
PERSPECTIVE ON ICT IN TEACHING AND LEARNING LISTENING & SPEAKING IN THE 21ST CENTURY: BEYOND CLASSROOM WALL

Gumawang Jati

Bandung Institute of Technology

ABSTRACT

Rapid evolution of communication technologies has changed language pedagogy and language use, enabling new ways of learning, new forms of authorship, and new ways to teach beyond cognitive, classroom wall and curriculum. The first section of this paper identifies and discusses 3 major issues related to ICT: behaviorism, cognitive approach, and integrative ICT. Computer software and Apps for teaching and learning speaking & listening are discussed in term of their effectiveness. The second section discusses the development of ICT (Internet Communication Technology) in the 21st century and its common practice done by English teachers, especially in teaching listening and speaking. The third section discusses the implication for teaching and learning and what teachers and students can do beyond the classroom wall.

Keywords: ICT for ELT, Apps for ELT, Beyond classroom wall

INTRODUCTION

Information Communication Technology (ICT) has played an important role in shaping the innovation in teaching listening. ICT provides great amount of resources to help students and teachers to get access to authentic materials for teaching and learning listening and speaking skills. There are variety of qualified materials for teachers to cater different students with different characteristics, i.e. preferences, interests, needs, and also learning styles. The authenticity of web-based resources can be a potential support for teachers in overcoming some problems with students' listening and speaking skills and preparing students to be able to cope with different listening and speaking situation in real contexts.

According to Pawlak, Waniek-Klimczak, & Majer (2011) the ability to speak in a foreign language is a difficult and arouse task; this is because the acquisition of speaking involves the mastery of different language subsystem to point that they can be employed automatically in spontaneous communication. Therefore one of the main functions of language teachers should provide as many opportunities as possible for their learners to develop their speaking skill in the target language. Then they ca interact with others under varied linguistics and social circumstances using such language subsystem appropriately and spontaneously. This is comprehensible in the sense that for many pupils the prime goal of learning a foreign language is to be able to speak it. This is essentially because many learners acknowledge that by being able to speak a foreign language, they are able to communicate with people of other countries, ethnic group race, and so on. Being able to speak a foreign language also builds their confidence, self-esteem, comprehension, and more (Vaseki, 2013). Factors affect successful oral language production includes the learners' ages, language knowledge and proficiency, and their motivation. Traditionally, the

teaching of speaking has taken place within formal classroom settings. Recently, with the rapid growth of Information and Communication Technologies (ICTs), computers and internet-based technologies play a more relevant role in teaching of the English listening & speaking skills and English in general. Thus, more and more English language teachers have opted for incorporating such emerging technologies into their everyday teaching as such “technologies can empower them as teachers and improve their teaching as well” (Smith & Barber, 2007, p. 11). This paper discusses the use of technology for listening in the first part and then for speaking in the next part.

TEACHING AND LEARNING LISTENING SKILLS USING TECHNOLOGY

Nowadays, the use of tapes which was considered as “ideal playback machine for teachers’ use” (Rixon, 1986, p. 132) have been extremely reduced. If not extinct, among teachers due to the availability of multimedia resources and advanced technology. Therefore the trend in the practices of teaching listening comprehension has experienced a lot of innovation throughout the time. Technology advancement provides support to learning environment for students’ listening comprehension through multimedia which consist of visual, auditory and textual; information, also the interactivity of the resources. Teachers can help students develop their listening techniques by selecting different kinds of materials, using visual options on the screen, maximizing the interactivity of computer control and other features provided by the computer and interactive technology. Lynch (2009) points out the main benefits of using advanced technology in teaching listening is that technology offers more choices and control to students. Moreover, it allows students to adapt it in accordance with their own interest as well as their learning styles in terms of content, mode (audio/video) activity, task type, difficulty, support (subtitle/hypertext), sequence, time and pace. To illustrate the potential of websites, it is worth to see what Martinez (2010) have done. Martinez compiled and categorized websites to be used for teaching listening into three categories, among others are websites which contain news in the form of audio, video and online radio, websites which speakers are not only native speakers but also non-native speakers. The followings are some interesting websites compiled and describes by Martinez (2010), which are accessible through the internet in the form of audio and video (see appendix 1).

