

# Distraction Pattern during Lecture Class among Dental Students

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#### Abstract:

It is difficult to keep the concentration of the student at its maximum potential during the entire time of the class as there are many distractions that can have a negative impact on students concentration and learning various forms of technologies, have invaded the classroom. The aim of the study was to evaluate the perception of students regarding effect of technology and destructive behaviour on concentration and learning process. The present study was carried among randomly selected 110 college students from different colleges in Chennai which include government aided and private colleges. The students who participated were from age 17 to 25. Questions were Prepared and administered to participants through survey planet, an online survey. The participants were well explained above the purpose of the study in detail. The questions were carefully studied and the corresponding answers were marked by the participants. The data was collected and statistically analysed. 54% of students considered themselves as attentive in class. 77.8% of the students find it difficult to concentrate in the class when the subject taught in the class is not their favorite subject, 54% of the students have answered that they do fall asleep during lecture ,79.4% of students get distracted in the classes while peers and desk mates ask irrelevant questions or comments. The survey indicated that the main reason of the students distraction is the dependence of the technological tools like mobile phones, laptops etc. Unpreparedness of students and no interest in subjects taught too causes significant distraction to students.

**Keywords**: Distraction, technologies, concentration.

#### INTRODUCTION

The students in the current age are learning in an atmosphere that has been described as "The age of distraction and a "culture of distraction" (O'Donnell, 2015). Classroom distractions are those behaviours that challenge the attention, focus, and information processing of students. Because the college classroom is fraught with opportunities for distractions, students'



abilities to process course information is influenced, often negatively. Learners' processing capacity is limited, especially when difficult content is presented or when peers distract from the learning process. (Flores, 2017)

As a result, distracted students' abilities to process content and construct schema is hampered. Further, although some behaviours are described as distracting, distraction has not been effectively operationalized in literature (Sweller et al., 2019). It is difficult to keep the concentration of students at its maximum potential during the entire time of the class, as there are many distractions that can have a negative impact on students' concentration and learning. Various forms of technology such as laptops, cell phones, net books, tablets, and smartphones, have invaded the classroom. (Paas et al., 2010; Sweller et al., 2019). There has been considerable discussion in recent literature about the potential negative effects of various technologies on students' concentration in the college classroom. This has led to some instructors and universities banning the use of electronic devices (cell phones, laptops) during class. (Campbell, 2006)

Researchers studied laptop use during class to determine its effects on student learning and found that it negatively affects students' performance and learning. In addition, it was found that students' use of laptops in the classroom does not improve their grades, (O'Bannon & Thomas, 2014). In this study we try to identify the various factors that cause the distraction among the students and their influence, using a survey. The aim of the study was to evaluate the perception of students regarding effect of technology and destructive behaviour on concentration and learning process.

# MATERIALS AND METHODS

The present study was carried among randomly selected 110 college students from different colleges in Chennai which include government, aided and

private colleges . The students who participated were from Age 17 to 25 Questions were prepared and administered to participants through survey planet, an online survey. The participants were well explained about the purpose of the study in detail. The questions were carefully studied and the corresponding answers were marked by the participants. The data was collected and statistically analysed

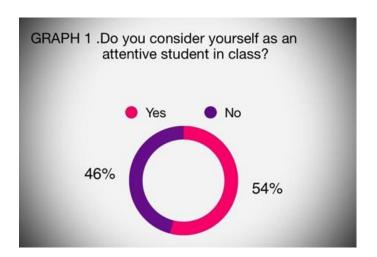
# **RESULT**

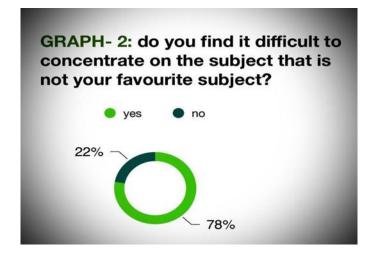
In this study on distraction, 110 college students we been given questionaries' regarding various types of distraction pattern during lecture classes. The question is where on yes or no format and they were asked to answer them. The data does receive has been analyzed and tabulator along with charts for each question. For the question of whether they consider themselves as an attentive student in class, 54% of the students answered yes which means majority of the students generally considered themselves as attentive in class (GRAPH 1). 77.8% of the students find it difficult to concentrate in the class when the subject taught in the class is not their favorite subject, while 23.2% of the students feel that the difficulty of the subject doesn't influence their concentration level (GRAPH 2) . Many of the students fall asleep during the lecture classes 54% of the students have answered that they do fall asleep during lecture in the class while 46% replied that they don't (GRAPH 3). The study also revealed the vast majority of the students get distracted in the classes while peers and desk mates ask irrelevant questions or comments, about 79.4% of students answer that they get distracted this way, While 20.6% said that this doesn't distract them (GRAPH 4).

