

A Study of Students' Experiences of Mobile Learning

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6 **Abstract**

7 These days mobile phones are ubiquitous with everyone and there is lot of craze for messenger
8 applications. Researchers has oftenly found their students asking them ?Do you use
9 WhatsApp?? or ?Are you on we chat???. This tickled their mind and made them think how
10 these mobile applications can help in education. This very thought triggered the first step to
11 this research. During session 2013- 2014, 37 student of B.Ed. (Bachelors in Education)
12 programme were selected. All the selected students were using smart phones and mobile
13 application named ?WhatsApp?. A WhatsApp group was created and students teacher
14 interacted with each other through it during 40 days teaching practice schedule. After the end
15 of teaching practice schedule, students were asked to fill in the questionnaire on the
16 experiences of WhatsApp m learning and for knowing their attitude towards it. For in depth
17 analysis, Interviews of 10 randomly selected students? was also taken. Findings of the study
18 show that student find learning through WhatsApp very interesting and educationally useful.
19 They found that their social interactivity with their peers and teacher has increased moreover
20 they learned collaboratively. The attitude of the students toward WhatsApp m learning was
21 favorable. The study also revealed that married students found learning through WhatsApp
22 disruptive and that they prefer learning in traditional classroom as it does not collide with
23 their family time.

24

25 **Index terms**— These days mobile phones are ubiquitous with everyone and there is lot of craze for messenger
26 applications. Researchers has oftenly found their studen

27 **1 Introduction**

28 t is no hidden fact that technology has taken over the society in last few years. Everyone is using technology,
29 from children and teenagers to adults and elders. Technology is vital in today's world and makes everything
30 easier. It has transformed our ways of communicating, socializing, playing, shopping and everything we do.
31 These profound changes are placing increasing pressure on the traditional models of teaching and learning. Due
32 to ever-increasing and diversified needs of the students technological advancements are also taking place in the
33 field of education every day. While e-learning is still being used as a supplementary tool to the conventional
34 forms of learning, a new method of knowledge addition called mlearning has emerged in the global scenario.

35 M-Learning refers to the "provision of education and training involving portable or mobile devices such as
36 Smartphone's, Personal Digital Assistants (PDA's), palmtop's, i pod's, digital cameras, pocket computer's ,
37 Mobile Phone's. etc."

38 Mobile devices provide significant opportunities to help learners become more autonomous and also have the
39 potential to change the delivery of teaching and learning in higher education. (Isil ??oy and Gary Motteram,
40 2013). Mobile learning can both complement and conflict with the formal education processes. On the positive
41 end, learners can extend their classroom learning activities to homework, field trips, and museum visits by
42 reviewing teaching materials on mobile devices; and or collecting and analyzing information using handheld data

2 PURPOSE OF THE STUDY

43 probes.(Park Hyungsung). Liak (2011) believes that "mobile learning is about changing the way we teach with
44 the way students' best learn."

45 The concept of mobile learning applied in this research is defined as a teaching learning interchange happening
46 through mobile phones only. Among all the mobile devices, mobile phone is chosen because it is probably the
47 most popular and widely used mobile device in the world, especially in India. India is the second-largest mobile
48 phone user with over 900 million users in the world (Press Information Bureau, Government of India). As per
49 the Telecom Regulatory Authority of India (TRAI), there were 910.16 million mobile phones and 938.34 telecom
50 service (including landlines) users in India at the end of May 2014.

51 There are several features of mobile phones like Voice, SMS, Browsing, Downloading, Gaming and variety of
52 applications. With the introduction of smart phones, the popularity of mobile applications has raised and its
53 usage has become increasingly prevalent among mobile users. One such application which is very students were
54 asked to fill in the questionnaire on the experiences of WhatsApp m learning and for knowing their attitude
55 towards it. For in depth analysis, Interviews of 10 randomly selected students' was also taken. Findings of the
56 study show that student find learning through WhatsApp very interesting and educationally useful. They found
57 that their social interactivity with their peers and teacher has increased moreover they learned collaboratively.
58 The attitude of the students toward WhatsApp m learning was favorable. The study also revealed that married
59 students found learning through WhatsApp disruptive and that they prefer learning in traditional classroom as
60 it does not collide with their family time.