Film can also be a great recipe to pump up students’ motivation. Students usually love to watch movies, and watching it together could be even more exiting for them. However, video watching cannot be the only activity for listening class. There should be a series of follow up activities to confirm students’ comprehension or at least to get students’ responses and feedback towards the video (see Appendix 2).

On top of this traditional materials, when talking about new technologies and listening comprehension, one of the first words we become familiar with is “podcast”, the ultimate innovation in audio materials, not only for its quality but also because they can be saved and shared very easily. Podcast can be found all around the web, but you can find specific podcast directories, such as <http://www.apple.com/es/itunes> where you can find millions of podcasts about any topic of your choice by just typing key word on the search box. Other podcast directories are Podcast Alley (<http://www.podastalley.com/>) and Podcast Pickle (<http://www.podcastpickle.com/>). Alternatively, you can go for specialized websites which host podcast specially designed for language learners. Among the favorites such as <http://www.eslpod.com> or <http://podcastenglish.com>, where teacher and students can

listen, download the podcast and have access to a learning guide with complete transcripts, additional vocabulary, extra explanations, cultural notes and comprehension questions.

In teaching listening, students need to be exposed not only to the native speakers of English but also the non-native speakers of English. As in the real world students will encounter both situations. The following website provides listening materials both audio and video with exercise that can be done online. <http://www.ello.org> provides English speakers from all around the world, so we can practice accents in English as well.

In addition, to cater the students' needs, one of the things that teachers can do is to adjust the level difficulties to the students' proficiency level. Teachers need to design and create listening comprehension exercises and even provide transcript of the listening passage to give more help to the students. There are many real authentic listening (radio online and video streaming). Using real authentic materials means that there is no help of instruction on using them and implements them in the teaching learning process. The following are popular among young people, which can be used for beyond classroom activities.

- TED is nonprofit devoted to spreading ideas, usually in the form of short, powerful talks (18 minutes or less). TED began in 1984 as a conference where Technology, Entertainment and Design converged, and today covers almost all topics – from science to business to global issues – in more than 100 languages.
- World radio streaming such as www.tunein.com is also popular. TuneIn's website and free mobile apps offer users the ability to listen to streaming audio of over 100,000 radio networks and radio stations worldwide, including AM, FM, HD, LP, digital and internet stations. Additionally, over four million podcasts are available for streaming on TuneIn.

In short, the available readymade online materials for listening are in line with behaviorism where 'carrot and stick' principles are applied. However, some preparations need to be done when using authentic materials such as tune in radio and podcast.

TEACHING AND LEARNING SPEAKING SKILLS USING TECHNOLOGY

The goal of teaching speaking skills is communicative efficiency. Learners should be able to make themselves understood, using their current proficiency to the fullest. In other words, students need as much as language support and exposure as possible. Language learners need a variety of language experiences. They need to hear the language, write the language, speak the language and read the language. Technology has provided richer resource, greater access to resources, greater interactivity and greater opportunities for the students to manipulate and use language. When teacher adds sound of voice to text, especially when students can access it outside the physical presence of the teacher can give personalized touch to students' learning experience. Skype™ is a free computer program you can use to make telephone calls over the internet and that you can also use it to make conference calls and voice calls, to chat, and to transfer files. Furthermore, Abdulazer, Abdulazer & Diamond (2007) affirm that "Skype™ can dramatically alter how you exchange information, how you meet new people, and how you interact with friends, family, and colleagues" (p. 9). Godwin-Jones (2007) explored the use of Skype™ and podcasting for language teaching and learning purposes in online environments. Overall, he found that both Skype™ and podcasting can be considered "disruptive technologies" in

that they allow for new and different ways of doing familiar tasks and offer intriguing opportunities for language professionals and learners, as they provide additional channels for oral communication.

