

Mobile Phone Usage and Academic Performance among Secondary School Students in Government Technical College, Ossomala Anambra State, Nigeria

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ABSTRACT

Aim of the Study: This paper investigated the impact of mobile phone on the academic performance of students in Government Technical College, Ossomala Anambra State especially as most students seem to have developed an addiction for their mobile phone. The learning theory of addiction was adopted for this study because it effectively explains how the use of mobile phone affects academic performance.

Methodology: The study adopted a descriptive research design and purposively selected the senior secondary school for this study because students who use mobile phone are mostly in senior secondary school compared to the junior secondary school. Using the balloting method SS 2 was selected to represent the entire students in senior secondary school. A sample size of (N=313) was derived from the sample population of 329. Respondents were selected using a snowball sampling technique. The data used for this study was derived through the use of questionnaire, internet materials, textbooks and journals. Data was presented in table and analysed using frequency and percentage distribution table.

Findings: Findings reveal that students often bring their mobile phone to school and use their mobile phone for non-academic purposes.

Conclusion: The study concluded that mobile phone causes distraction in class and interferes with class work in school. Base on this finding, the study recommends the need to educate students on the proper usage of mobile phone and the acquisition of mobile phone detector in schools by school managements to prevent the use of mobile phone in school.

Keywords: Academic Performance, Mobile Phone, Students.

Introduction

Martin Cooper, a former Motorola general manager for the systems section, invented the mobile phone in 1973 (Magner, 2004). It is a portable device for connecting to a telecommunication network that allows individuals to make and receive calls as well as send and receive messages. Mobile phone was first

Article History

Received:
July 8, 2022

Revised:
December 1, 2022

Accepted:
December 17, 2022

Published:
December 30, 2022

introduced in Nigeria in 2001 by Olusengu Obasanjo's regime. This has aided communication and to a large extent given individuals great access to information.

However, this device has caused distraction for students and increased the rate of cheating among students. O'Bannon and Thomas (2015) further added that this device has allowed students to have access to inappropriate materials and also, engage in cyber bullying.

According to studies, students who use their mobile phones in class take notes less frequently, remember information less well, and perform lower on tests than those who don't use them. The usage of mobile devices, according to Elder (2013), also makes it difficult for pupils to focus on other tasks, such as schoolwork.

In furtherance to this, Stephens and Pantoja (2016) and Wei, Wang, & Klausner. (2012) affirmed that mobile phone distracts students from learning task in class as students tend to switch back and forth the class information process when they use their mobile phone in class. Researchers like; Ledbetter and Finn (2013), O'Bannon and Thomas (2015) and Cheung (2008) on other hand, asserted that the use of mobile phone makes learning task easy and has made students more efficient in their learning task thereby, contributing positively to their academics. Many people may view mobile phone use as a barrier to meaningful learning, especially in light of the distractions from student ring tones, emails, texting, and tweeting. While advocates of mobile phone usage may have seen them as a potential learning tool for communication, online resources, and multi-media creativity (Trilling and Fadel, 2009).

According to a study by Norries, Hossain, and Soloway (2011), students' performance significantly improves when they use mobile learning devices in class. According to Kumar, students are reading e-books and downloading online lectures to improve their learning (2011). Another study by Mtega, Bernard, Msungu, and Sanare (2012) shows that respondents produce, download, upload, and share academic resources with their friends using mobile learning applications other than the more traditional text and call-based ones. GPS, a camera, voice conversations, emails, Google Drive, and other programmes are among these.

Thus, Woodcock, Middleton & Nortcliffe (2012) reported that the use of mobile phones improves productivity and eventually their learning performance if they are used for learning purposes. He further stated that most at times, students often use their phone for non-academic purposes like; playing games.

In view of this, Morris and Sarapin (2020) stated that despite the prevalence and perhaps, benefits of mobile phone, mobile phone remains a distraction rather than a learning tool especially as students continue to use mobile phone in the class; causing distraction even when there are strict rules prohibiting the use of mobile phones in most schools.

Statement of Problem

The use of mobile phone has become prevalent in contemporary times. While this may have eased communication among individuals, it is also, likely to improve the academic performance of students. But, most students have developed an addiction for their mobile phone. This addiction deprives them from attending to other things including their academic needs except their mobile phone. In most cases, these mobile phone addicts use their Mobile phone for non-academic purposes like; games playing and social media instead of academic purposes like research.