61 Mobile phones as M Learning devices are more prevalent and the most popular of mobile devices. Mobile
62 phones are making our lives easier and it has become very hard to imagine life without mobile phones because
63 people are accustomed to them (Guoqiang Cui, Shuyan Wang, 2008). Mobile phones are so advanced and smart
64 that they actually perform almost the same functions and features as personal computers. Prensky (2004) has
65 defined mobile phones as not just communication devices sparking new modalities of interacting between people,
66 they are also particularly useful computers that fit your pocket, are always with you, and are always on. Like
67 all communication and computing devices, mobile phones, can be used to learn. popular among smart phone
68 users these days is WhatsApp messenger. According to NDTV news, India is the largest market of WhatsApp
69 messenger; and according to DNA news report, there were over 60 million Indian users of WhatsApp in August
70 2014.

71 WhatsApp Messenger is a proprietary, crossplatform instant messaging subscription service for smart phones
72 and selected feature phones that uses the internet for communication. In addition to text messaging, users can
73 send each other images, video and audio media messages as well as their location using integrated mapping
74 features (Wikipedia). WhatsApp messenger has the following collaborative features: (A. ??ere WhatsApp has
75 become very popular and besides all, this Application is highly addictive and can create a great impact on regular
76 users, and apart from that it can leave a trace that becomes difficult to control and cure" (Johnson Yeboah and
77 George Dominic Ewur, 2014). According to the article in The Hindu "this application is hit among the college
78 going students and it seems to be handy for even the teachers who are using it to clear doubts of their students
79 after the college hours." Motiwala (2007), in his research related to the use of instant messaging for educational
80 purposes, suggests that popularity and support for mobile devices within the student population is great and
81 that the majority of students at universities benefit from texting through mobile learning devices. Bere (2013)
82 examined the use of WhatsApp in a South African university. The students gave the positive feedback and
83 claimed that it was an easier way to communicate with their teachers and the rest of the class and that it was
84 also fun.

85 A study conducted among students in Spain, examined the use of WhatsApp in English language studies. The
86 students reported a rise in motivation and a greater enthusiasm for reading in a foreign language (Plana et al.,
87 2013). The research conducted by Aicha Blehch Amry (2014) demonstrated the effectiveness of WhatsApp social
88 networking in comparison with face-toface learning in the classroom.

89 Overall, WhatsApp has become a shared platform that enhances accessibility, encourages cooperation, and
90 intensifies motivation to take an active part in academic assignments (Bere, 2013;Chipunza, 2013).II.

91 2 Purpose of the Study

92 India is a developing country and after considering the technological environment here, the study will only use
93 mobile phone among other mobile devices as this device is ubiquitous with most of the people in India. The study
94 is not just an interesting technological experimentation but it is undertaken for meeting the educational needs
95 of students, staff and course of B. In such a case if they are provided with administrative messages, classroom
96 management tips, short summaries of previously learned topics, and provided opportunity to ask queries related
97 to the problems they are facing it will prove useful and add on education for them. This will also help the
98 teachers in knowing what students are doing and what problems they are facing. Moreover it will also encourage
99 collaborative learning by providing the opportunities to work in a group using their mobile devices.

100 Thus the idea behind the study is to motivate the teachers and students' to use m learning in education. It is
101 generally seen that teachers find use of mobile phones in classrooms as irritating and disturbing rather than useful
102 for education. Moreover teachers do not share any enthusiasm to except it in teaching learning practices. This can
103 be overcome by convincing the teachers that any inconvenience offered will be offset by convenience offered. And
104 similarly students will be taught etiquette to be aware of when and where the use of these devices is acceptable.

