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**Peer-led instruction for a qualifying exam preparatory course or:
How I learned to stop worrying and love the PhD Qualifying Exam** WARREN CHRISTENSEN, LARRY ENGELHARDT, Iowa State University — In the spring of 2004, the authors were charged with the task of creating and administering a qualifying exam preparation curriculum that would strive to assist graduate students studying for their comprehensive physics exam. We incorporated many pedagogical techniques that have been proven effective at nearly all levels of instruction by leading researchers in the field of physics education. Our primary focus was on peer-led instruction and time-on-task doing actual problems from previous qualifying exams. After a brief but precise lecture covering essential ideas over a particular subject matter, students spend most of class time working in small groups and presenting worked problems at the board. At all times, the focus was on student explanations concerning the fundamental concepts behind a specific problem, as well as contemplating variations to broaden understanding and challenge students to think on their feet. We found that students who attended and participated regularly in class could be correlated with those students who achieved high marks on the exam.

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