© 2019 IJSRST | Volume 6 | Issue 3 | Print ISSN: 2395-6011 | Online ISSN: 2395-602X
Themed Section: Science and Technology
DOI : https://doi.org/10.32628/IJSRST196326

The impact of mobile phones applications in the educational process among students and faculty staff members at the College of Education- Female section, Jazan University

Mahasin Gad Alla Mohamed*[1]

*[1]Educational Technology, Jazan University, Sabya, Jazan, Saudi Arabia

ABSTRACT

A systematic random sample of (110) college students (female) aged (18-22) year old, and (15) faculty staff members at the College of Education-female section, Jazan University, was chosen. The study conducted in the academic year (2018). Questionnaire and interviews were used for collecting data. The study sample were asked to express their attitudes towards the usage of mobile phone applications in education. All data were analyzed with the SPSS personal computer program. Appropriate statistics for description (frequencies, percentage, means, standard deviations, and Chi2) were used. The results showed that calculated Chi2 value is bigger than the value of Chi2 derived from statistical tables. Thus, the null hypotheses (H0) rejected. Rejection of the null hypotheses indicates that the difference is significant in favor of the usage of mobile phone applications in the educational process.

Keywords: Mobile phone application; College students; faculty staff members, College of Education; Jazan University.

I. INTRODUCTION

Students are using mobile phones positively in education. These mobile devices enable students to control their individual learning and allow learners to change learning contexts in a suitable way, from formal to informal. It keeps students engaged, attentive and motivated and allows interaction with the mobile phones. Teaching staff also benefit from the use of mobile phones. There is evidence that mobile phones have encouraged independent learning making it easy for teachers to differentiate individual student needs and share resources with students and with each other.

For students, mobile phones are attractive and easy to use. Most of the mobile phones have larger screens, a variety of apps, audio and video recording software, higher processing and battery power (Mango, 2015). Doing activities and discussions facilitated by the mobile device, students find learning more fun as compared to a typical lecture-based classroom (Morrone et al, 2012).

Teaching staff can design interactive presentations, which include students' observations and comments. Teaching staff can give lectures, monitor progress and stay organized. Simple-to-use and easy to create presentations with amazing animations and effects. Productivity applications help students and teaching staff put together professional-looking documents, presentations, and spreadsheets. Teaching staff can write notes using mobile phones during the interactive discussion and these can be displayed on a projected screen for students. Teaching staff notes can be saved, modified, uploaded and can be helpful

to students. Students can track their assignments, take notes, and study for finals using the notes (Lina & Angelin, 2017).

Mobile phones help forge closer connections between student and teacher. Both teaching staff and students have learned and developed effectively through exploration and by wanting to share knowledge with each other (Looli et al, 2010).

The portability of mobile phones helps students using learning materials more than what is offered in current classroom settings. The teaching staff can easily update the student's data even when outside class that is without going to the desk or school (Dwight, 2013).

The use of mobile phones provides many positive outcomes for students, staff, and the community. It not only improves writing skills and gravity of students' research but also increases student interest in learning and ownership of the learning process. There are reductions in lecture instruction and an increase in project-based learning activities.

Mobile phones, when used inappropriately by students in the classroom, can be a source of distraction. Students find creative ways to do something on these mobile phones than follow the teacher's instructions. With access to the internet, their attention is diverted to gaming sites and social networking functions. Distraction is a big challenge to teaching staff members (Karsenti & Fievez, 2013). Management in educational institutions have to take responsibility to block certain applications or websites, and teaching staff needs to move around the class to control and monitor the use of such devices by students. In addition, mobile phones could create a place and time in the school for social networking than disallowing.

Reading a lot of text on the small screen of mobile phones can be difficult and cause eye strain (Shuler, 2009). There is a great variety of e-books available but schools have so limited access that some are difficult to use. Schools should provide students with a link to online books. Some governments have urged schools to speed up the transition to the digital textbook (Torres & Lofholm 2013). In the future, digital textbooks will replace traditional paper textbooks, which will be lighter.

Peng (2009) indicated the need for researchers "to conduct research on the effects of ubiquitous computing" (p. 11). However this challenge covered too much ground. Clough et al (2009) focused on informal learning and based on her research she concluded that "future research into mobile learning needs to take account of the role of mobile technology in supporting learning over a wider global and social context" (p. 131). Her focus on a wider geographical and social context can relate to the (Mobile access and massive Open Online Course) MOOC format as these types of courses have attracted and will attract a global audience with a diverse professional and personal background.

Roschelle (2003) adding that it is equally important "to understand the social practices by which those new affordances become powerful educational interventions" (p.268). In addition, Kukulska-Hulme et al. (2009) said that "if students focus on the social practice that mobile phones enable, will allow a different vision of mobile learning" (p. 9)

II. METHODS AND MATERIAL

Sample and Data Collection

The sample of the study consisted (110) subjects, who had been chosen from the population of students who study in different programs in the College of

Education at Jazan University, whose age ranging from (18 up to 22) years old.