105 Once this will be experienced, we anticipate a change in mindset that will eventually lead to next stage of m
106 learning: using the technology in their teaching. The rationale behind this research is that the introduction of
107 mobile devices will be useful in teaching learning practices and for taking first step into m learning. the current
108 research is expected to provide transition to m learning. Phase 3 (Teaching of Ethics): Ethics of the group were
109 decided and communicated to the students'. Some of the ethics were: i) no use of absurd language ii) no use of
110 it inside the classroom iii) no personal remarks Phase 4 (Implementation): Here messages were sent and received
111 using WhatsApp. The messages were sent related to ? Administrative updates or messages.

112 ? Sending ad on knowledge messages related to lessons learned prior to teaching practices. ? Class room
113 management tips.

114 ? Students' queries and problems were also resolved during teaching practice.

115 Phase 5 (Feedback): Students' were asked to give their feedback about the experience of WhatsApp mobile
116 learning through questionnaire. Follow up interview (n=10) was conducted.

117 IV.

118 **3 Types of Communication**

119 All the possible types of communication were used the group. Students' and teacher frequently shared videos,
120 audios, words, emoticons, images, photographs from their notebooks and URL links.

121 **4 V.**

122 Objectives 1. To study the student's Perception on ubiquitous aspect of WhatsApp m learning. 2. To study
123 Educational benefits of WhatsApp m learning.

124 3. To explore Collaborative learning in WhatsApp mobile learning atmosphere. 4. To study the Social
125 interactivity in WhatsApp mobile learning atmosphere. 5. To study the Attitude of students' towards WhatsApp
126 mobile learning.

127 VI.

128 **5 Research Methodology**

129 Current study is an experimental research employing single group post test only design. Research is conducted
130 during teaching practice schedule of B.Ed. programme in the academic session 2013-2014. The research is based
131 on mixed methodology; with quantitative approach the study also employed qualitative approach, as the study
132 narrates student's experiences on WhatsApp mobile learning. Total 37 B.ed. teacher trainees (32 females and
133 5 males) of Maharshi Dayanand University, Haryana, India; batch 2013 -2014 participated in the research. All
134 participants were using WhatsApp and participated willingly. They were free to withdraw from the study at any
135 given time. It should be noticed that none of the participants had previously used WhatsApp application for
136 teaching and learning.

137 **6 VII.**

138 **7 Data Collection**

139 Two data collection tools namely questionnaire and interviews were employed. Questionnaire is developed using
140 five points Likert Scale (Strongly Agree; Agree; Neutral; Disagree; and Strongly Disagree). Total 30 questions
141 covering five areas (Ubiquitous Learning; Educational Benefits; Collaborative Learning; Social interactivity in
142 WhatsApp mobile learning atmosphere; and Attitude towards WhatsApp mobile learning) were developed. The
143 study is conducted in a teacher education college of Maharshi Dayanand University, Haryana, India and total 37
144 B.Ed. trainees (who had smart phones with internet facility and were using WhatsApp application) filled in the
145 questionnaire.

146 Furthermore, after the quantitative study is made, qualitative data is collected using interview. Ten interviews
147 were conducted with randomly selected students from the experimental group (N = 37). The interviews took
148 the form of a friendly chat and interviewees were not aware that they are being interviewed. The information
149 gathered throughout the interviews were not categorized in a predetermined fashion, but evolved gradually as
150 the interviews continued (Bouhnik & Deshen , 2014).

151 **8 VIII.**

152 **9 Research Findings**

153 In this study, along with questionnaire, data was also collected through interviews. After interviews were
154 conducted (involving ten students), a descriptive qualitative analysis is carried out in order to identify the
155 effectiveness of WhatsApp m learning in teaching Ubiquitous learning is learning anytime, anywhere. 73% of the
156 student found learning anytime, anywhere convenient whereas 22% disagreed to it and 19% were neutral about
157 it. Follow up interview confirmed the questionnaire results and disclosed that learning 24/7 and anywhere is
158 interesting to students. Most of the discussions on the group were late night and students' supported the fact
159 that m-learning increases the flexibility of accessing a variety of resources for learning independently at anytime

12 CONCLUSION

160 and anywhere. (Jaradat, 2014) Disagreement came from those participants who were married and doesnot want
161 compromise on family time. 56% of the participants agreed that learning through WhatsApp m learning has
162 educational benefits, 27 % disagreed to it while 16% were neutral to the concept. Some of the educational benefits
163 mentioned by the students' during interview are: immediate feedback to the problem; learning on move; deeper
164 clarity on issues; revision of previously learned topics; learning from others problems; healthy discussions; and
165 availability of learning material all the time.