This may have affected the time they accrue to learning and studying and the attention they give in class during teachings. In some cases, these individuals do not concentrate in class completely even when they are not with their mobile phone and possibly become very unhappy whenever they lose their mobile phone or their mobile phone gets bad.

Thus, the addiction to mobile phone seems to have become a fundamental problem that supersedes the potential benefits of using mobile phone in contemporary time. This addiction poses a threat to academics

especially as students' attention seem to have shifted from good academic performance to trending social media news, latest mobile phone and latest mobile phone games.

Research Objective

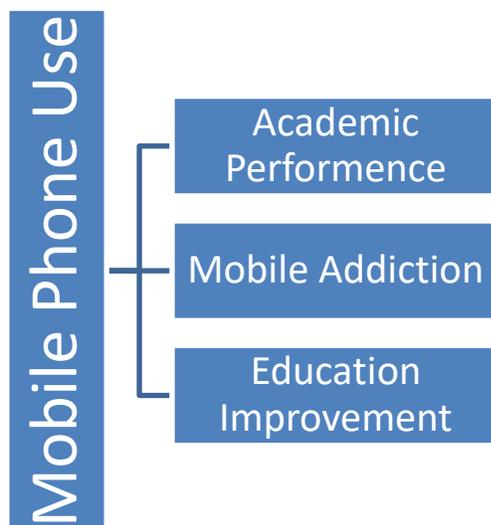
The study aimed to assessing the impact of mobile phone on the academic performance of students in Government Technical College, Ossomala Anambra State. The study focused on the senior secondary school where almost all the students own a mobile phone.

Research Questions

This study answered the following questions;

1. How has the use of mobile phone affected the academic performance of students in Government Technical College, Ossomala Anambra State?
2. How has the use of mobile phone caused the mobile phone addiction for students in Government Technical College, Ossomala Anambra State?
3. How can academic performance be improved even as students of Government Technical College, Ossomala Anambra State continues to use mobile phone.

Figure 1: *Study Model*



Literature Review

Dania and Iwe-Ewenode (2016) carried out a study titled “Undergraduate Usage of Mobile Phones and Its Implication of School Application”. This study sought to understand how undergraduates use their phones and how that can affect their academic performance. There are 27,650 participants in the colloquium, and 238 undergraduate students from two Federal Republic of Nigerian universities were chosen at random. Data for the study were gathered through a survey on adolescents' current mobile phone usage patterns. Since the survey forms were filled out immediately, there was a 100% response rate. Nearly all undergraduate students have smartphones, and the majority of them find them to be very beneficial. Students offered a number of justifications for owning a cell phone. These include mobility, emergency, e-mail and short message service, increased social status, self-assurance, loading information for fashion, social network, and misconduct. In addition to making and receiving calls, the short messaging service is the function that students use the most frequently. Mobile phone use by students has negative effects on school administration since it serves as a distraction, promotes laziness because students now browse

instead of visiting the library, is a target for cheating on exams, among other vices. There were suggestions made to limit undergraduate students' use of mobile phones at Nigerian universities.

In a similar study, Siew et al., (2017) carried out a study titled, “the Relationship between Smartphone Use and Academic Performance: a Case of Students in a Malaysian Tertiary Institution.” The study looked at how much smartphone use by students at one Malaysian university affects their academic performance and how it relates to their grade point average. Over the course of seven days, 176 students from three academic programmes monitored how often they used their smartphones for learning. The way that smartphones were used varied greatly depending on the academic programme. Further investigation indicated a connection between students' CGPA and the volume of time they spent using their smartphones for learning. The study concluded that it was necessary to assess and comprehend the ways in which cellphones can be used to enhance tertiary students' learning.

In a study titled "The Impact of Using Smartphones on the Academic Performance of Undergraduate Students," At the North-West University in South Africa, Ifeanyi and Chukwuere (2018) looked at how smartphone use affected undergraduate students' academic performance. The quantitative research methodology was utilised in this study to collect data from 375 undergraduate students using questionnaires. It was discovered that the majority of undergraduate students use their smartphones to interact with professors and other students, and that using smartphones can occasionally divert students from their academics.