The sample had been selected from the study population by using a systematic random sample. Questionnaire and interviews were used for collecting data. The researcher had measured the validity and reliability of the questionnaire by using: Pearson Correlation Coefficient and Cronbach Alpha Coefficient. The researcher had used Likert Scale. A typical three-level Likert item had been used in the questionnaire, the three-level Likert item as follows: (Agree), (to some extent), (Disagree); and personal interviews. The data were analysed with SPSS personal computer program.

Analysing of Data

All data were analysed with the SPSS personal computer program. Appropriate statistics for description (frequencies, percentage, means, standard deviations, and Chi2) were used.

III. RESULTS AND DISCUSSION

Findings/ Results

Students

The first aspect: Personal dimension

The personal dimension consisted of four items (1, 16, 17, and 21) or questions which stated in table (1). Percentage, mean and standard deviation for each item of the personal dimension question (student attitudes towards the personal use of mobile phone applications in Educational process) were analysed.

Table (1): Percentage analysis for personal attitudes towards the personal use of mobile phones applications in Educational process

Agree	To some extent	disagree
80.2	17	2.8

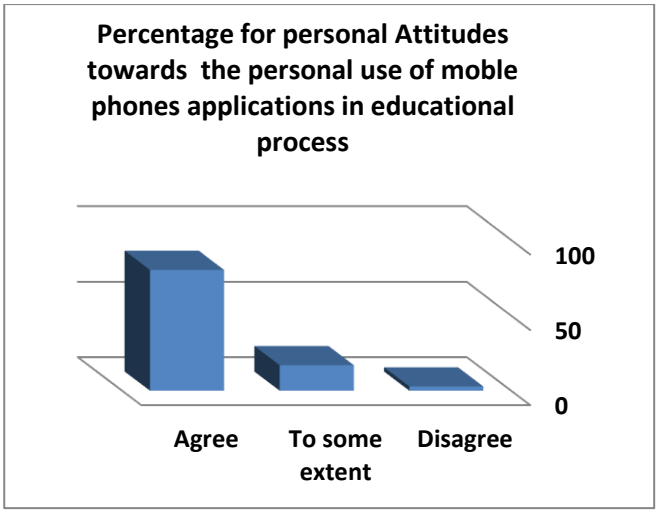


Figure (1): Percentage analysis for personal attitudes towards the personal use of mobile phones applications in Educational process

The percentage of study sample attitudes towards the personal use of mobile phones applications in the educational process were reported to display differences in study sample responses. Table (1) & Figure (1) shows that (80%) (N: 88) Agree, (17%) (N: 19) To some extent, and (2.8%) (N: 3) answered with Disagree.

Table (1) showed the students' responses to the first aspect's items, the researcher found that the percentage of the study sample responses centred on the level (Agree)

Table (2): Mean & Std. Deviation values

Mean	Std. Deviation
4.3	0.76

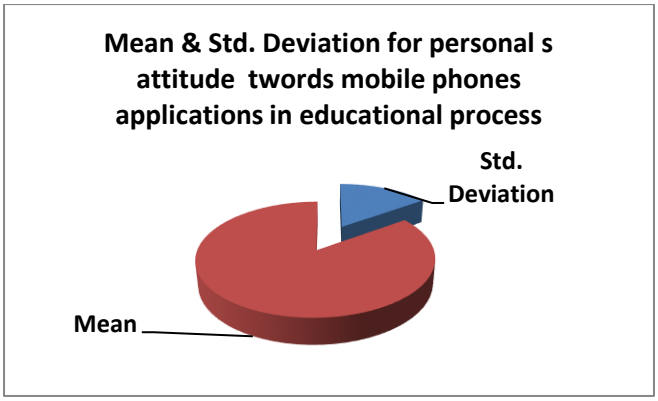


Figure (2): Mean & Std. Deviation values

Table (2) & Figure (2) shows values of standard deviation & Mean for the study sample response for the personal attitudes the personal use of mobile phones in the educational process.

Table (2) showed that, the mean values of all items is bigger than the std. deviation values, this indicated that the mean value represented the students' responses.

Table (3): Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
171.281	5.99

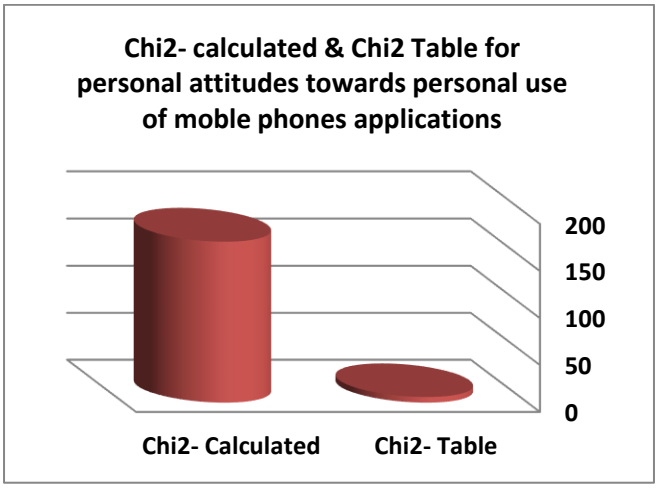


Figure (3): T- calculated and T- table values

Table (3) & Figure (3) shows hi2-calculated and Chi2-table values; Chi2-calculated value (171.281) whileChi2-table value (5.99).