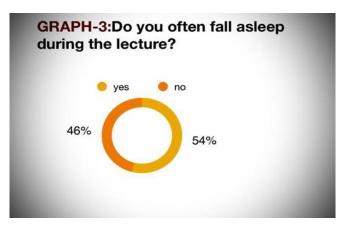
In this study more than half of the students revealed that they get distracted when they attend the classes unprepared that is without required materials for class like pen, notebook or other things needed in class. 52% of the students answered that they do get distracted during such occasions while 47.6% felt

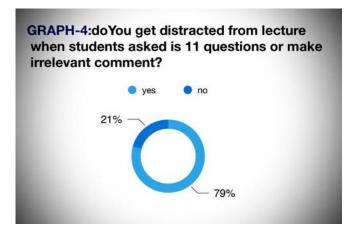


otherwise (GRAPH 5). 50.8% students in the study said that they get distracted if the instructor uses repeated words of phrases while 49.2% of them replied that this doesn't affect their concentration (GRAPH 6). According to the study another major distraction factor is the student sitting next to them talking with others during classes, 71.4% of the student answered that this particular factor distracts them while 28.6% said that it doesn't (GRAPH 7). Other major distracting factor according to the study conducted is the difficulty of the Subject that is lectured. 73% of the students revealed that they get distracted when the lecture they are attending is difficult to understand while 27% replied in the way (GRAPH 8). The digital distraction also is one of the major factors that affect the concentration of the students during the classes. For the question Whether they get distracted in class due to the ringing of cell phones, messages, alarms etc. 58.7% replied in affirmative while 41.3% replied that the sound doesn't distract them from the lecture classes (GRAPH 9).

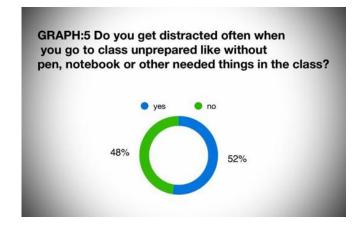


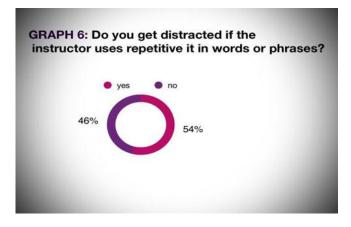


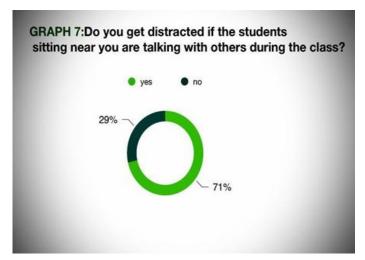


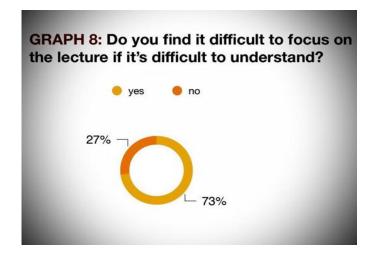


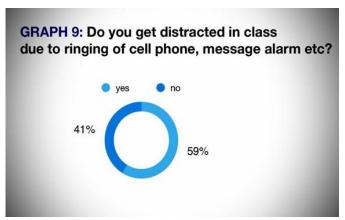












#### DISCUSSION

The students reported that cell phone ringing in the class was a major distractor towards their learning. They tend to check their digital devices, particularly, their smartphones, an average of 11.43 times during class for non-classroom activities. A solid 12 percent do texting, emailing, checking the time or other activities in class more than 30 times a day. This implies that the laptop and cell phone use in the classroom can impact negatively on the students' learning process. The educational institutions are for imparting knowledge and enhancing students learning experiences, henceforth if there are distracters, which can be removed conveniently, then appropriate policies should be in place for their judicial use. Keeping the phone on silent can be strictly followed to ensure minimal distraction and the faculty



can start by role modelling that behaviour. (Kuznekoff et al., 2015)

