Open and Distance Learning Accessibility to Learners with Disabilities

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Abstract: *This study was a survey that sought to explore the accessibility of ODL to students with disabilities at the Mashonaland East Region of the Zimbabwe Open University (ZOU). Structured interviews were used to solicit for data from the respondents. A convenience sample of six current and former ZOU students with disabilities, two organisations for PWDs, and twelve academic staff at ZOU Mashonaland East Region was used. Data were qualitatively and quantitatively presented and analysed. Results from the study show that whilst the ZOU quality policy manual has an affirmative policy for students with disabilities, there is no explicit affirmative enrolment policy to waiver the entry qualification for the same. There is also no clear-cut policy on financial assistance for students with disabilities. Furthermore, lecturers are not articulate with basics needed to assist students with disabilities except for those in the department of special needs education. The infrastructure at the regional centre is generally not friendly to students with physical disabilities as there are no ramps. Assistive devices are not readily available for PWDs. In view of these findings, it is recommended that the university pays attention to the admission policy, infrastructure, and training of lecturers from the different departments so as to be responsive to the needs of students with disabilities.*

Keywords: *Open and Distance Learning, Learners, Disabilities,*

1. INTRODUCTION

According to studies on people with disabilities, 10% of the world population consists of people with disabilities (PWDs) and in Zimbabwe, 1.9% of the population are PWDs as documented in 1997 (Cappa and Loeb, 2012). The serious observation made by Lang and Charowa (2007) about PWDs in Zimbabwe is that PWDs constitute one of the most poor, marginalised and socially excluded groups. This observation is a cause for concern. Lang and Charowa (2007) register the concerns of the former President of the World Bank in 2002 who declared that unless disability issues were addressed, the UN Millennium Development Goal targets would not be met. One of the strategies for mitigating poverty is through education. This assertion is corroborated by, Duta, Scguri-Geist, and Kundu (2009), Getze, Strodden and Brief (2001) who point out that post education, is a predictor of gainful employment in meaningful occupation. It opens opportunities for career development hence quality of life. Accessibility to education therefore important especially for people with disabilities Yoder, Pramuka and Llewellyn (2000) and Inbar (2003) so as to close the income differentials between PWDs and their able-bodied counterparts.

Foreman et al, (2001), Jung (2003), Johnson (2006) and Mpofu and Wilson (2004) in Sachs and Schreur (2011:2) explain that, "low enrolment and high dropout [of PWDs] can be understood as the result of inadequate accessibility of higher education institutions , lack of support, adverse social attitudes and social isolation as well as low financial capacity." In view of these limitations, the Zimbabwe Open University could fill this gap in the Zimbabwean society. The characteristics of open and distance learning should be an attraction to PWDs. Open access ensures that students of any age can apply with the prior learning taken cognisance of where normal entry requirements are not fulfilled. ZOU offers free time study to the student, such that one works at his/her own pace, at the desired place without campus confinement. ZOU committed itself to quality service to PWDs through the Quality Policy Manual (2013:16) which states as one of its quality objects as

to, "provide adequate facilities and services for staff and students with disabilities and special needs." However, the position on the ground seems to point towards the view that there are still constraints in accessibility for PWDs in ODL, hence this study aimed at establishing the extent to which the PWDs are accessing ODL at ZOU`s Mashonaland East Region.

2. STATEMENT OF THE PROBLEM

PWDs constitute one of the most poor, marginalised and socially excluded groups. Social services such as education have also been known to marginalise these people. This study seeks to explore the extent to which open and distance learning is accessible to students with disabilities in Zimbabwe.

3. RESEARCH QUESTIONS

The study sought to address the following research questions:

1. To what extent are institutional factors inhibitive to the enrolment of PWDs in ODL?

2. What personal factors inhibit PWDs from enrolling in ODL institutions?

3. How has technology been embraced to facilitate ODL delivery to PWDs?

4. What strategies can be put in place to effectively embrace PWDs in ODL?

4. REVIEW OF RELATED LITERATURE

Institutional Factors contributing to accessibility of ODL to PWDs

Chataika (2007) identified institutional factors that affect accessibility of higher education as physical access, inappropriate application and admission procedures, inappropriate teaching methods, inadequate support services and resources and political will. Jung (2003) and Johnson (2006) identify negative attitudes of faculty and administrative staff may prevent students, especially with invisible disabilities from disclosing their disabilities and from requesting accommodations they are entitled to.

