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# Perception of the ODL learners towards the use of mobile apps in learning in India

**Nisha Singh**[1]

**Abstract:** Information and Communication Technology (ICT) is being increasingly explored and used in enhancing the reach to learners in ODL who are physically separated from teachers. ICT has helped in their inclusion into the education system. One of the most handy tools for communicating and interacting among the open and distance education learners and teachers is mobile. Though efficacy of ICT has been established without doubt in managing educational administration, it is being rigorously explored in teaching and learning especially in area of mobile learning. In fact, mobiles can play a big role in anywhere and everywhere teaching and learning of open and distance education. Mobile applications called apps are flooding the education sector like app tsunami. This paper explores the use of mobile app for orienting the ODL learners about the basic concepts of open and distance learning. The mobile app was designed and developed using MIT App inventor. The mobile called Open and Distance Education (ODE) was sent to ninety (90) learners of Master of Arts in Distance Education (MADE) programme of 2015 and 2016 batches. Their feedback was sought on the design and the usefulness and perception of learners on the mobile application-ODE in understanding the basic concept of open and distance education through a questionnaire developed using Google Forms. The results reflected the positive perception of learners towards on the usefulness of mobile application for teaching and learning in Open and Distance Education Institutions. Most of learners supported the use of mobile app in ODL.



**Keywords**: Information and Communication Technology, Mobile App, Open and Distance Education, Smartphone, MIT App inventor

## Introduction

ICT is being increasingly explored and used in enhancing the reach to learners in ODL who are physically separated from teachers (Jegede, 2002; Awadhiya, et.al.,2014; Kem,2018; Singh et.al.,2018). It is more of a modern-day djinn- supernatural creatures in early Arabian and later Islamic mythology and theology who could do all we asked for. Similarly, today ICT has become pervasive in modern day life and whether one likes it or not, it touches and influences everyone's life. Especially mobiles have become an inseparable part of our lives penetrating other domains of our lives like health, entertainment besides mere communication (Aitkenhead, et.al., 2014; Ooi& Wei-Han Tan, 2016; Areàn, Hoa & Andersson, 2016.Kuoppamäki, Taipale, & Wilska,2017).

Mobile apps represent anytime and anywhere digital experience that resides in pockets, bags and has extraordinary untapped potential of being used in education both for educators and learners (Keegan, 2002; Hsu&Ching, 2013). Thus, the future of learning is through mobile (Ferdousi & Bari,2015; Sharma, 2019). Convenience, flexibility, engagement, and interactivity are all factors that make mobile learning more attractive to students. Technology invasion has made one of the most convenient ways

[1]drnisha@ignou.ac.in; Indira Gandhi National Open University, Delhi, India; ORCID: https://orcid.org/0000-0002-6561-835X


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to retrieve information is through apps application (Rafizah et al. 2015) Applications are being designed for mobiles to facilitate the processes related to both official and personal use. As open and distance education also aims to reach the learner anytime, anywhere, mobile apps are being looked upon as a great tool for ODL. With the trend of mobile learning, many learning materials have been developed, in the form of Podcast, widget, and Apps, while others embed the features of interactions and communication (Kukulska-Hulme, and Shield, 2008) to enhance the effectiveness of learning by using mobile devices. Orientation to Open and Distance Learning (ODL) system is required for the learners who come from conventional education system and are unaware of the pedagogy and skills required for studying in ODL system (Sharma, 2010). Orientation to ODL is very important in order to aware the entrants to the details of the system. This enables the learner to cross over the boundaries and customs of the conventional system and enter in to the mindset and skills of learning through the open and distance education.

It is system which is in consonance with the individualized learning space and opportunity in a classroom and its continuity outside the classroom. This has led instructional designers and teachers to use this plethora of mobile devices in the teaching learning process. As there is a growing demand for Mobile Applications among young people for various reasons from games to booking and ordering online, it was conceived that it can also be used to deliver learning material so that anytime and anywhere advantage is used for learning (Khaddage & Knezek,2011; Khaddage & Lattemann,2013). Mobile Apps can be easily downloaded with one-time connectivity and used as many times as needed. Mobile Application in this case will be beneficial to learners because of its reach and portability to its users. It is more accessible to learners in the remote areas especially in the rural areas where internet connectivity is still a challenge. Once the application gets downloaded, the user doesn't require any internet connection in order to study the content which an app provides. So, it is an easier way to disseminate the information. Further Vázquez-Cano (2014) found that the use of apps developed specifically for university subjects was highly valued by students as a new format which both supports and enhances learning practice. Therefore, it was recommended that universities continue developing new didactic strategies to connect both formal-informal and face-to-face ubiquitous learning settings.



But researchers like Cochrane (2012) expressed that all m-learning projects in higher education have not shown significant difference in pedagogical outcomes. As use of mobile app as learning resource and especially in open and distance education is still an evolving dynamic area, the present study was undertaken.