Since calculated (Cal) chi2 values> statistical table (Tab) chi2 value (5.99) at level of significant (sig.) (0.05), and degree of freedom (df) (2), this confirms the level of sig. (0.01) as it is less than (0.05) the level adopted for this study. Thus, the null hypothesis (There were no significant differences in students' response towards personal use of mobile applications in education) was rejected.

The second aspect: Reality of use

The reality of use consisted of five questionnaire aspects; each aspect consisted of a number of items as follows: Aspect. 1: Academic System consisted of six items (8-13). Aspect. 2: Classrooms consisted of four items (22-25). Aspect 3: Educational activities, assignments, and research, which consisted of (4-7, 14-15 and 19). Aspect. 4: Student' Positive participation in the classroom, consisted of one item (20). Aspect. 5: Encouragement of teacher to the student to use the phone in the educational process: consisted of three items (3, 18, and 26). Which stated in table (3). Percentage, the mean and standard deviation for each item of the reality of the use question (student's reality of use of mobile phones applications in Educational process) were analysed.

Reality of use: (Academic System)

Table (4): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the academic system.

Agree	To some extent	Disagree
81.8	13	5.2

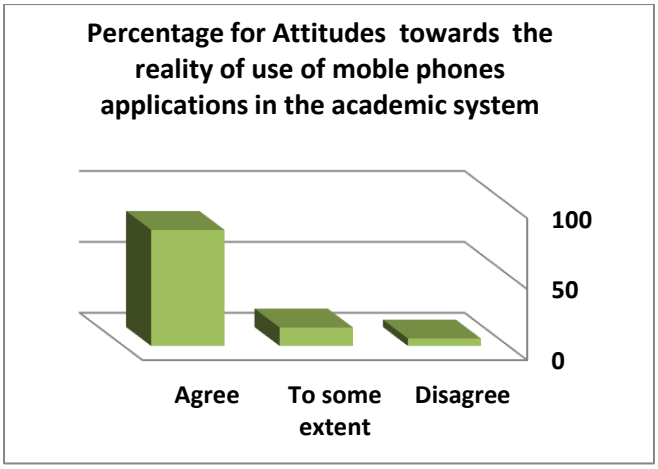


Figure (4): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the academic system.

The percentage of study sample attitudes towards the realty of use of mobile phones applications in the academic system were reported to display differences in study sample responses. Table (4) & Figure (4) shows that (81.8%) (N: 90) Agree, (13%) (N: 14) To some extent, and (5.2%) (N:6) answered with Disagree.

Table (4) showed the students' responses to the second aspect (Academic System), the researcher found that the percentage of the study sample responses centred on the level (Agree)

Table (5): Mean & Std. Deviation values

Mean	Std. Deviation
4.3	0.79

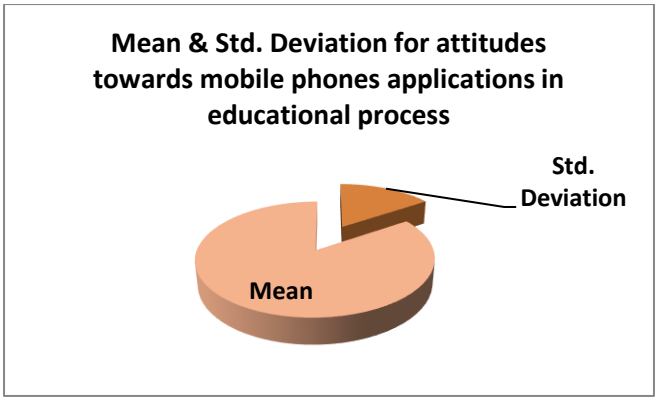


Figure (5): Mean & Std. Deviation values

Table (5) & Figure (5) shows values of standard deviation & Mean for the study sample response for the attitudes towards the reality of use of mobile phones in the academic system.

Table (5) showed that, the mean values of all items is bigger than the std. deviation values, this indicated that the mean value represented the students' responses.

Table (6): Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
134.061	5.99

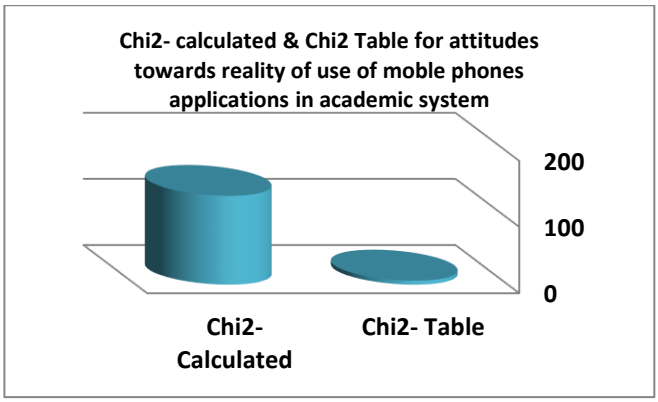


Figure (6): Chi2- calculated and Chi2- table values

Table (6) & Figure (6) shows hi2-calculated and Chi2-table values; Chi2-calculated value (134.061) whileChi2-table value (5.99).

