Review Article Sensible Technology – Speech Assistive Devices

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Abstract— The technologies of the listing and hearing has become a more portable. self-assistive techniques it is a mechanical or artificial sound producing methods. it is an artificial synthetic speech have been It is a phonetic phenomenon. to generating the natural speech, they using the augmentative and alternative communication. this shows the improve the natural speech of the patient. voice recording and voice massage exchange very quickly now a days it takes very quickly. there is a specific type and name pf the speech device, Signal massage voice output communication aids. Massage sequencer voice output communication. aids Overlay voice output communication aids, Dynamic screen voice output communication aids. this type of controlling systems they usefully for the handicaps and disables for instructed the correct movement, this device is manufacture to support and to help the individual to do their work performance. Arduino uno-microcontroller (AUM) that technology they recognized the speech, commands, sending and switching order etc.

Indexed Terms— speech devices, augmentative, alternative communication, speech disable, speech technologies.

I. INTRODUCTION

The technologies of the assistive technologies to individual and those people who disable physically or handicap for those people act is described in 1988 ,in the year they given the act for the assistive technologies , in this act technology related assistance to individual with disability act, under the act any handicap or disable person can take advantages of the act, they acquired the aids according to their convenient, they use according to their convenient according to individual disability(1).now recently the listing and hearing has become a more portable(2) in 2010-2020 in between the ten year they shown the more remarkable improvements in the speech recognition on the daily basis example voice massages, text massages , voces recorded from the internet ,amazon Alexa and apple devices. In before the 10 years back the rarely speech requisition devices should be used by the people (3).it is an artificial synthetic speech have been It is a phonetic phenomenon (4).to generating the natural speech they using the augmentative and alternative communication. this shows the improve the natural speech of the patient. Due to the effect of the (AAC). speech output increasing available. Negative thing's is not noticeable in thus things (5)

Now in recent advancement non speech sound mobile techniques they using in mobile and a computer also, so the computer that they not help the properly, in mobile the handling with the speech devices it helps to speech via using the text massages. is one device can carry in the small pocket that easy to carry and portably wireless and easy to control with mobile (6).in the clients with the diagnosed with the autistic spectrum disorder they also used a (AAC) (7). Now a days the speech is very important in communication with others and to send their words by sharing the words and idea to the people it is a very common ,they seen in different prospective ,automatic speech recognition or helpful for those people who hard to hearing , current automatic speech recognition the sound of the specker are evaluated ,there is some device that teach the algorithm of the keyboard of the devices they given the customs vocabulary models ,and that model is significantly improving in the feature in some recent years (8).

Automatic speech provide, often incorrectly is called as sensation of sound (9). The assistive speech technology helps the people who impaired or deaf so

now a days high number of people they were using the self-assistive techniques it is a mechanical or artificial sound producing methods (10). Many autistic disorder and hearing impairment people they mainly deal with the low outcome of the speech and hearing so for that they used AAC module for the better communication (11). voice recording and voice massage exchange very quickly now a days it takes very quickly (12).

In similar studies the speech units have four types in speech synthesized. TsynC corpus recorded phase, and there is number three-unit new corpus recorded with the non-sensible carried words than next is flit Thai systemized in speech system among the three-unit types in new corpus, demi-syllable obtains the highest score this are the computer speech system (13).

II. MATERIAL

This is the electrical appliance it is artificial technology; they change the many the sensor. And this sensor is highly sensitive (14). With help of the speech devices the learning of the student those who is impaired with speech, so that kind of the clients they should use the speech devices (15). Speech devices speaking techniques that is including the communication very easy ,quick in between two people who are communicating with each other (16).the machines have the power to understand the language of human usually consider to be intelligent .in early time the machines is have very specification only selected things is there now a days the technology of the speech devices is getting change they add the specification or design according the choice of the individual and the impairment of the individual ,and that model they recognizing the sensation of the people(17).