In recent years, internet audio has greatly increased in popularity. One recent example of internet audio, a podcast, is an audio file that anyone can create using a computer, microphone, and a software program. Once posted to the web, podcasts can be accessed, downloaded and played to a computer or MP3 player. The popularity of podcasts can be linked to their simplicity in creating, editing, publishing and listening to them. Using podcasting in contextualized language learning (as opposed to simple pronunciation drills) can also be useful in that it allows teachers to contextualize pronunciation and create meaningful tasks, rather than simply have students repeat and practice lists of words and sounds. Several tasks can focus on oral production, such as using audio diaries, conducting interviews with native speakers, and hosting talk shows where students “can record themselves and classmates for a classroom assignment and provide speech samples to the teacher for assessment. Students can record themselves or native speakers and then engage in listening practice as they focus on pronunciation, grammar use or intonation. There are so many websites and Apps that can be accessed which provide podcasts especially for language learning.

Smartphone Apps for Practice Speaking

After discussing the use of computer for teaching and learning speaking, there are also various ways to improve speaking skills using smart phones. These Apps are not intended for language learning but have many features that can be used for teaching. In this case teacher’s creativity is essential. It is better to try them before using them for teaching or learning purposes (see Appendix 3).

Some language learning theories that can be used to design activities using technology are behaviorism and cognitivism, as mentioned above that most available and readymade teaching and learning materials in the internet are based on behaviorism. However, teaching and learning activities using the authentic materials from the internet need to be designed and can be designed using cognitivism theory. The cognitivist school believes that learning by doing, and help the students to make their own sense of what they are studying, and enable them to make the use of their learning in real life. Designing a project using several digital media is one example. This kind of activity can be enjoyable create more participation, concentration, persistence, and more cognitive engagement (Cameron, 2001). Similarly in utilizing mobile Apps, teacher can design activities which develop 21st century skills (Creativity & Innovation, Communication, & Collaboration, Research & Information Fluency, Critical Thinking, Problem Solving & Decision Making). The activities should enable the students to demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology (Wu, 2010).

CONCLUSION

Technology has provided richer resource, greater access to resources, greater interactivity and greater opportunities for students to manipulate and use language. When teacher adds sound of voice to text, especially when students can access it outside the physical presence of the teacher can give a personalized touch to students’ learning experience.

Smart phones, bot iOS and Android provide rich resources in term of data so that the user can give voice commands and ask questions. The smart phone will provide data as instructed and also answer the questions. In other words, the users can practice listening and speaking skills with their smart phones. Teachers should revisit language learning theories, principles and teaching methodology and design activities using the appropriate technology, not the other way around.

REFERENCES

- Abdulazer, L., Abdulazer, S., Dammond, H. (2007). *Skype for dummies*. Hoboken, NJ: Wiley.
- Cameron, J. (2001). Review of Educational Research, Spring 2001, Vol. 71, No.1, pp. 29-42.
- Godwin, J. (2005). *Language learning & technology*. <http://llt.msu.edu/vol9num3/emerging/> September 2005, Volume 9, Number 3.
- Lynch, T. (2009). *Teaching second language listening*. Oxford: Oxford University Press.
- Martinez, P. (2010). *Current issues in English language teaching and learning*. Cambridge: Cambridge Scholar Publishing.
- Martinez, S. G. (2010). Using web resources to support teachers and students with the teaching and practice of listening comprehension. *Emcuentro*, 20 – 31. Retrieved from files.eric.ed.gov/fulltext/ED525731.pdf.
- Pawlak, M., Waniek-Klimczak, E., & Majer, J. (2011). *Speaking and instructed foreign language acquisition*. Bristol. UK: Multilingual Matters.
- Rixon, S. (1986) *developing listening skills*. USA: Macmillian.
- Wu, W. (2010). The application of input hypothesis to the teaching of listening and speaking of college English. *Asian Social Science*, pp. 137-141.
- Vaseki, A. (2013). *Learning a foreign language: A quick guide to understanding Spanish, French, and German foreign language training, special conjugation training, verbs for training, syllables and how to learn foreign language with training toys*. Kobo Edition (eBook). Clinton Gilkie.

