

The Effect of Television on Time Spent Completing an Assignment

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This study was designed to examine the effects of watching television on the amount of time it takes to complete a given assignment. Twenty participants were given an assignment to complete and were timed. Half of the participants were exposed to television while the other half of the participants were not. Significant differences were found between the two groups such that exposure to television significantly lengthened the amount of time it took to complete the given assignment.

It is almost common practice for school age children to place themselves in front of the television to begin their homework. Walk into any house or dorm room across the country to find children from elementary school kids through college seniors flipping through their text books while navigating through the channels of the local cable system. Many of these students will argue that leaving a television or radio on during their studies does not distract them from getting any work completed. In fact some may argue that it helps them to concentrate and that the television acts as a form of white noise; that is, it blocks out other possible distracting noises. It seems that the only people who seem to disagree with this idea are teachers and parents; and therefore researchers have attempted to figure out if television really does have an effect on homework.

Previous studies have focused on the effects of watching and/or listening to television and radio on homework. Cool, Yarbrough, Patton, and Runde (1994) gave their participants a specific amount of time to finish a set of questions and exposed their participants to television, radio or relative silence (Cool et al., 1994). They found that significantly fewer questions were answered in the time given when the participant was exposed to the television, as compared to the radio or relative silence. Furthermore, they found that when participants were exposed to all three levels sequentially (TV, radio and relative silence) during the given time, participants shown the television first

answered fewer questions than participants who were given silence or radio first (Cool et al., 1994).

Another study focused specifically on soap operas and their effects on studying (Pool, Koolstra, & Van Der Voort, 2003). In their study, Pool, et al., placed participants in one of three conditions: visual soap operas, an audio soundtrack of soap operas, or no television or sound, and gave all participants "memorization assignments." Results showed that the participants under the visual condition needed more time to complete the assignment than participants under the audio only and control conditions. Furthermore, after observing half of the participants during the study, the observational data showed that the increased time was due to the participants looking away from the assignment to look at the television (Pool, Koolstra, & Van Der Voort, 2003).

Similar to the studies by Pool et al. (2003) and Cool et al. (1994) was a study by Patton, Stinard and Routh (1983) to determine what, if anything, was considered distracting during homework in "real life settings." Experimenters distributed questionnaires to homes of 387 students in grades 5 through 9, and asked that they be filled out at home and returned to the experimenters. Patton et al. measured the amount of time spent completing the homework assignments and under what conditions the students tended to study (i.e. in front of the television, with the radio on, relative silence). Results showed again that television was a significant distracter from homework.

Results such as these can often be explained by different attention theories. Capacity theory hold that when the brain is exposed to two separate tasks that both require focused attention, such as watching television and completing a homework assignment, that attention is divided and performance in one or

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both of the tasks is diminished: "If a task is difficult, divided attention is sometimes not possible" (Goldstein, 2005, p.116).

All three studies have come to similar conclusions about the effects of television on studying. However all previous studies were administered to elementary and middle school age children and no experiments were found that related to college age students and the effect of television on their studies. Also all previous studies focused on the number of questions answered in a given amount of time. This study is different in that the time, not the number of questions being answered, is the dependent variable of interest. The current study aimed to show that watching television while completing an analog homework assignment would change the amount of time it takes to complete an assignment for college aged students. It was hypothesized that the presence of the television shows would increase the amount of time it takes for the participants to finish the given assignment.

Method

Participants

Participants in this study were a convenience sample of twenty undergraduate students currently enrolled at a public northeastern university. These students volunteered for the study via a sign up sheet posted in the Psychology Department. Participants received class credit for participating in the study.

Materials

Participants were given an informed consent and an envelope containing a small amount of reading material (see Appendix A), followed by a set of questions pertaining to the reading (see Appendix B). The reading material consisted of a short article found in a health magazine about the effects of exercise on cancer patients during treatment. Following this were questions about the reading with no interpretation needed. The reading and subsequent questions were stapled to one another in such a way that the participants were made to read the article before seeing the questions. Each participant was given the exact same packet. A prerecorded set of shows consisting of a variety of MTV, American Idol, and Cops, was shown to half of the participants. The other half were not given any television distraction during the course of the study. The television shows were shown on an overhead projector at the front of the room so that all of the participants in the television condition could see and hear it. A digital clock was placed at the front of the room and participants were asked to use this clock to answer any questions pertaining to time.