## Objectives

The objectives of the present study were:

- to develop Mobile Application for learners of ODL system 'ODE'.
- to find the effectiveness of the ODE as learning resource
- to find out the perception of the learners in use of mobile devices as learning resource.

## Methodology

A mobile app 'ODE' for open and distance learners was designed and developed for anytime and anywhere digital experience for orienting learners to the system of open and distance education.

The research study involved two main phases.

The first phase is design and development of the Mobile Application “ODE” on the introduction or orientating to Open and Distance Education. It was based on the Module for learners of open and distance education

The Mobile application was designed and developed by the author (Figure.1) using Open source Software MIT Appinventor (http://appinventor.mit.edu/explore/content/what-app-inventor.html) which is online software to develop Android OS based mobile applications. It is software which uses visual blocks in programming thus easing the process of development of a mobile application. The methodology used in developing Mobile Application included the following steps:

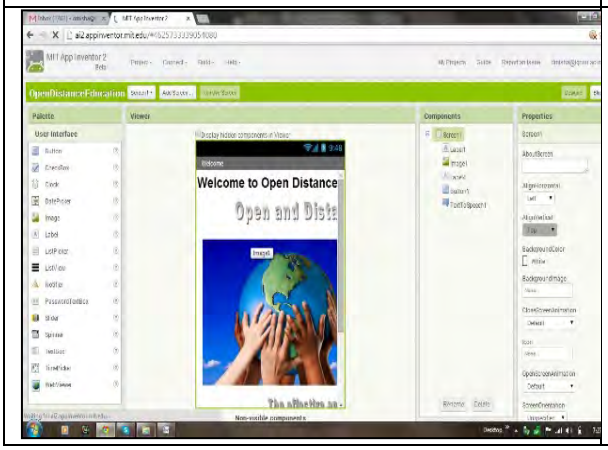
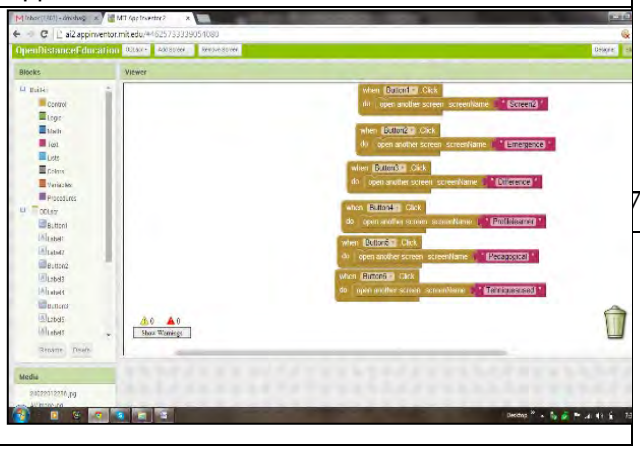

| Opening Screen of the Mobile Application | Visual Blocks depicting Programming of the Mobile App |
|---|---|
|  |  |



**Figure1**.Developmentof Mobile App using MIT Appinventor

The mobile app ODE was shown to six experts with expertise from Open and distance education and ICT. Their feedback was incorporated in the design.
The second phase of this study involved the analysis of the data using quantitative research method of survey. Jono et al. (2012) said study which requires analysis of the observations should employ survey or interview tool for collection of the data.
The present study used survey methodology for exploring the usability, effectiveness of the developed Mobile Application besides perception amongst learners.

**Data Collecting Tools**

Questionnaire was designed in two parts. The first part was designed to elicit information on the working, utility and perception of learners on the mobile application-ODE. It focused on the following:

- features of mobile application 'ODE' and its effectiveness; and
- perception of learners for use of mobile devices for open and distance education.

The second part contained ten questions to assess the learning gain amongst learners.

### Sampling or Study Group

MADE is a regular programme of IGNOU and is useful for people who work in the area of open and distance education. Ninety learners from two batches (2015-2016) of MADE programme were sent the mobile app-ODE through a link in e-mail. They were requested to download and install the mobile app in their mobile phone. The questionnaire developed using Google Forms was sent to the learners for their response. Thirty-three (33) learners responded on questionnaire.

### Data Analysis

The content validity of the questionnaire was established through experts' comments. The questionnaire was given to ten experts and few questions (4) were modified as per the suggestions. The final version was sent to learners.

Feedback data obtained through questionnaire was analyzed using Microsoft Excel and represented using frequency scores and percentages.

