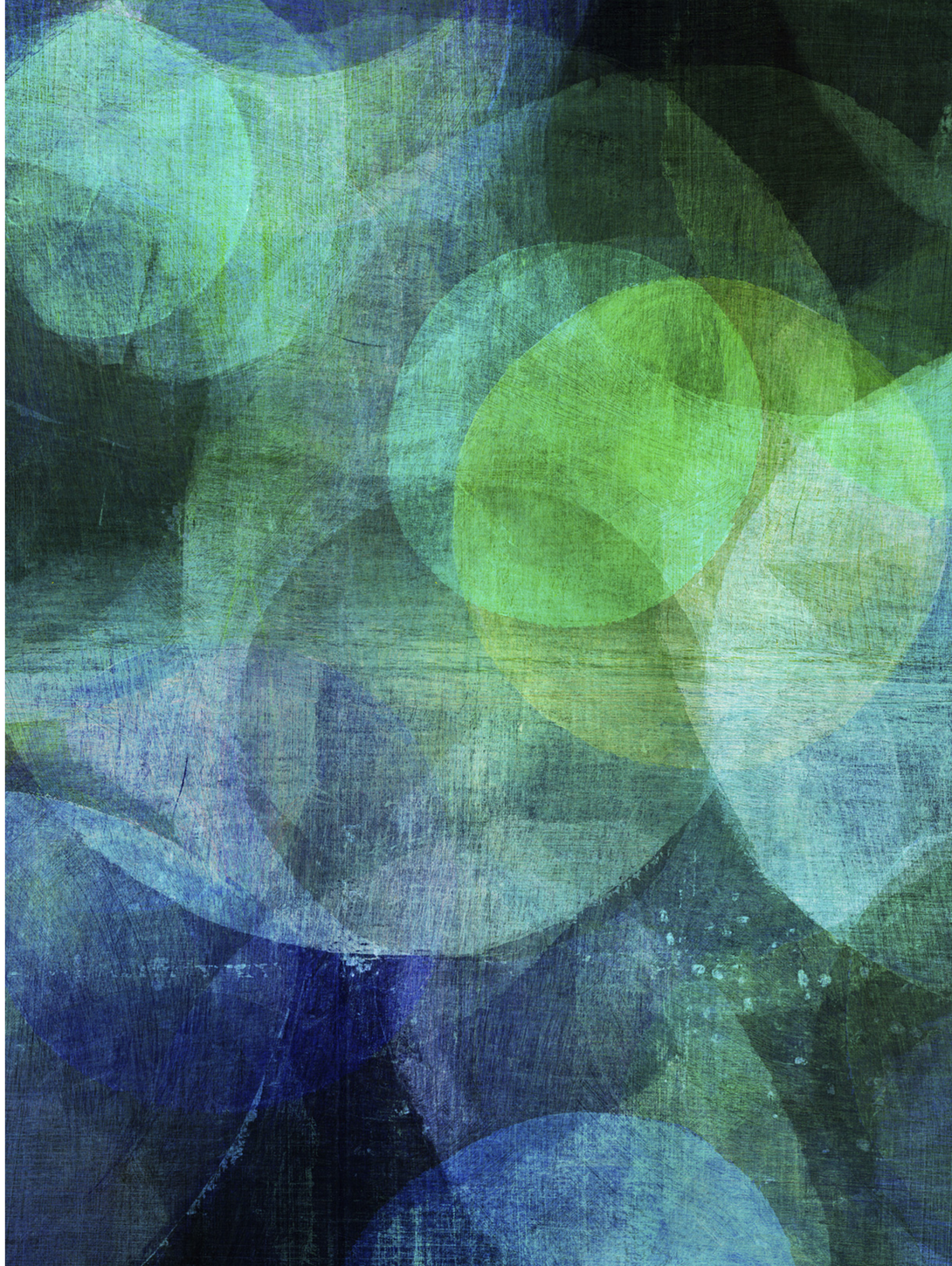
How can the design of the Building Construction course be improved in higher vocational colleges in China?