Since calculated (Cal) chi2 values> statistical table (Tab) chi2 value (5.99) at level of significant (sig.) (0.05), and degree of freedom (df) (2), this confirms the level of sig. (0.01) as it is less than (0.05) the level adopted for this study.

Reality of use: (Classroom)

Table (7): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the classroom.

Agree	To some extent	Disagree
88.6	8.7	2.7

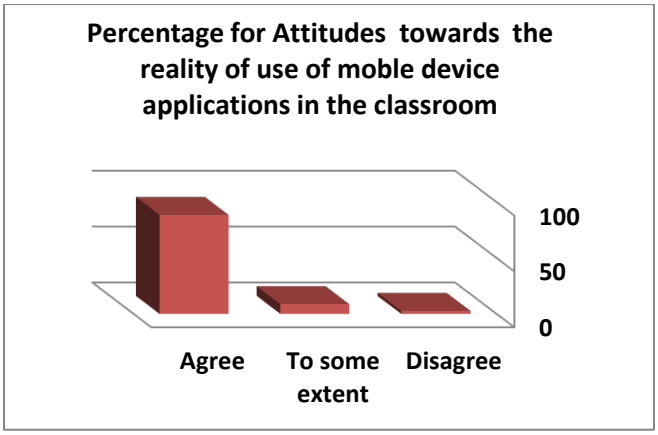


Figure (7): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the classroom.

The percentage of study sample attitudes towards the realty of use of mobile phones applications in the classroom were reported to display differences in study sample responses. Table (4) & Figure (4) shows that (88.6%) (N: 97) Agree, (8.7%) (N: 10) To some extent, and (2.7%) (N:3) answered with Disagree.
Table (4) showed the students' responses to the second aspect (classroom), the researcher found that the percentage of the study sample responses centred on the level (Agree).

Table (8): Mean & Std. Deviation values

Mean	Std. Deviation
4.3	0.74

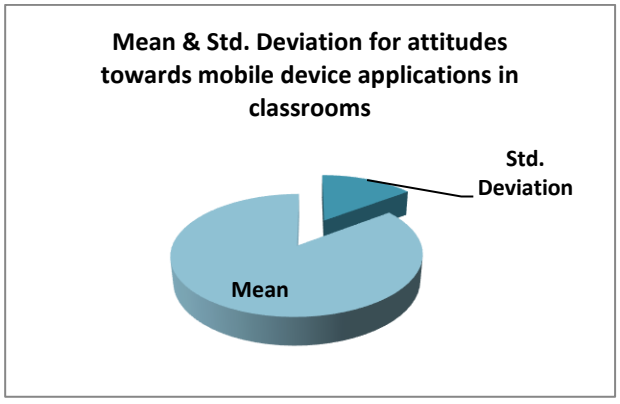


Figure (8): Mean & Std. Deviation values

Table (8) & Figure (8) shows values of standard deviation & Mean for the study sample response for the attitudes towards the reality of use of mobile phones in the classroom.

Table (8) showed that, the mean values of all items is bigger than the std. deviation values, this indicated that the mean value represented the students' responses.

. **Table (9):** Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
250.871	5.99

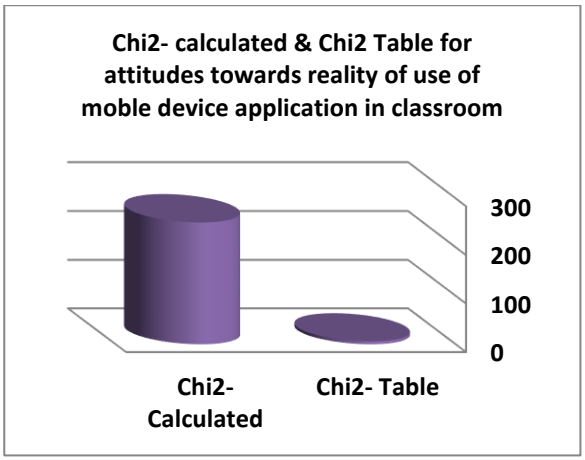


Figure (9): Chi2- calculated and Chi2- table values

Reality of use: Aspect 3 (Activities, assignments, & research)

Table (10): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the educational Activities, assignments, & research.