Our study also identified that the instructor who is difficult to understand is also a major external distractor for majority of the students and hampers their attention towards learning similar to study by Fried who found that an instructor that is difficult to understand is one of the top four external stimuli, (Fried, 2008). This finding highlights the importance of instructors knowledge of the principles of teaching and methods for enhancing students concentration in the class.

The students also identified that talking to each other in the class disturbs them; Poor personal hygiene, students talking with other students in class and illness symptoms were perceived to be distracting the students. In contrast, wearing clothing with unusual words, drinking and eating in the classroom were minimally distracting the students (Vos et al., 2011). This could be because the university has a strict dress code and faculty generally abides by them.

Instructors through setting up class rules and asking student to act professionally can manage majority of external stimuli inclusive of students' behaviours. The other external stimuli like unwanted noises, temperature, teaching resources etc. were also identified as distracters effecting student learning (Wurst et al., 2008; Zhang, 2015). This can also be adequately managed by the office staff and instructors by checking equipment, temperature and source of noise before starting class and reporting any other possible distractor to the management, And most respondents indicated that they shouldn't need to change their behavior. Three in 10 (30 percent) said they believed they could use their digital devices without distracting from their learning. Another 27 percent said it was their choice to use a digital device whenever they wanted. And 13 percent reported that the benefits of using their devices for non-class activities "outweighed" the distractions they caused. Eleven percent said they couldn't stop no matter what. (Tien & Fu, 2008)

Because "fighting boredom" was the most common reason cited by students for using devices in class. It has been suggested that students "need to learn more effective self-control techniques to keep them focused on the learning at hand." But it also meant, he wrote, that instructors could "benefit from learning and experimenting with new ways to engage college students in classroom activities that might reduce boredom and minimize disruptions." (Hurford& Hamilton, 2008).

The current study found a significant higher off-task behaviours and rate of distraction in senior students than junior students which indicates that the freshman students are more attentive than senior students. It could be because most of information they receive are new or they adapt to the distractions from school.

# **CONCLUSION**

The Survey categorically indicates that the main reason for the students distraction is the dependence on the technological tools like mobile phone, laptop etc. unpreparedness of students and non-interest in the subject taught too causes significant distraction to students.

# REFERENCES

- O'Donnell A. Contemplative pedagogy and mindfulness: Developing creative attention in an age of distraction. Journal of Philosophy of Education. 2015 May;49(2):187-202.
- 2. Kane RG. Teaching as counterinsurgency: Enhancing pedagogical effectiveness and student learning in a culture of distraction. The History Teacher. 2010 May 1;43(3):375-96.



- 3. Sweller J. Cognitive load during problem solving: Effects on learning. Cognitive science. 1988 Apr 1;12(2):257-85.
- 4. Sweller J, VanMerrienboer JJ, Paas FG. Cognitive architecture and instructional design. Educational psychology review. 1998 Sep 1;10(3):251-96.
- 5. Barkley RA. Behavioral inhibition, sustained attention, and executive functions: constructing a unifying theory of ADHD. Psychological bulletin. 1997 Jan;121(1):65.
- 6. Boice B. Classroom incivilities. Research in higher education. 1996 Aug 1;37(4):453-86.
- 7. Bolkan S. The importance of instructor clarity and its effect on student learning: Facilitating elaboration by reducing cognitive load. Communication Reports. 2016 Sep 1;29(3):152-62.
- 8. Granberg E, Witte J. Teaching with laptops for the first time: Lessons from a social science classroom. New Directions for Teaching and Learning. 2005 Mar;2005(101):51-9.
- 9. Burns SM, Lohenry K. Cellular phone use in class: Implications for teaching and learning a pilot study. College Student Journal. 2010 Sep 1;44(3):805-11.
- 10. Campbell SW. Perceptions of mobile phones in college classrooms: Ringing, cheating, and classroom policies. Communication education. 2006;55(3):280-294.
- 11. Fried CB. In-class laptop use and its effects on student learning. Computers & Education. 2008;50(3):906-914.
- 12. Goundar S. The distraction of technology in the classroom. Journal of Education & Human Development. 2014;3(1):211-229.
- 13. Trafton JG, Altmann EM, Brock DP, Mintz FE. Preparing to resume an interrupted task: Effects of prospective goal encoding and