## Findings and Discussions

### Demographic Profile

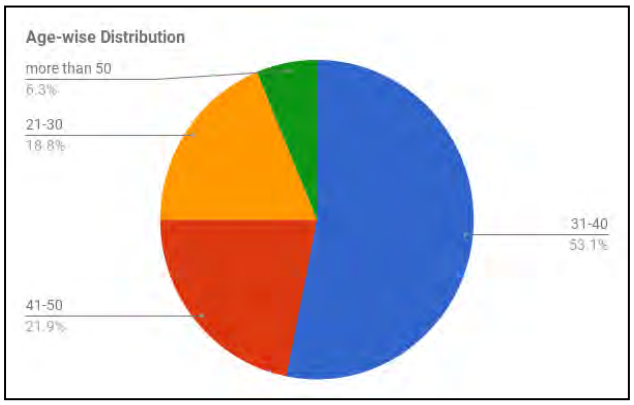



**Figure 2.** Age wise distribution of the learners.

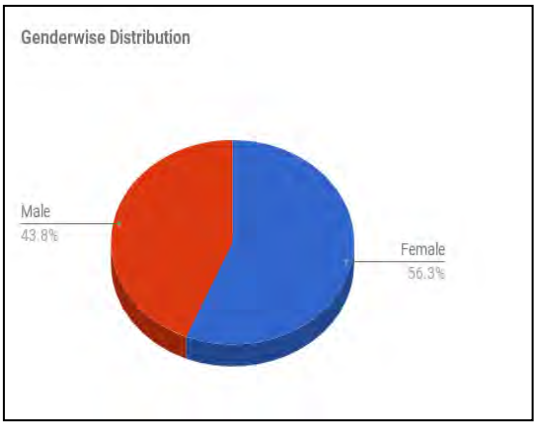



**Figure 3.**Genderwise distribution of the learners

The sample gender-wise (figure 3) consisted of 43.8% Men and 56.3% Women who were enrolled in the MADE Programme of IGNOU. The distribution of sample age wise (figure 2) shows near normal distribution wherein most of respondents were in the age-group of 31-40 (53.1%) followed by 41-50 years (21.9%). Only 6.3 % of respondents fall above the age of 51 years and 18.8% respondents were between 21-30 years. The reason could be that in age group 21-30 years the person had joined service and still settling in the area of work. The maximum (53.1%) is in 31-40 years age group when they look for professional development both horizontal and vertical. Following this 21.9% is 41-50 years age group. Here this could be due to late decision by them or due to their pursuing open and distance education as a second area of development for them. Also, only 6.3% was in age group 51 years and above and could be due to individual interest or other reasons.

As most of people in open and distance education pursue the courses/programmes for profession and self-development. The age group entering the Open University is higher than conventional mode. Open and distance education caters to the middle age segment more and that is reflected in the sample as well.

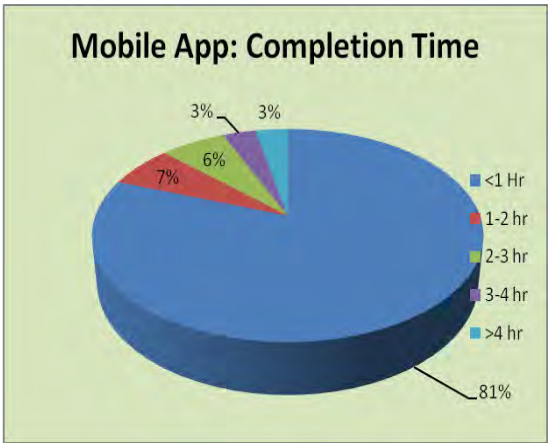



**Figure 4.** Mobile App completion Time

As Mobile Applications are becoming very popular (Yu-Chang, et.al.,2012), most (81%) of the respondents were able to complete ODE in less than one hour. Rest of the learners took higher than the stipulated time- 1-2 hour and 2-3 hour by 6.45% each and only 03 % of respondents were in 3-4 and more than 4 hours each.

**Mobile Application's Features**

There are many features of Mobile Application and for the purpose of the study, nine features were selected for feedback.

**Table 1.** Feedback on Features of Mobile Application 'ODE'

| S. No. | Features of Mobile Application | Opinion | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Very Good** | | **Good** | | **Average** | | **Poor** | | **Very poor** | |
| | | **Score** | **%age** | **Score** | **%age** | **Score** | **%age** | **Score** | **%age** | **Score** | **%age** |
| 1 | User Interface | 04 | 12.1 | 27 | 81.8 | 02 | 6.1 | 0 | 0 | 0 | 0 |
| 2 | Structure | 04 | 12.1 | 26 | 78.8 | 03 | 9.1 | 0 | 0 | 0 | 0 |
| 3 | Content | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | Language | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Style | 08 | 24.2 | 25 | 75.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | Interactivity | 06 | 18.2 | 27 | 81.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Length | 03 | 9.1 | 28 | 84.8 | 02 | 6.1 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Design | 06 | 18.2 | 27 | 81.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Quality | 08 | 24.2 | 23 | 69.7 | 02 | 6.1 | 0 | 0 | 0 | 0 |

