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Strategy flexibility: Choosing different systems to apply the work-energy principle<sup>1</sup> GRACE BAKER, THANH LE, Western Washington University — An important goal of physics instruction is to help students become adaptive problem solvers so that they can approach a wide range of situations. One aspect of adaptive problem solving is strategy flexibility — knowing multiple ways to approach a problem and choosing the most appropriate approach. In this study, we examine the role of meta strategic judgements in students' application of strategy flexibility. Specifically, we study students' meta-strategic judgements when choosing a system with which to apply the work-energy principle to various scenarios. College students enrolled in an introductory mechanics course were interviewed about their rationales for their system choices and asked to compare different options. Preliminary results will be analyzed to determine the cues students use to make decisions and to determine whether there is evidence that students implement strategy flexibility in their problem-solving process.

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