Agree	To some extent	Disagree
75.6	20	4.4

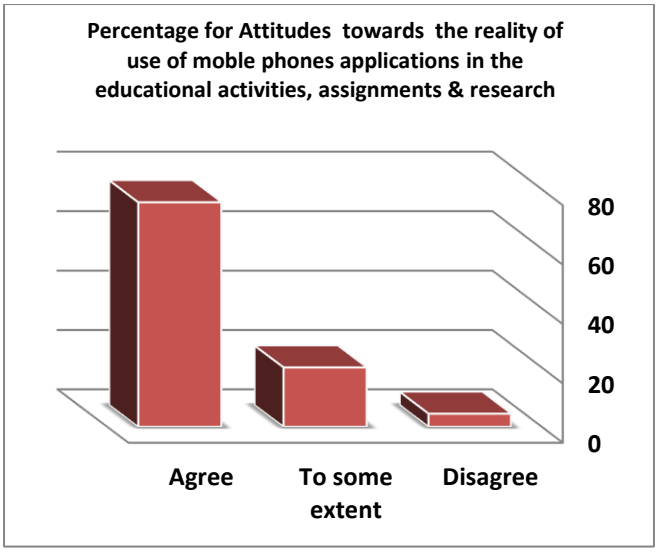


Figure (10) : Percentage analysis for attitudes towards the reality of use of mobile phones applications in the educational Activities, assignments, & research.

The percentage of study sample attitudes towards the realty of use of mobile phones applications in the educational Activities, assignments, & research were reported to display differences in study sample responses. Table (10) & Figure (10) shows that (75.6%) (N: 83) Agree, (20%) (N: 22) To some extent, and (4.4%) (N:5) answered with Disagree.

Table (10) showed the students' responses to the second aspect (classroom), the researcher found that the percentage of the study sample responses centred on the level (Agree).

Table (11) : Mean & Std. Deviation values

Mean	Std. Deviation
4.1	0.86

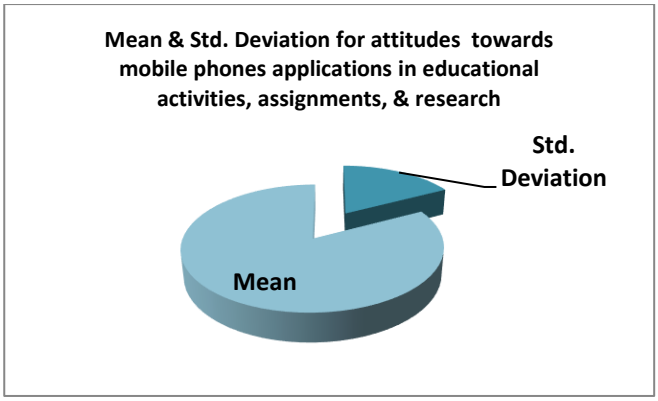


Figure (11): Mean & Std. Deviation values

Table (12): Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
204.366	5.99

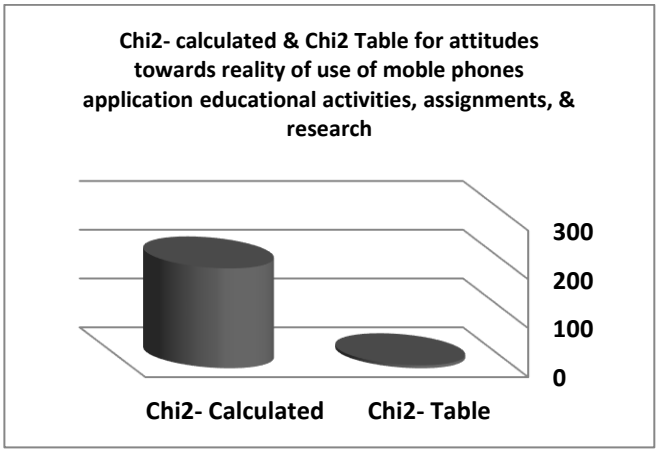


Figure (12): Chi2- calculated and Chi2- table values

Reality of use: (Student' Positive participation in the classroom)

Table (13): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the student positive participation in classroom

Agree	To some extent	Disagree
67.2	29.1	3.7

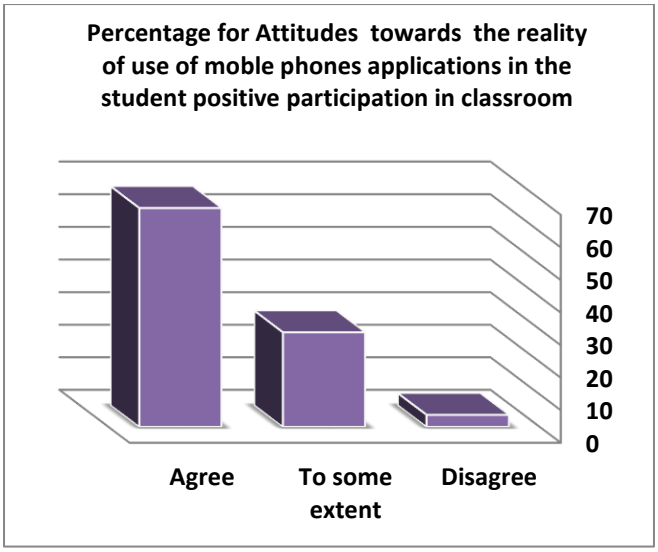


Figure (13): Percentage analysis for attitudes towards the reality of use of mobile phones applications in the student positive participation in classroom

The percentage of study sample attitudes towards the realty of use of mobile phones applications in the student positive participation in classroom were reported to display differences in study sample responses. Table (13) & Figure (13) shows that (67.2%) (N: 74) Agree, (29.1%) (N: 32) To some extent, and (3.7%) (N:4) answered with Disagree.

