Digital distraction: Learning Catalytics or Clicker

Fatemeh R. Renani, Georg Rieger, and Joss Ives

Physics & Astronomy, UBC

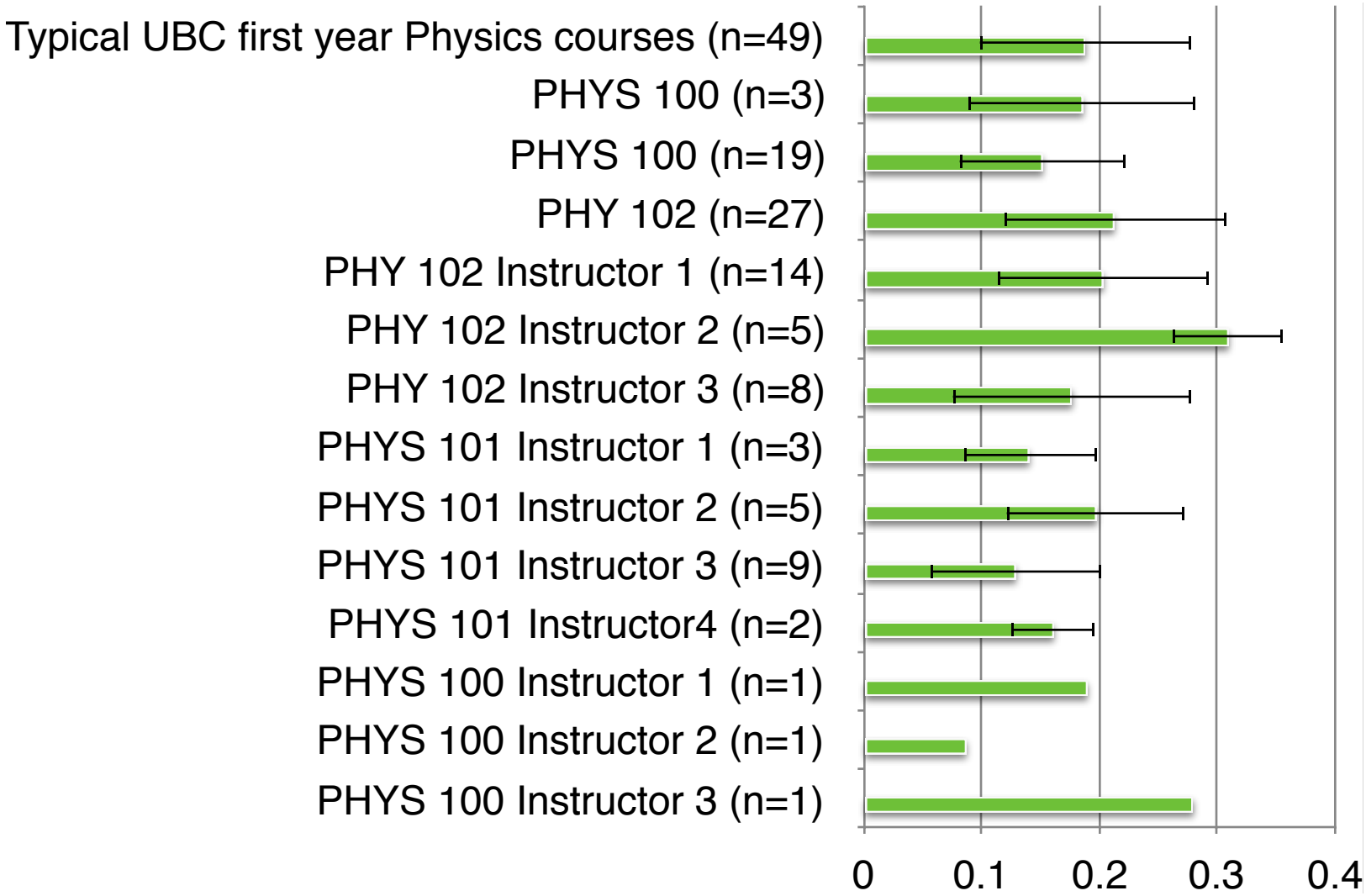
Background

Learning Catalytics (LC) is a promising new tool for supporting interactive learning activities during lectures, labs, or tutorials in a university or high school setting. It is meant to replace existing classroom response technology such as clickers. Compared to clickers, LC offers additional functionality such as more possible question types and a tool facilitating small group activities. Moreover, students use their own internet-capable devices rather than having to buy a clicker.

