

A STUDY ON KIBO APPLICATION FOR VISUALLY IMPAIRED STUDENTS

Submitted in partial fulfillment of the requirement for the award of

Bachelor of Business Administration

By

JAMJAGGALI PRUDVIRAJ

(38280003)



**DEPARTMENT OF BUSINESS ADMINISTRATION
SCHOOL OF MANAGEMENT STUDIES**

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade "A" by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119

APRIL 2021



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DEPARTMENT OF BUSINESS ADMINISTRATION

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **JAMJAGGILI PRUDVIRAJ (38280003)** who carried out the project entitled "A STUDY ON THE KIBO APPLICATION FOR VISUALLY IMPAIRED STUDENTS" under our supervision from 6th January 2020 to 6th March 2020.

Dr. THINESH KUMAR M.COM., M.B.A.,M.Phil.,Ph.D
(Internal Guide)

Dr.Bhuvaneswari M.B.A., Ph.D.,
Dean – School of Management Studies

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I **J.PRUDVIRAJ (38280003)** hereby declare that the Project Report entitled **“A STUDY ON KIBO APPLICATION FOR VISUALLY IMPAIRED STUDENTS”** Sholinganallur Chennai. done by me under the guidance of **DR.THINESH KUMAR. M M.COM., M.B.A., M.Phil., Ph.D.** Internal and at submitted in partial fulfillment of the award of Bachelor of Business Administration degree.

DATE:

PLACE: CHENNAI

J.PRUDVURAJ

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ABSTRACT

Many learning technologies, such as the block-based programming environments used to teach programming and many literacy applications, rely heavily on visual elements to convey information, making them inaccessible for students with visual impairments. In this project to discover how students with visual impairments are currently KIBO app using technologies, including touchscreens, and the accessibility problems with existing touchscreen devices and on the design, development and evaluation of two pieces of touchscreen-based learning technology for children. The Project explores the use of KIBO application to support the needs of students with a disability. Specifically, the chapter will examine use of KIBO application in mobile factors associated with illness or disability and also the use of mobile devices to support students with diverse communication disorders. The kibo app allow students with visual impairments to independently access similar content for learning to that of their sighted peers.

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CHAPTER 1: INTRODUCTION

1.1 Introduction of KIBO application

Kibo is a one-stop solution for any multilingual printed, handwritten and digital content accessibility. Kibo makes reading and learning experience inclusive and immersive for all (including the blind and visually impaired people).

It helps you read text across multiple international languages through audio. It supports multiple formats including PDF, TXT, EPUB, DAISY, MP3, OPUS, AAC, DOCX, JPG, along with PNG. You can also capture and read text from physical documents in real time.

1.2 Features OF KIBO application:

Kibo comes with various features listed below:-

1. View Recent Files

This will show the most recent 10 files you have opened and read along through Kibo Application.

2. Capture & Read

Open Capture & Read, the phone-camera will start (make sure you are connected to the internet), capture document photo and read the document in audio across multiple languages. You can also translate the content into different languages or read image labels.

3 Read your Documents

Read your Documents option helps you read existing files from your internal storage. It also helps you read text from a non-accessible scanned/non-unicode PDF through OCR option.

When you are reading a document, you will get the following features:

- Play/Pause – To start or pause reading

- Navigation – Using left/right buttons to go to previous/next word, sentence, paragraph, page, section and chapter - as per the selected level of navigation
 - Audio-Highlight – This feature helps you highlight content you are listening and save them in your notes area
 - Write-notes – This feature helps you type your comments in your notes
-
- Table of Contents – This feature helps you navigate to a desired chapter/section in DAISY and EPUB Books.
 - Levels of Navigation – Choose the level of text-navigation (Word/Sentence/Paragraph/Page/Section/Chapter). In case of an audio file, you can select between 10, 30, 60 seconds
 - Add Bookmark – This feature allows you to add multiple bookmarks in the same document, which can be accessed from the 'Bookmarks' option in 'More options' menu
 - More-Options – This list includes: Notes, Bookmarks, Settings
 - Notes – All your notes from the document will come here. You can edit, copy, share or delete your notes here

4. Read your Audio-Books

Read an existing audio files from your internal storage. You can access your audio books by either selecting the MP3 or OPUS format document or choose any MP3 or OPUS file from other apps, click open or share with, and choose Kibo.

5. Open E-Book Library

This library hosts more than 1 Million+ books from Sugamya Pustakalaya and Bookshare.

6. Read from Image

Text in the images can be read along with options to save, copy or share it with others enabling content accessibility for your friends too.

7. View Saved files

All the files saved by you after processing will appear in this tab.

8. Settings

This tab ensures that our blind and visually impaired friends experience maximum accessibility with options to change font size, reading speed, voice settings. Other preferences include: Enable/disable talkback reading, Color inversion, Processing sound, Image labeling preferences, etc. You can also view remaining credits, Change TTS and Translation Settings and Logout from your account.

1.3 Kibo App Guide

Welcome! Kibo is a one stop solution for all your reading and learning needs. We aim to provide solutions that make reading and learning at-par-with visually-abled people.

It is an inclusive app which is completely supported with talkback. Helping you read any kind of text-printed, handwritten, digital, audio, with an immersive reading experience.

You can access content across multiple languages including many Indian and overseas languages.

Link to Kibo App Tutorial : <https://youtu.be/WI5UEJBRh1M>

Getting Started,

Download and Installation

Kibo: Access Simplified App is available on Play-Store and can be downloaded from the given link

<https://play.google.com/store/apps/details?id=com.trestle.labs.kibo>

You can simply type “Kibo” and can download and install the app from Play Store.

App Permissions and Sign In after successful installation, The app asks for required permission, After providing the required permissions. After this the user can choose the google account to continue.

Language Setup:

Kibo app provides the flexibility to read text in desired voices available. Users can select the preferred Text to Speech Engine and Voices for different languages.

You can set TTS Engine & Voice for different languages the help of following steps

1. Go to settings tab from the main-page
2. Select the Language you wish to set

3. Select the text-to-speech engine for the language. Select from installed engines or download from the list. In-case of downloading a new engine, you will be redirected to the respective source
4. After selecting the text-to-speech engine, select the text-to-speech voice for that engine
5. Repeat this for all the languages you want to set the voice and click done
6. This is a one-time process. You can go back to settings and change your preferences anytime

1.4 KIBO App Functionalities

The various functionalities of the app are listed below:-

1. COVID -19 Assist

COVID 19 Assist helps you to get the required relevant information about the pandemic on your fingertips.

- Essential Information – Here you will get to know about the Symptoms, Prevention Treatment and Statistics of COVID 19
- My Gov Telegram – Here you will get the direct government verified information through telegram
- My Gov Whatsapp - Here you will get the direct government verified information through Whatsapp
- Apollo 24/7 Assesment- Here you can check your symptoms then decide whether you should consult and doctor
- How can we help you? – With this button you can reach out to us and we can see how can we help you
- AIIMS Information Booklet on COVID 19 – This option provides detailed information on COVID -19
- Guidelines for Home Quarantine – This option provides the guidelines for home quarantine issued by Ministry of Health

2. View Recent Files

This will show the most recent 10 files you have opened and read.