- Sub-research questions:

1. How do students view the strengths and limitations of the Building Construction course?

2. How do lecturers view the strengths and limitations of the Building Construction course?

2.AIMS AND OBJECTIVES



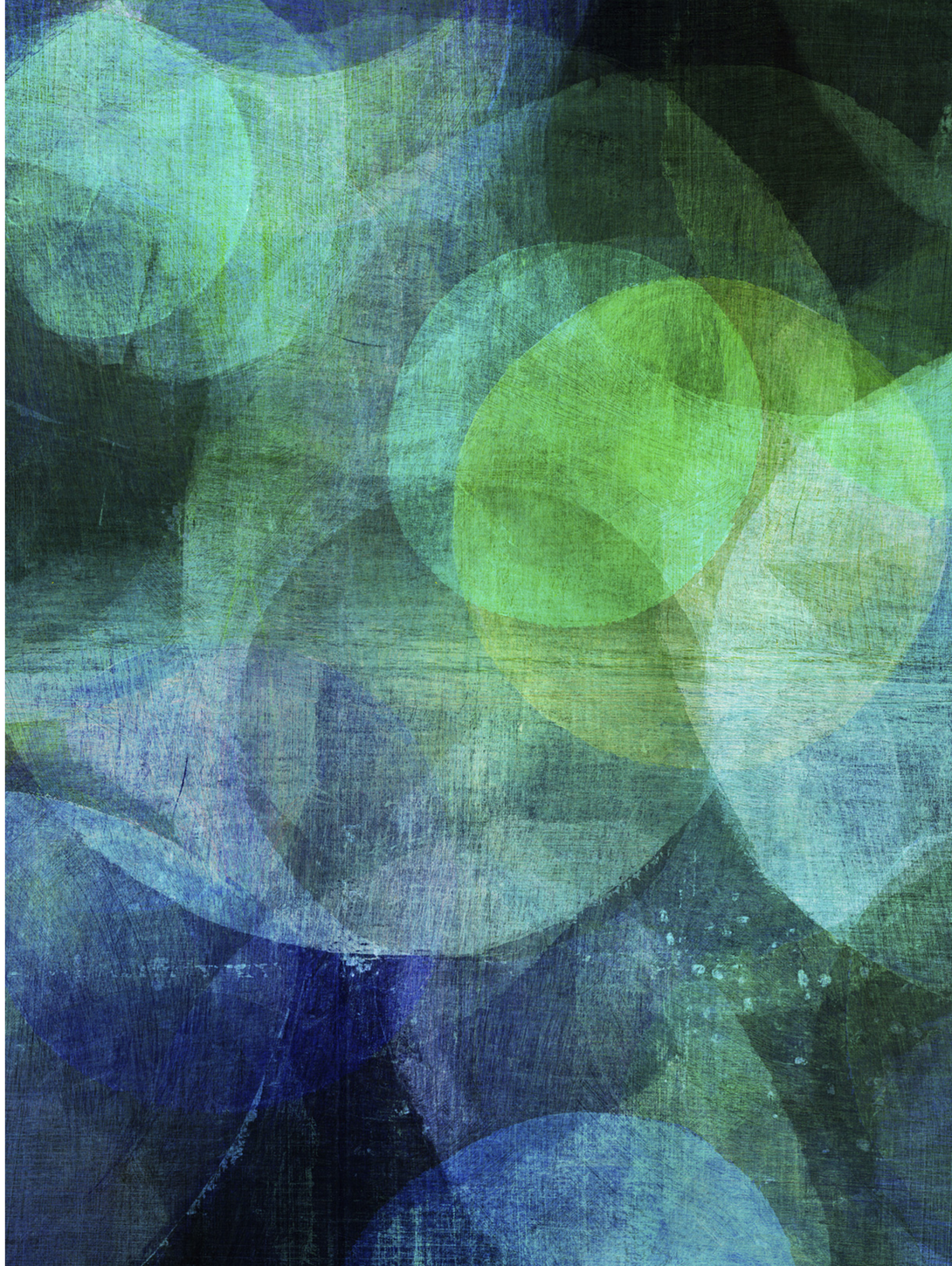
AIMS

- This study seeks to investigate ways to enhance the Building Construction course for Architecture, Construction, and Engineering (ACE) majors in China's higher vocational colleges, with the goal of improving student learning experiences and addressing instructional challenges. By analysing feedback from students and insights from lecturers, the research aims to propose recommendations for refining the course’s curriculum design, teaching approaches, and assessment practices.