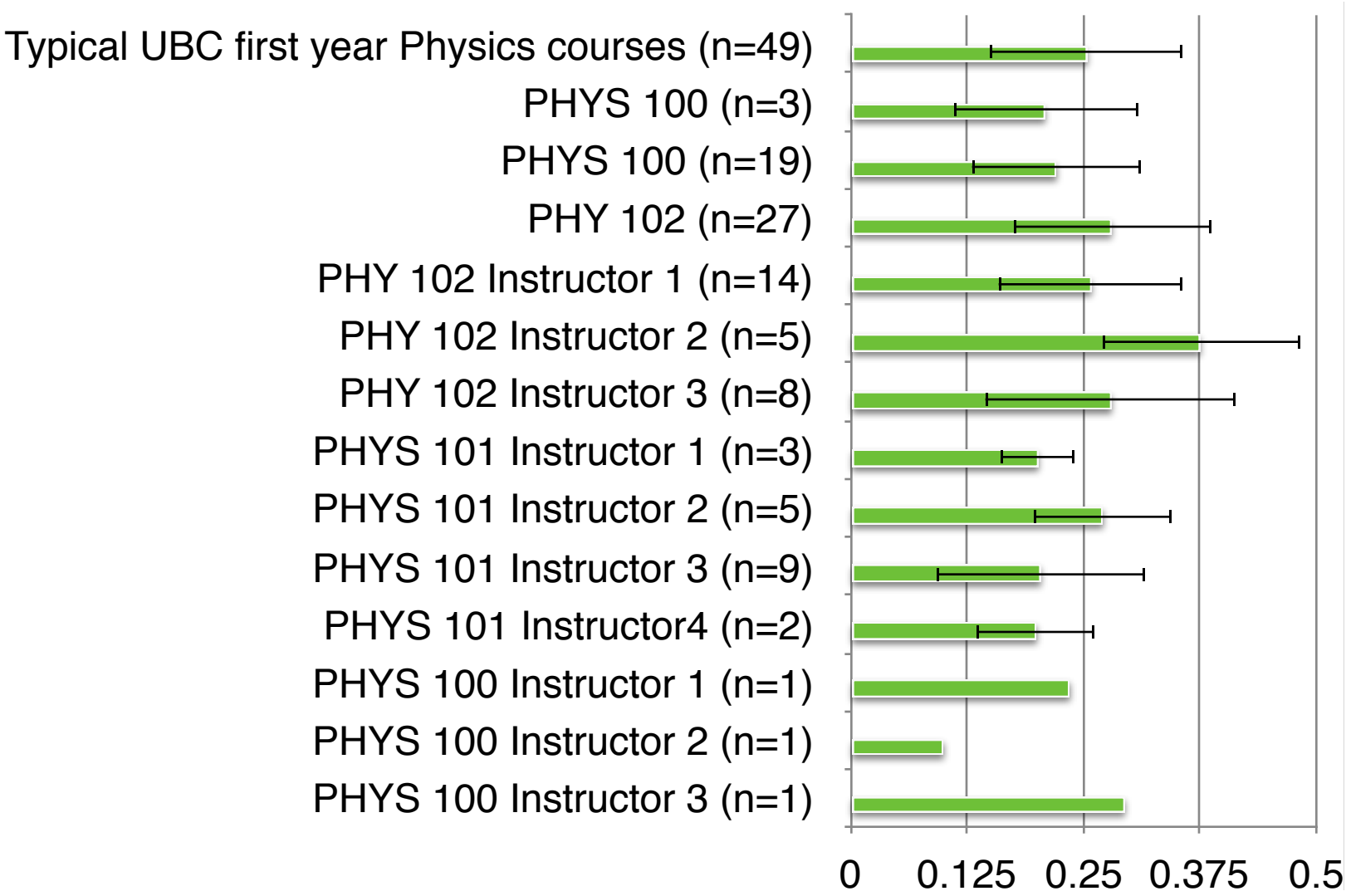
Before adopting Learning Catalytics (LC) on a large scale, the effectiveness of Learning Catalytics in class needs to be established. This is important since clickers have been shown to effectively support peer-instruction as evidenced by numerous publications. While Learning Catalytics has a number of available features (group mode, open-ended questions) that are not available to clickers, it is a web-based tool which necessitates the use of smart phones or tablet computers in class. These devices have a large potential for distraction (texting, facebook, etc.).

