Do Schools Kill Curiosity?

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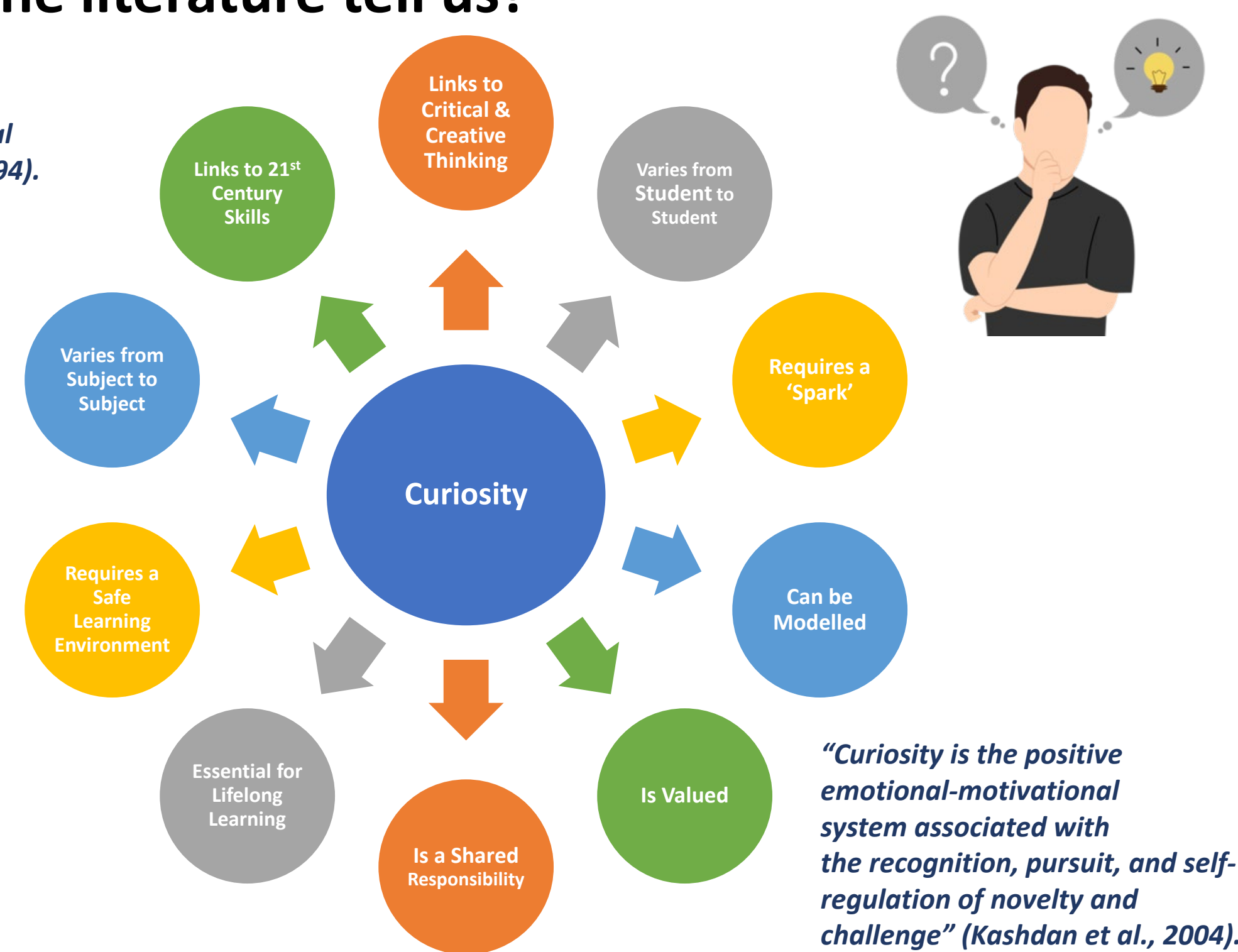
BACKGROUND & CONTEXT