3. Capture & Read

Capture document photo and read the document in audio across multiple languages

- Open Capture & Read, the back-camera will start (make sure you are connected to the internet)
- Click on capture image button to capture photo
- The text will be processed (a processing sound) and after sometime, your output will be ready
- You can press read button to read the content and use the navigations options to navigate inside the text.
- You can also translate the content into different languages

4. Read your Documents

Read existing files from your internal storage. Kibo supports following formats: .pdf, .txt, .epub, DAISY, .mp3

- Select Read your documents and go-to File Manager or Memory Card or Root folder, according to your choice
- Navigate to the folder and select the document that you want to read
- Alternatively, you can choose any file and inside open with, choose Kibo

Reading a Document

When you are reading a document, you will get the following features:

- Play/Pause – To start or pause reading
- Navigation – Using left/right buttons to go to previous/next word, sentence, paragraph, page, section and chapter - as per the selected level of navigation
- Audio-Highlight – This feature helps you highlight content you are listening and save them in your notes area
- Write-notes – This feature helps you type your comments in your notes
- Table of Contents – This feature helps you navigate to a desired chapter/section in DAISY and EPUB Books.
- Levels of Navigation – Choose the level of text-navigation
- (Word/Sentence/Paragraph/Page/Section/Chapter). In case of an audio file, you can select between 10, 30, 60 seconds.
- Add Bookmark – This feature allows you to add multiple bookmarks in the same document, which can be accessed from the 'Bookmarks' option in 'More options' menu
- More-Options – This list includes: Notes, Bookmarks, Settings

- Notes – All your notes will come here. You can edit, copy, share or delete your notes here. In case of an interruption during reading, the app automatically saves the last topic you were reading. You will be prompted to 'resume' reading or 'start again' when you open the same book again

Reading text from a non-accessible scanned/non-Unicode PDF

You can open the pdf using Read your Documents and inside this, select the OCR option. This will then process all the pages of the document (processing sound) and after sometime, your output will be ready and you can then read the document

4. Read your Audio-Books

Read existing MP3 files from your internal storage

- Select Read your audio-books and go-to File Manager or Memory Card or Root folder, according to your choice
- Navigate to the folder and select the .mp3 format document that you want to read
- Alternatively you can choose any .mp3 file and inside open with, choose Kibo

5. Open E-Book Library

This library hosts books from Bookshare, Sugamya Pustakalaya and Guttenberg libraries.

- Open E-book library and click the Navigation drawer
- Inside this side-menu, you will find content sources as- Sugamya Pustakalaya, Bookshare
- You may use your login details to do a one-time login to Sugamya Pustakalaya or Bookshare libraries
- You may search and download books from all these libraries and get them saved under 'My Bookshelf'

6. Read from Image

Read text in images:

- Open Read from Image, go to Gallery or other photo apps
- Select the image that you want to read (Some apps may have an additional OK button to select)
- The image will be processed (a processing sound) and after sometime, your output will be ready
- Alternatively, You can choose any image file and 'share' it with Kibo to read it
- Saving the Output

- When the processing of the document is completed, you can save, copy or share the documents.

7. View Saved files

All the files saved by you after processing will appear in this tab

8. Settings

In Settings, you can access the following:

- Change font size
- Change reading speed
- Enable/Disable Talk-back reading: By enabling this, you can access the text on the screens using your talkback. The Play/Pause and navigation buttons will be hidden
- Enable/Disable Color Inversion: By enabling this, the text reading area will change to- white text on black background
- Enable/Disable Processing Sound: The processing sound, which is played during Capture and Read and OCR, can be switched on and off with this option.
- Change voice settings
- View remaining credits
- Logout

9. Voice Settings

Set the TTS Engine & Voice for different languages

- Go to settings tab from the main-page
- Select the Language you wish to set
- Select the text-to-speech engine for the language. Select from installed engines or download from the list. In-case of downloading a new engine, you will be redirected to the respective source
- After selecting the text-to-speech engine, select the text-to-speech voice for that engine
- Repeat this for all the languages you want to set the voice and click done
- This is a one-time process. You can go back to settings and change your preferences anytime

Chapter 2: REVIEWS OF LITRATURE

2.1 INTRODUCTION

In this Chapter, the researcher has made an attempt to study and understand the satisfaction towards usage of kibo application of Customer experience. This attempt includes, understanding the basic concepts of Customer experience, analyzing research studies made by earlier researchers in respect of Customer experience in Trestle Labs. Through this Literature Survey researcher wants to find out which are the important parameters of Customer experience in respect of KIBO app usage.

- **Mattia, Amico¹ and Ludovico (2020)**, This paper presents Kibo, a MIDI controller equipped with a simplified tangible user interface. Entirely made of wood, Kibo presents eight geometric extractable solids that can be used to trigger note events and to control musical parameters. In the framework of the cooperation with the Music Informatics Lab of the University of Milan, the distinctive features of the device and their applicability to the field of music education have been investigated. Kibo aims to offer intuitive interaction with music parameters and fosters the acquisition of specific skills in a non-formal learning environment. Benefits are particularly evident for specific target categories of users, including preschool and primary school children and people with both physical and cognitive special needs.
- **Makoto J. Hirayama (2021)**, Book reading magnifier for low vision people was implemented as an application of smartphones or electronic tablets. Pages of books are captured by camera and the images of texts are magnified by the proposed devices. To read texts in the sequence of sentences in a book, the software recognizes and analyzes structures of book pages. To recognize lines of book texts, histograms of black and white is used. Using the devices, users enabled to move the magnified screens of book pages smoothly along a text line direction of reading sequences.
- **Founding members of Trestle Labs**, Akshita, a software engineer in Faridabad learnt about the challenges that the visually-impaired face on a daily basis during her final year project. She developed a device for the blind that could help them

navigate. The device would send vibration alerts in case of hurdles on the road to prevent any kind of mishaps, she tells The Better India (TBI). She tested the device on several individuals and it was some feedback that shaped her mission to help people with disabilities.

- **Yatin Pancha**, The fantastic tool for blind and low vision which makes people to feel like they have eyes! Keep it up, Lot of love and peace from the bottom of my heart for you and your team. It needs some improvements and features as well! But I do not hope because I am pretty sure that you will work hard and makes it more accessible for us.
- **Kayumba Mpwapu**, The app is very accessible and convenient especially for the visually impaired. It would be even better if it could navigate documents by paragraph. That's the only reason keeping me from giving it a five star rating.
- **Subathra Varadarajan**, Reading and extracting text are very helpful. Handwriting reading is also very good. I have to explore more in this app. But I find this app very helpful for my day to day activities in reading and converting in english as well as tamil. Thank you trestle team.
- **Tejas Waghmare**, This app was so helpful to the comfortable reading. Image and PDF reading reading is very well. This app helping me lot in my exams, in reading PDF and images. Thank you for this beautiful creation.
- **Philip Calvert et al.**, (2016) Library services to blind and visually impaired readers are changing as computer technology makes it possible to deliver reading material in a variety of new media formats. The Blind Foundation of New Zealand surveyed its library clients to discover the reading formats they currently used and which ones they preferred. The survey also asked questions about their access to computer technology and their personal assessment of their technological competency. There was a particular focus in the survey on the DAISY format and on services offering books by download. Analysis of the survey data shows that access to computer technology roughly matches the national profile. Use of computers generally declines with age, with iPhones and iPads being the exception. The DAISY format is both the most used and the most

preferred format for reading, though not so overwhelmingly as to suggest other formats can be dropped.

- **Marina Umaschi Bers (2018)**, This paper describes two programming environments explicitly designed for early childhood education, the screen-based ScratchJr; and the tangible robotic kit KIBO. Both of these tools were explicitly designed to support the learning of concepts and skills of computer science and engineering in a developmentally appropriate way. The design principles are based on the notion of “coding as playground” and “coding as literacy”.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

3.1.1 Descriptive research design

Descriptive research is a study designed to represent the participants in an accurate way. More simply put descriptive research is all about describing people who take part in the study.

3.2 SAMPLING TECHNIQUE

3.2.1 Convenience sampling method

A convenience sample is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach.

3.3 SOURCES OF DATA

Data collection is the term used to describe a process of preparing and collecting data.