166 But those who disagreed to the concept of learning through WhatsApp m learning gave the following reasons:
167 preference to entertainment with WhatsApp rather than education with WhatsApp; problem of one cannot be
168 problem of all; and misleading discussions and posts at times. Neutral response during interview was: learning
169 anyways i.e. whether through WhatsApp or in classroom has its own benefits. c) Collaborative Learning 82% of
170 the participants agreed that learning through WhatsApp m learning is collaborative learning. During interview
171 it was disclosed that students' were eager to post videos, audios, texts on the problems and were also learning
172 from others posts. Moreover they were always willing to solve others problems. Those who disagreed gave the
173 reason that not everybody shared the content in the group. 5% Neutral response came from those students' who
174 found learning in classroom also a collaborative effort. The reason behind unfavourable attitude of the 12 %
175 participants is small mobile screens, preference to entertainment over edutainment with WhatsApp and family
176 priorities among married participants.

177 10 IX.

178 11 Discussion

179 Researches shows that many educational stakeholders have positive attitude towards the adoption of MLearning
180 in educational situations ??Bere, ??009). Results of this study are in conformation made by the above mentioned
181 researchers since the majority of students' found learning anytime and anywhere very useful. A small number of
182 married students find learning everywhere and anytime disruptive to their family life.

183 When educational benefits were concerned, students' found it beneficial as it provides immediate feedback
184 to the problem; opportunity to learn on move; provide deeper clarity on issues through discussions; revision of
185 previously learned topics; learning from others problems; and availability of learning material all the time.

186 Most of the students agreed that learning through WhatsApp m learning is a collaborative learning experience
187 and it has increased their social interactivity with their peers and teacher. Overall students' shows a favorable
188 attitude towards WhatsApp m learning. They found WhatsApp m learning a valuable teaching method; a
189 valuable learning aid and highly personalized instructional medium. Students' gave preference to WhatsApp m
190 learning over traditional classroom and are willing to continue using WhatsApp in future for teaching learning.
191 Rajasingham (2009) concluded that with increasing sophistication in information technology, educational
192 paradigms are challenging conventional teaching methods. Findings of this study also support this as students'
193 finds that learning through WhatsApp m learning is making their lives easier since they can learn anytime and
194 anywhere hence contributing to the overall success of teaching and learning.

195 X.

196 12 Conclusion

197 The research has attempted to find the perception and attitude of students' (teacher trainees) towards WhatsApp
198 m learning by creating WhatsApp learning atmosphere. The findings indicate that student finds WhatsApp m
199 learning ubiquitous aspect interesting and educationally useful. Apart from it they also find it a collaborative
200 learning experience and helpful in increasing their social interactivity with peers and teachers. A positive attitude
201 of students towards WhatsApp m learning was highlighted from the study. Students' gave preference to WhatsApp
202 m learning over traditional classroom and has also shown their willingness to use it in the future.

203 Moreover, according to the findings of the study, WhatsApp m learning is not suited to married students and
204 they prefer traditional classroom teaching learning. This is because they it disruptive to their family life and
205 time. This is in line with the findings of Bere, 2013. As of now, it is possible to say that students have positive
206 attitude towards using WhatsApp in education as it enables them to co-operate and work as a team which is not
207 fully developed in the traditional classroom. But if we want WhatsApp m learning to become a common tool
208 teaching and learning, there will be need of further researches in identifying its educational and pedagogical goals
209 as well as for concluding its theoretical and practical implications. The study has dealt with teacher trainees
210 of particularly B.Ed. programme (a Graduate course in teacher education); further researches should examine
211 other courses as well.