- Co-educational Christian school Years K-12, 1200 students.
- Focused on evidence-based teaching and learning practices embedded into a philosophy that values lifelong learning.
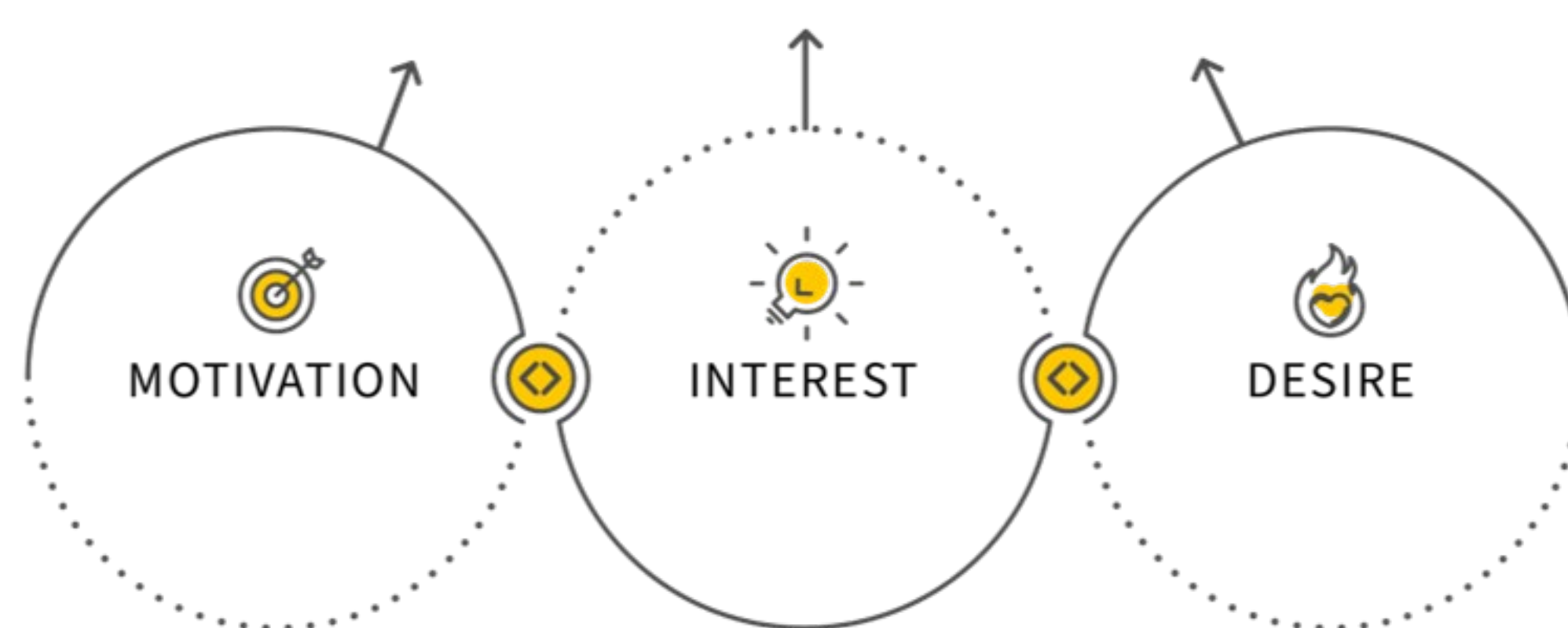
Research Focus

We are interested in the relationship between curiosity and the learning environment. We want to better understand the influencing factors that drive or diminish curiosity.

What does the literature tell us?

"Curiosity is described as a desire for information in absence of any external reward" (Lowenstein, 1994).

Links to 21st Century Skills · Links to Critical & Creative Thinking · Varies from Student to Student · Varies from Subject to Subject · Requires a 'Spark' · Curiosity · Requires a Safe Learning Environment · Can be Modelled · Essential for Lifelong Learning · Is a Shared Responsibility · Is Valued

"Curiosity is the positive emotional-motivational system associated with the recognition, pursuit, and self-regulation of novelty and challenge" (Kashdan et al., 2004).

CURIOSITY IS...