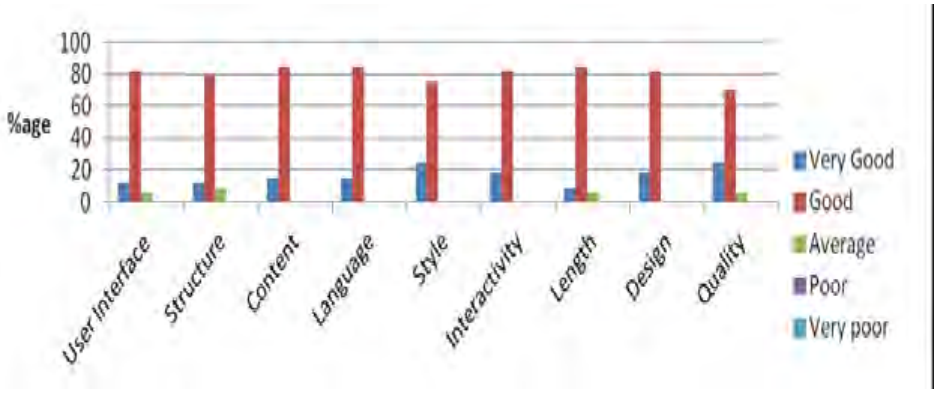



**Figure 5.** Feedback on Features of Mobile Application 'ODE'

As can be seen from the table 1 on all the features of the design, the mobile application "ODE" was found to be good. None of the learners rated the ODE as poor or very poor.

i. User interface of the Mobile Application "ODE" was rated good by 81.8 % and very good by 12.1% whereas 6.1 found it to be average. Thus, it can be concluded that the user interface of ODE was liked by most of the users and they found the screen and the interaction to the good.

ii. Structure is very important with reference to the concept formation and facilitates learning. 78.8% and 12.1% of learner of MADE found the Mobile Application 'ODE' to the good and very good respectively. 9.1% found the structure to be average.

iii. Content of Module whether it is through any mode is very important. 84.8% of the learners rated the content on ODE as good and 15.2% rated it to very good. Therefore, the content of the ODE was learner friendly and did not suffer from information overload as is true for most cases.

iv. Language is the medium of communication and is very important in case teaching learning resources. 84.4% & 15.2% rated the language of ODE as good and very good. Thus, it can be assumed that language of ODE was simple and learners were able to understand the message.

v. Style refers to the overall look and feel of the Mobile Application and 75.8 % of learners found it to be good. 24.2 % found the Mobile Application to be very good.

vi. Interactivity refers to the interaction between the learner and the Mobile Application for browsing through the Mobile Application content. The interactivity of the developed Mobile Application on ODE was found good by 81.8% learner and 18.2 % rated it as very good. The level of interactivity was found to be simple and more options of choice and interaction needs to be incorporated in the Mobile Application.

vii. Length of the Mobile Application was found good by more than 84.8 % of the learners. Length of Mobile Application affects the learning. Too lengthy or short learning resources affect learning adversely. The length of Mobile Application was found to be OK with the learners and does not demonstrate as no one rated it be poor.

viii. Design refers to overall look and feel and the architecture of the Mobile Application 81.8% rated to be good & 18.2 % as very good Thus it can be said that it met the approval of the learners in its architecture.

ix. Quality of any teaching learning resource is very important and same applies for Mobile Application. The Mobile Application ODE was rated good by 69.7 % of learners. 6.1% persons

rated it to be average in its qualitative dimension and thus some improvement can still be made on it qualitative aspects.

### Efficacy of the Mobile Application

It was assessed on the parameters of usefulness; relevance, easy of navigation, etc.

**Table 2**. Feedback on Efficacy of the Mobile App

| S. No. | Parameters of Mobile Application Design | Opinion | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Strongly Agree | | Agree | | Not sure | | Disagree | | Strongly disagree | |
| | | Score | % | Score | % | Score | % | Score | % | Score | % |
| 1 | Usefulness | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Relevance | 06 | 18.2 | 27 | 81.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | Interesting & Engaging | 07 | 21.2 | 24 | 72.7 | 02 | 6.1 | 0 | 0 | 0 | 0 |
| 4 | Loads easily & does not crash | 07 | 21.2 | 25 | 75.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Easy to navigate | 06 | 18.2 | 27 | 81.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | Fulfilled objectives of module | 06 | 18.2 | 27 | 81.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Promotes creativity & imagination | 05 | 15.2 | 22 | 66.7 | 06 | 18.2 | 2 | 6 | 0 | 0 |
| 8 | Stimulates High Order Thinking Skills (HOTS) | 06 | 18.2 | 21 | 63.6 | 06 | 18.2 | 3 | 10 | 0 | 0 |
| 9 | Design in functional & visually stimulating | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | Motivated me to learn through ODE | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 2 | 6 | 0 | 0 |



