

Information Packaging for Communication with the Physically Challenged

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Abstract: *The fact that the physically challenged are human beings means that; they have different needs. One of them is the need for information and also the need to be communicated with. More importantly, these people with disabilities have great potential in them that if well propagated, they become productive. This paper focuses on identifying the information needs of the people with disabilities, packaging it in the right format and form useful to the physically challenged persons; and finally communicating effectively with them to avail the information. It focuses on the deaf, the blind and the deaf – blind categories of the, physically challenged persons.*

Keywords: information – communication, physically challenged, blind – deaf, deaf, Information

1. Introduction

Information is only important when it is shared in its right context and also the right context of the user. Information's right context involves its right format, form and content. The user's context includes presenting the information to the user at the right time of need, in the right language and also in the right environment accessible by the user. There are many different types of uses whose needs vary greatly. The, physically challenged persons have their information needs, which unless known, they will remain unattended to. Therefore knowledge on the information need of a, physically challenged makes it easy to present the right information to each of them. The information should be presented in the right format and medium. This process of information presentation to the, physically challenged poses a great challenge since it is hard for most of them to access information in the conventionally known channels and media of communication. Moreover, not only having the right information for them is vital, but also the method of communicating with, and receiving feedback where necessary. In spite of all this, this process is possible. "Helen Keller who became deaf and blind at the age of 19 months, communicated her basic needs and wishes with crude, self-made signs until the age of 6. She had no ability for true communication, conversation or education until she learned sign language with the help of her teacher/ interpreter..." [1].

This means that each day new methods of information packaging and communication are being discovered. This paper focuses on how information can be presented to the blind, the deaf, and the deaf - blind.

Information and communication context for the, physically challenged. The Information context for the physically challenged

When preparing information for the blind people, we need first to understand that their information needs are in two categories;

- i. Information on how to cope with their physical conditions, and
- ii. Information on how to handle the day to day tasks, and participate in the productive activities.

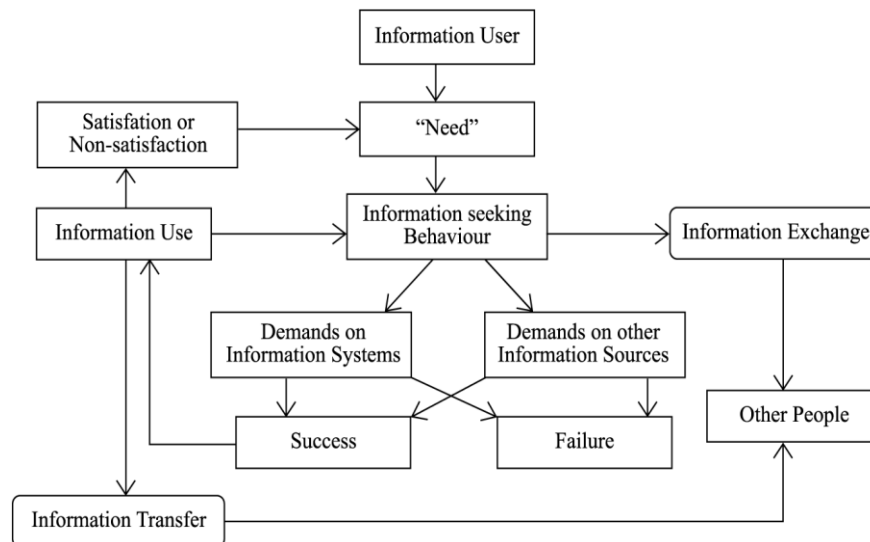
This means that it is important for information managers and communicators to find out what information is needed by whom? Where is that information found? And how best can they present this information to them? To answer these questions, the information provider must be keen to know:

- i. The Information seeking behaviour for the, physically challenged persons
- ii. What can the physically challenged persons do with the information when they find it

These concepts are discussed at length.

i. Information seeking behaviour of the persons with disabilities

Information seeking behaviour is influenced by the current need of the user. For the, physically challenged, they, at a given point in time, are in need of one of the two categories of information given above. After knowing their information needs, the next step of the information manager is to find the information, and then avail it the information to them. Availing the information refers to information providers placing the information within their reach. It requires one to understand the 'path' which the physically challenged persons use when going to look for information and also the 'place' they look for that information. This, we will generally refer it to as understanding 'information seeking behaviour'. This knowledge will enable the information manager to strategically package and place the information resources at a point that will be very easily accessible by them. Figure 1 below shows a model of information seeking behaviour.