Primary Data – Questionnaire given to 120 respondents

Secondary Data -Websites and online journals, Published reports & Review of literature from published articles

3.4 STRUCTURE OF QUESTIONNAIRE

Questionnaire was divided into two parts. First part was designed to know the general information about customers and the second part contained the respondent's opinions about customer's experience

3.5 SAMPLE SIZE

The sample of the study is 140 responses.

3.6 PERIOD OF STUDY

The duration of study is from January 2021 to March 2021 which is a three months of study.

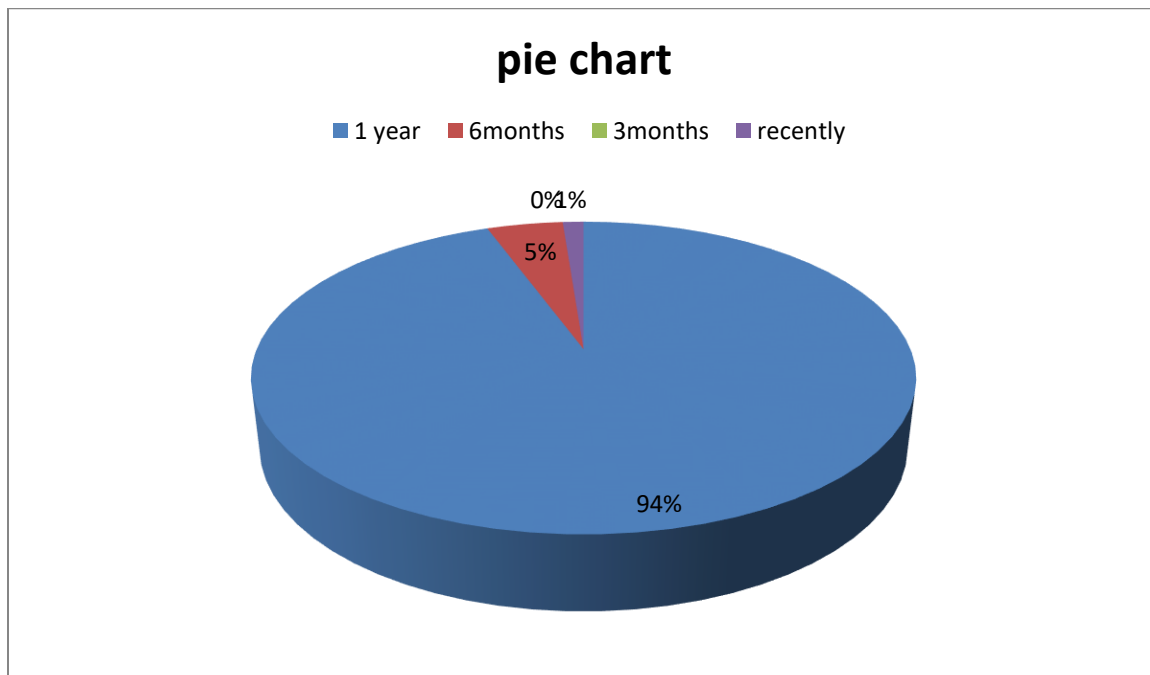
CHAPTER - 4 DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

Table 4.1.1: No from how long you are using KIBO

Options	%	count
1year	93.86	107
6months	4.39	5
3months	0.00	0
Recently	1.75	2

Chart 4.1.1: No from how long you are using KIBO



Interpretation-

From the above table it is interpreted that the number of responses according to year and month wise and 1year is 93.86%.

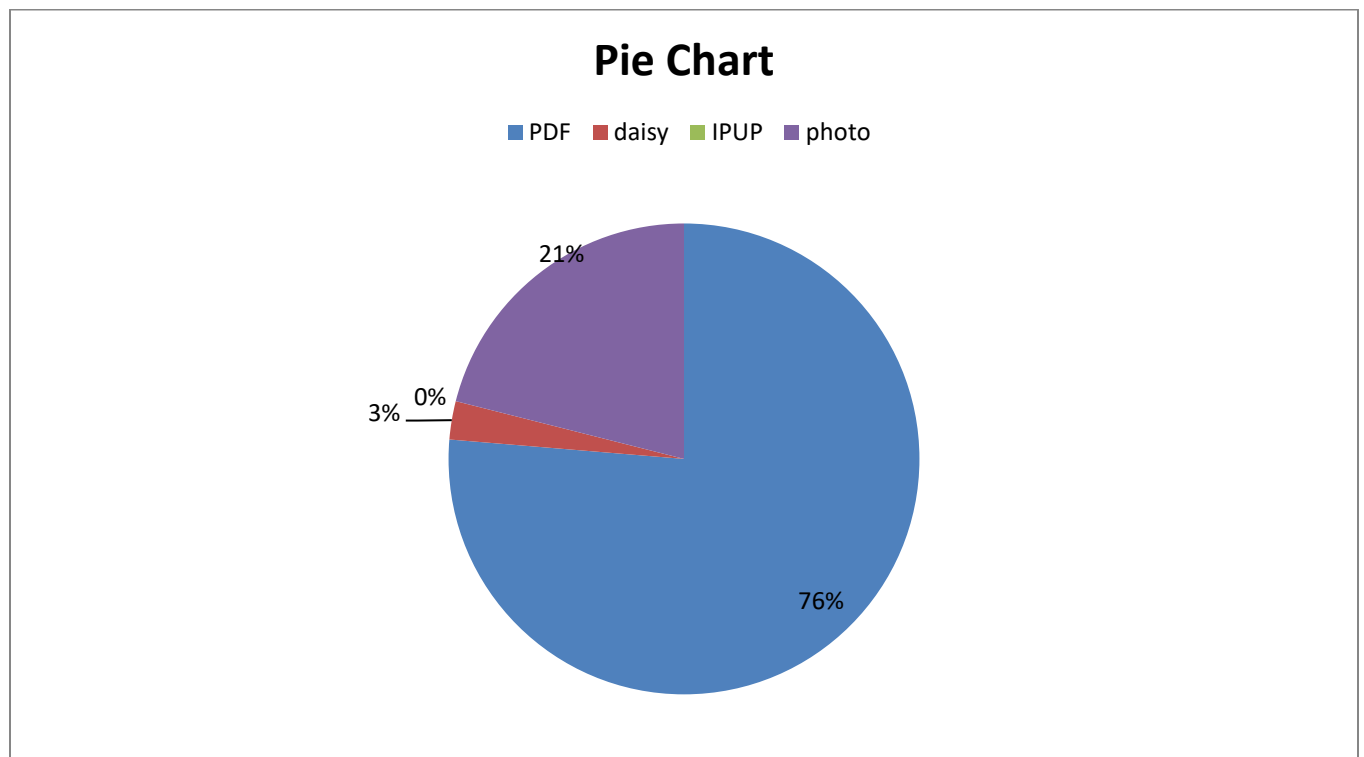
Inferences-

Majority responses are 1year is 93.86%.

Table 4.1.2: To access which type of files do your prefer KIBO

Options	%	count
PDF	76.32	87
Daisy	2.63	3
IPUP	0.00	0
photo	21.05	24

Chart 4.1.2: To access which type of files do your prefer KIBO



Interpretation-

From the above table it is interpreted that preference about KIBO app. Most of the respondent are using PDF format (76.32%) followed by photo (21.05) and Daisy (2.63).