Table (13) showed the students' responses to the second aspect (classroom), the researcher found that the percentage of the study sample responses centred on the level (Agree).

Table (14): Mean & Std. Deviation values

Mean	Std. Deviation
3.9	0.81

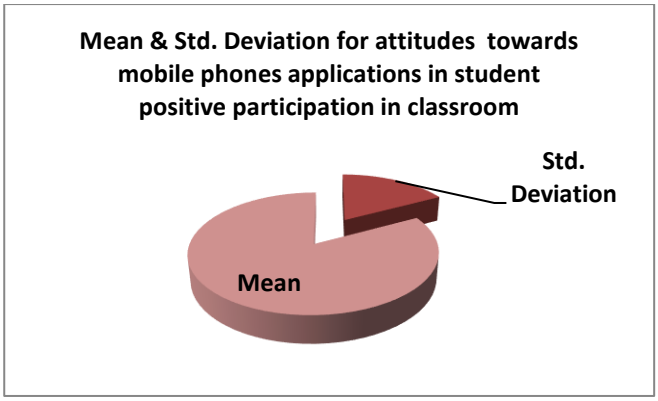


Figure (14): Mean & Std. Deviation values

Table (15): Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
166.997	5.99

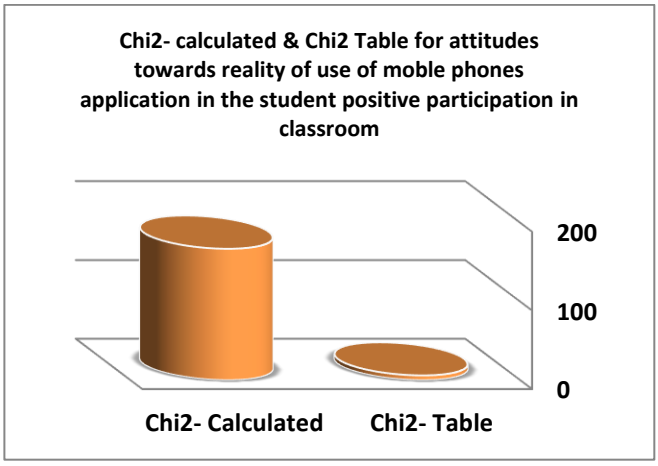
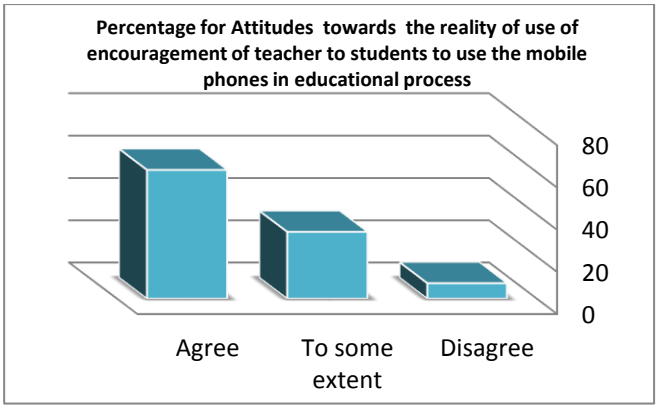


Figure (15): Chi2- calculated and Chi2- table values

Reality of use: (Encouragement of teacher to the student to use the phone in the educational process)

Table (16): Percentage analysis for attitudes towards the reality of use of Encouragement of teacher to the student to use the mobile phones in the educational process

Agree	To some extent	Disagree
61	31.7	7.3



Figure(16): Percentage analysis for attitudes towards the reality of use of Encouragement of teacher to the student to use the mobile phones in the educational process

Percentage analysis for attitudes towards the reality of use of Encouragement of teacher to the student to use the mobile phones in the educational process were reported to display differences in study sample responses. Table (16) & Figure (16) shows that (61%) (N: 67) Agree, (31.7%) (N: 35) To some extent, and (7.3%) (N:8) answered with Disagree.

Table (16) showed the students' responses to the second aspect (classroom), the researcher found that the percentage of the study sample responses centred on the level (Agree).

