



Investigating UDL-Based Tech Practices in the Elementary School Setting

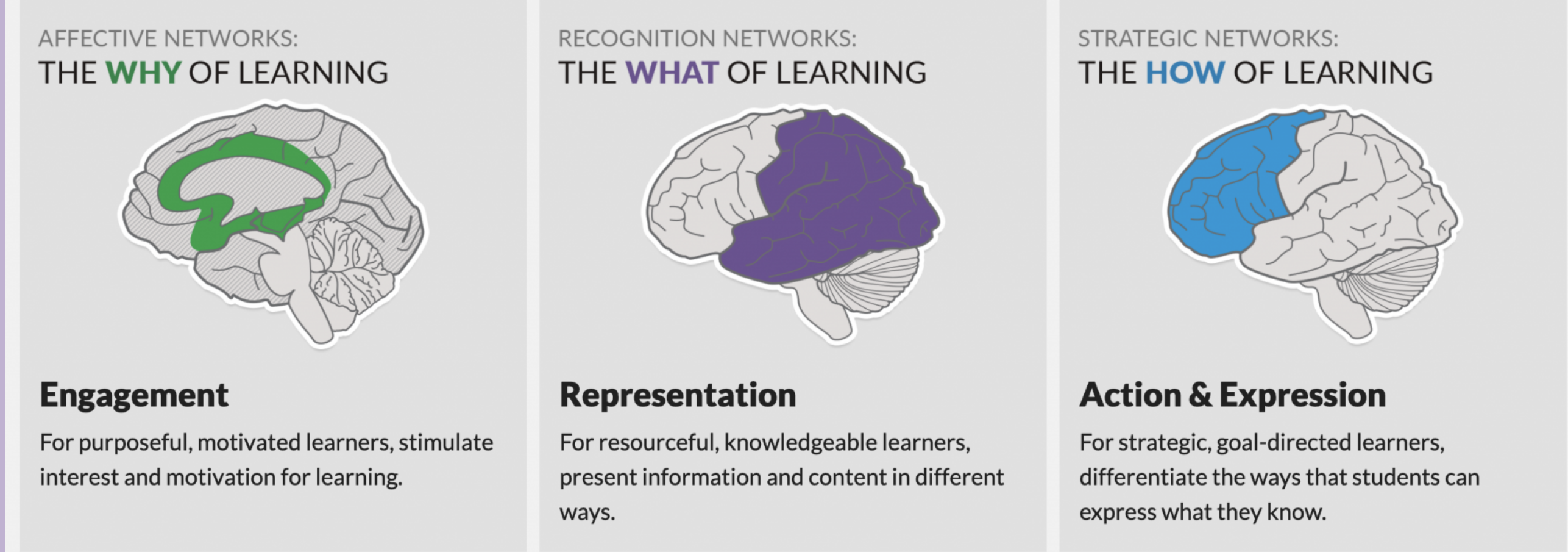
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BACKGROUND

Universal Design for Learning (UDL) is an inclusive framework that supports all learners by offering multiple ways to engage, represent, and express understanding. Technology can play a key role in making learning more flexible and accessible, but when overused or poorly matched, it may cause distraction, screen fatigue, or additional burdens for teachers.

This practitioner research project is designed to explore how elementary educators use technology to support UDL in ways that are both effective and manageable, without making learning overly dependent on screens.



PURPOSE AND HYPOTHESIS

Purpose: To explore how elementary school teachers use technology to support UDL while avoiding over reliance on screen-based instruction. **Hypothesis (My Research Question):** How can teachers use technology to support UDL in ways that are both effective and manageable, without making learning too dependent on screens?



MATERIALS AND METHODS

This study will use a qualitative, practitioner inquiry approach (Navarro et al., 2016) to explore how elementary school teachers use technology to support Universal Design for Learning (UDL) without making learning overly screen-dependent. It will be conducted during the 2025–2026 academic year as part of my teacher placement and coursework in inclusive educational research.

Research Design

As a form of practitioner research (Bray et al., 2024), this study is grounded in reflective, classroom-based inquiry. The focus is not on evaluating student performance but rather on understanding teacher decision-making and student engagement within inclusive classrooms that implement UDL and educational technology.

Participants

- Teachers: 2–3 elementary school teachers, including my cooperating teacher and possibly one additional teacher in the same school or district.
- Students: Not directly studied. Their de-identified journal entries will be collected as artifacts of teaching practice to support analysis of teacher strategies. This ensures alignment with IRB Form B and ethical use of student work.

Data Collection

- Semi-Structured Interviews with Teachers
Interviews will explore each teacher’s understanding of UDL, the tech tools they use, their motivations for using them, and the challenges they face balancing equity, engagement, and screen time. This method allows for open-ended exploration of teacher expertise and contextual factors (Pérez & Grant, 2023).
- Student Reflective Journals
Reflective writing prompts completed by students during class (e.g., “How did technology help you today?”) will be collected to observe how students respond to the classroom’s tech-integrated instruction. These artifacts will not be linked to any student identifiers and will be used only to support reflection on teacher practice, not to study the students themselves (Hall et al., 2015).