A study titled “The Impact of Smartphone Usage on the Learning Behaviour and Academic Performance of Students: Empirical Evidence from Pakistan” was conducted by Shakoor, Fakhra, and Abbas in (2021) as support for this claim. 150 students from various departments who were studying in Islamabad were used in this study. They all used smartphones to learn academic content and attend lectures in their daily lives. Results indicated a positive link between smartphone use and academic achievement as well as an impact.

The Use of Smartphones Among College Students in Nigeria: Revelations and Reflections was examined by Nwachukwu and Onyenakeya (2017). The purpose of the article was to investigate the purposes for which Nigerian college students use their smartphones and the importance they place on owning a GSM-enabled device. The study also looked for connections between smartphone use among college students and demographic factors like age and gender. The survey was completed by 555 participants in total. The findings revealed that around 75% of respondents used their smartphones for social networking while 24% utilised them for academic purposes. Additionally, it was shown that the activities students engaged in on their phones affected how long they used them.

Similar to this, Soyemi, Olorunfoba, and Okafor conducted a study titled "Analysis of Mobile Phone Impact on Student Academic Performance in Tertiary Institution" (2015). The study looked at phone use and determined how internet-enabled mobile phones affected students' academic performance at the Federal Polytechnic in Ilaro, Ogun State, Nigeria. The purpose of the research was to comprehend and determine the relationship between students' academic success and mobile phone use in the classroom. Structured questionnaires that were given to 45 students were used to collect the data. Additionally, 15 in-depth interviews were conducted. The results showed that using a mobile phone has a significant detrimental impact on students since they tend to overlook their academic responsibilities in favour of conversing, listening to music, and other activities. Additionally, this study found that pupils' poor academic performance is primarily caused by the use of mobile phones.

“Mobile Phone Usage among Nigerian University Students and its Impact on Teaching and Learning” was another study conducted by Mojaye (2015). This study observed the development and use of mobile phones in Nigeria and the associated benefits and drawbacks of their use among tertiary students. It was discovered that mobile phones have both positive and negative effects. The positive effects of mobile phones include easy access to information use, and personal convenience, while the negative effects include classroom distraction, diminished cognitive ability, exam cheating, cyberbullying, poor writing

skills, and addiction. The paper then made the suggestion that, despite the fact that mobile phones have positive effects on Nigerian students' educational and socioeconomic development, university administrators should take more proactive measures to lessen its negative effects by either forbidding students from using their phones during class hours or encouraging them to turn them off or put them on silent mode.

Navpreet Kaur (2018) looked on how student academic performance was impacted by mobile phone usage. The study looked at how often students used their phones and how that affected their academic performance. 50 college-bound students from Chandigarh University, Gharuan, participated in a survey. According to the study's findings, students' use of mobile phones during class may be having an impact on their academic performance. Additionally, the findings showed that among young pupils, mobile phone use has developed into an addiction.

“The impact of mobile phone usage on academic performance” was evaluated by Moyazzem (2019). The aim of the research was to explore how the use of mobile phones by male and female students at Bangladesh's Jahangirnagar University affected their academic performance. 274 students from Jahangirnagar University in Bangladesh, including 159 men and 115 women in the second through fourth years, were given a face-to-face survey to complete. The results showed that relationships with people of the opposite sex, age, and gender all significantly increase students' academic achievement. However, having a spouse and using a phone frequently have a adverse impression on students' academic performance since they can be sources of interruption depending on a student's mood and usage behaviour. According to the survey, mobile phone designers need to reflect how young people use their phones for learning.

The above empirical literature basically investigated undergraduates and the use of smart phone in countries outside Nigeria. This is a departure from this study that investigated the use of mobile phones; including smart phones on the academic performance of secondary school students in government technical college, Ossomala Anambra state, Nigeria.

Theoretical Framework

This study anchored on the learning theory of addiction. The theory as was postulated by Bandura. Bandura asserts that addiction is a learnt behaviour which could be by paired association or behavioural choice. Based on this theory the current trend of mobile phone usage cannot be detached from the improvement in technology which in every way makes life easy. Thus, the need for parents/guardian, friends and children to communicate easily especially in contemporary times, have increased the acquisition and use of mobile phone.

However, the pattern of usage among students is a behavioural choice. While some students may decide to keep their mobile phone at home to avoid distraction, some others will bring it to school and use it even when classes are going on. This in several ways affects the level of attention they give to their classes and reflects on their academic performance positively or negatively.

