

A BLENDED LEARNING APPROACH TO LABORATORY PREPARATION

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ABSTRACT

There is a widespread agreement that pre-lab preparation is beneficial to students as it facilitates their learning and understanding (O'Brien & Cameron, 2008; Jones & Edwards, 2008; Chittleborough, Treagust, & Mocerino, 2007). There is also evidence that, the ability of students to adequately be prepared both conceptually and procedurally is of critical importance for any long term benefit to be obtained from practical laboratory sessions (Rollnick *et al*, 2001). Our experience in teaching undergraduate and postgraduate laboratory courses in the last ten years also indicates better teaching and learning outcomes from students who are well prepared for labs. In this paper we report on the approach we have taken to facilitate student laboratory preparation and promote effective learning in the laboratory environment overall. We have developed a Biotechniques Pre-lab Online Resource Centre that provides a suite of activities presented in a blended learning context. These activities provide a more guided preparatory experience that enables students to have more vicarious learning experiences in laboratory time. It does this by reducing the cognitive overload students frequently experience in laboratories by enabling them to prepare more appropriately in their own time and space. We present evidence of student satisfaction and increased learning outcomes.

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