Appendix 1

- <http://news.bbc.co.uk> is an extraordinary resource to watch the World News. It also offers us the written version of the news, so we can both listen and read or use the audio or the written texts with different purposes. For those who just want to have a quick overview of what is happening in the world, they can watch a short summary of the news by clicking on the option "One Minute World News".
- <http://www.voanews.com/specialenglish/index.cfm> offers reports on World News and information on American Culture and History which students can either read, listen to it or do both, so as an independent learning tool, this site has ample opportunities for students. Particularly interesting is the program called "Words and Their Stories", in which a five minute feature about American English words and expressions is broadcasted.
- <http://www.lyrics.com>, <http://www.azlyrics.com>, <http://www.lyricsworld.com>. Any of these three links gives you the lyrics for almost every song, a very useful tool if we want to use music in our listening sessions.

Audioblogs and Podcasting

- [Text America](#) portal for moblogging
- [GoBlogGo](#) site for posting images
- [Audioblogger](#) audio blogging service for Blogger software
- [Audioblog.com](#) podcast and videoblog publishing service
- [Audioblogging in Chinese as a Second Language](#) by Alaric Radosh
- [Podcasts in French](#) from podcast.net
- [pieCast](#) podcasts from the Partners in Excellence Project (Scotland)
- [mgsOnline: Weblog, AudioBlog and Podcasting Development](#) from the creator of the pieCast project
- [Hopes for legal music podcasts rise](#) from news.com
- [mgsPodcast](#) podcasts for language learning from Musselburgh Grammar School (UK)
- [Report: podcast popularity to skyrocket](#) from iPodNN
- [Language learning podcasts](#) from the National Centre for Languages (UK)
- [ELF Practices](#) from A. P. Campbell, includes ideas on using audioblogs
- [Setting up a High-Tech Language School](#) discussion on Slashdot
- [The everyday creation of media by everyday people](#) from edugadget
- [The concept of making media as a basic life skill](#) from Eric Rice
- [Really Learn Spanish](#) podcasts from Johan van Rooyen
- [The Promis of Podcasting \(PDF\)](#) by Susan Manning
- [The Bob and Rob Show](#) podcasts for English learners
- [RSS Readers](#) software for "syndicated" podcasts
- [Third of US iPod owners now podcasting](#) report on a survey from the Pew Internet and American Life Project
- [Mozilla says Thunderbird podcasting is on its way](#) from silicon.com
- [Podcasting with Your iPod Photo](#) how to sync images in podcasting
- [Podsites](#) using iPod's Note Reader with podcasting
- [TextPODcasting with iPod Notes](#) how to guide
- [Turn Your iPod into an Ebook Reader](#) ideas for using note reader on iPods for education
- [Autocasting](#) from wikipedia, on using text-to-speech for podcasting
- [Talkr](#) converts text-only blogs for podcasting
- [Feedpod](#) text-to-speech newsfeed reader
- [Audacity](#) free, cross-platform sound editor

