Pen-Input Computing and DyKnow Software: Pedagogical Opportunities for Interactive Physics Instruction

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Results
Louisiana State University Shreveport
Sisson (2009)

DyKnow and university-provided Tablet PCs deployed in:
1) Algebra-based and Calculus-based Introductory Physics Courses. Results compared with 5 year department averages in seminars without deployment.

<table>
<thead>
<tr>
<th>Conceptual Understanding (FCI)</th>
<th>Problem Solving (Final Exam)</th>
<th>Course Success (4.3 A, B, C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra-based Physics I (n = 39, Fall 07)</td>
<td>7% increase (p = 0.14)</td>
<td>2% improvement (p = 0.64)</td>
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<tr>
<td>Calculus-based Physics I (n = 26, Fall 08)</td>
<td>3% increase (p = 0.99)</td>
<td>11% increase (p = 0.05)</td>
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</tbody>
</table>

Columbus State University
Hrepic and Shaw (2010)

DyKnow and voluntarily brought students’ personal computers deployed in:
1) Algebra-based Introductory Physics Courses: Results compared success in the same class based on how much they used technology.

Advantages
- More interaction for the whole class
- Easy to go back and review material
- Helps students organize notes
- Allows you to focus on content, not note-taking
- Can check status button without embarrassment
- Can telecommunicate to class

Disadvantages
- If you have no computer: you are at a disadvantage
- Technical issues can cut up class: Disconnected internet
- Temptation to check email during class
- Couldn’t take notes by hand if using laptop in class

References


* Author’s papers available at www.dyknow.com