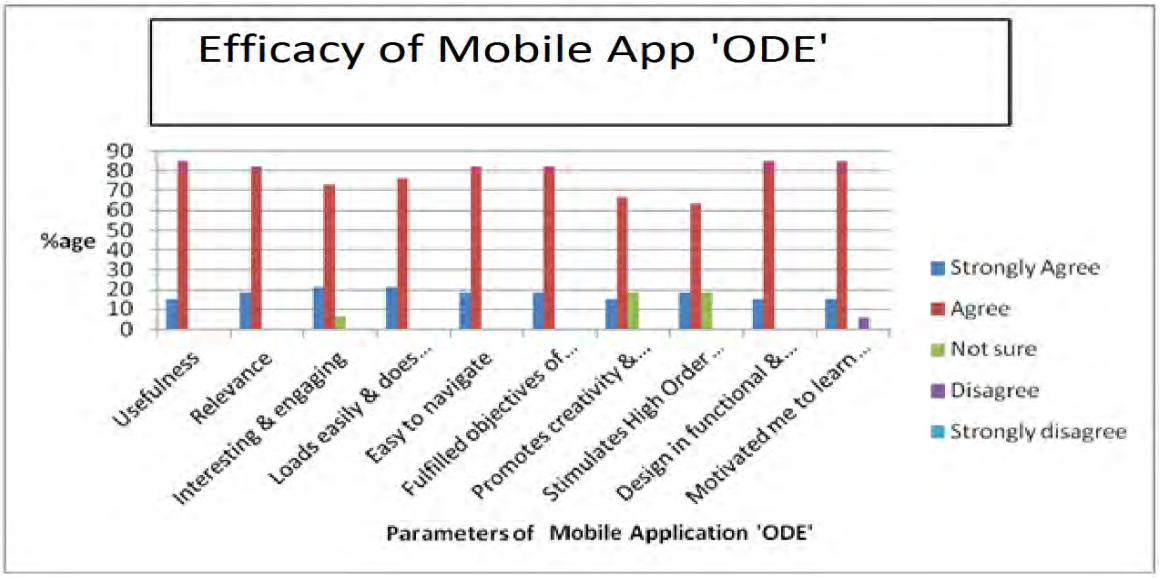



**Figure 6.** Feedback on Efficacy of Mobile App

a) All the learners found the ODE to be a useful tool for learning especially in case of open and distance education. 15.2 % & 84.8 % learners expressed very strong and strong agreement to its usefulness respectively as we see the penetration of Mobile Applications have surpassed that of any other ICT tool. It has also been explored and preferred as teaching learning tool

especially with reference to its 24x7x365 availability and ease of operation in terms of competence, cost and time. Thus, even while waiting in queues one can read in small portions and learn and get benefitted. This is reflected in almost 100% agreement in the usefulness of the Mobile Application as a learning device in ODE.

b) Total (100 %) agreement was there on the relevance of Mobile Applications for the learners of open and Distance learning (ODL). 81.8 % agreed whereas 18.1% strongly agreed with its relevance. Hjorland& Christensen ( 2002) refers to Relevance as "Something(A) is relevant to a task (T) if it increases the likelihood of accomplishing the goal (G) which is implied by T" .Therefore, Mobile Application ODE was relevant to the learners of open and distance education as it gave information is smaller portion which are easily understandable and thus remains in memory. Mobile has omnipresence in our lives and thus can be used as learning device as well.

c) A large percentage of learners found the Mobile Application interesting and engaging as a learning tool and only 02 learners were not sure of their opinion. The Mobile Application was interactive and had visual input-besides navigational interactivity. Video from YouTube was animated & thus interesting and their learner found it engaging as well interesting.

d) Another important feature of any Mobile Application is the ease with which it loads, opens and works. Also the processing should be sound and sturdy so that it does not crash while being run. The Mobile Application ODE was rated to load easily by almost all learners. The Mobile Application is sturdy, and does not crash and hangs and thus was liked by most of learners.

e) The Navigation is very important in e-learning and designing of websites. If it is easy then learner does not feel intimidated whereas if it complex, the learner may get lost in the navigational nitty-gritty and may not reach the goal. All learners found navigation to be easy. The navigation is important in Mobile Application because of smaller user interface. The smoother the movement back and forth, the more is the learning capacity of the tool.



f) Similarly, ODE fulfilled the objectives of the module for learners of open and distance education. The learners of ODE are new to the system as they mostly come from conventional face to face system; therefore, need to be oriented to ODE. The Mobile Application fulfilled its objectives of orienting the learners to ODE.