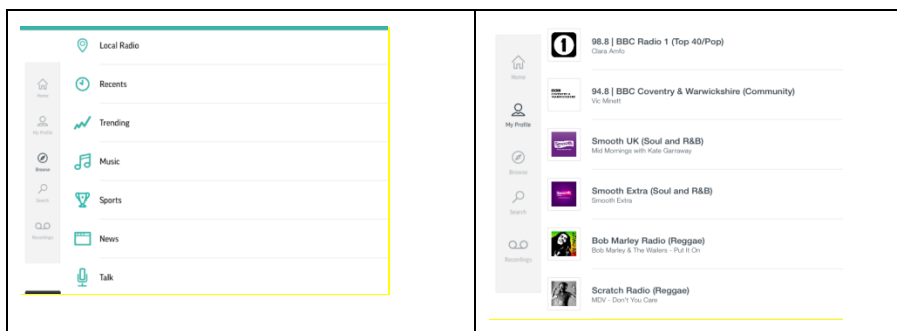
Appendix 2

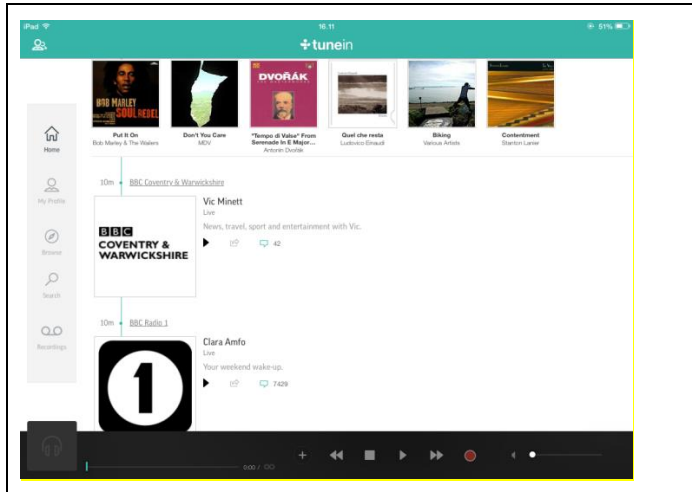
- <http://www.youtube.com> This is undoubtedly the most visited webpage for videos. Students are very familiar with it, so they will know very well how to use it. You can find almost anything here by just typing the topic of your choice on the search box. (Martinez, 2010)
- <http://www.script-o-rama.com> offers us both full transcripts and scripts from films, a very useful material which provides not only a written version of the audio material, but also excellent sociopragmatic information that we can use in many different ways.
- <http://www.movieweb.com/videos> provides us with very detailed information about films which can be used for pre- or post-listening activities, such as information about actors, summary of the film, pictures of the characters and different scenes, videos, trailers, the official film web page, the soundtrack of the film, etc.

Appendix 3

Online Radio Website or Application

The use of online radio website or application on Android or iOS can be an essential tool in supporting students' oral skill. For receptive skills development, the online radio can provide opportunities for students to listen to a variety of speakers on a variety of topics in a variety of genres – dialogs, news, advertisements, talk show, comedy, interviews, lectures, stories, songs, poems and many more. If the students do not have the gadget or difficult to get internet access, teachers can spend time recording new material for listening, speaking and pronunciation practice and testing. By using apps such as Tune in Radio, Pandora, Stitcher or many other available apps, teachers and students can choose any programs from many different Radio stations all over the world and get exposed to English spoken in the real communication context be it native or non-native speakers.





Choices and List of Station in Tune In Radio

Voice Recorder

In the EFL Speaking and pronunciation classes, students can record their interviews or their own voices on a regular basis. Voice recorder can be found in Smart Phone, Laptop, and Tablet or even in the not-so-sophisticated cellphone and is still the most convenient means of capturing voices for evaluation and analysis. One of the outcomes of using this technology is that teachers can collect the files of students' recorded voices, spend a fair amount of time listening to them, analyzing students' spoken English and recording and writing down comments and corrections. Teachers can also spend time recording listening and speaking materials for the students. The positive side for students is that they receive individualized instruction and guidance from someone who is a model speaker, so ideally both the message and the medium are valuable and promote the learning.

Video

Video is a step up from audio recording. Playing pre-recorded video provides the audio visual information that helps students observe, understand and imitate oral communication, from language expressions, gestures and distance between speakers, not to mention other cultural, behavioral, and sociological aspects of language. Teachers can also utilize video camera to record students' interactions and oral presentations. Again, recent technology can ease the process of video recording as most smartphones and tablets are now equipped with video camera feature. This is worth doing because, if a picture speaks a thousand words, a moving picture speaks a million. Self-recorded video provide speakers with a view of themselves that they do not otherwise have, and it gives them a stronger basis for evaluating their performance and setting goal for future learning.