Secondly, when students observes that their classmates bring their mobile phone to school and use it in class without being punished, they maybe motivated to do likewise so as to feel among but at the detriment of their academics. This theory effectively explains how the use of mobile phone affects academic performance and thus, was adopted for this study.

Research Methodology

Research Design

The study investigated the effect of mobile phone on the academic performance of students in secondary school. This study focused on the senior secondary school of Government Technical College, Ossomala; where most students bring their mobile phone to school even with prohibition against students bringing

mobile phone to school. The study adopted a descriptive research design because its effective gathered data on the behaviour, opinions and happenings of the general environment.

Study Population and Sampling Technique

Government Technical College, Ossomala is a government owned secondary school in Anambra state, with a combination of junior and senior secondary school. The study purposively selected the senior secondary school for this study because students who use mobile phone are mostly in senior secondary school compared to the junior secondary school. The senior secondary school has a population of 1060 students; 360 in SS 1, 370 in SS 2 and 330 in SS 3 according to the schools register. Thus, the balloting method was used in selecting SS 2 as the class to represent the entire students in senior secondary school.

Sample Size

However, a sample size of 313 was derived from the sample population of 329 students that made up the population of students given questionnaire as 41 students stated that they do not have a mobile phone. Respondents were selected using a snowball sampling technique so as to ascertain that the respondents selected for the study had mobile phone and brings their mobile phone to school.

Data Collection Tool

The data used for this study was derived through the use of questionnaire, internet materials, textbooks and journals. Data was presented in table and analysed using frequency and percentage distribution table.

Research Findings

Reliability and validity

The preceding table demonstrates that the reliability values for the variables, which are 0.762, 0.846, 0.714, and 0.801 respectively and are higher than the standard value of 0.7, are the best and demonstrate reliability on the likert scale. It is determined that the data obtained from the questionnaire is trustworthy.

Table 1: *Instrument Reliability*

Variables	Reliability
MU	0.762
MA	0.846
EP	0.714
EI	0.801

Table 2: *Correlation of variables*

	1	2	3	4
Mobile Phone Use (MU)	1			
Mobile Addiction (MA)	.223**	1		
Education Performance (EP)	.145**	.448**	1	
Education Improvement (EI)	.451*	.218**	.681**	1

** $p < .01$

Table 2 shows the three variables have significant positive correlation among them.

Table 3: *Questionnaire frequency and percentage*

S/N	Question	Never	Seldom	Often	Total
1.	How often do you bring your phone to school?	53 16.9%	103 32.9%	157 50.2%	313 100
2.	How often do you use your phone in school?	95 30.4%	151 48.2%	67 21.4%	313 100
3.	How often do phones ring or beep in class?	12 3.8%	173 55.3%	128 40.9%	313 100
4.	Does it cause distraction when a phone rings in class?	15 4.8%	88 28.1%	210 67.1	313 100
5.	How comfortable are you without using your phone?	93 29.7%	119 38%	101 32.3%	313 100
6.	How often do you use your phone for non-academic purpose like social media and playing game?	9 2.9%	141 45%	163 52.1%	313 100
7.	Does the use of phone cause distraction for the student?	33 10.5%	148 47.3%	132 42.2%	313 100
8.	Does frequent use of phone affect the performance of students?	74 23.6%	154 49.2%	85 27.2%	313 100
9.	How often do you use your phone for academic purpose?	69 22%	139 44.4%	105 33.5%	313 100
10.	How often do you feel very sad when you lose your phone or when your phone is spoilt?	91 29.1%	99 31.6%	123 39.3%	313 100
11.	How often do you think about your phone even when it's at home?	40 12.8%	161 51.4%	121 38.7%	313 100
12.	How often does the use of Mobile Phone in class interfere with learning?	36 11.5%	190 60.7%	87 27.8%	313 100
13.	How often does the use of Mobile Phone in class assist learning?	115 36.7%	100 31.9%	98 31.3%	313 100
14.	How often does the use of mobile phone in class affect your attention level in class?	76 26.2%	129 41.2%	108 34.5%	313 100
15.	How often does the use of mobile phone interferes with your class work?	95 30.4%	132 42.1%	86 27.5%	313 100

Discussion of Findings

The study found out that most of the students bring their mobile phone to school perhaps to aid communication between them and their parents/guardian and their friends. Though sometimes, these students also use their mobile phone in school and in some cases these phones rings in class and causes distraction in class.