MOTIVATION · INTEREST · DESIRE

RESEARCH QUESTIONS

To what extent are our students curious?

- What are our students' understandings of curiosity?
- What are our educators doing to foster curiosity?
- What prompts students to take action to address knowledge gaps?

METHODS

Methodology	• Participants: 421 students from Years 7 to 12 • Mixed methods
Procedure	• Student surveys (2023) • Small sample interviews (2024) • Experience sampling (2024)
Process	In 2023 students completed an online survey. Survey data was analysed and interviews were conducted with selected students in early 2024. Students have also participated in experience sampling in pilot classes.
Measures	Survey based on Kashdan's 5DCR Interviews and response analysis Experience sampling via Microsoft Teams and Survey Sparrow
Data Analysis	• Descriptive, diagnostic, predictive and prescriptive

ANALYSIS & RESULTS

Student Interviews

Question One: How do you define curiosity?

Motivation - **69%** of students demonstrate a strong alignment with **motivation driving their understanding of curiosity**, using words like: "drive", "desire," "willingness," "urge," and "need to know".

Interest – half of responses (**50%**), indicate **individual interpretation of curiosity aligning with interest**: "interested in something," "sudden interest," "finding new ways to do," and "wanting to find out more".

Desire – More than half (**56%**) responded with frequent occurrences of synonymous words or phrases: "desire to explore" and "desire to know everything".

Question Two: How does curiosity make you feel?

Positive Emotions –**a majority (81%) delineate curiosity in a positive capacity**: joy, excitement, eagerness, and a sense of purpose. They describe feeling happy, intrigued, and determined.

Negative Emotions – a minority (19%) associate it with negative emotions: "anxiety" and "worry", also noting a "fear of the unknown".

Question Three: When do you feel most curious?

Personal Space: Few students (31%) suggest personal space promotes curiosity. This suggests that personal space provides a conducive environment for introspection.