g) Teaching and learning at all levels aspire to promote creativity and imagination learners. Any teaching learning resources or tool is assessed on this parameter. Mobile Application ODE was rated highly on this parameter on this only 6 were not sure. A Mobile Application uses multimedia; there are more triggers to thinking process a simple media learning resource. As the content was basic and in conversational style, it encouraged learners to thinking further and higher imagination.

h) HOTS are the higher order thinking skills which should be developed as a result of any teaching learning endeavor. An equal number of learners 6 were not sure of ability of ODE to stimulate HOTS.

i) The results analyzed show that few learners had expressed their disagreement on these two parameters of Mobile Application- Promotion of creativity and imagination (04) and HOTS (03). Though the number is small but this is also important as it reflects an angle of perception among learners. The disagreement may be due to the fact that the content is informative and interaction does not involve rhetorical or provocative questions. These can be incorporated in

the Mobile Application. Also, interactivity can be linked to the correct and incorrect answer and that would have been more helpful in stimulation of HOTS.

j) All learners agreed about the functional design and the visually stimulating feature of Mobile Application ODE. Designing is very important feature and visual appeal attracts learners to approach and use it. They found the Mobile Application ODE to be visually stimulating and enjoying. Most of learners are attracted towards visual appeal and only after that one goes through the content.

k) All learners felt that the Mobile Application-ODE motivated learners to learn though ODE as it tells then about 'what is open and distance education'. Having knowledge/orientation is just step towards it usage. Mobile Application ODE helps to build the concept of ODE and thus motivates one to be learning through ODE.

**Effectiveness of Mobile App as Learning Resource**

**Table 3.** Feedback on Effectiveness of the Mobile App 'ODE'as Learning Resource (N=32)

| Q. No. | No. of correct response | Percentage |
|---|---|---|
| 1 | 27 | 87.38 |
| 2 | 14 | 43.75 |
| 3 | 22 | 68.75 |
| 4 | 23 | 71.88 |
| 5 | 18 | 56.25 |
| 6 | 10 | 31.25 |
| 7 | 26 | 81.25 |
| 8 | 27 | 87.38 |
| 9 | 20 | 62.5 |
| 10 | 23 | 71.88 |



The mobile app ODE, as a learning resource will be considered effective if the learners are able to answer the questions based on the content delivered through the mobile app. Table 3 depicts the use of Mobile app as learning resource. The learners were asked ten questions based on the content delivered through the mobile app ODE to assess their learning gain.

It was found that question number 1 and 8 elicited the most correct responses that is 27 out of 32 (87.38%) and the lowest score for question number 6 was 10/32 (31.25%) followed by question number 2 which is 14/32(43.75%). In the table 4 only one learner obtained minimum score of 2 whereas maximum score of 10 was obtained by two learners. Score of six(6) was obtained by nine learners. If we look at the figure 7, we see that normal probability curve. Therefore, the use of mobile app as a learning resource is quite encouraging and needs to be explored further.

**Table 4.** Score obtained vs. number of learners

| S.No. | Score obtained on the Questionnaire (out of 10) | No. of learners obtaining the score |
|---|---|---|
| 1. | 2 | 1 |
| 2. | 3 | 2 |
| 3. | 4 | 2 |
| 4. | 5 | 3 |
| 5. | 6 | 9 |
| 6. | 7 | 4 |