Data Analysis

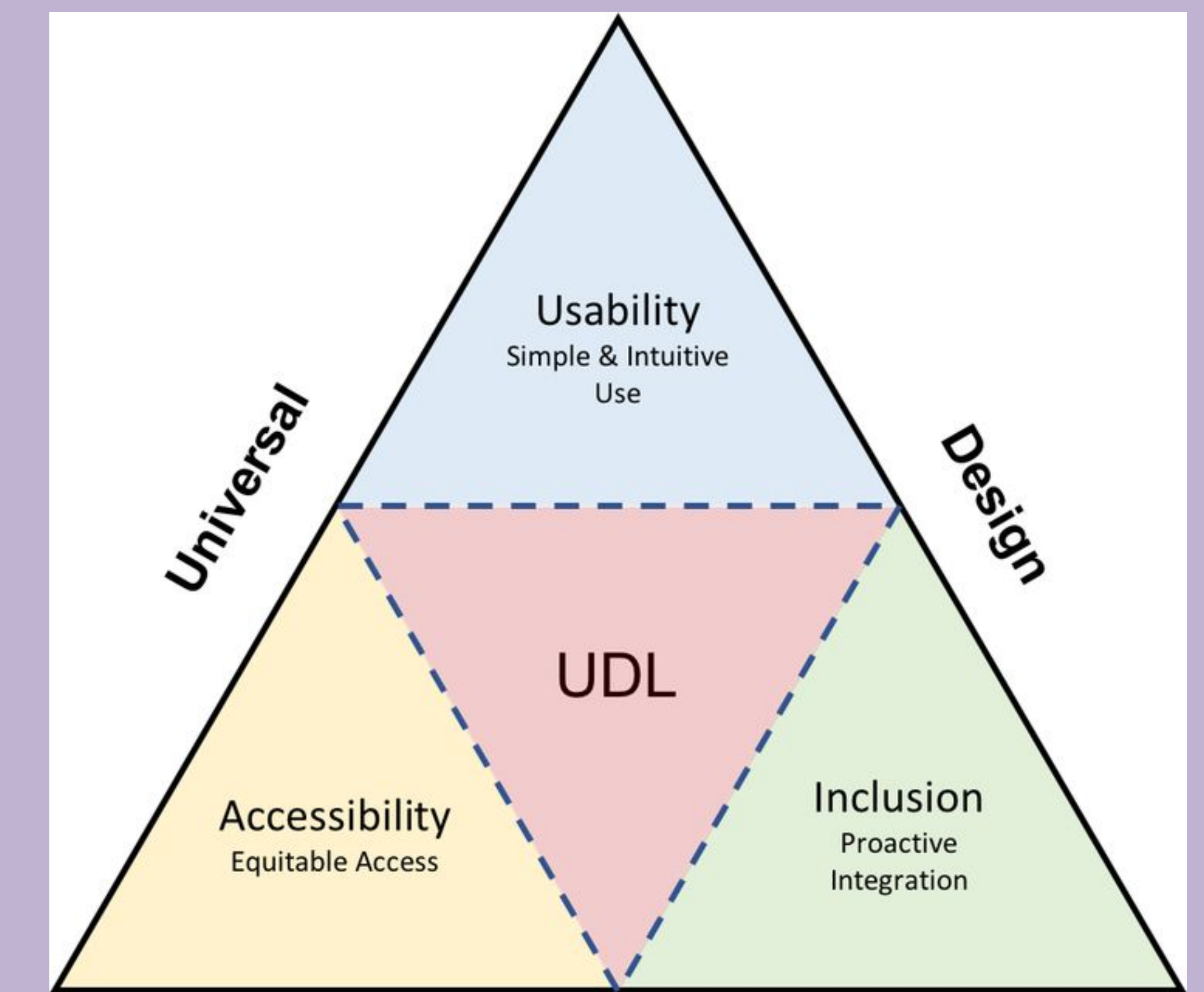
Interview transcripts will be analyzed using thematic coding (Navarro et al., 2016) to identify patterns related to technology selection, UDL implementation, and teacher perceptions of effectiveness. Student journals will be reviewed to support analysis of how UDL-aligned tech practices are experienced in real-time classroom use. The data will be examined through the lens of UDL’s core principles: engagement, representation, and expression (Pérez & Grant, 2023).

Ethics and Confidentiality

- Teacher participants will sign IRB-approved consent forms.
- All data will be stored securely, and pseudonyms will be used in all reporting.
- Student artifacts will remain anonymous and will not be quoted or used in any way that could reveal identities.
- The study has been approved for IRB exemption under Form B at Hobart and William Smith Colleges.

RESULTS

Not applicable yet: This research is in the planning and IRB-approved pre-research phase. Findings will be based on interviews and classroom artifacts collected during the 2025–2026 academic year.



CONCLUSIONS

This research will explore how teachers make intentional decisions about technology in UDL-informed classrooms. By focusing on teacher interviews and student journal artifacts, the study aims to identify tech tools that support access and engagement without leading to screen overload. The goal is to highlight strategies that are effective, manageable, and aligned with UDL principles. Findings will support future work in inclusive teaching, helping educators make informed choices about when tech helps, and when it doesn’t.

BIBLIOGRAPHY

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