Learning Environment: **Many students (69%) believe that curiosity often arises in subjects that individuals find engaging or enjoyable.**
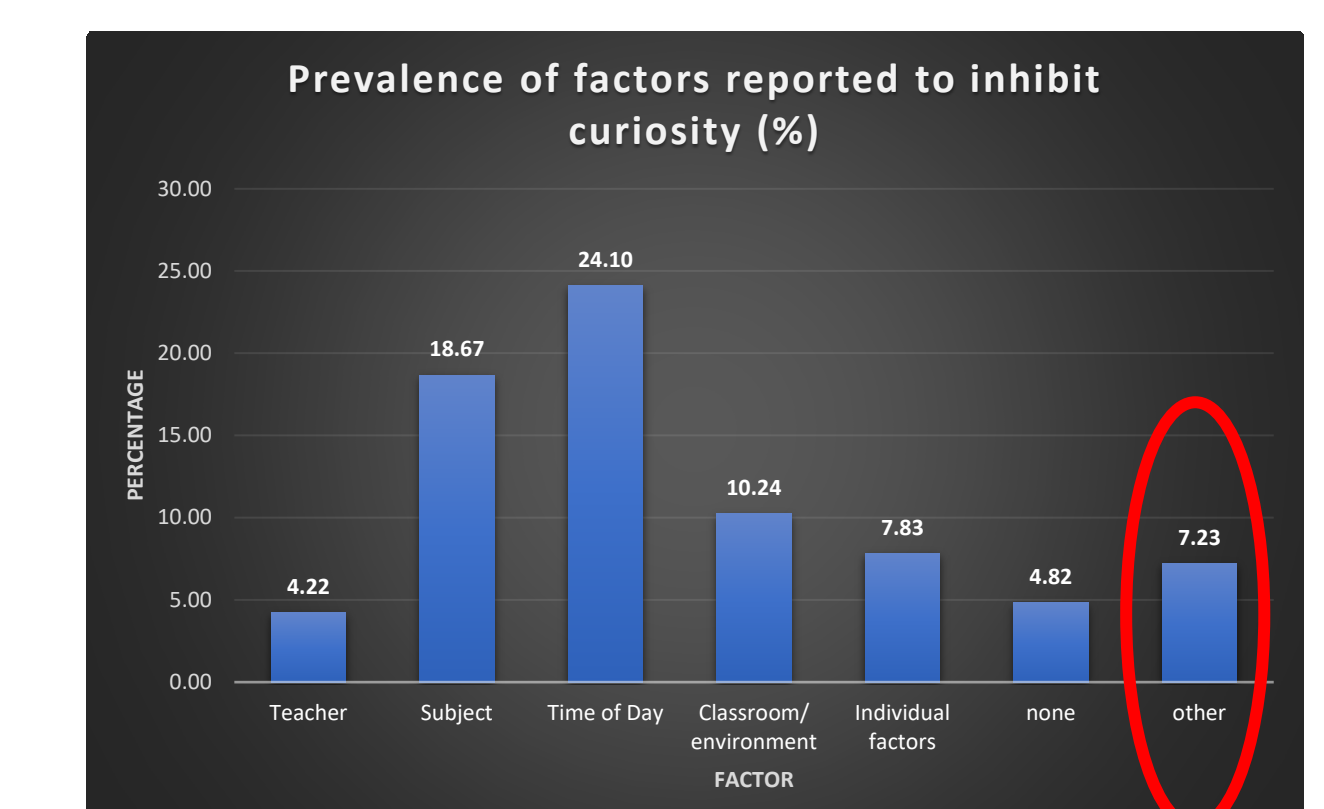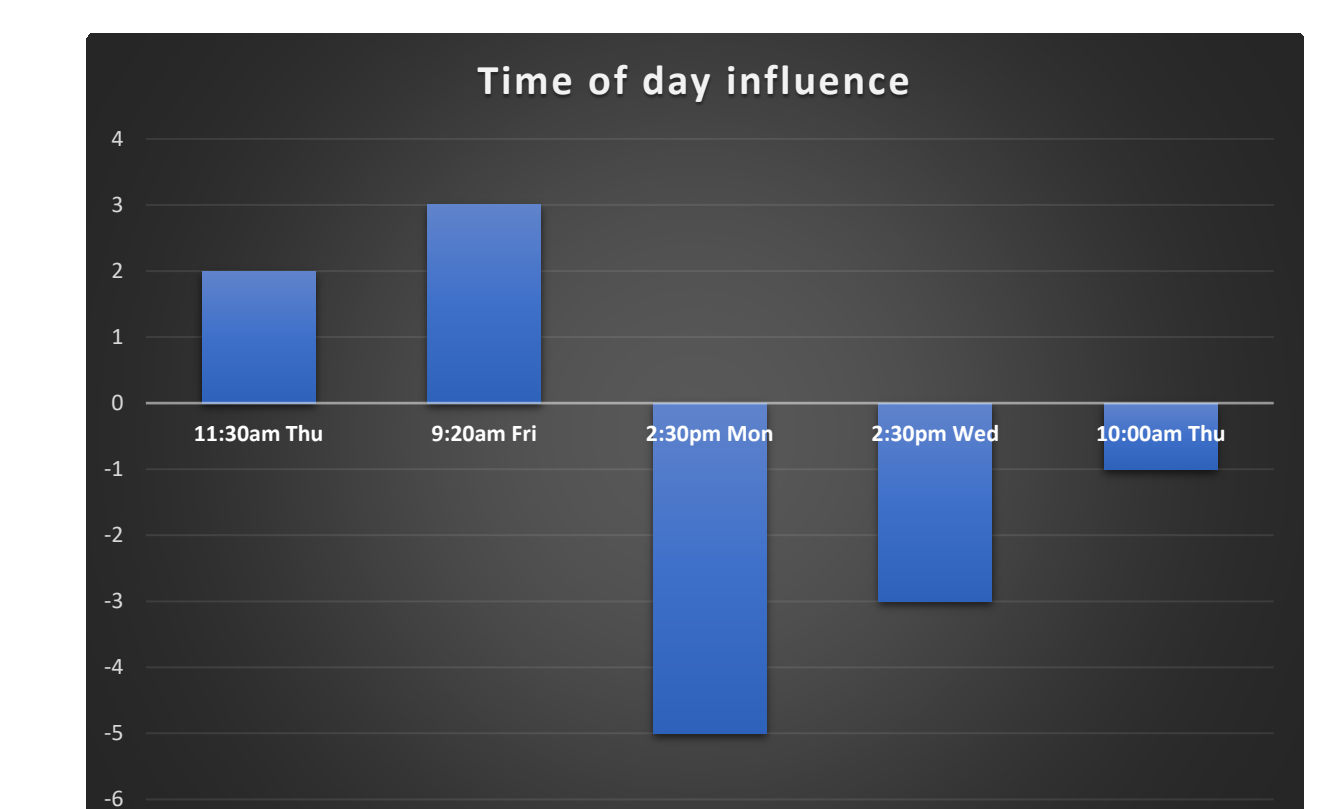