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## **(G) (POS-4) Exploring Computational Physics Exercises as a Tool for Learning Physics**

*Tuesday 28 May 2024 17:47 (2 minutes)*

Over the past decade, physics education has increasingly emphasized computational skills for undergraduates. These skills offer many benefits, fostering problem-solving, analysis, and critical thinking applicable across various professions. This study delves into the relationship between computational activities and enhanced physics learning, specifically explored through coding exercises introduced in a second-year electricity and magnetism course. Students numerically computed vector derivatives for diverse fields, providing a basis for learning gains assessed through pre- and post-quizzes. Interviews with students during code development shed light on their thought processes, confidence levels, and alignment of computed results with their initial conceptions of vector fields.

### **Keyword-1**

Computational Physics

### **Keyword-2**

Pedagogy

### **Keyword-3**

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