Table (17): Mean & Std. Deviation values

Mean	Std. Deviation
3.8	0.86

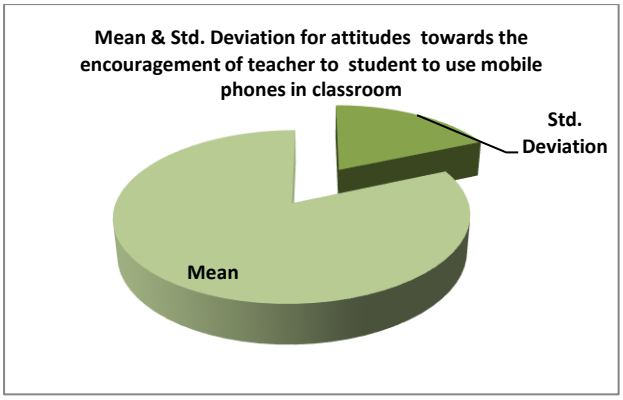


Figure (17): Mean & Std. Deviation values

Table (18): Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
124.401	5.99

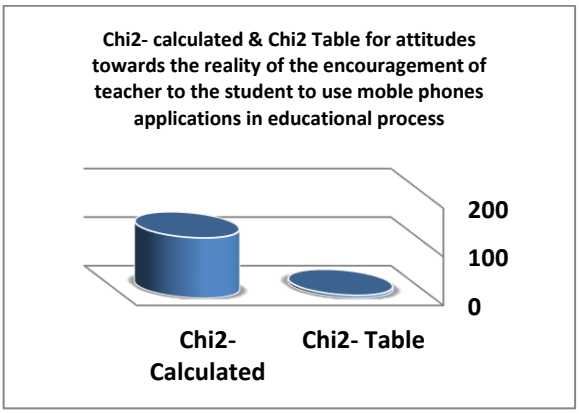


Figure (18): Chi2- calculated and Chi2- table values

In order to identify the students' reality of use of the mobile application, 5 basic aspects were identified. The second hypothesis was stated as follows: There were no significant differences in students' responses towards the reality of use of mobile applications in education. To test this hypothesis, the researcher used Chi2 to compare students' responses to the questions of this aspect.

Since Cal chi2 values> Tab chi2 value (5.99) at a level of Sig. (0.05), and df (2), this confirms the level of sig. (0.01) as it is less than (0.05) the level adopted for this study. Thus, the null hypothesis (There were no significant differences in students' responses towards

the reality of the use of mobile applications in education) was rejected.

The third aspect: Obstacles to use

Table (19): percentage analysis for the obstacles of use of mobile phones applications in educational process

Agree	To some extent	Disagree
44.2	38.3	17.5

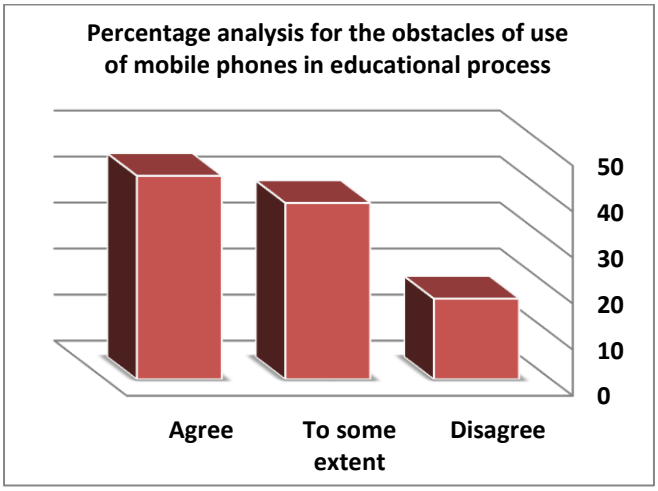


Figure (19) : percentage analysis for the obstacles of use of mobile phones applications in educational process

Percentage analysis for attitudes towards the reality of use of Encouragement of teacher to the student to use the mobile phones in the educational process were reported to display differences in study sample responses. Table (19) & Figure (19) shows that (44.2%) (N: 49) Agree, (38.3%) (N: 42) To some extent, and (17.5%) (N:19) answered with Disagree.

Table (19) showed the students' responses to the second aspect (classroom), the researcher found that the percentage of the study sample responses centred on the level (Agree).

