EMPLOYING LIBERATIVE PEDAGOGIES IN ENGINEERING EDUCATION

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ABSTRACT

Many educators in the humanities and social sciences employ pedagogies of liberation, including feminist and/or critical or radical pedagogies based on the works of bell hooks, Paulo Freire, and others, to engage students in collectively creating democratic classrooms that encourage all voices. This article motivates the use of these pedagogies in engineering education and presents their application in an engineering thermodynamics course. Implementation areas include relating course material to students’ experiences, facilitating students’ responsibility for learning and authority in the classroom, incorporating ethics and policy issues, and decentering Western civilization. Assessment approaches are discussed, as well as limitations of liberative pedagogies in an engineering context.

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