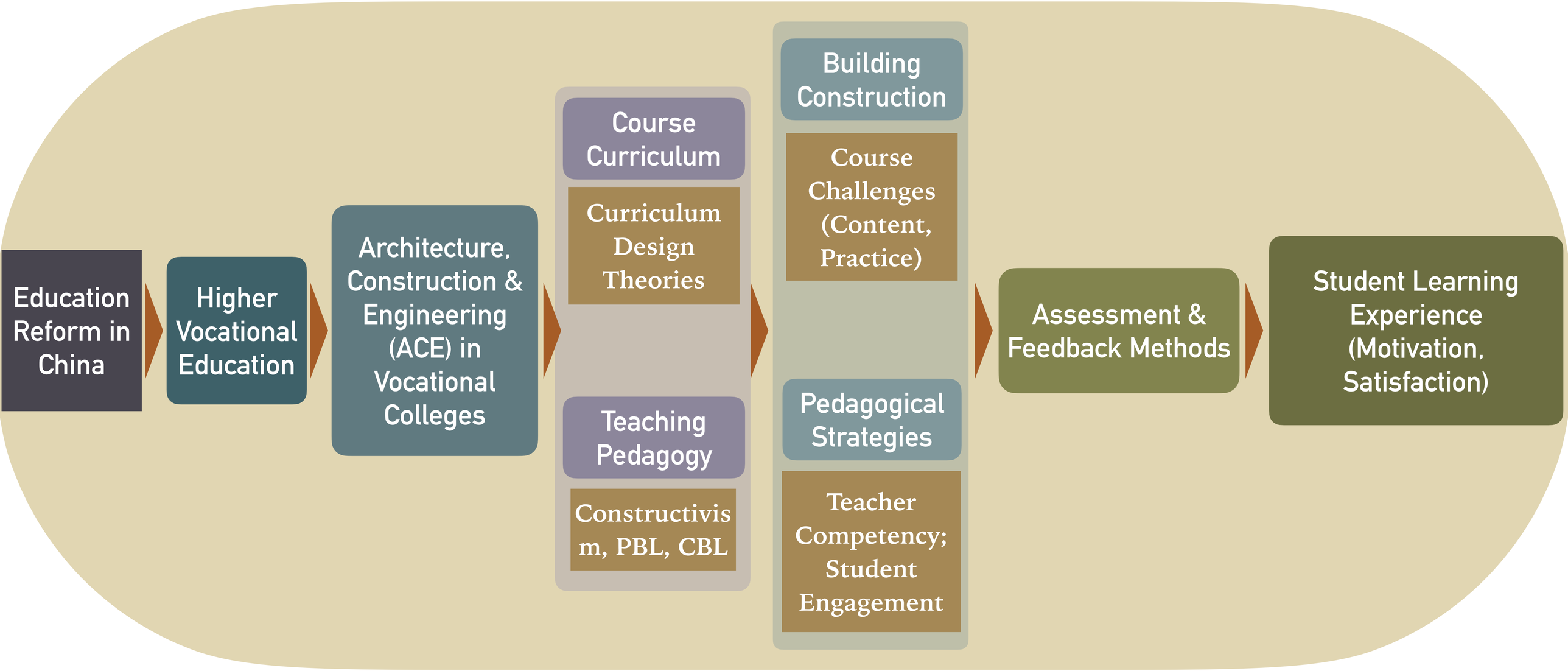
OBJECTIVES

- To analyse student perspectives: Explore students' opinions on the strengths and shortcomings of the course, including the course content, teaching approaches, and practical application.
- To examine lecturer perspectives: Gain insight into lecturers' views on the course's effectiveness, the difficulties they encounter in delivering material, and the support required for teaching construction technologies.
- To identify best practices in course design: Investigate effective models of building construction education, both within China and internationally, to guide improvements in course planning and teaching strategies.
- To propose recommendations for improvement: Formulate a framework to enhance course design, with a focus on course content, pedagogical methods, and student assessment techniques.

