

important thing for me, is making sure I feel like I understand the material

Kasee's dialogue can be categorized as displaying a mastery orientation because she notes hard work in the face of challenge (her physics course) and privileging understanding as more important than getting the right answer or a good grade.

2. *Kasee Context Two: Family Roles and Fixed Mindset*

During the same interview, within the interviewer question context about whether her parents were surprised by her chosen path of study she answered: *"I don't think so, because I've **always been** very inquisitive, stuff like asking questions always. My mom is in business and my dad is in marketing...videographer stuff...[he] has a very creative side and my mom is like the business side, and I just got the science stuff. I don't think they're surprised, because I have **always been like this my whole life**. And so it's just like, "Oh, [Kasee's] just like the science girl."*

The storytelling context Kasee describes is with respect to family relationships: her parents. Kasee notes that she asks "questions always." She appears to be referencing younger moments in her life at home as the storytelling context, however, the transcript does not outlaw an interpretation of her statements as referencing the context of school science courses as well. The nearby mindset belief word Kasee employs is "science stuff." We also argue that she uses it in a fixed way since she uses "always" twice in describing what is connected to getting the "science stuff."

VII. DISCUSSION AND CONCLUSIONS

While we have some preliminary evidence that supports Dweck's assertion that people are mixtures, we do not yet have consistent context-related patterns.

In addition, our examples of nearby belief statements that are "fixed" cannot be interpreted as problematic in the same way as strongly agreeing that "you have a certain amount of intelligence and you can't do much to change it" [9]. Further work will need to unpack students' implicit and explicit understanding of the relationship between intelligence, talent, synonyms, and nearby words. The latter two categories are important because talent and intelligence are used less frequently in colloquial student talk.

We take up mindset as a construct to examine the strengths, weaknesses, and implications of categorizing students and their dialogue in this way. Students' educational contexts are clearly consequential, something we hope to unpack more through our context-dependent study.

Our main contribution to the literature with this short paper is to present the first analysis framework for examining mindset in interview data. Although our pilot study has limitations, our analysis suggests productive future places to follow up around context-dependence. Since peer and faculty messaging around mindset in STEM at large research universities often negatively affects students, particularly those already marginalized, [12, 13, 17], helping instructors change behavior to leverage productive context-dependent student beliefs will be key. Our pilot studies were also limited across gender (mainly women) and race (White); further work will necessitate examining more varied gendered and racialized experiences around intelligence beliefs [14]. Lastly, we highlight that issues of identity (e.g. "science person") can be seen in student dialogue. Future work will connect identity and mindset.

ACKNOWLEDGEMENTS

We are grateful to Dimitri Dounas-Frazer for feedback, and the Lyman Briggs College for support.

[1] D.S. Yeager, D. Paunesku, G. Walton, & C.S. Dweck. White House White Paper (2013).
[2] L.S. Blackwell, K.H. Trzesniewski & C.S. Dweck. *J. Child Devel.* **78**, 246-263 (2007).
[3] D. Hammer. *Cog & Instruc.* **12**, 151-183 (1994).
[4] A. Gupta and A. Elby. *Int. J. of Sc. Educ.* **33**, 2463-2488 (2011).
[5] A. Elby. *Am. J. Phys.* **69**, S54-S64 (2001).
[6] Dweck, C.S. *Edu. Week.* **35**, 20, 24 (2015).
[7] L. Lising & A. Elby. *Am J. Phys.* **73**, 372-382 (2005).
[8] C.S. Dweck & E.L. Leggett. *Pysch. Review.* **95**, 256-273 (1988).
[9] C.S. Dweck. *Self-theories: Their role in motivation, personality, and development*. Psychology Press, Philadelphia, PA, (2000).

[10] E.S. Elliot & C.S. Dweck. *J. Pers. Soc. Psych.* **54**, 5-12, (1988).
[11] H. Grant & C.S. Dweck. *J. Pers. Soc. Psych.* **85**, 541-553 (2003).
[12] C. Good, A. Rattan, & C.S. Dweck. *J. Pers. Soc. Psych.* **102**, 700-717 (2012)
[13] C.M. Lewis, K. Yasuhara, & R.E. Anderson. *7th Comp. Edu Res. Proc.* 3-10 (2011).
[14] N. Shah. Dissertation. (2013).
[15] R.A. Engle, F.R. Conant, & J.G. Greeno. In *Video research in the learning sciences*, 239-254, (2007).
[16] C.S. Dweck. *Mindset: The New Psychology of Success*. Random House, New York (2006).
[17] S. J. Leslie, A. Cimpian, M. Meye, & E. Freeland. *Science.* **347**, 262-265 (2015).