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Identifying the Pathways and Experiences of Asian Students' Engineering Major Choice

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ABSTRACT

Asian students' pathways and experiences in engineering are not well-studied. Understanding pathways and experiences can inform students, parents, educators, and policymakers how to better approach the engineering major choice process. This study identifies pathways and experiences of Asian students choosing to major in engineering. Eleven semi-structured interviews of Asian students at a major research institution were analyzed in NVivo using thematic analysis. In this study, 8 Asian students chose engineering as a field of study and subsequently chose an engineering major while 3 chose an engineering major directly. Students following either pathway shared catalyzing interests, such as math and science, and the influence of parents but diverged in the decision-making processes. Students who chose their major after choosing engineering considered a broad range of interests in their decision-making and were likely to mention additional figures of influence such as peers, graduate assistants, teachers, and professors. These students actively engaged in exploration and weighing of interests by comparing likes and dislikes. Overall, most students acknowledged parental influence. International students tended to discuss parental influence within the context of financial support/burden. These findings are relevant for the investigation of student persistence, recruitment, and retention and the design of multiple-institution studies. Researchers can develop questions based on the findings to determine what aspects of student pathways and experiences can be affected through policy and other actionable changes.

KEYWORDS

Asian students, engineering major choice, pathways and experiences, qualitative analysis, thematic analysis