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Attitudes towards mathematics as a subject, and mathematics learning and instruction in a transdisciplinary engineering study.

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Summary: This article explores student attitudes and preferences in learning and teaching of mathematics in engineering studies that transcend the division between technical, scientific and artistic disciplines. For observing such attitudes, we have developed a model that relates the attitude towards mathematics as a subject with the attitude towards mathematics learning and instruction. Data comes from a study at the Media technology educational program of Aalborg University. The study used attitude and preference questionnaires, and observations and interviews with students. The results show that media technology students are not confident in mathematics and consider mathematics to be a difficult subject. Nevertheless, they recognize the importance of mathematics both in their studies and in general. Moreover, students favour learning on their own or together with their peers over learning supported by a teacher. We propose that these findings inspire reforming mathematical education for such engineering students.

Classification: C25 C35

Keywords: attitudes; learning preferences; teaching; engineering students