Abstract: Three experiments examined note-taking strategies and their relation to recall. In Experiment 1, participants were instructed either to take organized lecture notes or to try and transcribe the lecture, and they either took their notes by hand or typed them into a computer. Those instructed to transcribe the lecture using a computer showed the best recall on immediate tests, and the subsequent experiments focused on note-taking using computers.

Table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Note-taking overall</th>
<th>Free recall</th>
<th></th>
<th></th>
<th></th>
<th>Short answer</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall</td>
<td>Main ideas</td>
<td>Important details</td>
<td>Unimportant details</td>
<td>Overall</td>
<td>Important details</td>
<td>Unimportant details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organize</td>
<td>0.28 (.12)</td>
<td>0.12 (.05)</td>
<td>0.17 (.10)</td>
<td>0.18 (.09)</td>
<td>0.10 (.08)</td>
<td>0.47 (.19)</td>
<td>0.52 (.16)</td>
<td>0.42 (.26)</td>
<td></td>
</tr>
<tr>
<td>Transcribe</td>
<td>0.28 (.10)</td>
<td>0.12 (.03)</td>
<td>0.17 (.12)</td>
<td>0.21 (.10)</td>
<td>0.08 (.07)</td>
<td>0.46 (.15)</td>
<td>0.45 (.17)</td>
<td>0.47 (.18)</td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organize</td>
<td>0.34 (.13)</td>
<td>0.12 (.05)</td>
<td>0.21 (.14)</td>
<td>0.16 (.10)</td>
<td>0.10 (.10)</td>
<td>0.50 (.20)</td>
<td>0.53 (.20)</td>
<td>0.46 (.25)</td>
<td></td>
</tr>
<tr>
<td>Transcribe</td>
<td>0.44 (.12)</td>
<td>0.18 (.06)</td>
<td>0.25 (.13)</td>
<td>0.24 (.12)</td>
<td>0.12 (.08)</td>
<td>0.64 (.12)</td>
<td>0.72 (.16)</td>
<td>0.58 (.13)</td>
<td></td>
</tr>
</tbody>
</table>

There's an across the board benefit of taking verbatim notes on a computer (rather than handwriting). The benefit of verbatim-computer taken notes shows its strongest advantage when students have to answer questions about important details (which is shown in the green highlighted cell: 72% correct if taking verbatim notes on a computer vs only 45% correct if taking verbatim notes by hand).

What Predicts Skill in Lecture Note Taking?

Stephen T. Peverly, Vivek Ramaswamy, Cindy Brown, James Sumowski, Moona Alidoost, and Joanna Garner
Columbia University

Abstract: Despite the importance of good lecture notes to test performance, very little is known about the cognitive processes that underlie effective lecture note taking. The primary purpose of the 2 studies reported (a pilot study and Study 1) was to investigate 3 processes hypothesized to be significantly related to quality of notes: transcription fluency, verbal working memory, and the ability to identify main ideas. A 2nd purpose was to replicate the findings from previous research that notes and verbal working memory were significantly related to test performance. Results indicated that transcription fluency was the only predictor of quality of notes and that quality of notes was the only significant predictor of test performance. The findings on transcription fluency extend those of the children’s writing literature to indicate that transcription fluency is related to a variety of writing outcomes and suggest that interventions directed at transcription fluency may enhance lecture note taking.

Relationships Between Handwriting and Keyboarding Performance of Sixth-Grade Students

CONCLUSION. Keyboarding performance demonstrated low to moderate correlation with handwriting performance, suggesting that these forms of written expression require distinctly different skills. Most students who were slow at handwriting or had poor legibility increased the quantity and overall legibility of text they produced with a keyboard. These results suggest that keyboarding has the potential to increase and improve a student’s written output.

Note Taking Effectiveness in the Modern Classroom
K.M. Beck, J.S. Hartley, S.L. Hustedde, and T.C. Felsberg
Rutgers University

Excerpt: Lastly, the word counts of the lecture notes taken by both groups [one group took notes on laptops and one group took notes by hand] were analyzed, using an independent sample, two-tailed t-test with a .05 level of significance. The mean word count for the computer group was 153.3 (SD = 62.6) while the average of the handwritten group was 96.7 (SD = 45.1) as seen in Figure 2. The analysis of the data showed that there was a statistically significant difference between the amount of notes taken by students taking notes on a computer, and students taking notes by hand, $t(17) = 2.24, p = .041$. In other words, students taking notes on a computer took significantly more notes than students taking notes by hand.

Wireless Laptops as Means For Promoting Active Learning In Large Lecture Halls
Barak, Miri; Lipson, Alberta; Lerman, Steven

This paper reports on a study that examined the use of wireless laptops for promoting active learning in lecture halls. The study examined students’ behavior in class and their perceptions of the new learning environment throughout three consecutive semesters. An online survey revealed that students have highly positive perceptions about the use of wireless laptops, but less positive perceptions about being active in class. Class observations showed that the use of wireless laptops enhances student-centered, hands-on, and exploratory learning as well as meaningful student-to-student and student-to-instructor interactions. However, findings also show that wireless laptops can become a source of distraction, if used for non-learning purposes.

Canadian university students in wireless classrooms: What do they do on their laptops and does it really matter?
Patrick Gaudreau, Dave Miranda, and Alexandre Gareau
School of Psychology, University of Ottawa, Ottawa, ON, Canada K1N

Two studies were conducted to examine what undergraduate students do on their laptops during class time and the extent to which laptop usage behaviors are associated with academic success. In Study 1, a sample of 1129 students from a Canadian university completed a survey measuring prototypical behaviors emitted on laptops during class time. Results of factor analyses indicated that laptop behaviors can be regrouped in two dimensions: School related and school unrelated laptop utilization. School unrelated laptop behaviors were significantly associated with lower levels of self-reported academic achievement and satisfaction. School related laptop behaviors were positively associated with academic satisfaction. These results were invariant across different faculties on campus. In Study 2, another sample of 88 students was recruited to examine the longitudinal association between laptop behaviors and semester grade point average obtained at the end of the semester. Results of Study 2 showed that school unrelated laptop behaviors were prospectively associated with lower semester grade point average, even after controlling for a series of potentially confounding influences (i.e., self-regulation failure, motivational deficit, disorganized learning, internet addiction, and school disenchantment).

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