ARE CELL PHONES USEFUL AS LEARNING TOOLS FOR STUDENTS?

Students are accessing cell phones every day for several hours and even during classes. As teachers, can we use this media to enhance our teaching? Dr S Ramkumar and Mr D V Sivaji explore the issue in this blog.

INTRODUCTION

One of the most important technologies that has widespread and accelerated diffusion among people in the last decade is the cell phone. The nature of this technology is dynamic. It keeps on undergoing drastic changes to suit various types of users. From being a luxury initially, it is fast becoming a need for each and every person. Due to various policies and applications, such as cashless transfer of money and paperless transactions of different types, the role of mobile phone has grown beyond the simple connectivity function of just 'talking'. Given the direct and fast penetration of this technology among the student community, we undertook a study among the undergraduate students of Rajiv Gandhi Institute of Veterinary Education and Research (RIVER), Puducherry, India, to understand the use of cell phones among them. We share the salient finding of this study in this blog mainly to raise certain critical questions/issues on the findings, that has direct implications on the 'learning situation' as well as on the need for changing pedagogical perceptions of the faculty.
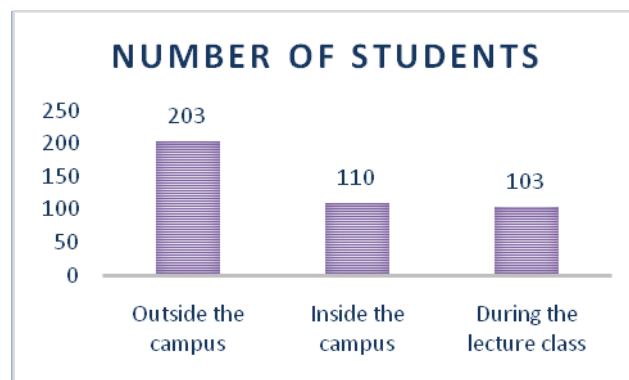
Use of Cell Phones

The sample comprised of 203 students, of which 108 were girls and 95 were boys. All of them own cell phones, of which 88% have smart phones. All the students definitely use it off-campus but almost 50% of the students use it in the campus and classrooms (Figure 1). The cell phone is being widely used for chatting, browsing, music & videos, apart from talking of course.

Fig. 1: Number of students using cell phones

*multiple responses

Use of Cell Phones outside the Campus/Day:
Understandably all the students use cell phones off the campus – on an average one hour and 45 minutes is being spent on cell phone use off-campus per day. Students' daily cell phone usage ranges from 20 minutes to 4 hours.

Use of Cell Phones inside the Campus/Day:
More than 50% of the students (110 out of 203), use cell phones in the campus for 32 minutes on an average every day. The usage pattern is almost similar for boys and girls (boys 35 minutes and girls 30 minutes). It is largely being used during leisure time, like during lunch break or between classes.

Use of Cell Phones during Classes/Day:
Only 10% of the students (20 out of 203) responded that they do not use cell phone at all during lectures/classes. 103 students affirmed using a cell phone during lectures/classes. 80 students did not respond to this question. On an average students use a cell phone for 22 minutes a day spread over different times. They use it for checking their messages and calls. The

main reasons the students give for using cell phones during lectures are: (i) the sessions are not interesting enough; (ii) sometimes they use it to keep awake during lectures; and (iii) occasionally when they can't understand what is being taught.

Major activities for which Cell phones are used

It was observed that 95% of the students use internet in cell phones. On an average, per day 1 hour 40 minutes are spent by students on social media, music and videos, information seeking, playing games (Figure 2).