Voice mail or voice chat

Voice mail and voice chat are probably wondering, the kind of technology is good for students but not so time-consuming for teachers. To get students do oral assignments than can be heard and assessed but need no direct oral responses, teachers can assign voicemail homework. Listening to instructions on a voice mail system and leaving messages are skills that help students in "real life". In addition, students can record a message, review the message, delete and record the message, again and finally save it and exit the system. The benefit to the students is the get listening and speaking practice and life skill practice as well. The benefit to the teachers is that the length of the message is limited, teachers can access the voice mail box from any location, there is no gadget to carry around and teachers do not need to record oral response. Teachers can listen to each message, jot down notes and scores. Using voice mail assignment can be less time

consuming for the teachers. The corollary is that the students get less corrective feedback – but they have done speaking practice.

Some mobile applications such as Whats App or Blackberry messenger are now equipped with the feature of voice messages. Teachers can set up a special Whats app or BBM group and assign a task in which students are expected to respond using the voice message.

Siri

Siri is a personal assistant that resides on iPhone 4S. Siri responds to voice (words you speak) rather than requests typed. The user can talk to iPhone 4S to perform a range of tasks (employing speech-to-text translation), the user also hear Siri's human-like voice talk back at the user (text-to-speech technology). Siri is automatically built into the iPhone 4S, no need to download anything to get going.

Siri can help user perform a number of tasks on iPhone 4S much faster than typed them. Such tasks include things like:

- Sending e-mails and text messages
- Finding specific messages in inbox
- Having texts read
- Having spoken words transcribed into text
- Using the built-in Wolfram|Alpha database to quickly find useful information, such as dictionary definitions, mathematical equations, measurement conversions, or even fast facts and pop culture references
- Searching the web for anything and everything, including info and media (such as photos and videos)
- Posting updates to Facebook and Twitter
- Making and accessing notes
- Getting directions from point A to point B, using the iPhone 4S's GPS radio
- Finding businesses nearby — including directions on getting there — be it gas stations, banks, or restaurants; many businesses are also displayed by rating
- Making phone calls and FaceTime video calls
- Getting real-time information on weather, stock quotes, and much more
- Accessing music and podcasts using voice, including the ability to control audio playback adding and accessing calendar appointments, alarms, timers, and reminders



Give Siri a task, such as a reminder about an important date.

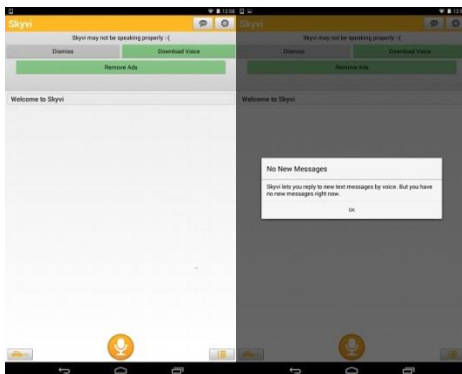
Unlike other speech-to-text technology, including those offered by other smartphones, Siri works on the operating system level and knows which app to open based on request.

Using advanced artificial intelligence (AI), Siri makes connections based on your relationships, uses humor to make you smile, and is eager to learn more about your world and how to make your life easier to manage.

Android Platform Apps

There are similar and some even better apps available for Android platform that can also be used for teaching and learning . Below is a list on the Android platform.