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Figure 1:

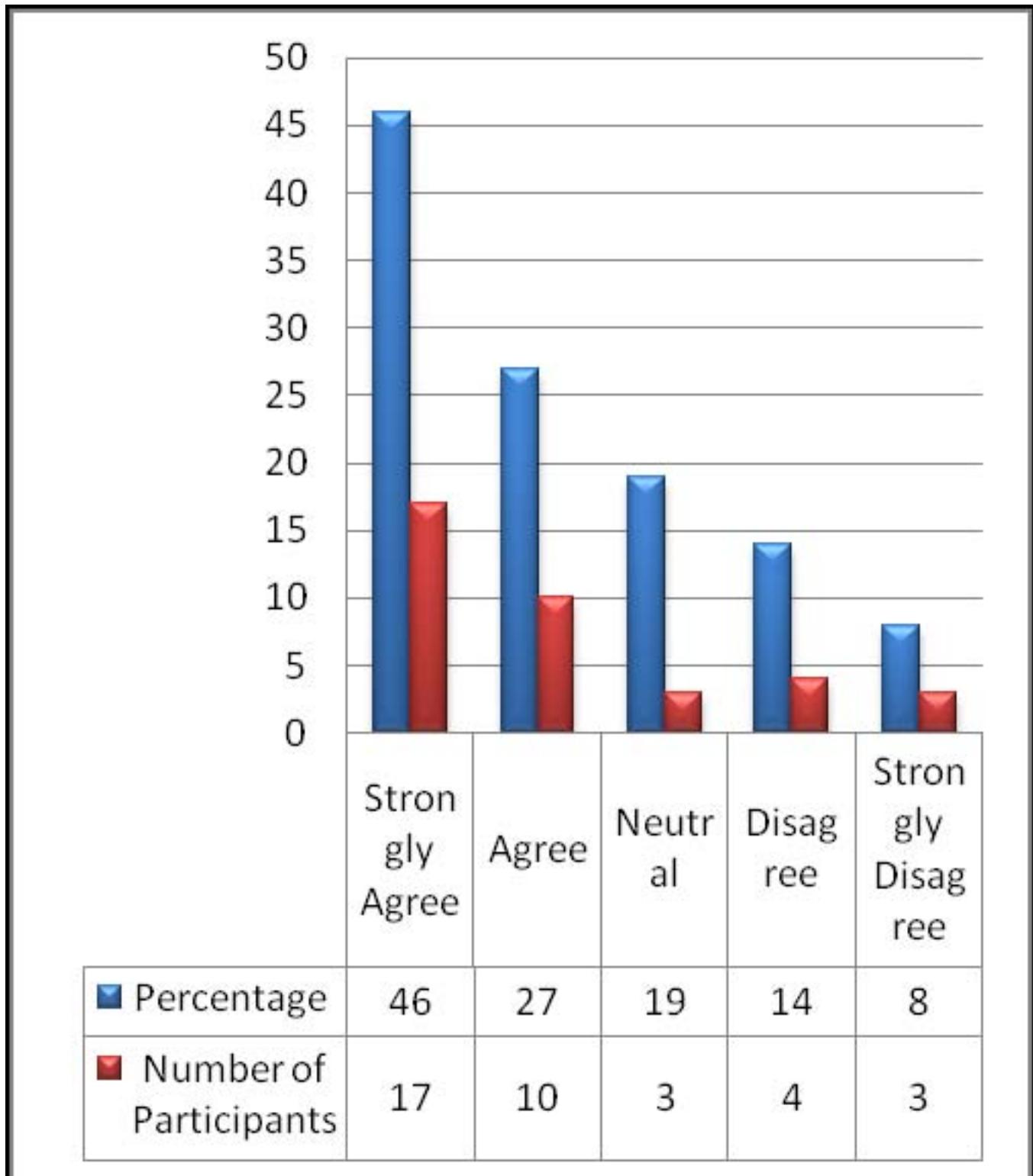


Figure 2:

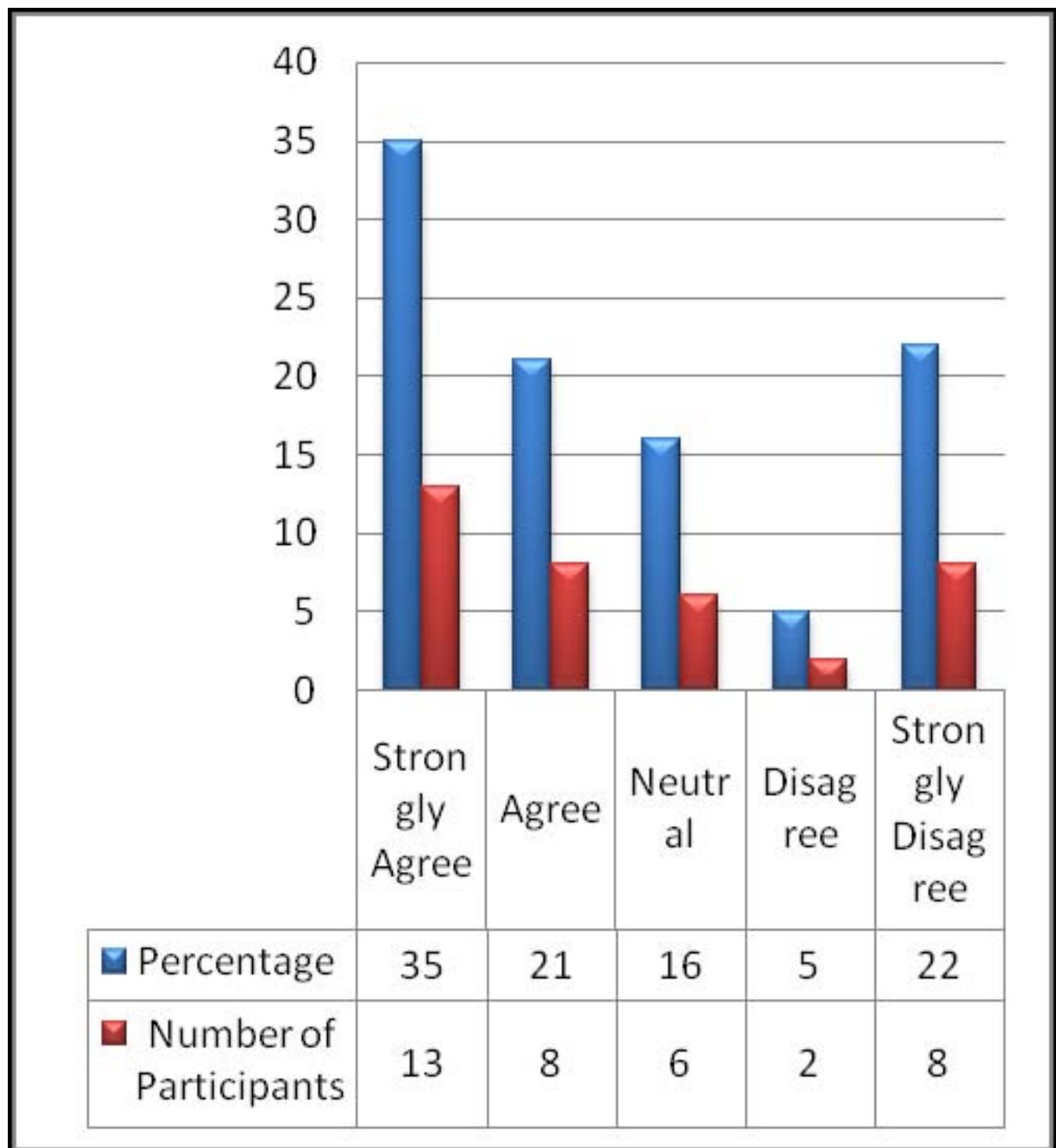


Figure 3:

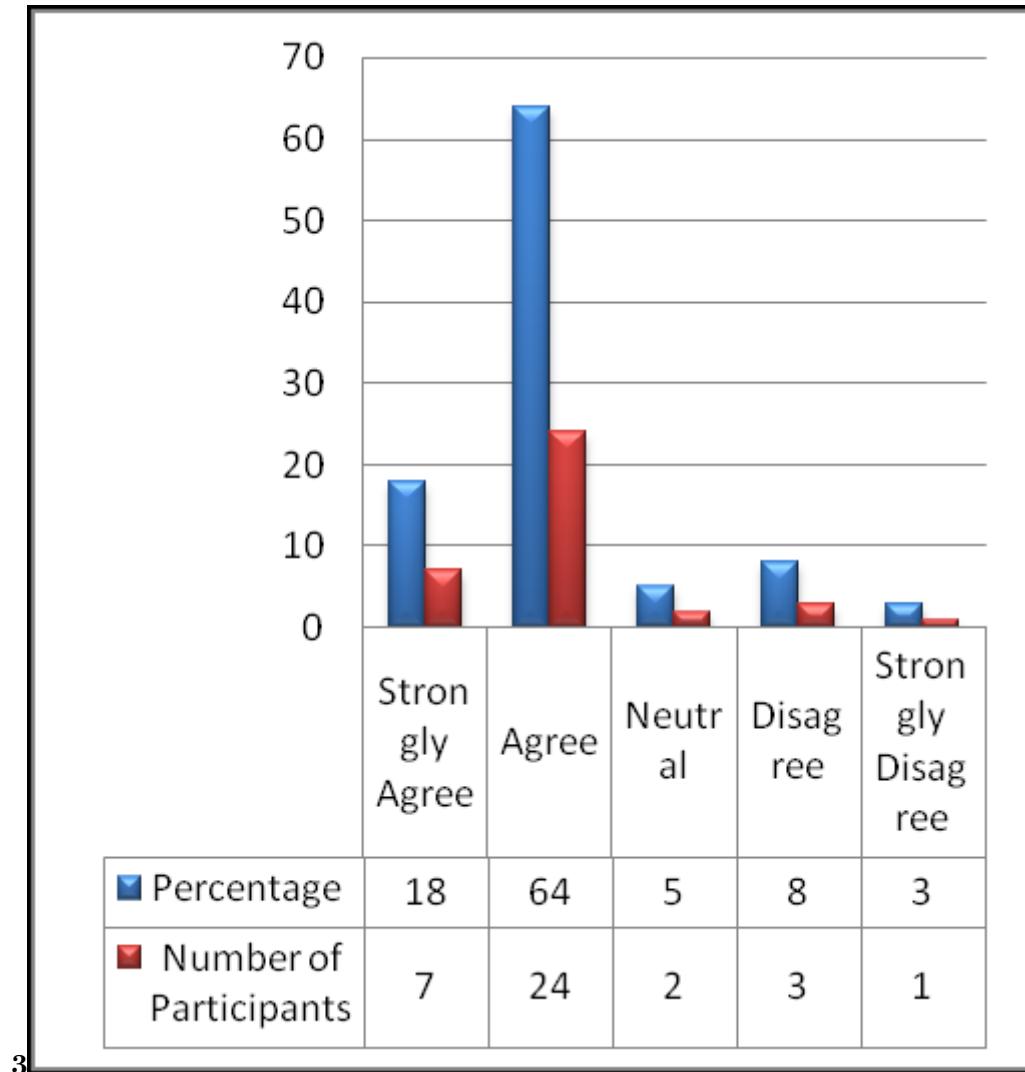


Figure 4: Interviewee 3 :