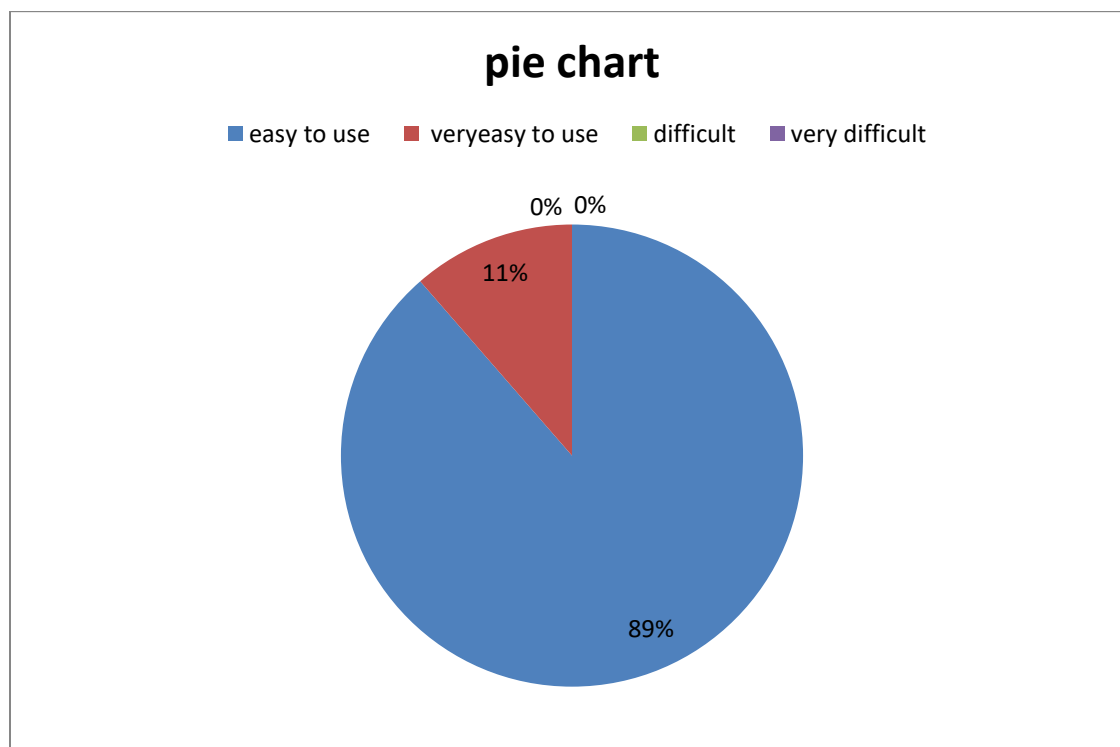
Inferences-

Most of the respondent are using PDF format (76.32%)

Table 4.1.3: How do you feel while using KIBO. On your phone

Options	%	Count
Easy to use	88.60	101
Very easy to use	11.40	13
difficult	0.00	0
Very difficult	0.00	0

CHART 4.1.3: How do you feel while using KIBO. On your phone



Interpretation-

From the above table it is interpreted that preference about KIBO app. Most of the respondent uses the app easily (88.60%) followed by very easy to use (11.40%).

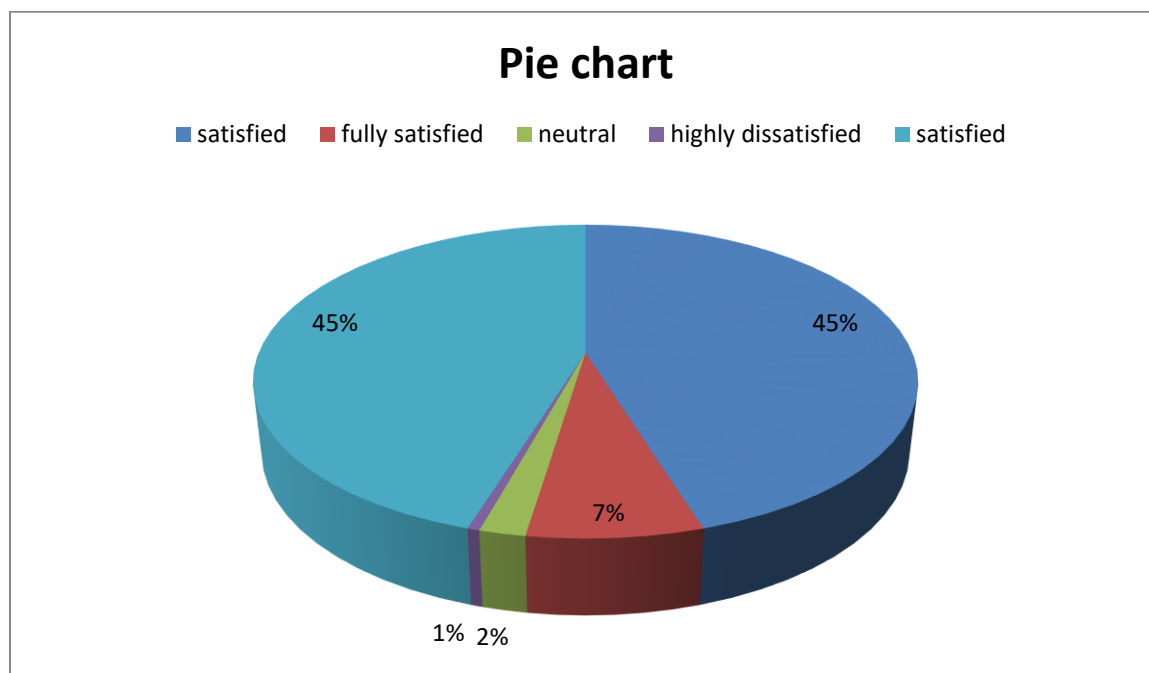
Inferences-

Most of the respondent are uses the KIBO app easily (88.60%).

Table 4.1.4: Do you satisfied with the audio quality recorded in KIBO

Options	%	Count
Satisfied	82.46	94
Fully Satisfied	13.16	15
neutral	3.51	4
satisfied	82.46	94
Highly dissatisfied	0.88	1

Chart 4.1.4: Do you satisfied with the audio quality recorded in KIBO



Interpretation-

From the above table it is interpreted that preference about audio quality of KIBO app. Most of the respondent satisfied using the audio quality (82.46%) followed by very easy to use (11.40%).

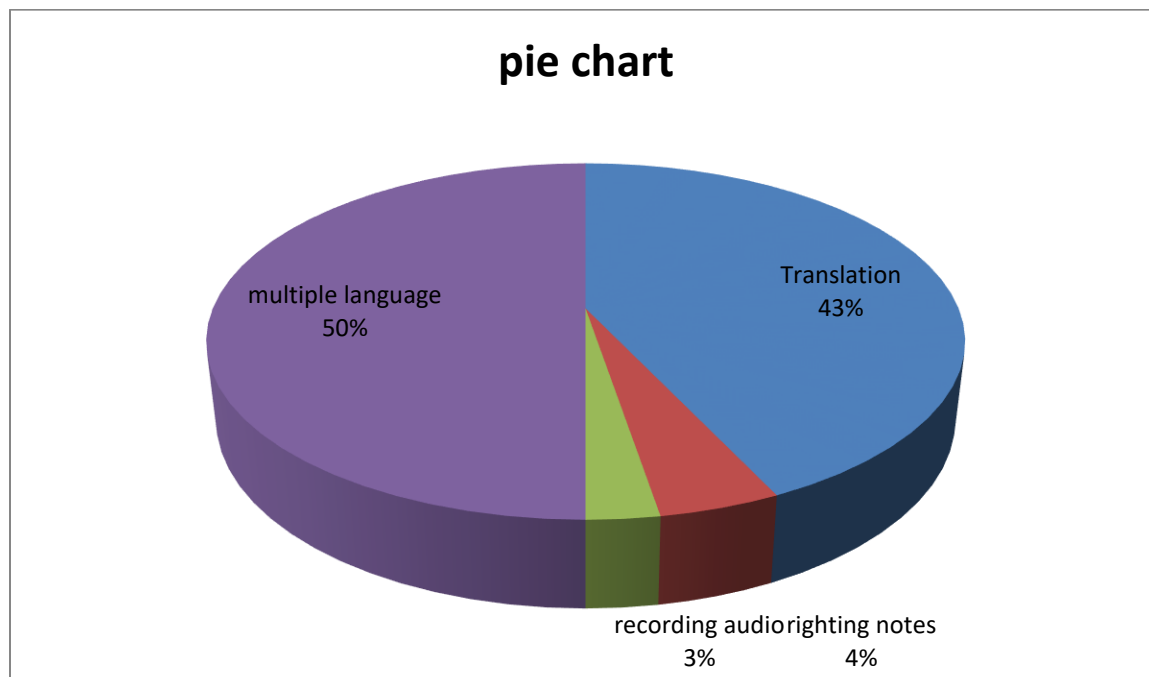
Inferences-

Most of the respondent satisfied using the KIBO app the (82.46%).