Fig. 2: Number of students using different cell phone applications
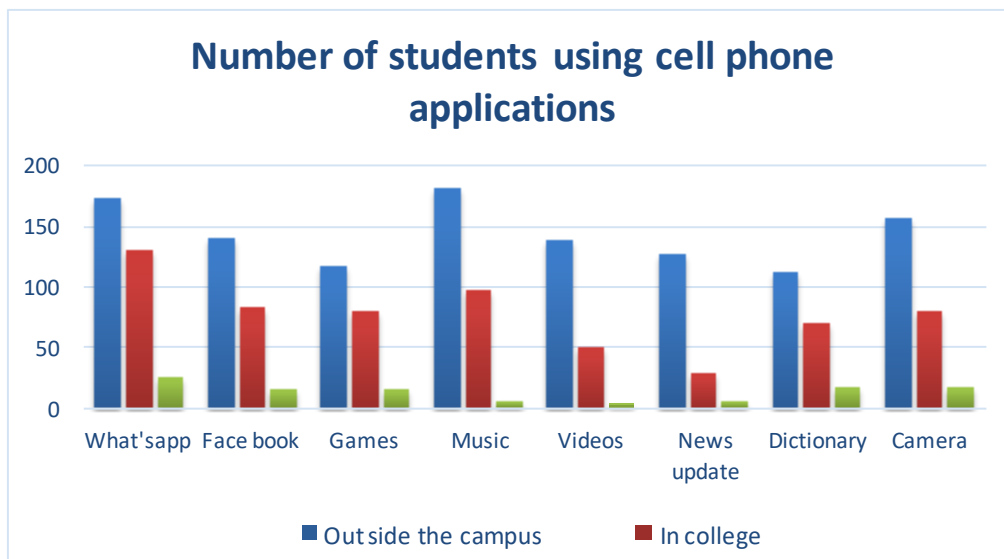
WhatsApp:

The study revealed that 110 students spend on an average 2 hours per day on WhatsApp, in and off the campus and during lectures.
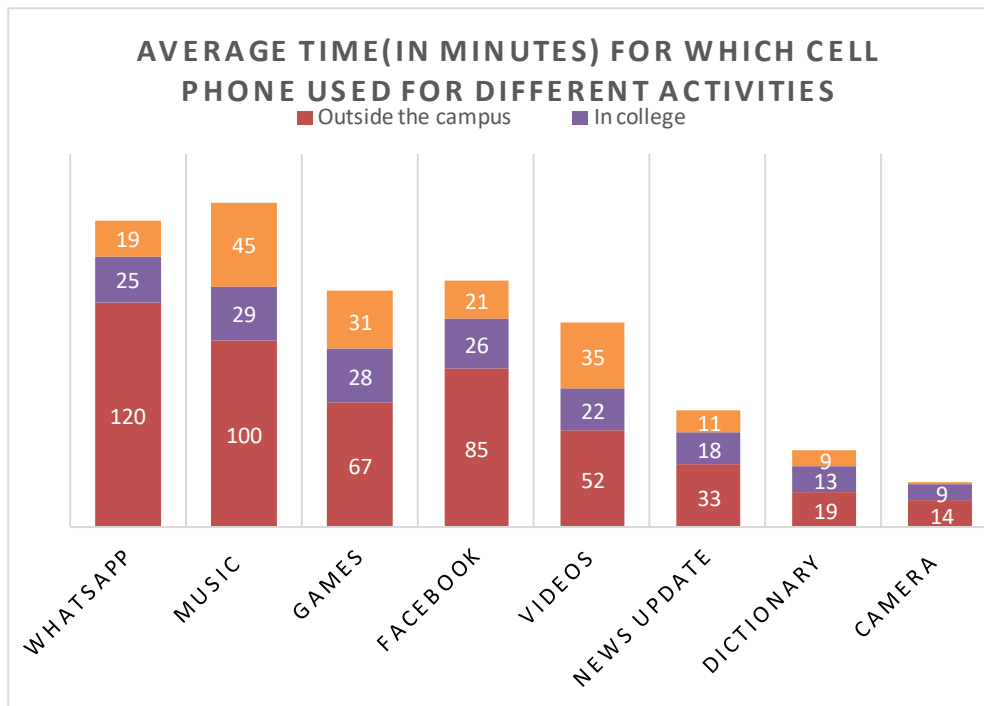