Procedure

Participants were seated facing the front of the room and given the consent forms to sign. Once all of the consent forms were signed and collected the envelopes containing the reading (see Appendix A) and the questions (see Appendix B) were distributed and participants were asked to open the packet and follow the

directions. At this point the time on the digital clock was recorded to ensure that all participants began at the same time. For the participants who received the distraction the television was begun at the same time. The independent variable, in this case the television, was controlled by presenting the television shows to every other group participating in the study, which ensured for random assignment to groups. It was then explained to all participants the importance of not talking to one another throughout the course of the study. This helped to control any extraneous distractions that might confound the results of the study. It was important that the only distraction was the television, and that there were not distractions in the no tv condition. They were also informed that they were free to leave as soon as they had finished their questions. The final question on the questionnaire asked them to record the time at which they finished the questionnaire. Once the times had been collected from the answer sheets, the recorded times became the dependent variable.

Results

For purposes of this study time was measured in minutes and the data was analyzed using a one sample t-test. Analysis showed that the television group ($M = 5.20$, $SD = 1.55$) took longer to finish the article and questionnaire than the non television group ($M = 3.10$, $SD = 1.85$), $t(18) = 2.75$, $p < .05$.

Discussion

This study found that television did indeed significantly increase the amount of time it took to complete an assignment. Results of this study were consistent with previous studies done regarding television and its effects on assignments. It was found that many of the participants under the television condition took time to look up at the television screen. This seemed to be the key reason behind the extended length of time that it took to complete the assignment. This finding is consistent with the study done by Pool et al. (2003), where participants looked up from the assignment to watch television. In looking up to the television the brain is experiencing divided attention and therefore both tasks are being diminished. Capacity theory would explain this as an overload to the amount of space allocated to resources. The successfulness of the task is directly proportional to the amount of resource being used. The more resource being used then the less successful is the completion of the task correctly. Other studies focused on the number of questions answered in a specific amount of time (Cool, et al., 1994; Patton, 1983). This study was different in that all questions were answered and the participants were timed. However measured, time or number of questions answered, the results were consistent in that television had a negative effect on homework.

This study was limited by the amount of participants allowed in the study. Had a larger number of participants been included, the results may have been different. Although one group was supposed to have no distractions, it proved to be very difficult to eliminate all distractions in the room. However, distractions that were present in the non distraction groups, such as other

participants and the presence of food, were also present during the television groups.

Further studies into the effect of television on studying may employ more participants and focus on homework done in a real life setting such as a bedroom or a dorm room. Other factors that should be taken into consideration for future studies should include the accuracy of the answers. It may have been that those that completed the questions sooner answered many of the questions incorrectly and vice versa. Furthermore, with these results it can be successfully argued that television during studying is more than simply white noise; it can be a serious distraction and with this knowledge, valuable time could be saved on a daily basis. This is important to college students as often time is limited and with the availability of time comes the options to complete more tasks or partake in some much needed sleep.

References

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Appendix A

Please read the following passage all the way though and then answer the questions on the following page:

Fitter Fighters

Working out benefits those battling cancer, according to a report presented at the American Society of Clinical Oncology's annual meeting. Study participants-27 women with breast cancer and 11 men with prostate cancer-received five radiation treatments a week for at least 6 weeks; half also exercised by walking and using resistance bands. By the study's end, the exercisers aver

aged more than 12,000 steps per day (an 82 percent increase), improved their aerobic capacity, and maintained their strength better than the control group. "Cancer patients usually see a decline in fitness and strength levels during radiation treatments," says study author Karen Mustian, Ph.D. (Women's health, 2006).

Appendix B

Please answer the following questions as accurately as you can:

You may look at the following reading. When you are done you can place all materials in the envelope provided and hand them to the instructor on your way out.

1. What does the article claim benefits people who are fighting cancer?
2. How many radiation treatments did the participants receive?
3. How many weeks did they receive radiation for?
4. What exercise did half of the participants partake in?
5. How many steps did the participants average per day? What percent increase was this?
6. What were the participants able to achieve by exercising that the control group could not?
7. When do Cancer patients usually see a decline in fitness and strength levels?
8. Please record the time that you completed the questionnaire.

Thank you for participating!