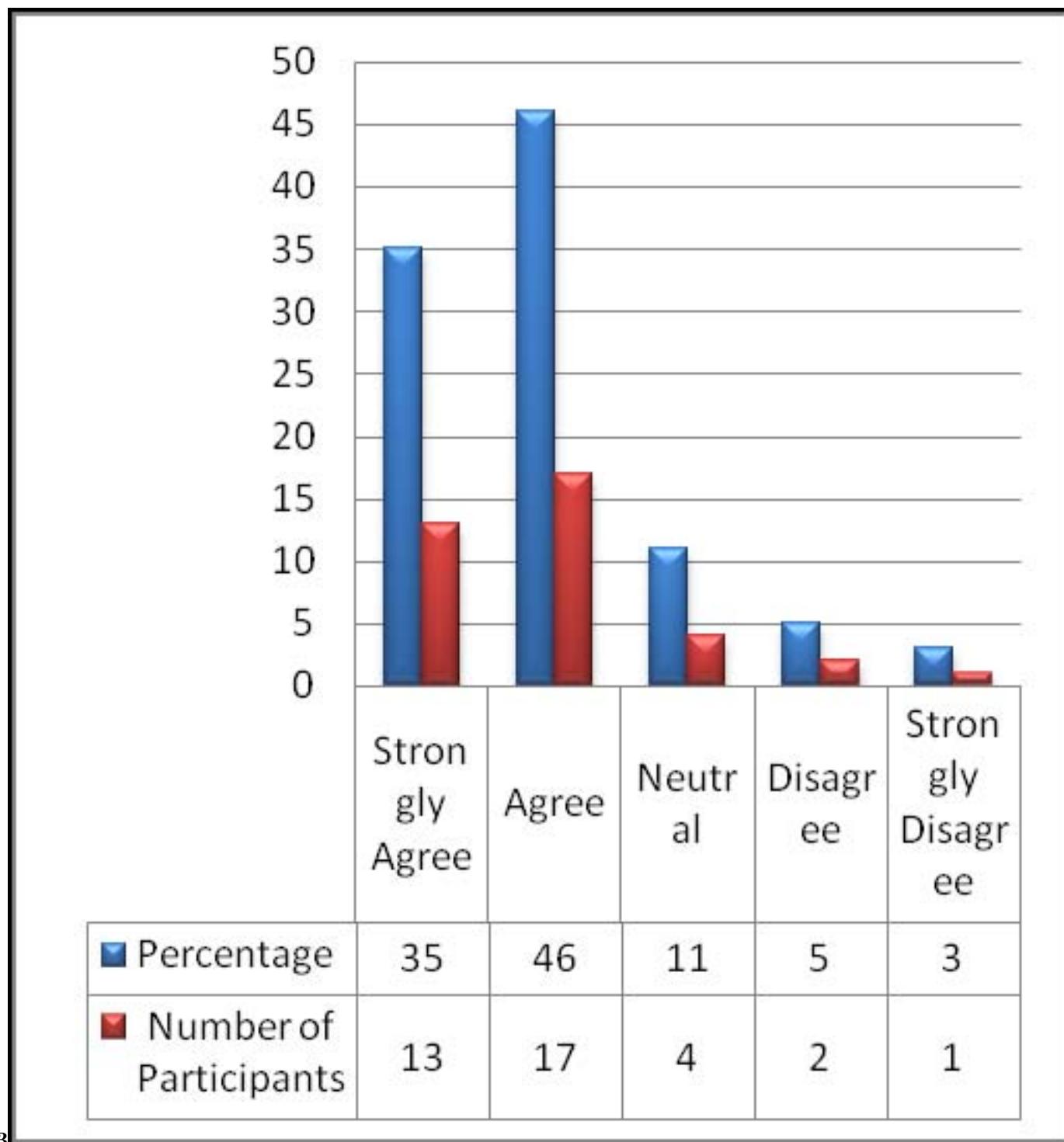


Figure 5: Figure. 3 d



Figure 6: Figure. 4 e

5. Offline automatically when the device is off or outside coverage area.

Messaging: Messages are saved

[Note: 3. Unlimited Messaging: The number of messages you can share on WhatsApp is unlimited. The application uses 3G/EDGE internet data plan or Wi-Fi to ensure continuous data transmission across platforms. 4. Cross Platform Engagements: Interactants with different devices (personal digital assistants, Smart phones, Galaxy tablets) can message one another through various media (text messages, pictures, videos, voice notes). 6. No Charges involved: there is no charges involved for using WhatsApp as it uses same internet data plan which is used for email or web browsing. 7. Pins and Users Name: WhatsApp user need not to remember passwords or username as it works via phone numbers and integrates with users' address books.]

Figure 7:

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