WhatsApp is an internet-applicable application for sharing information, images, videos, songs, and also has a facility for calling. It is because of these facilities that most of the students use this application, both in and off the campus and during lectures.
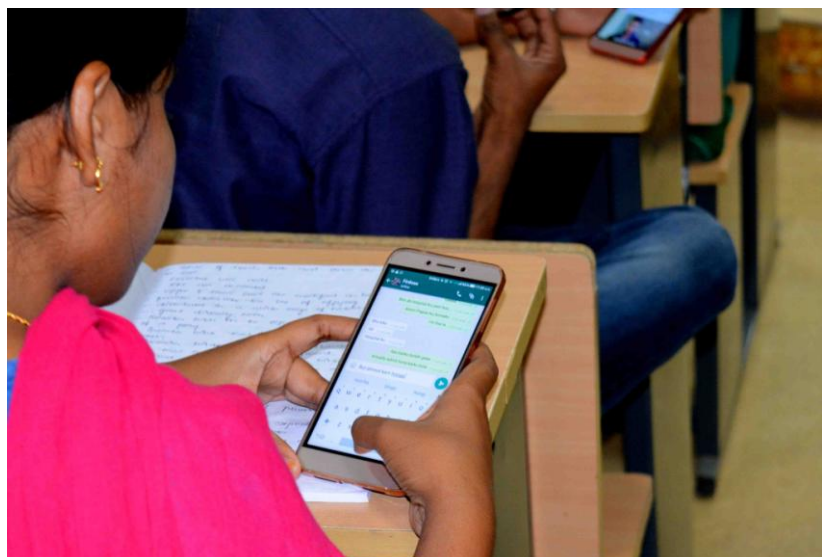
Facebook:

Facebook is the platform where students can share their emotions, pictures and activities. The study revealed that 80 students spend on an average 1 hour 40 minutes on Facebook daily (Fig. 3). This was similar to the findings made by Alexander (2011).

Fig. 3: Average time (in minutes) for which Cell Phones are used for different activities

AVERAGE TIME(IN MINUTES) FOR WHICH CELL PHONE USED FOR DIFFERENT ACTIVITIES

■ Outside the campus ■ In college

Activity	Outside the campus	In college	Orange
WHATSAPP	120	25	19
MUSIC	100	29	45
GAMES	67	28	31
FACEBOOK	85	26	21
VIDEOS	52	22	35
NEWS UPDATE	33	18	11
DICTIONARY	19	13	9
CAMERA	14	9	

*multiple responses
* Rounded off to the nearest minutes

IMPLICATIONS:

We need to accept that cell phones play an important role in the life of students, as it does for everyone else. It is synonymous with information seeking and sharing in all domains of life – private, social and academic. Cell phones offer instant connectivity to information and entertainment. Many functions of a computer are being replaced by the cell phone. In this context, it is important to view the opportunities for using a cell phone as a teaching aid.

Cell Phone as a Learning Tool?

As all students are using cell phones, the potential of this tool could be explored in areas of 'learning'. For instance, lectures could be video graphed and making repositories of these videos available to students can help students to either access classes in advance, or later, if they happen to miss a class.

As noted earlier, majority of the students are using cell phones even during the classroom sessions for chatting, hearing songs and watching videos. So it would be useful to explore how this tool can be used to promote learning. For instance, 'internet searching' exercise on a specific theme for a short while in selected lectures can be used purposely to stimulate the students and help them participate more actively in the learning process (Box 1).

Box 1: Enhancing learning opportunities inside the classroom by means of a cell phone

The general thumb rule is that cell phones can be an effective 'once-in-a-while' interest generating study tool in a class. Some examples of its possibilities during a class are given below:
1. Teachers can use cell phones to facilitate a learning situation by asking the learners to read a topic online for a short time (10-15 minutes) and can then initiate discussion on it (maybe in 2 classes out of 20 in a semester).
2. Students may be permitted to record on cell phone videos or audios, on topics that are relatively complex and take time for full assimilation. This maybe more useful in some practical classes, on such difficult topics as anatomy, surgery, livestock products technology, etc., which usually involve method demonstrations. This will also aid in supporting students who require more/special/continuous assistance in the learning process.
3. Students can instantly check the meanings of certain words, dosages, alternate drugs, etc., that are used in the lecture via browsing the internet, that they might feel hesitant about asking their teacher.
4. Occasionally, in a few classes, students may be allowed to answer specific questions by sending the answer to the cell phone of the teacher. This will mainly help those students who are otherwise uncomfortable in sharing their answers in front of the whole class.
5. Use of cell phone can also help in 'paperless evaluation' of the subject content taught, the teaching process, and also the teacher. The students may use apps such as 'Poll Everywhere' to provide feedback.
6. Share questions with students and answers from students through cell phones.
7. Organise at least one mock test through cell phones in a semester.
Other possibilities
- Cell phone as a teaching aid to project PowerPoints;
- WhatsApp groups for teachers and students for clarifying doubts, for sending reminders on important assignments, and sharing documents (images, short videos) with students;
- Creating a YouTube channel to share videos of lectures and demonstrations;
- Give an opportunity to the students in the groups to post small videos, images, or write-ups prior to a lecture or a practical class.