Table (20): Mean & Std. Deviation values

Mean	Std. Deviation
3.4	0.91

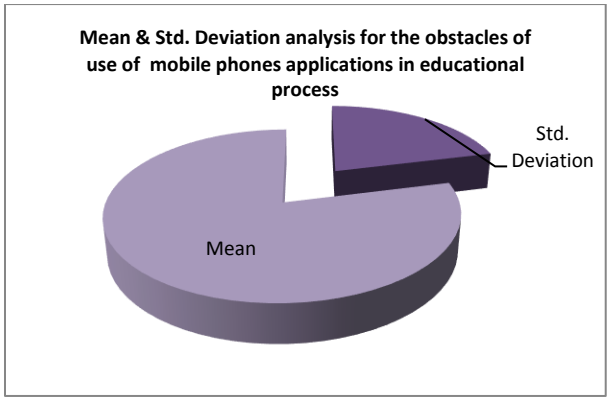


Figure (20): Mean & Std. Deviation values

Table (21): Chi2- calculated and Chi2- table values

Chi2- Calculated	Chi2- Table
227.726	5.99

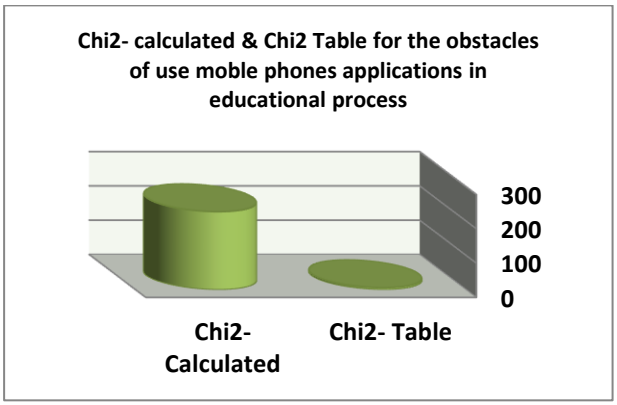


Figure (18): Chi2- calculated and Chi2- table values

In order to identify the obstacles of use of mobile application, two basic aspects were identified, The third hypothesis was stated as follows: There were no significant differences in students' responses towards the obstacles use of mobile applications in education. To test this hypothesis, the researcher used Chi2 to compare students' responses to the questions of this aspect. Since Cal chi2 values> Tab chi2 value (5.99) at a level of Sig. (0.05), and df (2), this confirms the level of sig. (0.01) as it is less than (0.05) the level adopted for this study. Thus, the null hypothesis (There were no significant differences in students' responses towards the obstacles the use of mobile applications in education) was rejected.

Teaching Staff

The researcher conducted interviews with (15) of the teaching staff members. As a result, the researcher came out with the following points:

- Mobile phones encouraged self-learning.
- By using mobile phones, teaching staff can differentiate individual student needs.
- Mobile phones helped both teaching staff and students in sharing documents, presentations, learning materials, and assignments with each other and with students themselves.
- Teaching staff displayed notes from mobile phones on the projected screen.
- Mobile phones helped teaching staff to keep closer to their students.
- Mobile phones offered easy connection between teaching staff members and students

IV. CONCLUSION

Rejection of the null hypotheses indicates that the differences are significant in favour of the usage of mobile phones applications in the educational process. The researcher concluded that students and teaching staff members have a positive attitude towards the usage of mobile phones application in education.

V. REFERENCES

[1] Clough, J., Jones, A.C., McAndrew, P., Scanlon, E. (2009). Informal Learning Evidence in Online Community of Mobile Device Enthusiasts. In M. Ally (Ed), Mobile learning: Transforming the delivery of education and training (pp. 99–112). Athabasca, BC: Athabasca University

[2] Dwight, V (2013): The apps have it. iPads and tablets are changing the face of special education URL: http://www.weareteachers.com/hot-topics/special reports/assistive-technology-in-the classroom.

[3] Karsenti, T., & Fievex, A. (2013, December 09). The iPad in education: Uses, benefits, and challenges a survey of 6,057 students and 302 teachers in Quebec, Canada (Rep.). Retrieved March 18, 2016, from http://www.karsenti.ca/ipad/pdf/iPad_report_Karsenti-Fievez_EN.pdf

[4] Kukulska-Hulme, A., Sharples, M., Milrad, M., Arnedillo-Sánchez, I., & Vavoula, G. (2009). Innovation in mobile learning: A European perspective. International Journal of Mobile and Blended Learning, 1(1), 13-35.

[5] Lina D., Angelin v. (2017). Teaching and learning with mobile devices in the 21st century digital world: benefits and challenges. European online Journal of Multidisciplinary studies, May-August 2017, 2(5), 399-342.

[6] Looi, C. K., Seow, P., Zhang, B. H., So, H. J., Chen, W., & Wong, L. H. (2010). Leveraging mobile technology for sustainable seamless learning: a research agenda. British Journal of Educational Technology, 41(2), 154-169.

[7] Mango, O. (2015). IPad use and student engagement in the - classroom. The Turkish Online Journal of Educational Technology, 14(1), 53-57. Retrieved March 15, 2016, from http://www.tojet.net/articles/v14i1/1417.pdf

[8] Morrone, A. S., Gosney, J., & Enge, S. (2012, April). Empowering Students and Instructors: Reflections on the Effectiveness of iPads for Teaching and Learning. Retrieved March 18, 2016, from https://net.educause.edu/ir/library/pdf/ELIB1201.pdf

[9] Peng, H., Su, Y. J., Chou, C., & Tsai, C. C. (2009). Ubiquitous knowledge construction: Mobile learning re-defined and a conceptual

framework. Innovations in Education and Teaching International, 46(2), 171-183.

[10] Roschelle, J. (2003). Keynote paper: Unlocking the learning value of wireless mobile devices. Journal of Computer Assisted Learning, 19(3), 260-272.

[11] Shuler, C. (2009, January). Pockets of potential: Using mobile learning technologies to promote children's learning. New York: The Joan Ganz Cooney Center at Sesame Workshop. From: http://joanganzcooneycenter.org/pdf/pockets_of_potential.pdf

[12] Torres, Z. & Lofholm, N. (2013), Colorado schools face challenges in transition to digital textbooks. The Dever Post; http://www.denverpost.com/news/ci_24730836/colorado-schools-face-challenges-transition-digital-textbooks?source=infinite

Cite this article as :

Mahasin Gad Alla Mohamed, "The impact of mobile phones applications in the educational process among students and faculty staff members at the College of Education- Female section, Jazan University", International Journal of Scientific Research in Science and Technology (IJSRST), Online ISSN : 2395-602X, Print ISSN : 2395-6011, Volume 6 Issue 3, pp. 226-237, May-June 2019. Available at doi : https://doi.org/10.32628/IJSRST196326
Journal URL : http://ijsrst.com/IJSRST196326