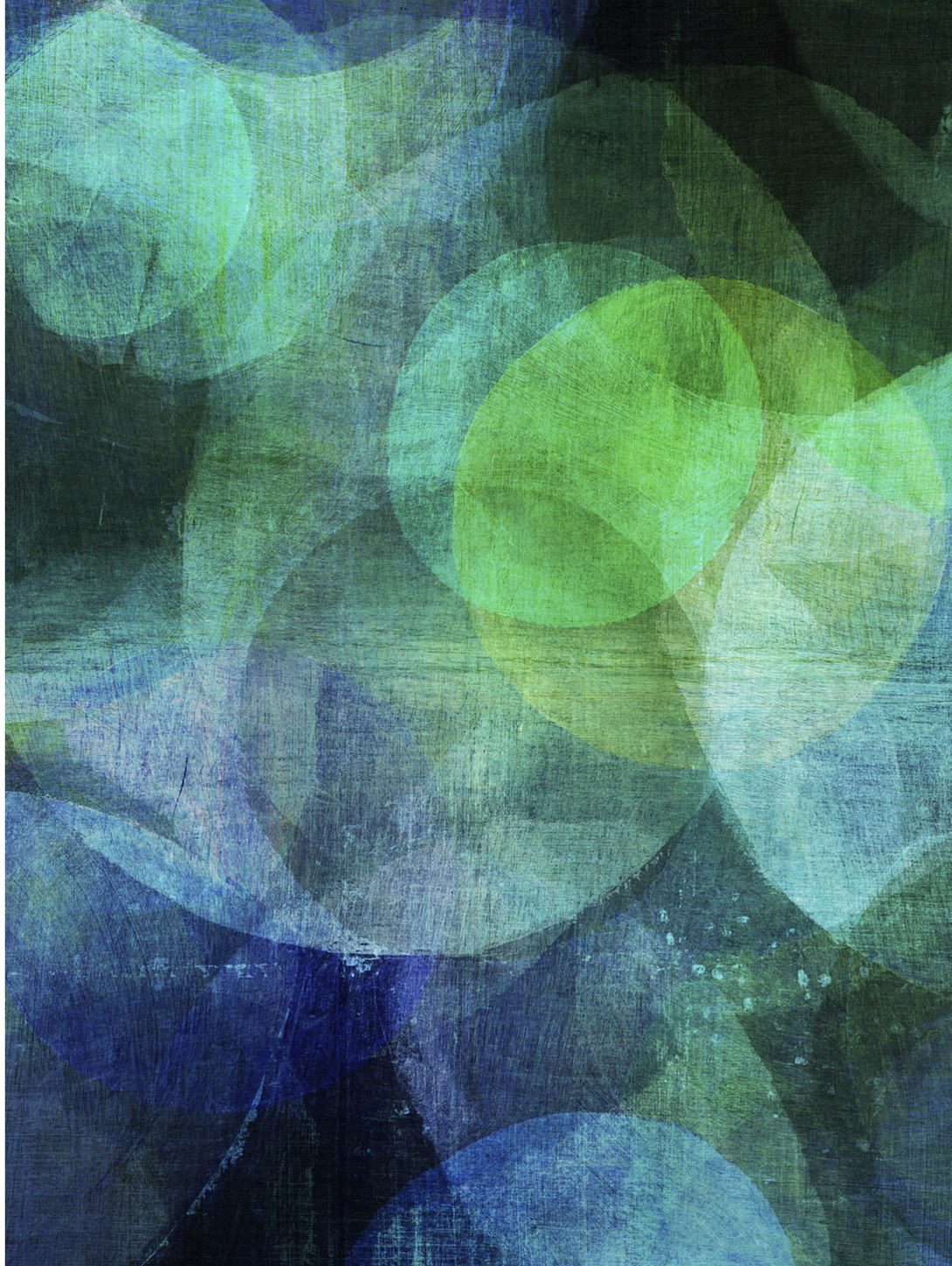
3.LITERATURE REVIEW



LITERATURE REVIEW PLAN

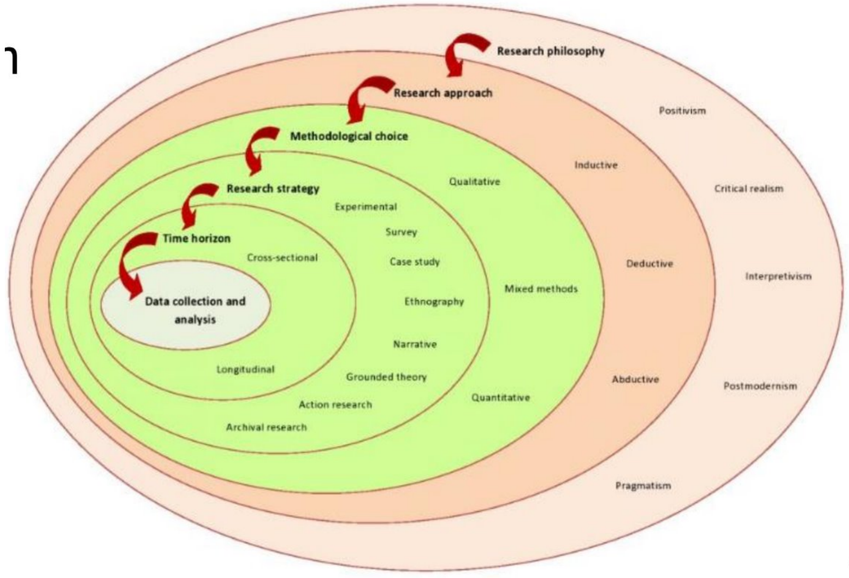


4.METHODOLOGY



METHODOLOGY

- RESEARCH PHILOSOPHY: **PRAGMATIC PARADIGM**
- RESEARCH APPROACH: **INDUCTIVE**
- METHODOLOGICAL CHOICE: **MIXED METHODS**
- RESEARCH STRATEGY: **CASE STUDY**
- TIME HORIZON: **CROSS SECTIONAL**
- DATA COLLECTION: **Questionnaire, Focus Group Discussions, Semi-Structured Interviews**
- DATA ANALYSIS: **Thematic analysis, Quantitative Analysis**



(Saunders et al., 2007)

PRAGMATIC PARADIGM

- DEFINITION: Pragmatism is a philosophy that strives to unveil practical knowledge. (Dube, Nkomo and Apadile-Thokweng, 2024)
- **Why? It focuses on practical outcomes and solutions, emphasising the use of both qualitative and quantitative methods to answer research questions**
- BENEFITS: Flexible and reflexive research design (Feilzer, 2010); Choice of research methods; Responsive to data
- LIMITATIONS: May lack philosophical purity

INDUCTIVE

- DEFINITION: An inductive approach moves from specific observations (data) to broader generalisations or theories, often used when exploring under-researched areas.
- **Why? Starting from specific observations or data, moving toward general conclusions or theories, especially when existing theories may not fully explain local teaching and learning experiences**
- BENEFITS: Suited for exploratory studies like the exploration of students' perception
- LIMITATIONS: Findings may not be generalisable beyond the specific context

MIXED METHODS

- DEFINITION: 'Mixed methods research encourages researchers to use multiple approaches to collecting and analysing data within a single study' (Migiro and Magangi, 2011)
- **Why? In-depth insights of students' and lecturers' perception + statistical information is needed**
- BENEFITS: Flexible; Practical; real-word application
- LIMITATIONS: Complexity; quantitative and qualitative data might be contradictory to each other

CASE STUDY