Choruva (2009) says that most buildings in educational institutions are inaccessible for PWDs. Inbar (2003) explains that in Israel, funds were provided for making physical adjustments in buildings. A big problem is access to transport and buildings. Without accessible transport, disabled people cannot get anywhere outside their home, block or village. Without buildings being accessible, they cannot enter or move around within. This really impedes their possibility to participate in daily activities, go to school, work and social meetings. A solution to this is called 'Universal Design': a set of guidelines and rules that help architects and local government plan building works ahead of time to make buildings, roads and means of transport accessible to all people within society. Examples of good practice can be found in Venter et al (2004) and Wiman/Sandhu (2004). "The Convention promotes "universal design" – the design of products, environments, programmes and services usable by all people, to the greatest extent possible, without the need for adaptation or specialised design" (UN Enable, 2008).

Then there is the issue of accessible water tapes and sanitation blocks which should be designed so that a blind person could use them, and public toilet facilities should have at least one wheelchair-accessible toilet.

Choruva (2009) says educational institutions do not have enough qualified staff to meet the special needs of PWDS. Lack of the requisite skills usually leads to negative attitudes developing within the service providers. This is further confirmed by Choruva (2006) who reveals that PWDs say they frequently face negative attitudes from employees in education sector. They believe these attitudes are largely attributed to uncertainty among education personnel about how to deal with PWDS. Parasuram (2006) cites a 2006 study in Mumbai, India, which established that teachers were influenced in mainstream education in their attitudes towards inclusion of disabled students by being formerly, acquainted someone with a disability.

Another environmental barrier to disabled people is the lack of accessible information, for example in Braille, large print or sign language (films or interpreter). Meetings, leaflets, television, cinema and newspapers should all be accessible in various formats and languages.

Environmental barriers are in essence problems that could be mediated by careful, inclusive and participatory planning. One big reason for mainstreaming the needs of people with a disability in all development planning and implementation is that if you plan ahead, you will not have to patch up afterwards, which can be costly and time-consuming.

One of the great strengths of mainstreaming disability in development is that it is much cheaper and more sustainable than ad hoc project-based, disability-specific interventions. (Valverde et al, 2011).

Modesto and Tan (2009) mention that the course writers must consider the way course material will be used. This is a vital input which hinges on the characteristics of learners for whom materials are to be written. In ODL it is incumbent of the course team to also include specialists in disability issues who would help in ensuring that the study material responds to the different needs of the PWDs. Multi Sector coordination and collaboration is essential in bringing together elements into the course team which will ensure the relevance of the material. During the process stage the material should be flexible enough to allow the PWDs to participate in tutorials without hindrances. An integrated whole institution system which ensures that the study material is issued to the PWD upon registration should be put in place. The teaching learning period must make sure of the adapted material through necessary supports in the form of on line material or teams of disability specialists created to support students. Such teams will assess the effectiveness of the material through student feedbacks. The outcome section shows issues to do with achievement, attainment and standards. The learner achieves personal development enhancing a positive attitude towards learning. They manage to complete their degree or diploma. The ODL institution reaches appropriate standards and this has a positive impact on society. The framework is affected by three fundamental contextual factors these being policies, funding and management. A positive disability policy will ensure that everybody is aware of what should be done when meeting the needs of the PWDs. Adequate funding is important if appropriate study materials are to be provided and barrier free environments developed. Lastly, the inclusion of PWDs needs to be properly managed it cannot be left to chance alone (Kaputa, 2013).

5. HOW TECHNOLOGY HAS BEEN EMBRACED TO FACILITATE ODL DELIVERY TO PWDs

Open and Distance Learning courses, resources, and materials must be designed and delivered in such a way that the level of communication and course-taking experience is the same for students with or without disabilities.