Table 4.1.5: Which of the feature do you like most in KIBO application

Options	%	Count
Translation	42.98	49
Righting notes	4.39	5
Recording audio	2.63	3
Multiple language	50.00	57

Chart 4.1.5: Which of the feature do you like most in KIBO application



Interpretation-

From the above table it is interpreted that preference about feature of KIBO app. Most of the respondent liked the Multiple Language feature in KIBO app (50.00%) followed by translation (42.89%).

Inferences- Most of the respondent liked the Multiple Language feature in KIBO app (50.00%)

Table 4.1.6: How do you rate the online library e facility connected with the application KIBO

Options	%	count
Good	74.56	85
excellent	21.05	24
neutral	4.39	5
Not so good	0.00	0

Chart 4.1.6: How do you rate the online library e facility connected with the application KIBO



Interpretation-

From the above table it is interpreted that preference about online library e facility feature of KIBO app. Most of them respondent that e-library facility is good (74.56%) followed by excellent (21.05%).

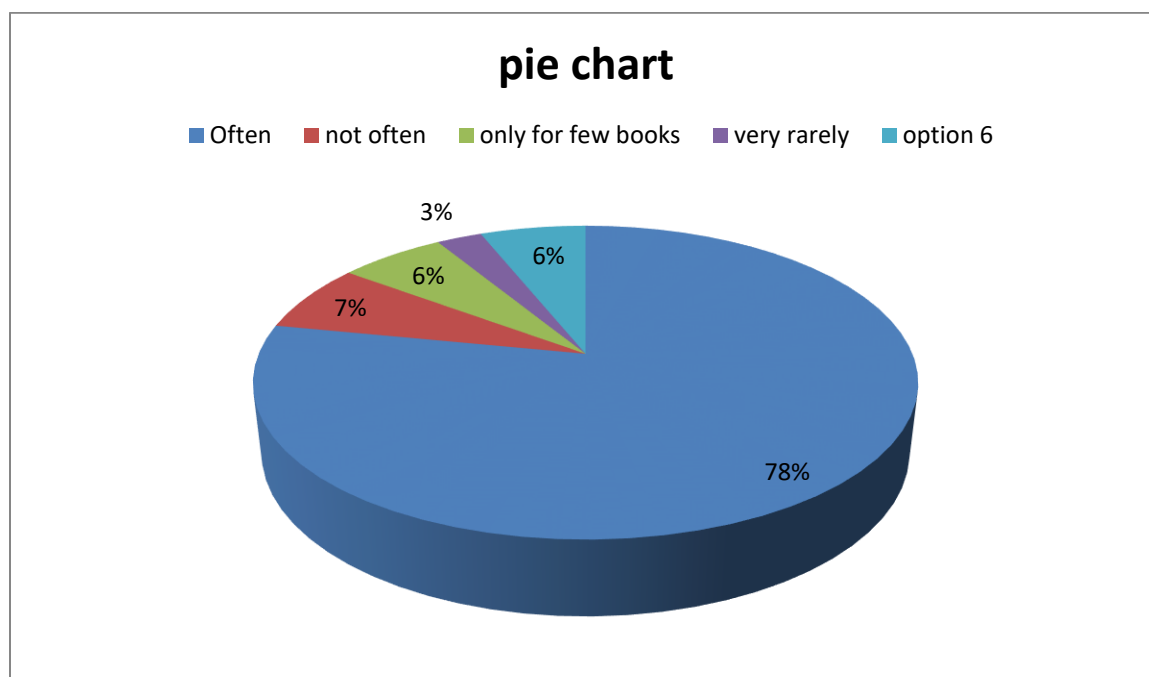
Inferences-

Most of them respondent that e-library facility is good (74.56%)

Table 4.1.7: How often dp4 online library in KIBO

Options	%	Count
Often	78.07	89
Not often	7.02	8
Only for few books	6.14	7
Very rarely	2.63	3
Option	6.14	7

Chart 4.1.7: How often dp4 online library in KIBO



Interpretation-

From the above table it is interpreted that preference about dp4 online library in KIBO app. Most of them respondent often dp4 is available in library (78.07%).

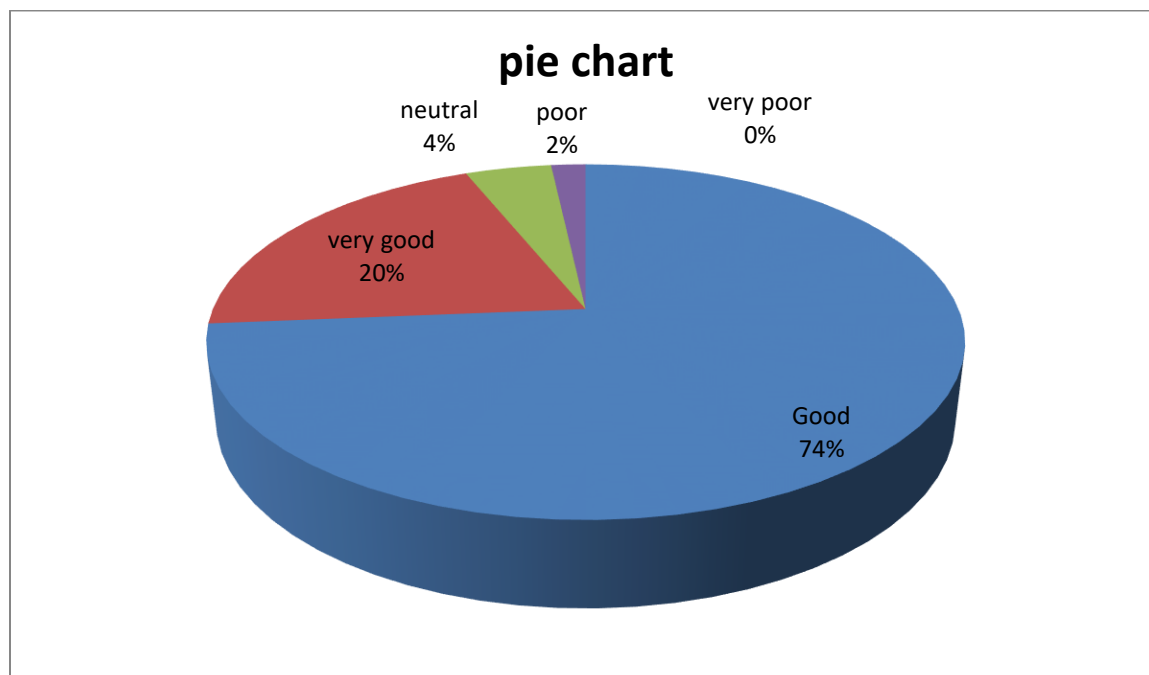
Inferences-

Most of them respondent often dp4 is available in library (78.07%).