In this research we investigate the distraction (digital and none digital) level in typical first year physics courses using Learning Catalytics and clickers.

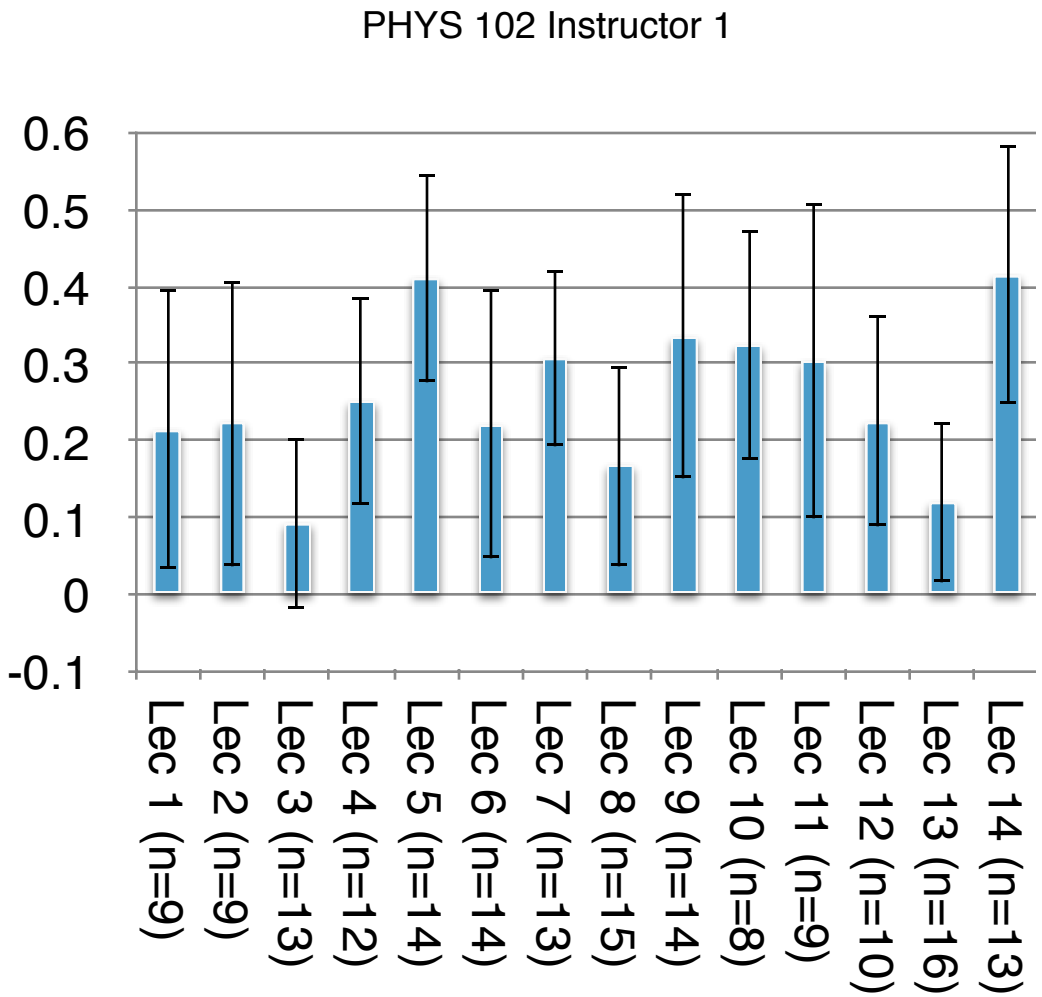
Digital distraction and standard deviation of three first-year Physics courses thought by wide range of instructors (novice to experienced). Number of observed lectures for each category is represented by n.