Bretz and Johnson (2000) observe that computer literacy has become recognized by education experts and researchers as a central factor in students' academic performance. Inbar (2003) asserts that adding computers, assistive technology and other adapted learning equipment, in addition to scholarships to students is assumed to have resulted in an increasing number of students with disabilities entering higher education. Assistive devices should be readily available and materials in the form needed should be availed in time.

A research by Kamba (2009) revealed that in order to build institutional capacity for e-learning at the University of Dar es Salaam, an Instructional Technology Resource Unit (ITRU) was created in 2002 to spearhead the process. The unit conducts instructional design workshops targeting academic staff and students. The main objectives of the workshops were to:

- Encourage academic staff to enable independent learning among the students;

- Sensitise academics about alternatives methods of delivering courses;

- Introduce them to flexible methodologies and course design structures that recognise the needs of varied learners;

- Facilitate the design of electronic online materials for student access;

- Sensitise the staff on their changing roles from providers of knowledge to that of facilitators, and finally;

- Improve student evaluation of their own learning.

It is envisaged that academic staff will apply the principles and skills acquired in the workshops to design online courses and will register students to take the courses on an experimental basis.

6. PERSONAL FACTORS AND HOW THEY ARE INHIBITIVE TO THE ENROLMENT OF PWDS

Chataika (2007) established that attitudes and disability awareness could be both catalysts and obstacles to inclusion of people with disabilities. It must be acknowledged that disabling attitudes and practices can be deeply enshrined into culture, society and legislation, and may therefore be extremely difficult to overcome. In trying to remove disabling practices, a major obstacle that must not be overlooked is bureaucracy. Putting files on a desk can be done easily, but actually having them read, discussed and implemented is another. Mainstreaming of disability overall suffers from disregard and half-hearted implementation

A weakness of 'mainstreaming disability' is that practitioners often easily assume that people's beliefs can be changed within due time. Also, people might change their views, but not their practices. Its effect is often overestimated (Chataika, 2007; Parasuram, 2006).

Choruwa (2006) states that challenges to access to education for most PWDs start right from the family level. PWDs are faced with negative attitudes from the family members. They consider sending children with disabilities to school as a waste of time. When discussing attitudes, there are two sides to the coin: the disabling attitudes of non-impaired society as well as the disabling attitudes that people with an impairment harbour themselves. The belief is that when the first change, the latter will follow spontaneously. But the process of self-actualisation actually takes many years to complete.

Choruwa (2006:16) points out that, "it is a matter of fact that most people with disabilities come from very poor backgrounds. Choruwa (2006:12) states that "Disability and poverty are inseparable. Both poverty and disability reinforce each other, thereby contributing to increased vulnerability among PWDs." Meeting the special needs of PWDs is only at an extra cost from the view point of people without disabilities. In some instances, breadwinner might have to devote working to giving care especially for middle to low income earners making it strenuous for PWDs to access higher education.

7. STRATEGIES TO BE PUT IN PLACE TO EFFECTIVELY EMBRACE PWDS IN ODL

According to Hendriks (2009), one of the primary concepts of ODL is to offer students learning anytime, anywhere. Therefore, all ODL resources must be designed to afford students with disabilities maximum opportunity to access distance education resources anytime, anywhere without the need for outside assistance (e.g. sign language interpreters, aides, etc.). ODL resources must generally be designed to provide "built-in" accommodation (i.e., closed or open captioning, descriptive narration) and/or interface design/content layout, which is accessible to "industry standard" assistive computer technology in common use by persons with disabilities.

Whenever possible, printed information should be provided in the alternative format preferred by the student (that is, Braille, audio tape, large print, electronic text, MP3, DAISY). When choosing between possible alternative formats or methods of delivery, consideration should be given to the fact that methods which are adequate for short, simple or less important communications may not be equally effective or appropriate for longer, more complex, or more critical material. For example, use of a telephone relay service may be an acceptable method for a faculty member to respond to a brief question from a deaf student during his/her office hours, but would not be appropriate as a means of permitting that same student to participate in a class discussion in a course conducted by teleconference.