- DEFINITION: "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-world context." (Tumele, 2015)
- **Why? A course, the Building Construction course within a single institution, a higher vocational college in China**
- BENEFITS: It helps understand how the course is experienced and perceived.
- LIMITATIONS: Findings are context-specific and may not be widely generalisable.

CROSS SECTIONAL

- DEFINITION: Data is collected at a single point in time or over a short period, focuse on "what is happening now"
- BENEFITS: Useful for assessing current perceptions and experiences.
- LIMITATIONS: Cannot capture changes or trends over time.

DATA COLLECTION: SEMI-STRUCTURED INTERVIEW (2)

- DEFINITION: Interviews guided by a flexible set of questions, allowing probing and exploration.
- **Why? Evaluate the curriculum's effectiveness; identify instructional challenges**
- BENEFITS: Flexible (ensuring that key topics are addressed); yields deep insights into lecturer experiences and opinions; allowing reflexivity and talk (Alsaawi, 2014)
- LIMITATIONS: Time-consuming to conduct and analyse.

DATA COLLECTION: FOCUS GROUP DISCUSSION (5-6)

- DEFINITION: Group interviews that gather collective views and stimulate discussion.
- **Why? 'An interactive environment where students can share their experiences, discuss common challenges, and propose course improvements' (Nyumba, et al., 2018)**
- BENEFITS: Efficient way to gather data from multiple participants simultaneously
- LIMITATIONS: Dominant voices may influence group opinion.

DATA COLLECTION: QUESTIONNAIRE (30)

- DEFINITION: Structured instrument to collect quantitative data from a large group.
- **Why? Examines fundamental data and student experiences with various teaching methods, including lectures, practical activities, and digital simulations**
- BENEFITS: Quick to administer and analyse; effective for gathering standardised data
- LIMITATIONS: Limited depth of response; may not fully reflect the complexity of students' experiences; could be biased if participation is limited to motivated students.