'Flipped classroom' is an instructional strategy and type of blended learning that reverses the traditional learning environment by delivering instructional content, often online, outside of the classroom. In a flipped classroom, students watch online lectures, collaborate in online discussions, or carry out research at home and engage in concepts under the guidance of a mentor (Wikipedia).

'The Traffic signal approach' proposed by Rao (2012) in school education breaks down mobile device usage in the classroom into three manageable components – that is when a teacher is taking class he/she may show any one of three different coloured cards like red, yellow and green. Red card means students must keep their cell phones completely away. Green card means as directed by the teacher for a search & discussion activity. Yellow card to clarify doubts students may use cell phone in between a lecture class. Distractions arising

from the use of a cell phone can be limited by approving its use by students for specific purposes that will aid teaching in a class.

Mind set Change among Teachers

Use of cell phones as a teaching-learning tool requires a mind set change among teachers. Teachers need to appreciate the new learning opportunities arising from use of cell phones and the merits of combining conventional methods, such as lectures with cell phone applicable pedagogic approaches. The situation also demands 'technology-friendly' faculty who need to enhance their skills in using different ICT-enabled tools in teaching.

Thomas L Friedman in his recent book, *Thank you for Being Late* (2016) noted the exponential growth of technologies and how professionals and public need to adapt to these as soon as possible in order to benefit/contribute to these advances. Teachers need to review these types of books that highlight the importance of changing mind sets for a better tomorrow.
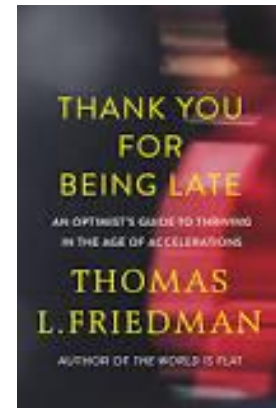
FINAL WORDS

Limited and purposive use of cell phones as a teaching-learning tool has several advantages. It demands increased involvement of teachers in identifying the degree and nature of its use in classrooms. For majority of the students each day begins and ends with a cell phone. The cell phone is becoming an indispensible, trustworthy appendage, always beside them providing confidence, entertainment, hope and connectivity, in addition to the information we speak of. Probably, it is their best and most intimate friend.

Bibliography

Rao A. (2012.) Classroom management of mobile devices: The Traffic Signal Approach. (Available at: https://teachbytes.com/2012/08/07/classroom-management-of-mobile-devices-the-traffic-signal-approach/).

Alexander A. (2011.) How reliant are college students on smartphones? (Retrieved from: http://ansonalex.com/technology/how-reliant-are-college-students-on-smartphones-infographic/).

Kasch C, Haimerl P, Arlt P, and Heuwieser W. (2016.) The use of mobile devices and online services by German veterinary students.

Bashir G M M, Md. Rahaman A, Syed Md. Galib, and Rahaman M.M. (2014.) Smart phone based social networking for teaching & learning.

Brenner T. (2015.) The use of mobile devices in the college classroom. (Available at: http://bokcenter.harvard.edu/blog/use-mobile-devices-college-classroom).

Dixit S, Shukla H, Bhagwat AK, Bindal A, Goyal A, Zaidi A, and Shrivastava A. (2010.) A study to evaluate mobile phone dependence among students of a medical college and associated hospital of

Central India. (Available at:
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2940198/).

Ghatge S. (2015.) Indian college students use mobile Internet up to 8 hours daily: Survey. Last updated: December 18, 2015 at 11:00 am. (Available at:
http://trak.in/tags/business/2015/12/18/indian college-students-mobile-internet-8-hours-daily/).

Wang Y, Niiya M, Mark G, Reich S, Warschauer M. (2014.) Coming of age (Digitally): An ecological view of social media use among college students.

Dr S Ramkumar is Professor and Head of Veterinary Extension at Rajiv Gandhi Institute of Veterinary Education and Research (RIVER), Puducherry, India. He also serves as the Director of Entrepreneurship Development Cell, Department of Industries, Government of Puducherry (Email: suku.ramkumar@gmail.com). Mr D V Sivaji is doing his second year of Masters in Veterinary Extension at RIVER. (Email: dirisala.sivaji@gmail.com)