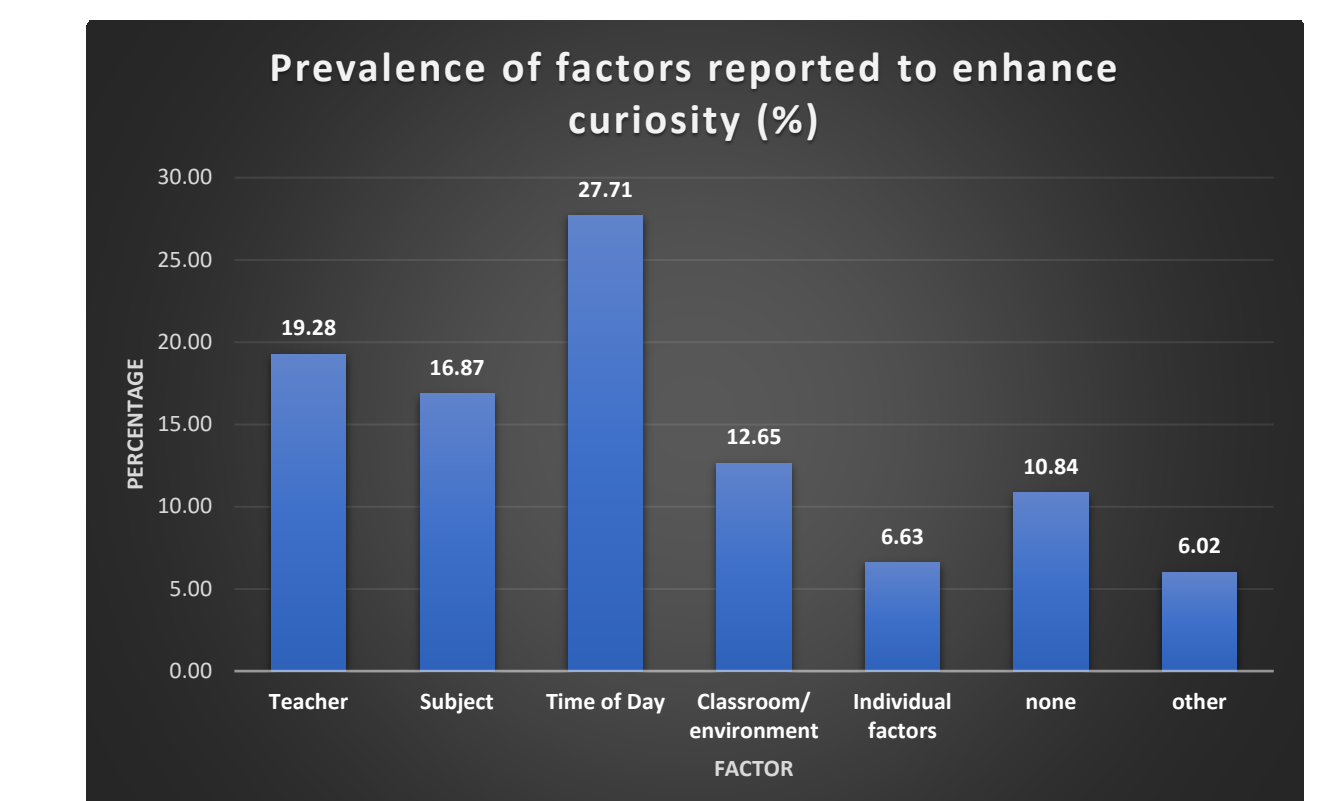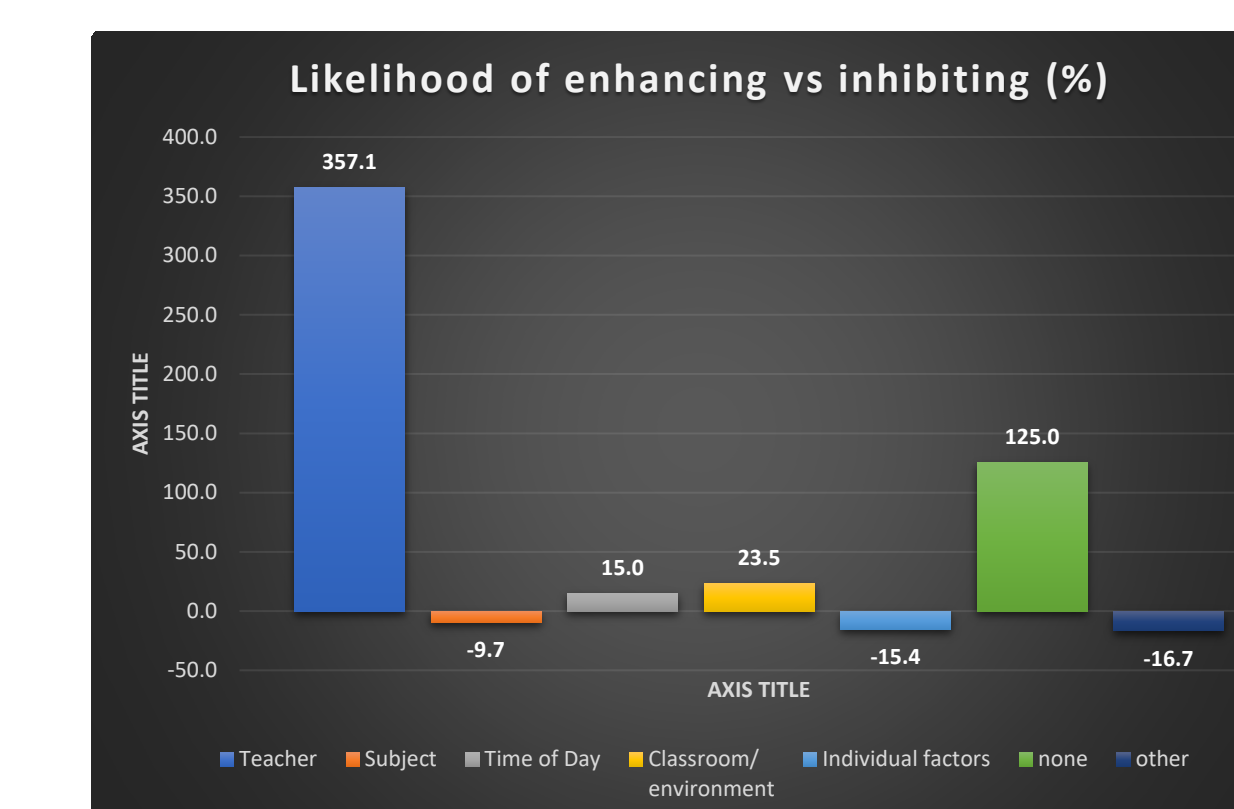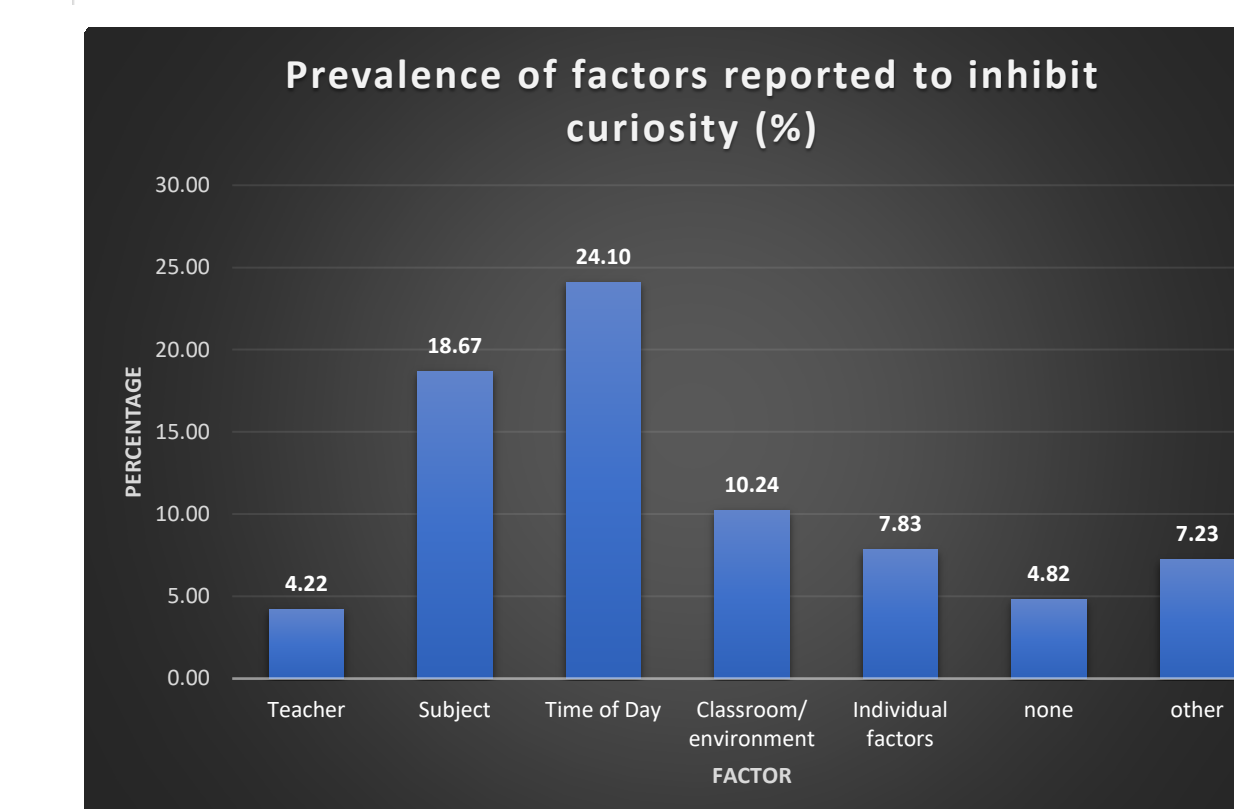