| | | |
|---|---|---|
| 7. | 8 | 5 |
| 8. | 9 | 5 |
| 9. | 10 | 2 |

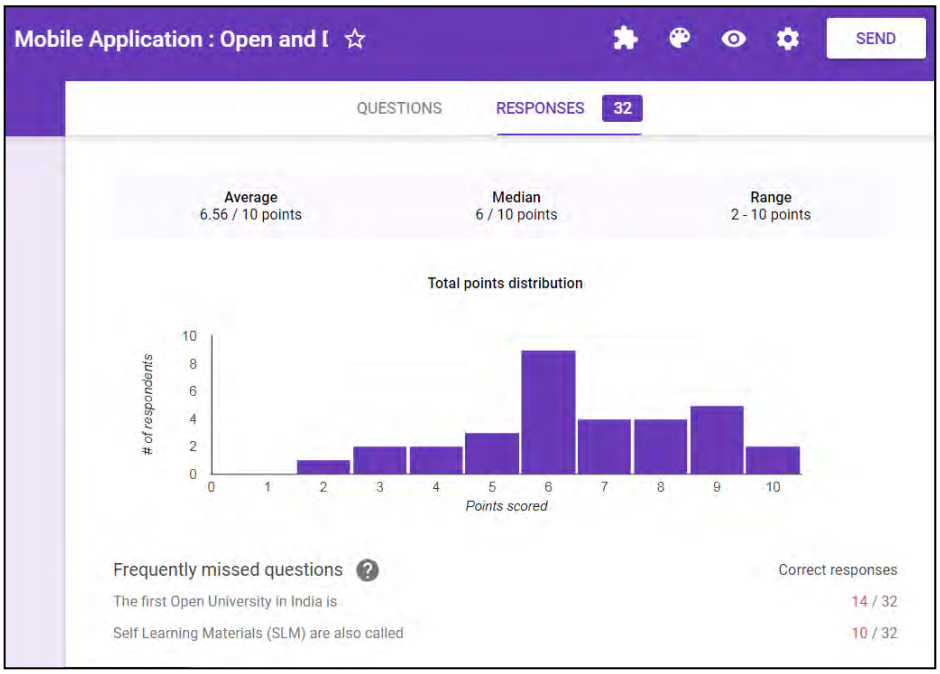



**Figure 7.** Total point distribution on the Questionnaire



### Perception regarding the use of Mobile App

The perception towards any resource, activity is important for learners to use it. If the perception is positive, learners will be willing to adopt it and if it is not positive, the learners will not use it in spite of our efforts. Thus, the perception of learners towards use of mobile devices for various processes of open and distance education was assessed and is presented in table-5.

**Table 5.** Perception towards use of mobile applications

| S. No. | Perception of Use of Mobile Devices | Opinion | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Strongly Agree | | Agree | | Not sure | | Disagree | | Strongly disagree | |
| | | Score | % | Score | % | Score | % | Score | % | Score | % |
| 1 | providing Self Learning Materials (SLM) | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | sharing media | 07 | 21.2 | 24 | 72.7 | 02 | 6.1 | 0 | 0 | 0 | 0 |
| 3 | accessing syllabus | 04 | 12.1 | 27 | 81.8 | 02 | 6.1 | 0 | 0 | 0 | 0 |
| 4 | completing quizzes | 05 | 15.2 | 28 | 84.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | providing Student Support Services | 07 | 21.2 | 24 | 72.7 | 02 | 6.1 | 0 | 0 | 0 | 0 |
| 6 | providing admission related information | 06 | 18.2 | 25 | 75.8 | 02 | 6.1 | 0 | 0 | 0 | 0 |
| 7 | accessing assignments | 06 | 18.2 | 24 | 72.7 | 03 | 9.1 | 0 | 6 | 0 | 0 |
| 8 | participating in Discussion Forums | 08 | 24.2 | 23 | 69.7 | 02 | 6.1 | 0 | 10 | 0 | 0 |
| 9 | providing examination related information | 09 | 15.2 | 22 | 66.6 | 02 | 6.1 | 0 | 0 | 0 | 0 |

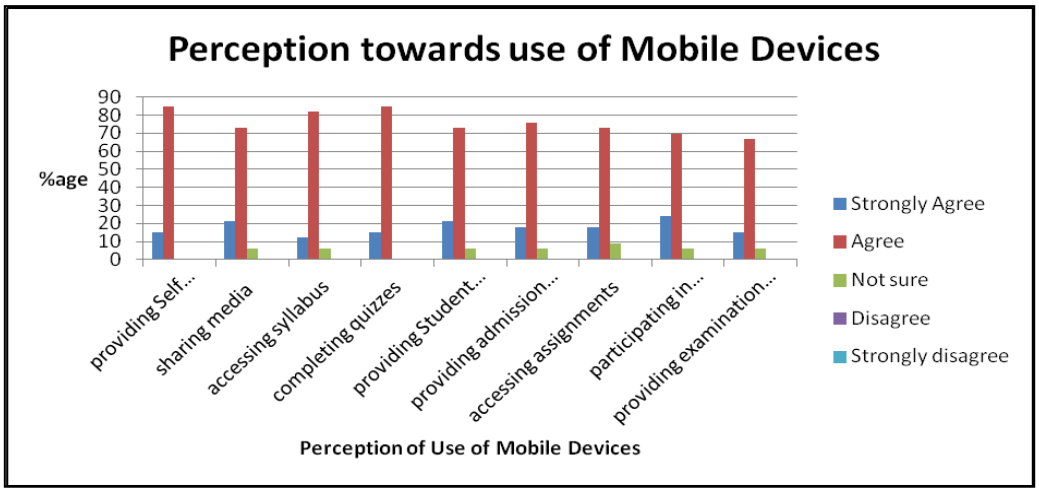



**Figure 8.** Perception of Learners regarding Mobile App

As can be seen from the table 5 the perception of all learners for the use of mobile app for providing SLM and completing quizzes was found to be positive. Soleimania, et al.(2104) found that positive perception of the role of MALL (Mobile Assisted Language Learning ) in enhancing learners' English through providing them with the opportunity to access various useful materials, to carry out different activities in English, and to communicate and interact with their friends and lecturers using English. In the present study too all agreed to use of mobile devices for providing SLM and completing quizzes. Pindeha (2015) also said that the users' acceptance of using mobile apps in learning Kadazandusun language was influenced by their perceived usefulness of the mobile apps and ease of use of mobile apps. In other dimensions sharing media; accessing syllabus; providing Student Support Services; providing admission related information; participating in Discussion Forums; providing examination related information only 6.1% learners expressed that they were not sure on the role of mobile devices in providing these services. Only in accessing assignments 9.1 % learners felt unsure of role of mobile devices. Thus, we can say that mobile devices are perceived positively in open and distance learning environment and should be explored and used for better reach.