The study also found out that most students are so used to their mobile phone to the extent that they feel uncomfortable and very sad without it. But, when they have their phone, most of them use it for non-academic purposes which do not help their learning but rather, affect their classwork and attention level adversely.

Thus, while the use of mobile may have had the potential of improving learning, it has so far no improved learning among students in Government Technical College, Ossomala thereby, affecting the overall academic performance of student in the school.

Conclusion

The introduction of mobile phone in Nigeria and other countries brought about tremendous advantages and disadvantages. While it may have increased the ability of students to access lecture materials and information globally, the use of mobile phone may have as well been detrimental to academic process.

This is based on the fact most students seem to be addicted to their mobile phone and can hardly concentrate on anything except their phone. Most times, this category of students does not engage in educational activities like research while using their phone. Rather, they use their mobile phone for non-academic like; playing games and social media chatting and surfing

In most cases, their phone causes distraction in class and reduces their attention level in class. While it may be essential for students to prioritise their school/class work so as to perform well academically, mobile phone non-academic activities are prioritised at the expense of school/class work thereby, leading to poor grades and the overall academic performance in school.

Recommendation

Based on the findings of the research, the study made the following recommendations. They are;

Public Orientation: there is need for the government and NGOs to educate students on the proper use of mobile phone with emphasis on their achieving good academic performance even as they continue to use their mobile phone.

Strict Implementation of Rules Against the use of Mobile Phone in School: there is need to put all hands-on deck to enforce laws against the use of phone n school. Parents should ensure that their wards do not go to school with their phone by making them drop their phone before them. Any student caught using for should also be severely punished to serve as deterrent to others.

Acquisition of Mobile Phone Detector in Schools: every school should acquire devices that detect phones at the school's entrance so that students can be checked before gaining access into the school premises. Any phone detected should be seized till the end of the term to discourage students from bringing their phone to school.

Imbibing Appropriate Phone Etiquette: there is need for students to increase the use of mobile phone for academic reasons and imbibe self-discipline so as not to bring their mobile phone to school.

Acknowledgments

None

Conflict of Interest

Author has no conflict of interest.

Funding Source

The author received no funding to conduct this study.

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References

- Cheung, S. L. (2008). Using Mobile Phone Messaging as a Response Medium in Classroom Experiments. *The Journal of Economic Education*, 39(1), 51-67.
- Dania, P. O. and Iwe-Ewenode, J. (2016). Undergraduate Usage of Mobile Phones and Its Implication of School Application. *Journal of Education and Practice*, 7(21), 30-32.
- Elder, A. D. (2013). College Students' Cell Phone Use, Beliefs and Effects on Their Learning. *College Student Journal*, 47(4), 585-592.
- Ifeanyi, I. P., & Chukwuere, J. E. (2018). The Impact of Using Smartphones on the Academic Performance of Undergraduate Students. *Knowledge Management & E-Learning*, 10(3), 290–308.
- Khan, A.W., Safdar, G., Ashraf, M. (2018). Effects of Mobile Phone Usage on Social Behaviours of University Students: A Case study of Islamia University of Bahawalpur, Pakistan. *Global Media Journal Pakistan Edition*, 11(1), 1-26.
- Kumar, M. (2011). Impact of the Evolution of Smart Phones in Education Technology and Its Application in Technical and Professional Studies: Indian Perspective. *International Journal of Managing Information Technology (IJMIT)*, 3(3), 39-49.
- Ledbetter, A. M., & Finn, A. N. (2013). Teacher Technology Policies and Online Communication Apprehension as Predictors of Learner Empowerment. *Communication Education*, 62(3), 301-317.
- Magner, D.K. (2004). Oregon State Adds International Flavor to Students Majors. *The Chronicle of Higher Education*, 17(26), 10 – 14.
- Mojaye, E. M. (2015). Mobile Phone Usage among Nigerian University Students and Its Impact on Teaching and Learning. *Global Journal of Arts Humanities and Social Sciences*, 3 (1), 29-38.
- Morris, P., & Sarapin. S. (2020). Mobile Phones in the Classroom: Policies and Potential Pedagogy. *Journal of Media Literacy Education*, 12(1), 57-69.
- Moyazzem, H. (2019). Impact of Mobile Phone Usage on Academic Performance. *World Scientific News*, 118, 164-180.
- Mtega, W.P., Bernard, R., Msungu, A.C., & Sanare, R. (2012). *Using Mobile Phones for Teaching and Learning Purposes in Higher Learning Institutions: The Case of Sokoine University of Agriculture in Tanzania*. Proceedings and Report of the 5th UbuntuNet Alliance Annual