Model of information seeking behaviour

From figure 1 above it is clear that, when in need of information, any person will 'run' to

- Information systems
- Other information resources, and
- Other people

We can now realize where these people run when in need of information. It is now the role of the information manager to ensure that they equip these 'sources' with the right information as indicated by the results of user studies, so as to 'meet' the, physically challenged persons when they are in an information searching mission.

To equip *information systems*, we need to identify the category of the physically challenged, know what technology they are vast in using, and then store the information in them. For instance, the blind people are able to use audio devices and also braille. This dictates that information managers need to invest in packaging information in these systems so as to capture this category of people; for the blind – deaf information is packaged modern available tools, like the Braille sense; and for the deaf, formation managers need to find videos, and other kinds of motion pictures among others. These are examples of information systems where the persons with disabilities will run to. (These are discussed further in next sections)

Other information resources for the physically challenged would refer to alternative sources which they can access information from. This could be; for the deaf, they can read books, they can interpret positioning of objects, and they can also watch motion pictures and videos among others. Options may be available for other categories of physically challenged also. The information managers need to explore other options of information resources that can supplement the information system depending on the needs of different categories of people with disabilities. These 'other resources', need to be equipped with the right information always and be made always readily available for access.

Other people also are sources to which the physically challenged persons will run for information. These people include family members, friends, relatives, personal guides and other persons who are close to the physically challenged persons. Training these people and giving them with

important information that may be useful to the physically challenged will be very helpful since they are always together and they know each other much better.

ii. What can these people do with the information when they get it?

The second question we need to ask ourselves is after getting this information; can the physically challenged persons do anything with it or act on it? [3] There are several things that people do with information when they get it;

a. Working

After locating a document, one may need to work on it, even if it is not immediately. This working may include editing, annotating, copying.

b. Reading

When people get documents one of the things they do with them is reading, though it is not obvious. This may be, reading to identify, skimming, reading to answer questions, reading to self-inform, reading to learn

c. Writing

[4]When people get documents, they do not only read them but they also create, update, and annotate them. This brings out the logic that when preparing information for communication with the physically challenged it is important to ensure that, after accessing the information, depending on the category of the physically challenged person and their abilities, they should be able to carry out any of the actions give above with ease. This will enhance proper dissemination and use of information appropriately.

Communication context with the physically challenged persons

When choosing the channel of communication for this category of persons, there is need to have in mind that;

- It is important to know what is/are the disability(s) of that person with disability.
- It is important to establish the techniques of communication that is known to that individual. Do not assume that that individual understands the conventionally known language for people like him or her.
- Just understanding the language to use when communicating with the physically challenged is not enough, our approach to them as we prepare to

communicate and when communicating matters even more.

These facts mean that, first, before communicating; the information provider needs to establish is the type of disability of that person. One could be partially blind or totally blind, hard hearing or totally deaf, or deaf – blind. This will avoid using the wrong channel or method of communication to that physically challenged.

Secondly, understand what language the physically challenged can be able to understand. For instance, not every deaf person is well vast with the American Sign Language, or every deaf person can be able to hear. Also, there are some who are not totally handicapped with their disabilities and therefore can somehow understand the conventional languages; for instance the hard hearing can here loud sounds, the partially blind can see in highly illuminated environments.

Lastly, understanding the right approach towards communicating with the physically challenged helps the information manager to win the confidence of the person and hence they can be trusted. Let us not forget that in their conditions, the physically challenged persons feel vulnerable and our approach to them will either attract or repel us from them.

Information and communication for different categories of the physically challenged

i. The blind

Information for the blind

Blindness could be total blind or partial. For both groups, psychologically motivating information and explanation of what their environment is like are the first important type of information to be provided. Environmental information opens their minds and creates mental pictures of what the environment looks like, while motivational information makes them realize what they can do in their environment to take part in the development process. Explaining the environment can be done easily either by word of mouth explanation or providing information resources that they can access information from. Through user studies, which includes, talent observation and asking questions, the information manager realizes information the needs of each blind person who is their client. It is then his role to find the information two categories of information needed by the user. They will then identify the best medium and format to present the information to this category of users.

Communication with the blind

Communicating with the blind goes beyond knowing sign language. Before any step to communicate, there is need for the communicator to be sensitive on their approach towards the blind. [5] Few tips in this kind of communication are recommended. First, do not feel very much obliged to speak politically correct when talking to a person who is blind. Feel free and talk with them normally. Do not direct questions to the persons who are with the blind person, but just ask them; they can be able to respond well. When talking to persons who are blind, avoid exaggerating things.