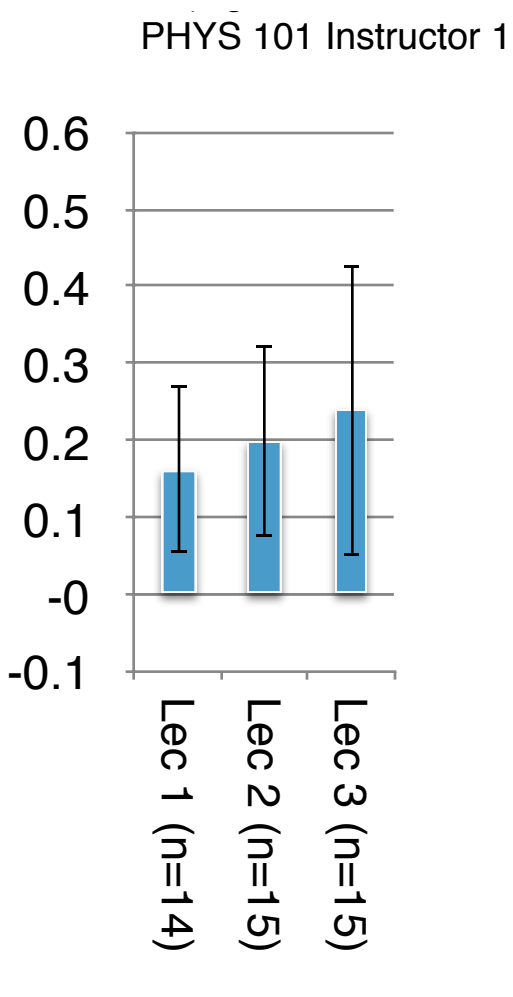


Distraction (digital and non-digital) and standard deviation of three first-year Physics courses thought by wide range of instructors (novice to experienced). Number of observed lectures for each category is represented by n.

