

Developing an online tool to collect causal maps of students' subfield interest formation

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Physics majors often face uncertainty related to career decisions, such as struggling to identify specific subfields of interest within the discipline. To address this, it is crucial to understand how positive and negative factors affect students' career interests. Our initiative focuses on the development of a unique digital tool that helps students diagrammatically represent the formation of their subfield interests. This tool is used during an interview to guide the creation of information-rich causal maps to better understand the supports and challenges students encounter. Unlike traditional surveys our tool works to capture the chronological story of an individual and identifies the level of impact specific experiences and beliefs have of subfield interest. This data includes interpretable graphical maps that have meaning to students and researchers. This presentation will highlight the development process of our tool, its role in assessing students' subfield interests in physics, and preliminary results from the network analysis of collected maps. Our long-term goal is to develop the tool into a streamlined assessment that could help departments provide more effective support for students' career decision-making.