Table 4.1.8: How is the feature of accessibility works with KIBO

Options	%	Count
Good	73.68	84
Very good	20.18	23
Neutral	4.39	5
Poor	1.75	2
Very poor	0.00	0

CHART 4.1.8: How is the feature of accessibility works with KIBO



Interpretation-

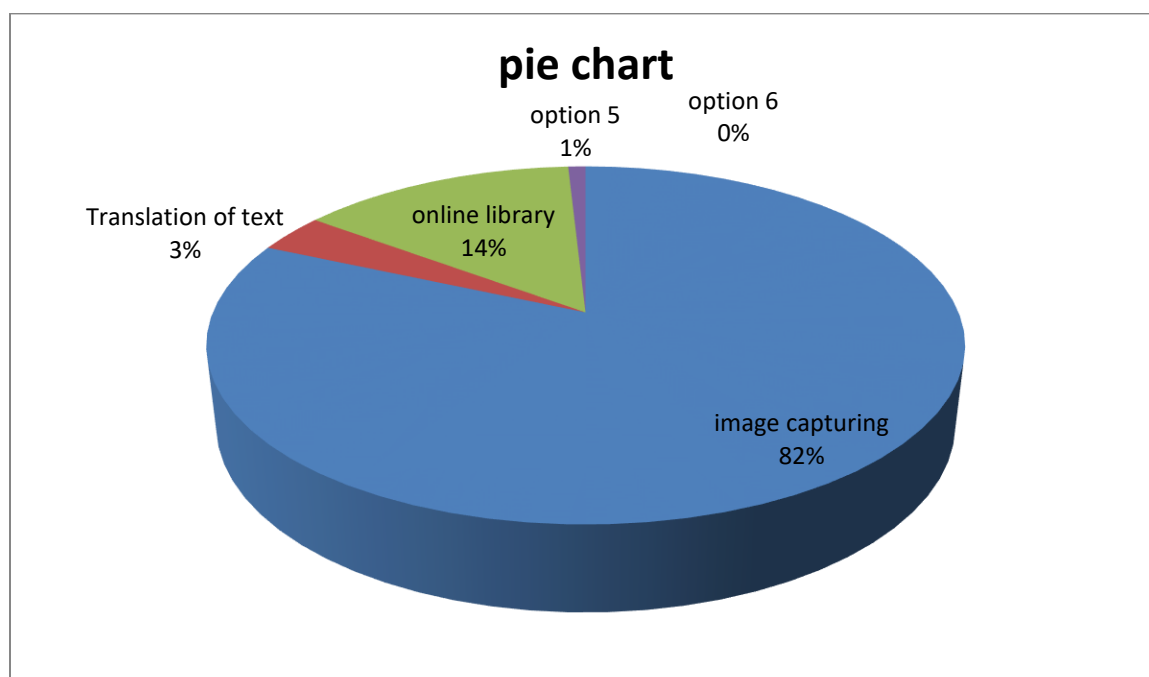
From the above table it is interpreted that preference about feature accessibility in KIBO app. Most of them respondent that it is good to access in KIBO app (73.68%).

Inferences- Most of them respondent that it is good to access in KIBO app (73.68%).

Table 4.1.9: Tell us about the specific feature that you like the most in KIBO WHY COMPARING WITH OTHER APPLICATIONS

Options	%	Count
Image capturing	81.58	93
Translation of text	3.51	4
Online library	14.04	16
Option 5	0.88	1
Option 6	0.00	0

CHART 4.1.9: Tell us about the specific feature that you like the most in KIBO why comparing with other applications



Interpretation-

From the above table it is interpreted that preference about online library e-facility feature of KIBO app. Most of them respondent that Image capturing feature in KIBO is good facility (81.58%) followed by Online library (14.04%).

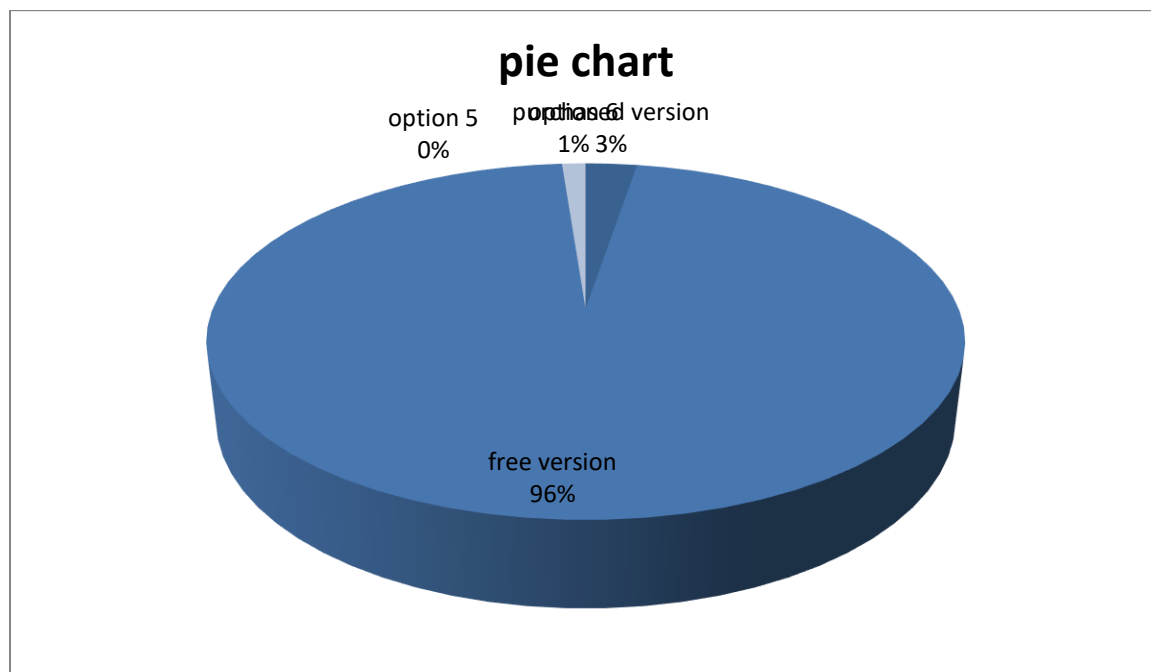
Inferences-

Most of the respondent liked the Image capturing feature in KIBO is good facility (81.58%).

Table 4.1.10: Which version of the KIBO do you use

Options	%	Count
Purchased version	2.63	3
Free version	96.49	110
Option 5	0.00	0
Option 6	0.88	1

CHART 4.1.10: Which version of the KIBO do you use



Interpretation-

From the above table it is interpreted that. Most of them respondent liked the Free version of KIBO (96.49%).