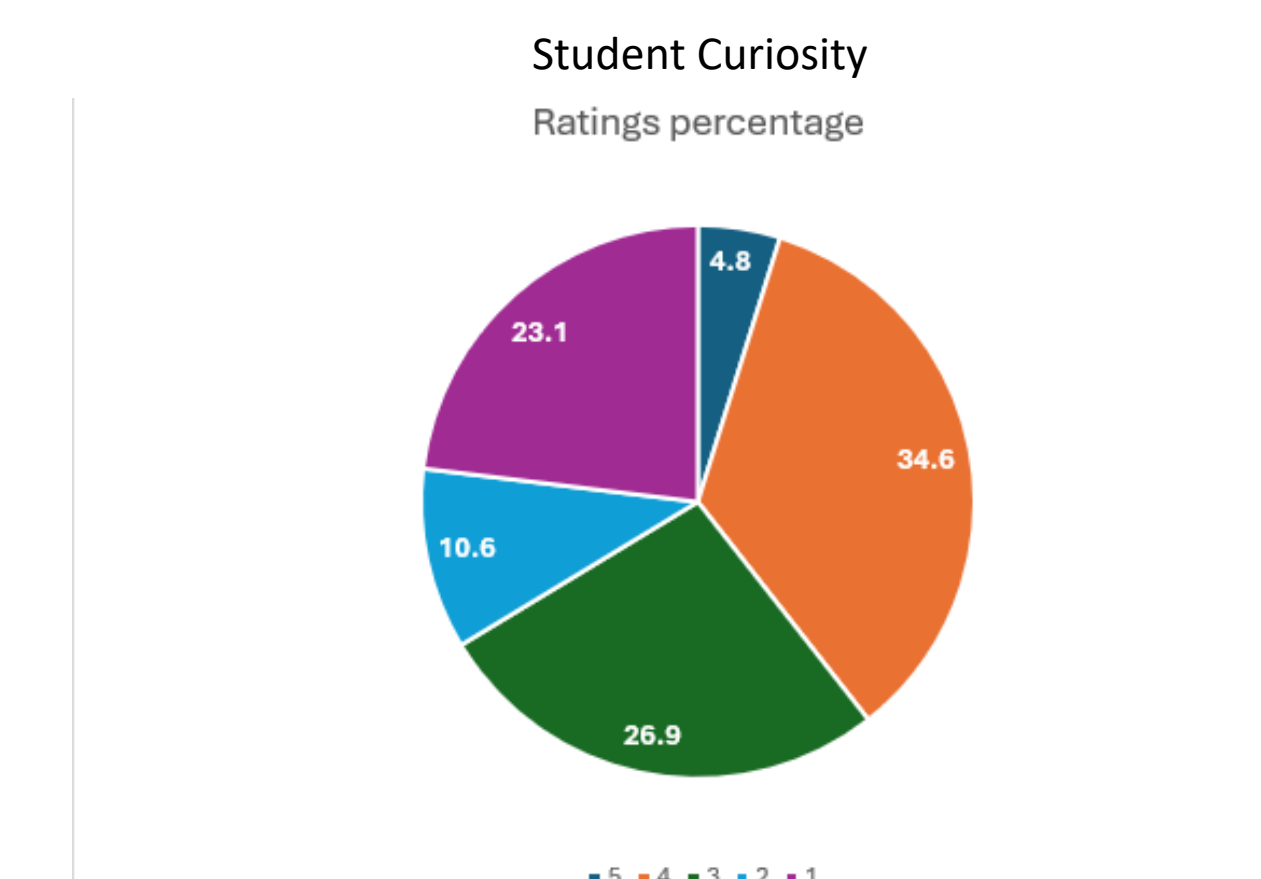
Question Four: What stops you from being curious?