Skyvi (Siri like Assistant)



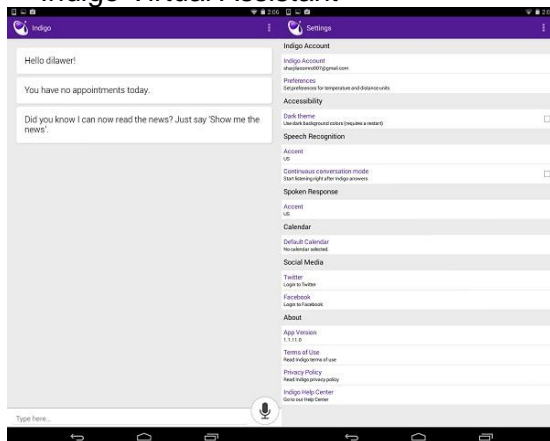
This one literally says “Siri like Assistant” next to its name. It is one of the most simple and easy to use virtual assistants available for android smartphone. This app offers all the features expected from a solid virtual assistant. The best thing about the app is the simple and straightforward user interface that lets newcomers easily navigate the app. User can make calls directly with voice commands, user can reply to texts with voice, and find maps/routes with the help of Skyvi. Finding any contact and calling them with the help of Skyvi is as easy as eating a pie.

EVA Free – Voice Assistant



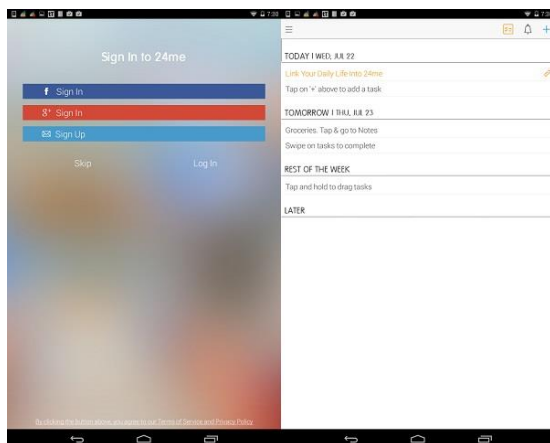
EVA is a solid contender in the virtual assistant market but the interface is a bit confusing for a newbie, however, once user is familiar with the overall user interface of this amazing virtual assistant it will become one of the best assistants for the user. EVA reads back to user quickly so user can get answers as quickly as possible. The app provides user clear and easy to understand instructions so user can easily navigate through the app’s layout. User get to learn everything and every feature EVA has to offer in the tutorial. The free version is actually a fully paid app but it only lasts for 28 days after that user have to buy the full app.

Indigo Virtual Assistant



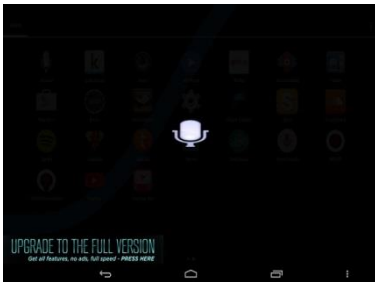
Indigo Virtual Assistant provides the best user interface out of all the virtual assistant apps available in the Google Play store. User can easily navigate through this app and perform any tasks required. Indigo Virtual Assistant even helps user find the closest train stations, bus stations, and even lets user search for YouTube videos directly from the app within seconds.

24me: To-Do, Task List & Notes



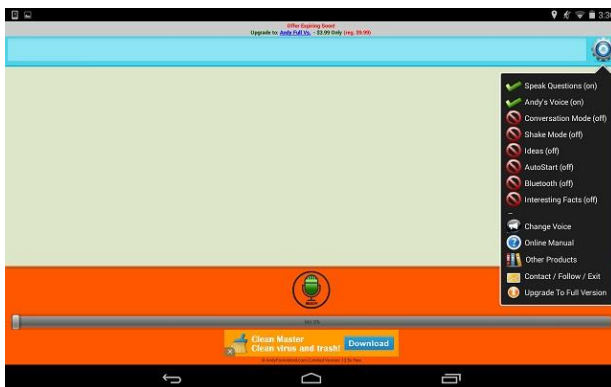
This app is not a virtual assistant per se but it offers good features. 24me is the best personal assistant on android phone and it automates all tasks. It learns everything about user from schedule, calendar and social media apps. After getting to know user, it starts generating personal schedules so user can keep track of daily activities. It reminds user of what tasks that are coming up next and best of all, it even wishes user friends on Facebook automatically on their birthdays. This assistant makes it really easy for user to collaborate with anyone, anywhere in the world.