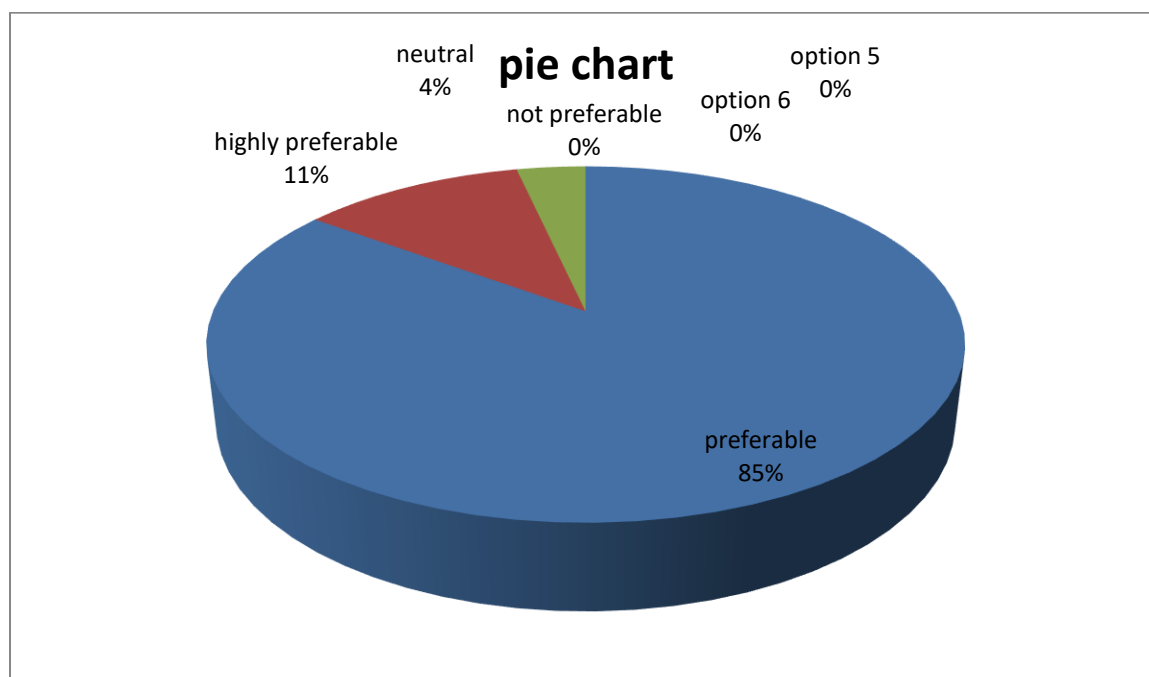
Inferences-

Most of them respondent liked the Free version of KIBO (96.49%)

Table 4.1.11: Do you think KIBO is preferable to visually impaired to use

Options	%	Count
Preferable	85.09	97
Highly Preferable	3.51	13
Neutral	3.51	4
Not preferable	0.00	0
Option 5	0.00	0
Option 6	0.00	0

CHART 4.1.11: Do you think KIBO is preferable to visually impaired to use



Interpretation-

From the above table it is interpreted that KIBO is preferred (85.09%) for Visually impaired people .

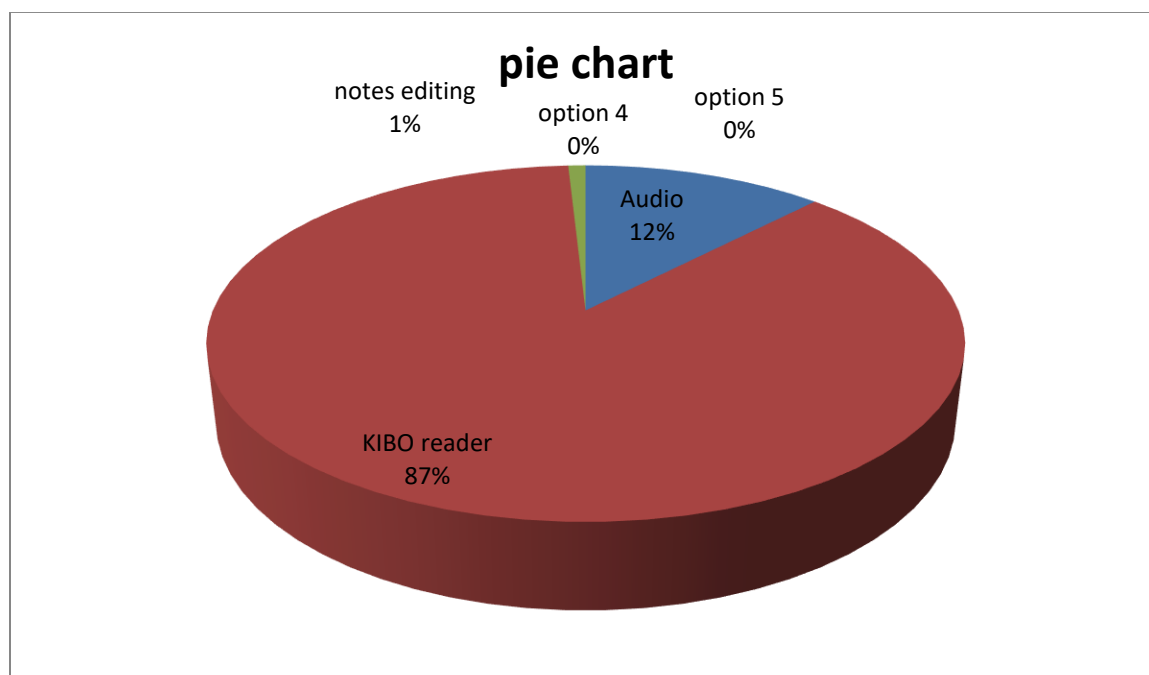
Inferences-

Most of the respondent preferred (85.09%) for Visually impaired people.

Table 4.1.12: Why writing or recording through KIBO which feature is most preferable?

Options	%	Count
Audio	12.28	14
KIBO reader	86.84	99
Notes editing	0.88	1
Option 4	0	0
Option 5	0	0
Option 6	0	0

CHART 4.1.12: Why writing or recording through KIBO which feature is most preferable



Interpretation-

From the above table it is interpreted that preference about recording on KIBO app. Most of them respondent that KIBO reader feature is available (86.84%).

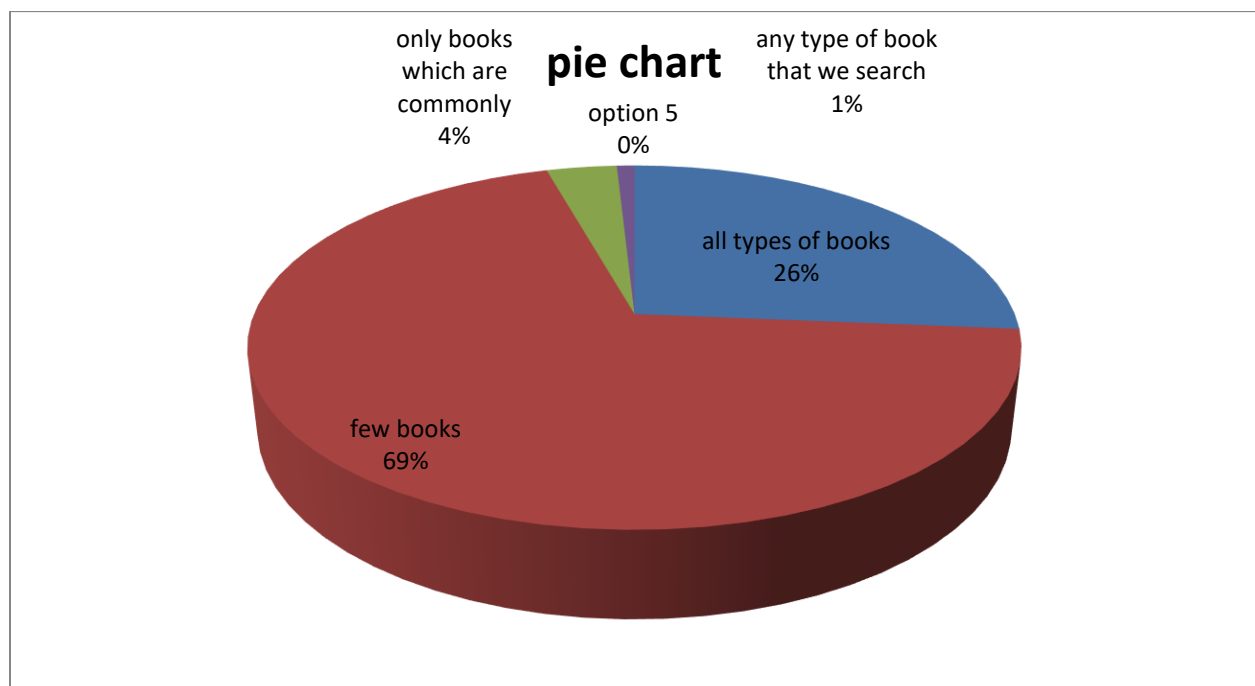
Inferences-

Most of them respondent that KIBO reader feature is available (86.84%).

