

Tracing Identity Change in an Undergraduate Research Program

Data Challenge 2026

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Overview

Research Question

How do students describe and make sense of their **identity development** through participation in an undergraduate research program?

Data Collection

- Semi-structured interviews with undergraduate students (n=7) participating in mentorship program at teaching university
 - Academic background, experience with mentorship, roles in project(s), navigating challenges of research process

Projective Reflection (Foster, 2012; 2014)

- Theoretical framework interpreting learning as “identity change over time”
 - More than knowledge acquisition, self-transformation
- Identity exploration across learning experiences
 - Content knowledge/technical literacy (Kereluik et al., 2013)
 - Regulated actions (Hadwin & Oshige, 2011)
 - Interests and valuing (Foster, 2008)
 - Self-perceptions and self-definitions (Foster & Shah, 2016)
- Mentorship integrates content knowledge based regulated learning and self-concept

Codebook - Deductive

Code	Definition	Fleiss Kappa
Content Knowledge	Evidence of changes in students' understanding, reasoning, or use of domain knowledge, including how they make sense of concepts, practices, or systems.	0.70
Self-Regulated Learning	(Content Knowledge) Student describes independent control over their learning process, including planning, monitoring, persistence, or strategy use.	0.83
Co-Regulated Learning	(Content knowledge) Learning shaped through guided interaction with a more knowledgeable other (mentor in our case).	0.77
Socially-Shared Learning	(Content knowledge) Learning through collaborative, peer-based interaction, where knowledge and understanding are co-constructed.	0.83
Interest and Valuing	Statements indicating shifts in what students find meaningful, worthwhile, or personally relevant within the domain. This includes increased interest, enjoyment, or recognition of the value of research or science for their own lives or contexts beyond school.	0.74
Self-Perception	Statements reflecting shifts in how students view themselves, including their confidence, self-concept, and identification as a researcher or scientist. This includes descriptions of who they believe they are now and who they imagine they could become in the future.	0.70

Data Segementation

Data division: Turns of talk

Conversation: Individual interview

Unit of Analysis: Individual Participants

Windon stanza: Moving stanza for each 2 lines

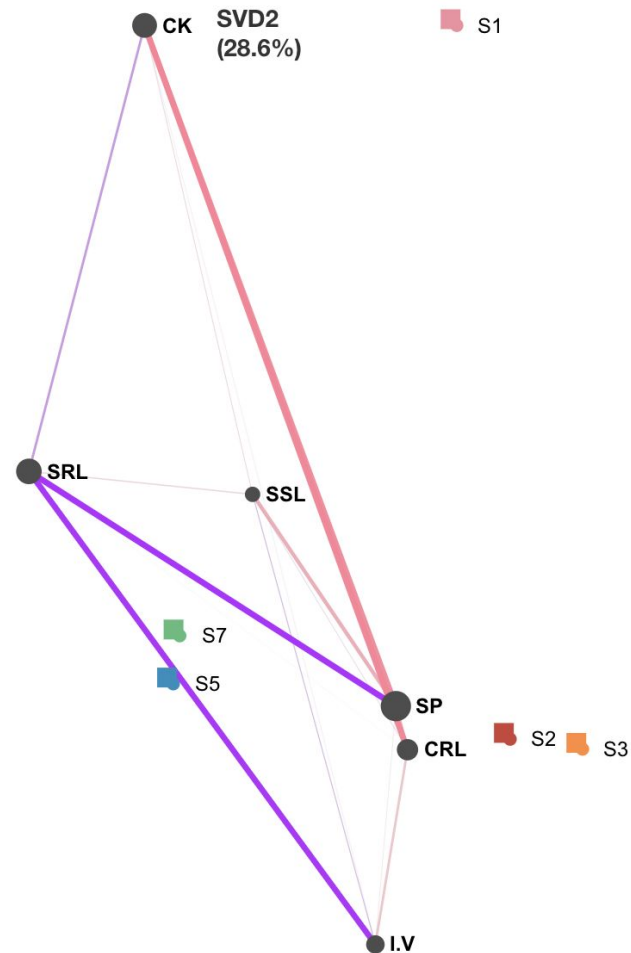


Epistemic Network Analysis

	Pearson	Spearman
X Axis:	1.00	1.00
Y Axis:	1.00	1.00



Units: Role > Conversation
Conversation: Conversation



Thank you!

Comments/Questions?