- retrospective rehearsal. International Journal of Human-Computer Studies. 2003;58(5):583-603.
- 14. Young JR. The fight for classroom attention: Professor vs. laptop. Chronicle of Higher Education. 2006;52(39):A27.
- 15. Campbell, S. W. (2006). Perceptions of Mobile Phones in College Classrooms: Ringing, Cheating, and Classroom Policies. In *Communication Education* (Vol. 55, Issue 3, pp. 280–294). https://doi.org/10.1080/0363452060074857
- 16. Flores, S. A. (2017).Contemplative Pedagogy: Mindfulness Methodology in Education & Human Development. In Journal ofEducation and Human **Development** (Vol. 6. Issue 3). https://doi.org/10.15640/jehd.v6n3a7
- 17. Fried, C. B. (2008). In-class laptop use and its effects on student learning. In *Computers & Education* (Vol. 50, Issue 3, pp. 906–914).
  https://doi.org/10.1016/j.compedu.2006.09. 006
- 18. Hurford, A., & Hamilton, E. (2008). Effects of tablet computers and collaborative classroom software on student engagement and learning. In 2008 38th Annual Frontiers in Education Conference. https://doi.org/10.1109/fie.2008.4720652
- 19. Kuznekoff, J. H., Munz, S., & Titsworth, S. (2015). Mobile Phones in the Classroom: Examining the Effects of Texting, Twitter, and Message Content on Student Learning. In *Communication Education* (Vol. 64, Issue 3, pp. 344–365). https://doi.org/10.1080/03634523.2015.103 8727
- 20. O'Bannon, B. W., & Thomas, K. (2014). Teacher perceptions of using mobile phones



- in the classroom: Age matters! In *Computers & Education* (Vol. 74, pp. 15–25). https://doi.org/10.1016/j.compedu.2014.01. 006
- 21. O'Donnell, A. (2015). Contemplative Pedagogy and Mindfulness: Developing Creative Attention in an Age of Distraction. In *Journal of Philosophy of Education* (Vol. 49, Issue 2, pp. 187–202). https://doi.org/10.1111/1467-9752.12136
- 22. Paas, F., van Gog, T., & Sweller, J. (2010). Cognitive Load Theory: New Conceptualizations, Specifications, and Research Perspectives. Integrated Educational Psychology Review (Vol. 22, 2. Issue pp. 115–121). https://doi.org/10.1007/s10648-010-9133-8
- 23. Sweller, J., van Merriënboer, J. J. G., & Paas, F. (2019). Cognitive Architecture and Instructional Design: 20 Years Later. In *Educational Psychology Review* (Vol. 31, Issue 2, pp. 261–292). https://doi.org/10.1007/s10648-019-09465-5
- 24. Tien, F. F., & Fu, T.-T. (2008). The correlates of the digital divide and their impact on college student learning. In *Computers & Education* (Vol. 50, Issue 1, pp. 421–436). https://doi.org/10.1016/j.compedu.2006.07. 005
- 25. Vos, N., van der Meijden, H., & Denessen, E. (2011). Effects of constructing versus playing an educational game on student motivation and deep learning strategy use. In *Computers & Education* (Vol. 56, Issue 1, pp. 127–137). https://doi.org/10.1016/j.compedu.2010.08. 013
- 26. Wurst, C., Smarkola, C., & Gaffney, M. A.

- (2008). Ubiquitous laptop usage in higher education: Effects on student achievement, student satisfaction, and constructivist measures in honors and traditional classrooms. In Computers & Education (Vol. 51. Issue 4, pp. 1766–1783). https://doi.org/10.1016/j.compedu.2008.05. 006
- 27. Zhang, W. (2015). Learning variables, inclass laptop multitasking and academic performance: A path analysis. In *Computers & Education* (Vol. 81, pp. 82–88). https://doi.org/10.1016/j.compedu.2014.09. 012