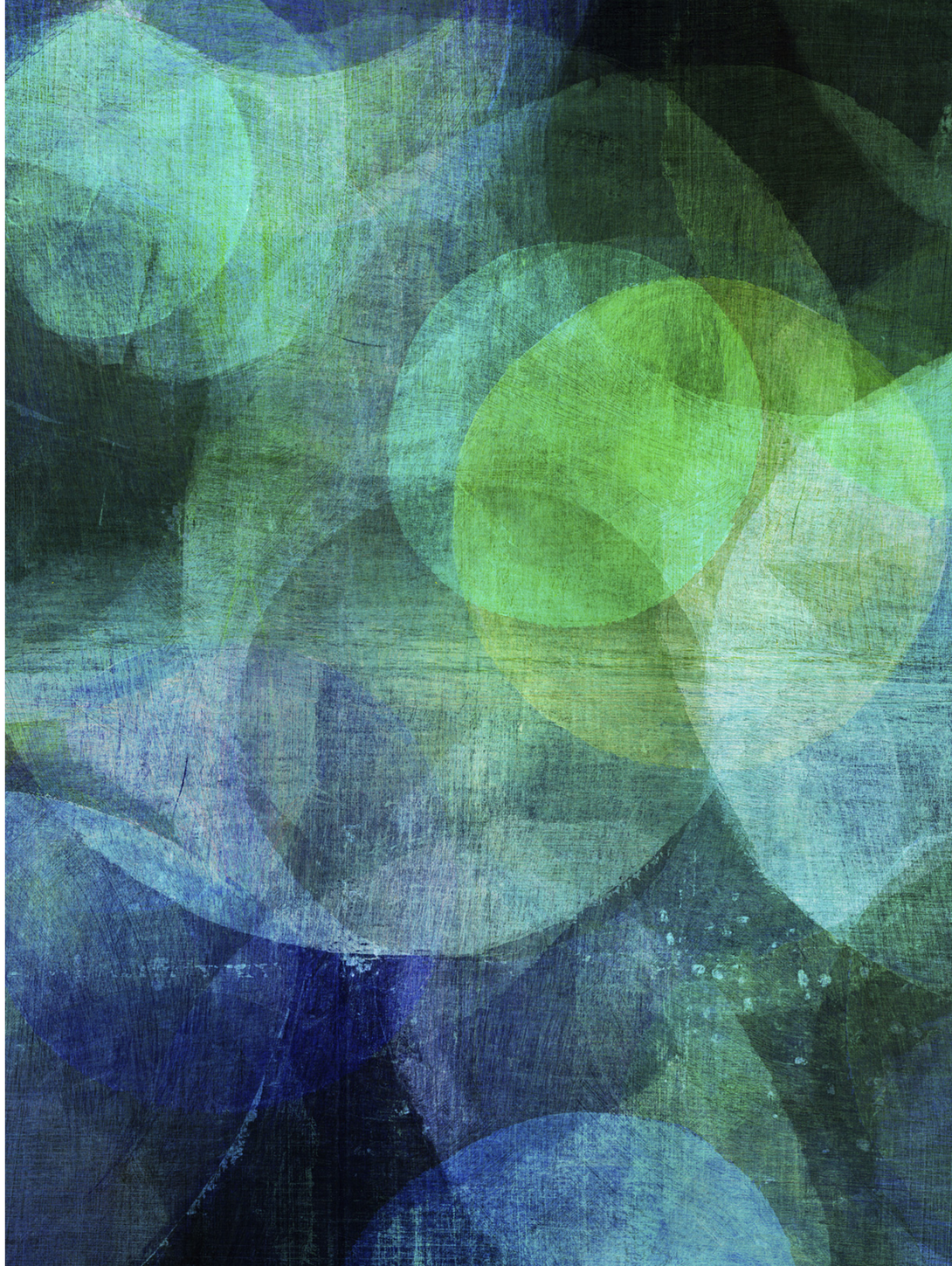
DATA ANALYSIS: THEMATIC ANALYSIS

- DEFINITION: A technique used to identify, analyse, and interpret patterns or themes within qualitative data.
- **Why? An exploration of participants' views on the course design, including their perceptions of the content, instructional methods, and practical implementation.**
- BENEFITS: Enables detailed interpretation of participant views
- LIMITATIONS: Subject to researcher interpretation; risk of bias; Requires careful coding and validation of themes (Vaismoradi, Turunen, and Bondas, 2013)

DATA ANALYSIS: QUANTITATIVE ANALYSIS

- DEFINITION: Quantitative analysis of numerical data to uncover patterns and correlations.
- **Why? 'Provide an overview of students' behaviours and preferences' (Hossan, Dato'Mansor, and Jaharuddin, 2023).**
- BENEFITS: Facilitates comparison across groups; objectivity
- LIMITATIONS: Does not capture nuanced or context-rich insights; quality depends on questionnaire design and sample size (30)

5.REFERENCES



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THANK YOU

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