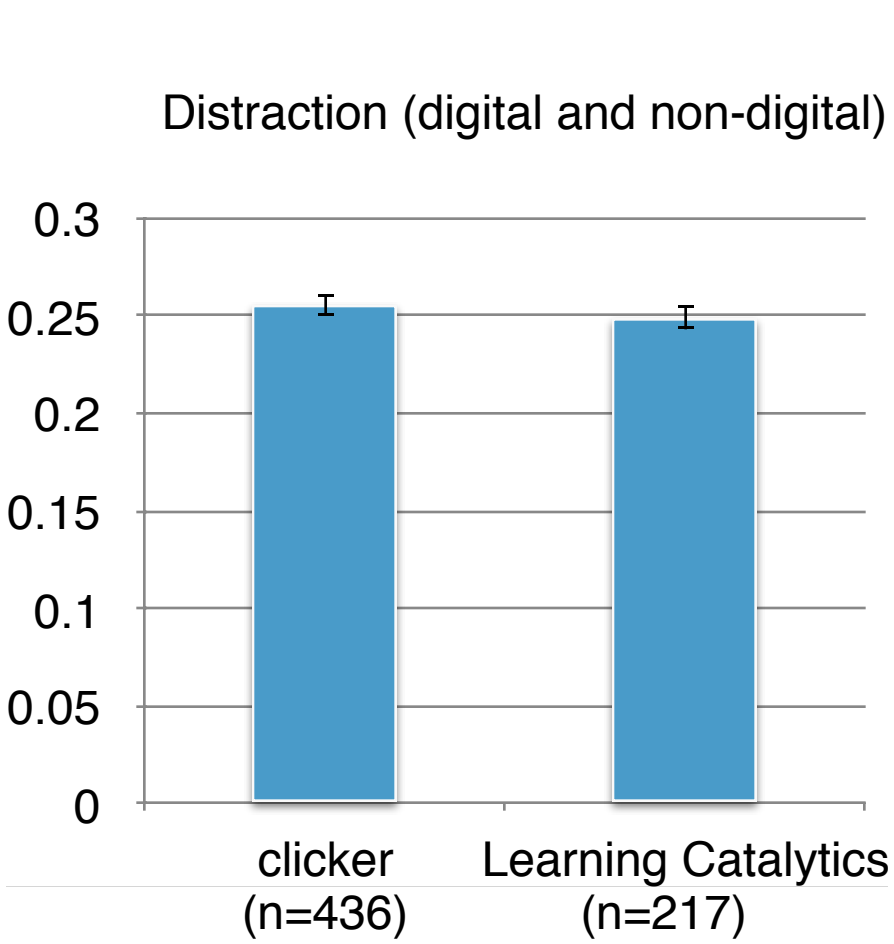


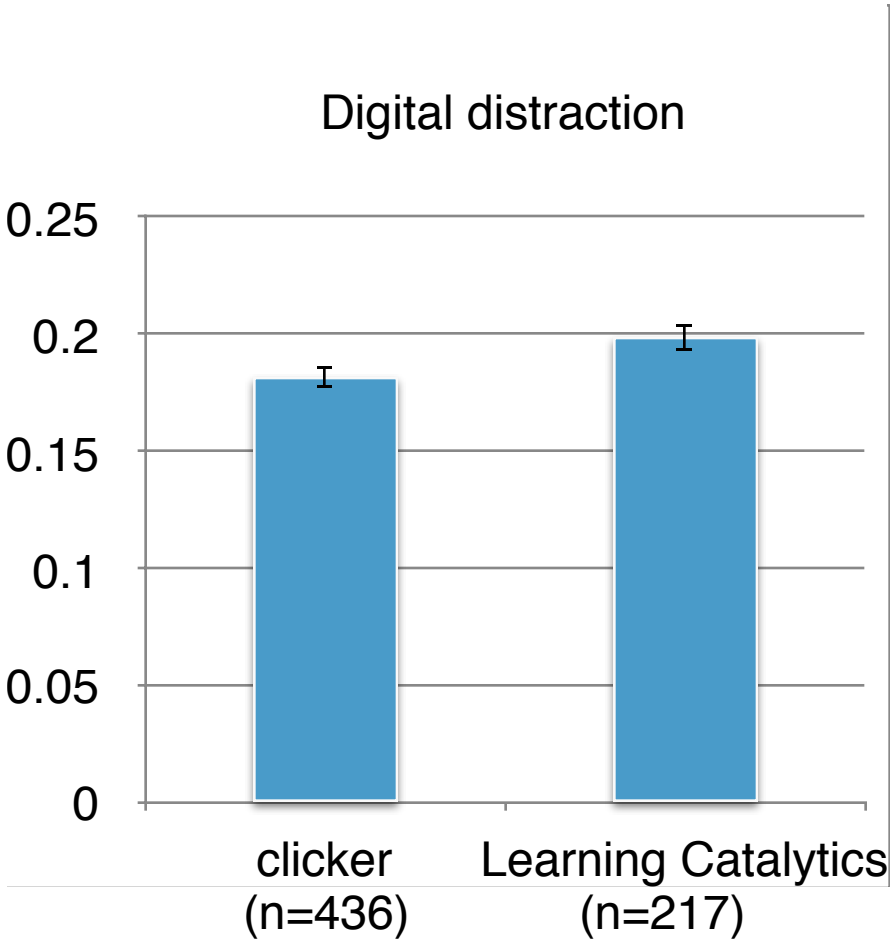
Distraction (digital and non-digital) average and standard deviation of two instructors. Number of observations per each lecture is represented by n.