They only imagine things in their minds and create pictures, therefore paint a real picture for them. Generally talk to them, be free with them, tell them what you intend to do; for instance when leaving the room, when you come in to a room where they are. Choice of communication channel for the blind may not be as technical as it is for the deaf – blind. The blind have the option of using their hearing senses and also the sense of touch. Therefore when packaging information, the information manager needs to have it in audio form or have it in braille. Audio could be talking face to face, using telephone, using audio players, or any other devices that can play sound that has been recorded. This information communication media containing the relevant information is then availed to the information centres like libraries, where they can easily be accessed by the users.

ii. The deaf

Information for the deaf

Deafness can either be the hard hearing type or total. The information needs of the deaf are also varied just as in the other categories. They too need the psychological motivation to stir up their abilities. However, unlike the blind, this category of persons can be able to see their environment, what is happening in it, and they make a choice of what they want to do in it. Therefore, the process of information provision starts from acting on the user study results. The information provider needs to select the best medium to package the information. For the written, there is no big challenge since the normal writing procedure is applicable.

Communicating with the deaf

[6] Not all Deaf and Hard of Hearing people communicate the same way; even those who use sign language may use different forms of a signing system or signed language. Some deaf people can communicate in many modalities where others may choose to communicate in only one. Hard hearing or late deafened people use different communicate method. It is important that prior to meeting ask the client which methodology is most effective for them. Caserta, recommends the following tips after selecting the right technique comfortable to the client “ the room should be as quiet as possible, when speaking face the person and speak slowly, do not yell, avoid chewing gum or covering your mouth while speaking, don’t speak too quickly and if a term is difficult to get across rephrase instead of repeating.”

Moreover we need to realize that the deaf do not only depend on sign language. “That there is a segment of the deaf and hard of hearing population that does not use the sign language or any form of a signed system, and communicate orally. This client base often refers to itself as or “hard of hearing” [6]. These individuals will speak and attempt to speech read (lip-read) when communicating...” However Caserta indicates that these individuals must be very much vast with the language they are lip reading.

The deaf – blind

Information for the deaf - blind

Just like the blind and the deaf, the first way to present information to the deaf – blind is being able to know what

they need. Therefore the process and details of information provision for the two groups are applicable here.

Communication with the deaf - blind

Communicating with the deaf-blind poses a very great challenge especially if deaf - blindness occurs at a late age in life. "Deaf-blind people have many different ways of communication. The methods they use vary, depending on the causes of their combined vision and hearing loss, their backgrounds, and their education." [7]

[8] Deaf-blind persons function in distinct ways compared to persons who are either deaf or blind. Due to their sensory deprivation, it becomes a big challenge for them to respond normally to their family members and others. In some occasions few of them tend to act in some ways like mentally retarded people. Therefore creating special kinds of aids to enable communicate with those in their environment effectively and live more productive lives possess very demanding challenge. The only communication channel currently available and fit for the deaf-blind persons is the tactile. This means technological assistive devices for the deaf-blind persons must somehow convert internal stimuli into useful tactile sensations. There are technologies that have been invented to enable this category of persons to be able to communicate effectively. [1] There is a provision of innovative communication solutions for the blind – deaf through NDBEDP (National Deaf-Blind Equipment Distribution Program). With HIMS Deaf-Blind communication solutions, the Deaf-Blind are able to:

- 1) Carry out face to face communication with a sighted person using an LCD and keyboard or iPhone/ iPad
- 2) Access and browse the web
- 3) Remotely communicate using email, Google talk, or MSN
- 4) Use as a Braille display for PC, Mac or Smartphone including iOS and Android devices
- 5) Utilize advanced note taking features and applications

A good example of these facilities is Braille Sense." It is similar to a tablet for the blind or visually impaired person, enabling him/ her to perform tasks like Word Processing, reading books, email, internet surfing, scheduling appointments and social networking." [1] It has a "Unique Flippable LCD" which is the inbuilt portable USB LCD that allows a sighted person to view what the blind person is inputting into the system to facilitate face - to - face communication. It also has a "Built-in Vibration Motor" which alerts the deaf – blind on messages that are being send to them in way that they don't need to hear for them to be aware. The braille sense comes in different types and they have different specifications. They are Braille Sense U2, Braille Sense and Braille sense U2 QWERTY



Figure 1: Braille sense U2, [1]



Figure 2: Braille sense U2 QWERTY [1]



Figure 3: Braille Sense on Hand [1]

Conclusion

It must be realized that it is very vital to appreciate every person, including the physically challenged. Most of them have abilities that even the persons with no disabilities do not have. With this realization, we will spend time and resources to ensure that the physically challenged persons have first discovered what they are capable of doing, secondly, we will be able to provide them the information they need for them to put their potential to work, and lastly we will support them by being able to communicate with them during the day to day activities.

Therefore it is the role of information managers to position themselves strategically, so that they may perform this noble task and explore this virgin potential in the people with disabilities.

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