Now a modern time the mobile is the way for the convey the communication form the people to another, it is modern and most updated technologies. A lot of developmental mile stone the mobile technologies seen. day by day the mobile technologies are improving their technologies according to the brands way high voice quality and recording of the voice they provide variety of the communication .and for the more effectively function of the mobile used the internet for the better performance (18). This type of controlling systems they usefully for the handicaps

and disables for instructed the correct movement, this device is manufacture to support and to help the individual to do their work performance .it was development of the Arduino uno-microcontroller (AUM) that technology they recognized the speech, commands, sending and switching order etc. the Bluetooth techniques using for the communication. To create the communication path for communication. It is a pathway of for micro controller. This device is successfully test and mobile multiple command speech device (19).

Sr no	Name of the devices	Specialty
1	Signal massage voice output communication aids	This is a speech producing device for individual for the correct their impairment of speech (20). It helps to sense the tactile sensation (21).it is a design with the electromagnetic interference.
2	Massage sequencer voice output communication aids	It is a combination of microswitch for assessing preferred environmental stimuli and voice output of the communication aids for requisition social contact (22).
3	Overlay voice output communication aids	In this device contain 128 keys.in this device according the clients they used picture words and symbols will a show the massage(23) .
4	Dynamic screen voice output communication aids	Dynamic screen devices symbols or graphic can save the multiple pages, they also navigate the person. This device is most recent devices in speech assistive things,

		we can set the device customized. according to the choice of the people they set the keys words and graphics, reading and writing, picture, and individual can also connect the internet also (24).

There are some following lists of devices (25).

1.Overlay voice output communication aids.

2.Massage sequencer voice output communication aids.

3.Signal massage vocal.

4.Dynamic screen voice output communication aids

Merits	Demerits
1. easier to handle portable in nature.	Not every time easy for the client
2.wireless	Sometime charging difficulties.
3. Any age group can manage this, everyone can.	Sometimes older people have trouble understanding technology and have problems using it.
4. Only devices are required for the objects; observation is not required	Some devices require an operator to control them.

DISCUSSION

In the similar studies author said that ,the case study is based on the evidenced that brain based volitational communication is possible isolation also .so in this study done with the patient amyotrophic diseases ,they loss of communication capacities ,and that is not curable the health of the person get worsen day by day ,this condition they given the speech devices to evaluate the communication ,when the state is locked down ,they implanted the 2 sixty four arrays in supplement primary motor cortex of a patient who fully locked in sates ,the patient modulated neural firing rates is according the auditory feedback buy selecting the strategy of the words phrases and communication according to the that based(26) .

In the similar study the author of the study said that ,the purpose of the study the short time effect of circumlaryngeal massage and laryngeal reposturing ,for the autistic patient voice in transmasculine individuals , fifteen transmasculine individuals under the a session circumlaryngeal massage and laryngeal posturing with speech pathologist ,they collect the voice recording collected from the patient before the massage and reposturing .and after the circumlaryngeal massage and laryngeal posturing .after that they see the effectively changes is significant(27).

In another similar review. said that voice is the essential for the communication expressing one's intention as a human life. They survey mouth interface technologies which are mouth mounted devices for speech recognition production volitional control and the corresponding research to develop the artificial technologies based on the varied sensor ,electromyography, electro-cephalography ,electropalatographic, electromagnetic articulography ,permeant magnetic articularlography , 3 axial magnetic sensors in deep learning techniques it related to voice recognition , it include the speech recognition ,silent speech interface and this are the methods of solve the problems of speech disable people(28) .

In another author paper investigation of data Augmentation techniques for disordered of speech recognition. they said that speech recognition is very highly difficult challenge. under the neuron motor

condition of a people with the speech disorder. compounding with the co-occurring physical disabilities tempo perturbation and speech perturbation. Both are the normal and disorder speech were exploited in augmentation process.so finally the specker adopted the augmentation device according their speech production 2.92% (29).

CONCLUSION

Speech devices are used for a long time before any other wearable devices are developed, they were not that much updated in form but nowadays they came with the upgrading and also, they have many more features. these devices are very powerful and more efficiently work because of that nowadays they develop and many people they used in daily basis they useful helpful for an efficient great experience in life. So different speech devices are effective for the clients.

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