- Conference, 118-129. Retrieved from <http://www.ubuntu.net/sites/default/files/mtegaw.pdf> on 7th March, 2022.
- Navpreet K. (2018) Impact of Mobile Phone Usage on the Academic Performance of Students. *Pramana Research Journal*, 8(12).
- Norries, C., Hossain, A., & Soloway, E. (2011). Using Smartphones as Essential Tools for Learning: A Call to Place Schools on the Right Side of the 21st century. *Educational Technology*, 51(3), 18-25.
- Nwachukwu, C. and Onyenakeya, K. (2017). Use of Smartphones among College Students in Nigeria: Revelations and Reflections. *J Communication*, 8(2), 171-182.
- O'Bannon, B. W., & Thomas, K. M. (2015). Mobile Phones in the Classroom: Preservice Teachers Answer the Call. *Computers & Education*, 85, 110-122.
- Safdar, G. (2021). Cultural Aspiration across the Borders: Measuring the Cultural Effects of Online Media on Pakistani Youth. *Online Media & Society*, 2, 41-50.
- Safdar, G., Khan, A.W. (2018). Effects of Digital Media on Cultural Values of Male University Students of Punjab, Pakistan. *Pakistan-Annual Research Journal*, 54, 1-19.
- Shabir, G., Hameed, Y.M.Y., Safdar, G., Gilani, S.M.F.S. (2014). Impact of Social Media on Youth: A Case Study of Bahawalpur City. *Asian Journal of Social Sciences and Humanities*, 3(4), 132-151.
- Shabir, G., Iqbal, Y.W., Safdar, G. (2014). Demographics“ Differences in Social Networking Sites Use: What Communication Motives Does it Gratify? *International Journal of Social Work and Human Service Practice*, 2(5), 184-194.
- Shabir, G., Safdar, G., Hussain, T., Imran, M., Seyal, A.M. (2015). Media Ethics: Choosing the Right Way to Serve. *Research on Humanities and Social Sciences*, 5(3), 80-85.
- Shabir, G., Safdar, G., Jamil, T., Bano, S. (2015). Mass Media, Communication and Globalization with the perspective of 21st century. *New Media and Mass Communication*, 34, 11-15.
- Shakoor, F., Fakhar, A., & Abbas, J. (2021). Impact of Smartphones Usage on the Learning Behaviour and Academic Performance of Students: Empirical Evidence from Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 11(2), 862–881.
- Siew, F. N., Nor Syamimi, H., Nor Hairunnisa, M. and Nur-Ain, A. M. (2017). The Relationship between Smartphone Use and Academic Performance: A Case of Students in a Malaysian Tertiary Institution. *Malaysian Online Journal of Educational Technology*, 5(4): 58-70.
- Soyemi, J., Oloruntoba, S. A. and Okafor, B. (2015). Analysis of Mobile Phone Impact on Student Academic Performance in Tertiary Institution. *International Journal of Emerging Technology and Advanced Engineering*, 5(1), 361-367.
- Stephens, K. K., & Pantoja, G. E. (2016). Mobile Devices in the Classroom: Learning Motivations Predict Specific Types of Multicommunicating Behaviors. *Communication Education*, 65(4), 463-479.
- Trilling, B., & Fadel, C. (2009). *21st Century Skills: Learning for Life in our Times*. San Francisco, CA: Jossey-Bass.
- Wei, F. F., Wang, Y. K., & Klausner, M. (2012). Rethinking College Students' Self-Regulation and Sustained Attention: Does Text Messaging During Class Influence Cognitive Learning? *Communication Education*, 61(3), 185-204.
- Woodcock, B., Middleton, A., & Nortcliffe, A. (2012). Considering the Smartphone Learner: An Investigation into Student Interest in the Use of Personal Technology to Enhance their Learning. *Student Engagement and Experience Journal*, 1(1), 1-15.