

Supplemental Independent Research Grant

Period: 2026-2028 **Funding Level:** \$20,000./year. **Fields:** AI & Education

Researcher: Robert W. Lawler

Position: Professor Emeritus, Purdue

Background: <https://nlcsa.net/wp-content/uploads/2025/11/LawlerShortCV2025.pdf>

A vigorous 85, Lawler works in his 4th floor home office, climbing the stairs 2-3 times daily. He works on this project full time. Recent technology expenses included a local machine, network, web-site hosting, plugin-software, and automated speech transcription draft services. Supplemental funding will enable continuing and enhancing efforts for this period.

References:

Reviews of “**Computer Experience and Cognitive Development**”: see White, Papert, Davis at <https://nlcsa.net/lc2b-tis-2/lc2b-reviews/>

Reviews of “**Artificial Intelligence and Education**”: see Elshout, Dede, Albers at <https://nlcsa.net/lc0c-aied/lc0c-reviews/>

Reviews of Articles in “**The Journal of Mathematical Behavior**” by editor R. B. Davis at <https://nlcsa.net/lc0a-rwl/lc0a-analyses/>

Project Beginning: made public at the “Constructionism 2010 Conference” in Paris

see: <https://nlcsa.net/lc0a-rwl/lc0a-ongoing-uncompleted-projects/LC0aR4/>

Current State of work: see <https://NLCSA.net> (Natural Learning Case Study Archive)

Objectives and Methods:

to better understand human learning through detailed analysis of a 3 year case study video corpus of one child's learning about things and symbol systems within her family (corpus is 6 years).

to better formulate machine knowledge for peoples' use by articulating relationships among the development of representations through detailed analysis of humans' learning experiences.

What Specifically will be the efforts:

extending materials preparation:

format remaining digitized video as content segregated clips

upload and integrate those clips into the existing corpus for subsequent analysis

extending materials analyses:

continue the transcription/analytical editing of the current thousand video clips

install transcriptions, analyzed as dialogue, as a **second** content representation

create manually traces of physical action of the infant and child as a **third** representation

install AI generated “summary” of clip as a “**contents list**” as a guide to others

install, but bury under a clickable link, an AI generated narrative of the clip as a “consensus” **alternative** to the analysis the principle is working out.

exploring **content and analysis derived perspectives, appreciations, and ideas** about the development of specific human embodied knowledge and its flexibility

Progress Reports : Frequency: annual Level: Highlights and Summary