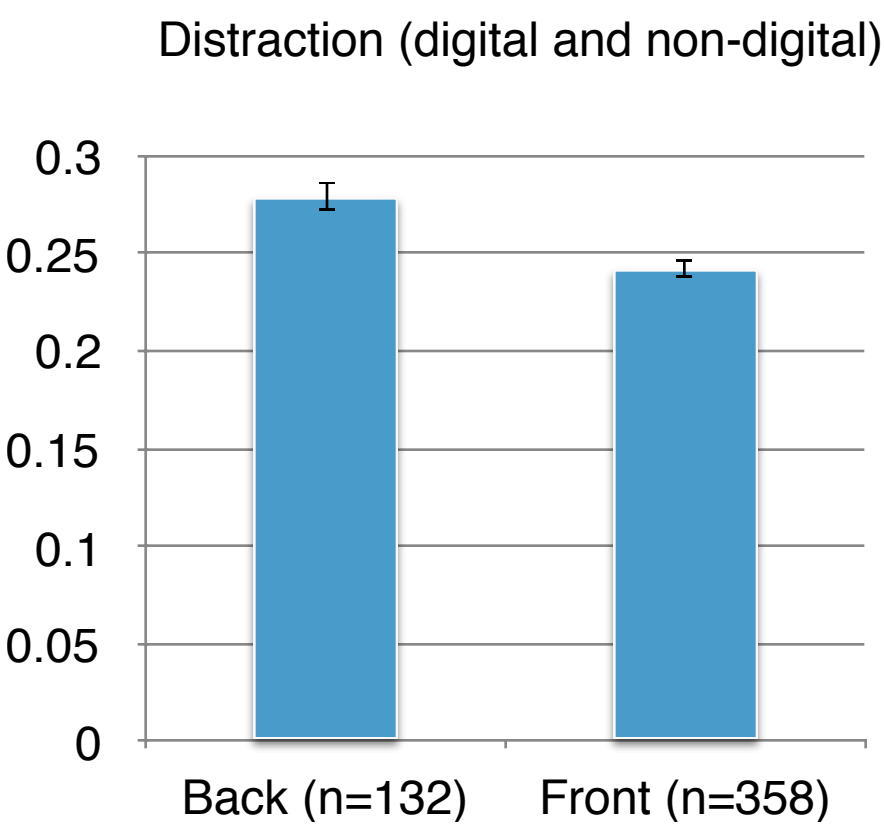


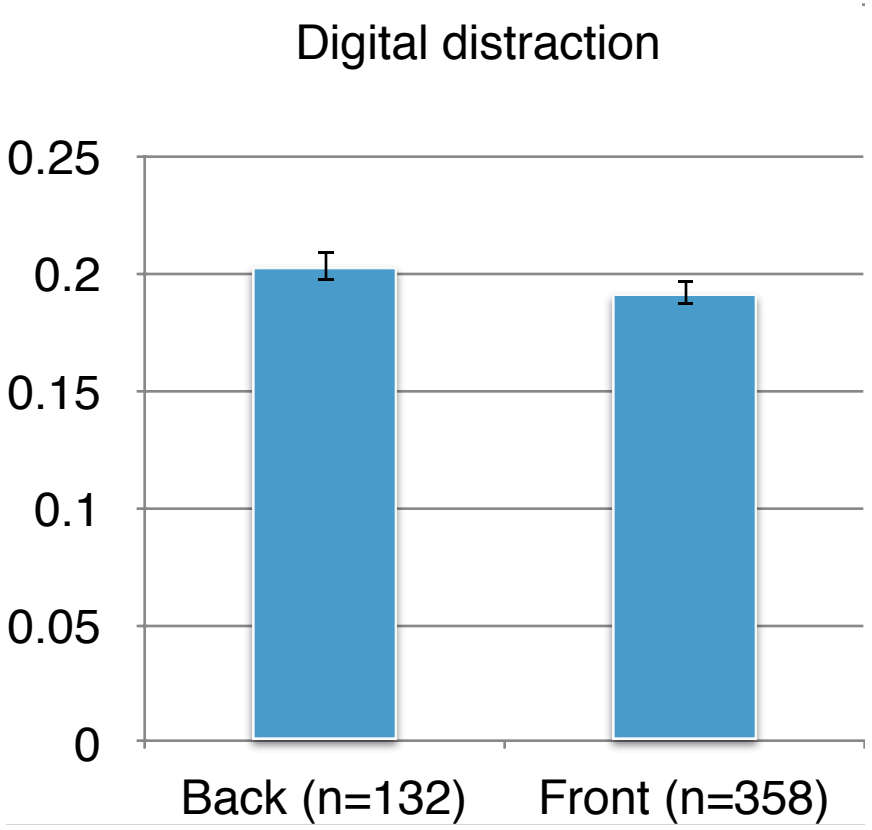
Comparison of **distraction** (digital with and without non-digital) using clicker and learning catalytic in a typical first-year physics courses thought at UBC. Number of total observations is represented by n.





Classroom seating position and **distraction** (digital with and without non-digital) in a typical first-year physics courses thought at UBC. Number of total observations is represented by n.





Conclusion:

Despite there being a small increase in the observed rate of digital distractions when using Learning Catalytics instead of clicker, there is no difference in the total rate of distractions when looking at the combined digital and other distractions. Therefore, this study verifies the validation of Learning Catalytics as a tool in instructors' tools kit.