Intrinsic Inhibitors: **50% of students demonstrate there might be a struggle with finding the answer**, a lack of motivation or interest in subjects they find boring, a fear of the unknow, or fear of stepping outside one's comfort zone.

Extrinsic Inhibitors: 25% of students describe an extrinsic inhibitor, including descriptions of a rigid curriculum and completing tasks within a set time frame that leave little room for independent exploration. Additionally, repetitive learning experiences that fail to provide new information stifle curiosity.

25% of students had no response.

Preliminary Findings from Experience Sampling

Student Curiosity — Ratings percentage

Prevalence of factors reported to enhance curiosity (%)

Prevalence of factors reported to inhibit curiosity (%)

Time of day influence

Likelihood of enhancing vs inhibiting (%)

Prevalence of factors reported to inhibit curiosity (%)

Preliminary Implications for Teaching & Learning

In regard to student curiosity:
- The teacher appears to have a large influence
- The time of day might play a role
- Issues external to the classroom/subject are likely important

Key Learnings

1. It is possible to collect experience sampling data in the classroom in a relatively unobtrusive manner.
2. Students have some awareness of their level of curiosity.
3. Students have an awareness of what enhances and inhibits their curiosity.
4. Possible affirmations:
   - The teacher has a large (perhaps the largest) influence on student curiosity.
   - Time of day can influence curiosity.

NEXT STEPS

In 2025 and beyond:
Finalise the latest data collection – experience sampling
Analyse the data
Assuming we've detected trends, investigate possible interventions
Formulate research informed trial interventions

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