Jeannie



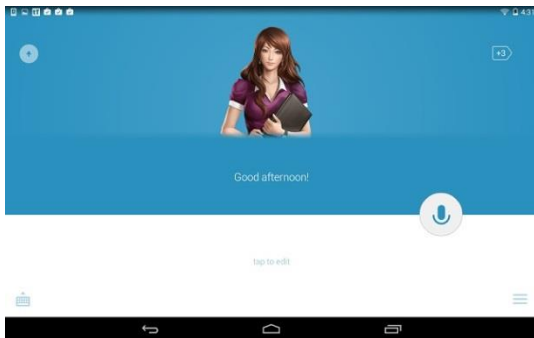
The best thing about Jeannie is the fact that user doesn't have to remember any special keywords to activate it, user can just speak naturally smartphone and it will understand everything user says and perform the tasks ordered. It will even translate commands into different languages. The advanced voice recognition system recognizes user's voice commands even if user is not a native English speaker which is a great feature to have in a virtual assistant app.

Andy (Siri like Assistant)



Here we have another app with "Siri like Assistant" next to its name. Well, it sure does perform a lot of stuff as quickly as Siri but the interface looks a bit different from the original iPhone assistant. Andy brings a simple and hassle-free interface for the user so you can quickly perform different tasks with your voice. Best thing about Andy is the fact that it gives you real time directions when you are driving and you can also talk about casual stuff with it as well. Andy tries to answer all your questions no matter how weird or funny they actually are. The paid version of Andy offers even more features that make your whole virtual assistant experience much more smoother. Andy also brings you detailed information from sites like Wikipedia, etc.

Assistant with talking alarm



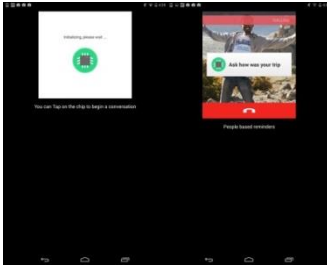
Don't judge this one by its name. The name sounds a little odd and it seems as if this is one alarm clock app instead of a virtual assistant. However, that's not the case because this is one advanced virtual assistant for your android smartphone. The best thing about assistant is that you can choose an avatar or make your own and it will be the appearance for your assistant. You can then talk to it naturally and have a conversation. It will perform different tasks that you want, launch apps, connect to different internet services, and you can speak in plenty of different languages because this assistant understands a large collection of different languages from around the world including but not limited to, English, Spanish, French, Germany, and many more.

Robin – the Siri Challenger



You may have already noticed that this is the only app that uses “The Siri Challenger” instead of “Just like Siri” in its description which means that it's going to give Siri a good run for its money. Robin is the perfect companion for you when you are on the road because it brings you everything you need when behind the wheel without having to look at or touch your phone at all. It gives voice directions, nearby locations of interest, GPS locations, gas station information, weather reports, and even cracks a few jokes to make you laugh while on the go. She keeps learning about you on daily basis and constantly evolves to suit your needs. You need a parking spot in a crowded area? Robin has got you covered.

Jarvis



It's not the same Jarvis that Ironman uses in the Marvel movies but still it's one of the coolest virtual assistants you will ever download on your android phone. Jarvis talks to you like a friend and keeps you updated with the latest news. Apart from performing all the basic tasks on your android phone, Jarvis can also control your phone settings and perform simple tasks that would otherwise take you a bit of time. It can turn on your WiFi, Bluetooth, phone's flash, play songs, and many more functions with just a quick voice command. Jarvis also runs on your Android wear devices if you own one.