Table 4.1.13: Do you find all books in the E library connected to KIBO

Options	%	Count	
All types of Books	26.32	30	
Few books	69.30	79	
Only books which are commonly	3.51	4	
Any type of book that we search	0.88	1	
Option 5	0	0	
Option 6	0	0	

CHART 4.1.13: Do you find all books in the E library connected to KIBO



Interpretation-

From the above table it is interpreted that few books are preferred (69.30%) e-library. and followed by the all types of Books available in e-library (26.32%).

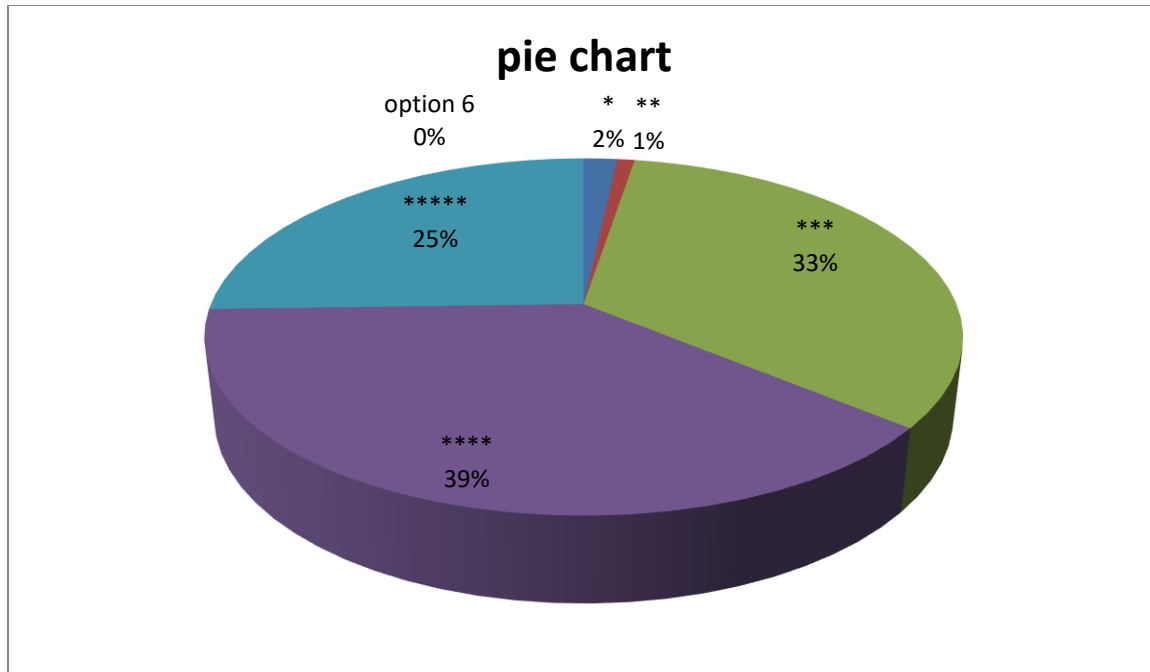
Inferences-

Most of the respondent that few books are available in the e-library KIBO app is (69.30%).

Table 4.1.14: How do you read KIBO

Options	%	Count
*	1.75	2
**	0.88	1
***	33.33	38
****	38.60	44
*****	25.44	29
Option 6	0	0

CHART 4.1.14: How do you read KIBO



Interpretation-

From the above table it is interpreted that four stars are preferred (38.60%) to read the KIBO app .

Inferences- Most of the respondent that few books are four stars are preferred (38.60%).

CHAPTER 5

5.1 FINDINGS

- Majority 93.86% of the people are using KIBO from 1 year
- Majority 76.32% of the respondents are using for PDF access.
- Majority 88.60% of the respondents feel easy to use.
- Majority 82.46% of the respondents are satisfied with the audio quality.
- Majority 42.98% of the respondents are likes for translation.
- Majority 74.56% of the respondents are rate the online library e facility connected with the application KIBO.
- Majority 78.07% of the respondents are often dp4 online library.
- Majority 73.68% of the respondents are good in accessibility.
- Majority 49.6% of the respondents are number of subscribers.
- Majority 33.6% of the respondents are the mobiles.
- Majority 43.6% of the respondent are the high quality.
- Majority 38.60% of the respondents are satisfied in reading KIBO.

5.2 SUGGESTIONS

The overall experience index from the study reveals that the KIBO application is Processing very well and customers using and getting experience with the service Given. Some of the customers have complained about the interface of the KIBO applications because as per it regular updates it will changed automatically.

5.3 CONCLUSION

KIBO is a one-stop solution for any multilingual printed, handwritten and digital content accessibility. KIBO makes reading and learning experience inclusive and immersive for all (including the blind and visually impaired people). It helps you read text across multiple international languages through audio. It supports multiple formats including PDF, TXT, EPUB, DAISY, MP3, OPUS, AAC, DOCX, JPG, along with PNG. You can also capture and read text from physical documents in real time. The research

with KIBO shows that as young as four are capable of successfully building and programming robots. As students get older, they are able to master increasingly complex concepts including repeat loops, sensors, and conditional statements. Students are able to use KIBO to explore a variety of interdisciplinary content including literature, history, and more. Finally, research with KIBO shows that young students are able to practice social-emotional skills such as communication and collaboration when using the KIBO robotics kit.

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APPENDIX(Questionnaire)

1. Name :
2. email :
3. Gender : male / female ()
4. From how long you are using KIBO? ()
a) 1year. b) 6months c) 3months d) recently
5. To access which type of files do you prefer KIBO. ()
a) PDF. b) daisy c) IPUP d) photo
6. Which o the feature do you like the most in KIBO. ()
a) Translation b) righting notes c) recording audio d) multiple language
7. How Do you feel while using KIBO. On your phone ()
a) Easy to use. b) very easy to use c) difficult d) very difficult
8. Do you satisfied with the audio quality recorded in KIBO? ()
a) Satisfied, b) fully satisfied, c) neutral, d) not satisfied, e) highly dissatisfied.
9. How do you rate the online library e facility connected with the application KIBO ?
a) Good, b) excellent, c) neutral, d) not so good, ()
- 10 How often dp4 online library in KIBO? ()
a) Often, b) not often, c) only for few books d) very rarely.
11. How is the feature of accessibility works with KIBO? ()
a) Good b) very good,, c) neutral, d) poor, e) very poor
12. Tell us about the specific feature that you like the most in KIBO WHY COMPARING WITH OTHER APPLICATIONS ()
a) IMAGE CAPTURING AND READING,
b) TRANSLATION OF TEXT FROM ONE LANGUAGE TO PREFERRED LANGUAGE,
c) ONLINE LIBRARY FACILITY ACCESSING MULTIPLE TYPES OF FILE FORMATS
13. WHICH VERSION OF THE THE KIBO DO YOU USE. ()

a) Purchased version, b) free version.

14. Do you think KIBO is preferable to visually impaired to use? ()

a) Preferable, b) highly preferable, c) neutral, d) not preferable.

15. Why writing or reading through KIBO which feature is most preferable ()

a) Audio b) KIBO reader c) notes editing

16. Do you find all the books available in the E library connected to KIBO ()

a) All types of books c) only books which are commonly available

b) Few books d) any type of book that we search for.

17. How do you read KIBO ()

a) * b) ** c) *** d) **** e) *****

18. Do you suggest any features to be added -----