## Discussion

The feedback provided by the learners reveals that the mobile app was found to be relevant and effective by most of the learners. They found it to be very good and interactive. All learners expressed it to be "good initiative" and referred to it as "an appreciable effort". It was found to be quite motivating as it gives them offline matter to read. It was found it to be educative, useful and effective app for students of Distance Education who had no background of Open and Distance Education. As also reported by Noor, et al. (2018) the users' acceptance has been overwhelming. The users' perceived the AMIT's application as a convenient, practical and quick source of reference compared to the conventional, hardcopy terminology book. Similar was the finding of the present study that this small, user friendly and crisp application can help fresher's clear their basics about the Open and Distance learning system which contributes phenomenally to the expansion of the Higher Education system especially in India. It will be useful for students of ODE and they can understand the system at their own place and space. This app is ice breaker for the learner of ODL as then they can go directly through the material. Small modules of this type may be developed; learners can go through the information any time in an interactive way. This App will facilitate the learner to navigate through the content in an easy way via different means of resources, like audio, video or text. The activity like this motivates to teachers and others to design mobile app for their own programmes also.

The design of the ODE needed some modifications as per the feedback like more images could be used wherever possible and more refinement is desirable. The font style, color and formatting need to be revisited. Learners' suggested that it will be better if a navigation manual of one slide can be added in starting which will help learners to navigate more effectively. Module on app should start with module objectives which may motivate the learner to navigate through all pages. There is scope to improve interface, structure of content and navigational tool. Interactivity also need be increased. This mobile application is highly useful for learners and can be used as addition to or substitute for Self Learning Material (SLM). It generates interest and motivates learners. Since it is supported with Audio/Video files, it helps learners to understand contents in better way.

The mobile app needs one time download and thus can be facilitated through the study or the regional centers of IGNOU. It felt like reading a well written e-book. FAQ or discussion page where one can help another with doubts and raise questions would be helpful.

Also the perception of the learners towards Mobile devices was found to be positive and thus can be explored to provide the teaching learning at distance as in open and distance education through the use of mobile devices. The present study indicates that there is lot of positive perception for the use of mobile application amongst learners. It could be due to the fact that they are digital natives.

## Conclusion and Suggestions

In conclusion, the findings revealed that the Mobile Application ODE for the orientation of the learners of Open and Distance Education was found to be effective by most of the learners and thus may be used as a learning resource to orient the learners towards the Open and Distance Education. The use of Mobile Application ODE's for teaching and learning will be a step towards M-learning wherein the latest theory of learning through connectivism is used for learner's learning.



Mobile Devices are the next step forward in open and distance education. It will enable open distance learners to learn at distance. Hence, it is time for Open Universities to look into modalities for providing m-learning, given the scenario that learners and teachers are both ready (Miglani&Awadhiya, 2016).
The present study indicates that there is lot of positive perception for the use of mobile application amongst learners. it could be due to the fact that they are digital natives.

The government has taken initiative of encouraging institutions to launch mobile application for greater reach. In depth learning and analytics of mobile app learning as well as its effect on achievement need to be explored. There is a growing trend in use of mobile app (Sharma,2019) especially in English language learning (Aziz, et.al, 2018).

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## About the Author

**Nisha Singh**

Dr Nisha Singh is working as Deputy Director (R&D), in Center for Online Education (formerly Inter University Consortium for Technology-Enabled Flexible Education and Development). She has a long classroom teaching experience as Teacher Educator (1993-2009) in various Teacher Training Institutions (Department of Education, University of Delhi; Vasanta College for Women, Varanasi, UP; MJP Rohilkhand University, Bareilly, UP).



She is actively involved in Faculty Development Programmes of IGNOU and other universities. Her areas of specializations are Teacher Education, ICT Applications in Education and Online Education, E-content development, Mobile learning, Open Education Resources (OER), Massive Open Online Courses (MOOCs). She also coordinates the SWAYAM, SWAYAM-Prabha activities in IGNOU.

Mailing Address:
Indira Gandhi National Open University,
Centre for online Education, Block-17, Maidan Garhi
New Delhi-110068, India
E-mail: drnisha@ignou.ac.in ; drnishaindia@gmail.com