Multi-Tasking and Technology Use: A Help or a Hindrance?

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Understanding the effects of attention on academic performance contributes to the nursing profession in many ways and is an important phenomenon to investigate. As nurses, one of the most important behaviors that must be developed is the ability to provide on-task attention. In doing this, nurses ignore matters of minor concern and attend to matters of serious concern. Nursing students must practice this behavior while in school yet while they use laptops during lecture, they are at risk for their attention to become off-task, which impedes their academic performance. This research advances what is known about educating nursing students. It helps establish that nursing students’ academic performance, just like other disciplines, can be negatively influenced when their attention becomes off-task during a lecture.

This research also adds to theoretical knowledge. As part of Cognitive Learning Theory, it is the instructor’s duty to influence or reduce factors that contribute to extraneous load during the learning process. Previous extraneous load factors have been identified as noise and temperature, for example. As indicated from this research, using laptops during lecture causes off-task attention and can now be considered as another one of the factors that contribute to extraneous load.

For nursing instructors, this research begins to reveal the impact of academic performance when using laptops during the lecture. This, however, is not to say that one must ban laptops from the lecture room. However, it does give educators permission to indicate to students when laptops should be used and when they should not be used. The latest position statement from the National League for Nursing calls for nurse educators to use technology in innovative ways in the classroom. Because of this, nurse educators need to find evidence-based ways that technology supports academic performance.

Future research endeavors include understanding how cognitive forces create off-task attention. Is there, for example, a certain point where one can becomes off-task in attention but it would have no effect on performance? In addition, it is important to research how being in view of a laptop, yet not on a laptop, can also influence performance. Innovative classroom teaching techniques that incorporate the use of the laptops, yet keep students on-task in their attention, need to also be identified. Understanding students’ perception on these matters would also be important.

In the clinical setting, understanding the effect of attention on performance can have a larger influence on practice, beyond technology use. In the clinical setting, it would be important to determine if multi-tasking impedes the performance of safe patient care. For example, a nurse engaging in multi-tasking, by preparing medications for one patient and answering questions about another patient could result in potentially fatal medication errors. Nurses providing discharge instructions to patients and become off-task in their attention may forget to relay important information to patients. Patients in the home setting whose attention becomes off-task may forget to take their medications. As everyday life becomes more complex and chaotic, distractions by either technology-generated sources or other factors will continue to be present.
Because of this, it is imperative that nurse researchers investigate the concept of attention and how it influences performance in both education and clinical settings.

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**Abstract Summary:**
Although many may think that multi-tasking is a quality we would like to be able to instill in our nursing students, it is a potentially problematic behavior. This research will overview how multitasking with technology can have a negative impact on academic performance. Teaching and learning alternatives will be reviewed.

**Content Outline:**
- Background
- Laptop Use
- Social Media Use
- Research
- Other Fields
- Nursing
- Study Results
- Sweller’s Cognitive Load Theory
- Impact on the Classroom
- Conclusions
- Teaching Alternatives
- Learning Alternatives

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