Adoption of access solutions which include assigning assistants (i.e., sign language interpreters, readers) to work with an individual student to provide access to distance education resources should only be considered as a last resort when all efforts to enhance the native accessibility of the course material have failed. This is particularly true since, for several years, colleges have funding to assist them in providing access to distance education (Valverde et al, 2011)

Access to ODL courses, resources and materials include the audio, video and text components of courses or communication delivered via existing and emerging technologies. Access includes the audio, video, multimedia and text components of Web sites, electronic chat rooms, e-mail,

instructional software, CD-ROM, DVD, laser disc, video tape, audio tape, electronic text and print materials. Where access to Web sites not controlled by the college is required or realistically necessary to completion of a course, the college must take steps to ensure that such sites are accessible or provide the same material by other accessible means. ODL courses, resources and materials must be designed and delivered in such a way that the level of communication and course-taking experience is the same for students with or without disabilities.

Valverde et al, (2011) explain that modifications to the curriculum, materials or resources used in the course can also improve accessibility of ODL to PWDs. This process transforms curriculum, materials and or resources to a form which allow their easy use by PWDs. The process however not compromise the content but only should facilitate use by PWDs. Accommodation also improves on accessibility of ODL to PWDs. This would involve a fundamental alteration in the nature of the instructional activity which is equally effective for the student to grasp matter.

There always needs to be cooperation and lobby with the local (and higher) authorities to ensure support and sustainability. In the context of Zimbabwe several of the organisations for PWDs should take an active role in seeking funding. It can however, be difficult as there has been noted donor fatigue.

The development of ODL study material for all learners initially is very expensive but due to the law of demand and supply gradually reduces in cost (Valverde et al, 2011).

Rowntree (1992) and Modesto and Tau (2009) suggest ways in which study materials can be developed,

- Using existing off- the shelf learning packages;

- Building on existing non-open learning materials, for example, textbooks and videos;

- Planning and planning a custom-made package from scratch;

- Hosting a course on behalf of another institution; and

- Adapted study materials used by another institution.

A study by Komba (2009) shows that various official documents justify the need to give more attention to distance education as an alternative delivery mode. Such documents include the Poverty Reduction Strategy Paper (2000), the Tanzania Vision 2025, the Education Sector Development Programme (1998), the Teacher Education Master Plan (2000), Secondary Education Master Plan (2000), the Higher Education Sub-Master Plan 2003-2018, and the National ICT Policy (2003). The documents have the following complementary assumptions, that:

Education is an important tool for socio-economic development and a key factor in strengthening human capabilities and reducing poverty in an increasingly globalised world;

- There is need to improve and bolster education quality, access and affordability, equity and efficiency;

- There is a shortage of qualified and competent experts at various levels of the social and economic system;

- The existing arrangements for the production of experts are not adequate to address the shortage of qualified and competent teachers in teachers' colleges and secondary schools;

- There is a need to expand enrolment in higher education institutions through a combination of residential and distance education methods; and

- That use ICT as a tool to improve access and the quality of delivery of education and training at all levels.

The strength of the above approach is in putting in place the legal framework. The framework gives the impetus to implementation and provides the foundation for assessment. Strengthening teacher education especially where disability issues are central ensures accessibility of ODL to PWDs.

8. METHODOLOGY

The current study adopted a case study approach, which was carried out at the ZOU, Mashonaland East Region. Structured interviews were used to solicit information on the accessibility of open and distance learning to students with disabilities. Representatives from organisations for people with disabilities first inspected ZOU infrastructure and documents. Thereafter, these were then interviewed. Data were analysed qualitatively by sorting, coding and classifying it in themes. Quantitative data were presented in tables, graphs and pie charts.

9. POPULATION AND SAMPLE

In this study, views were solicited from all the current and former students with disabilities, one organisation for people with disabilities and a convenient sample of one academic staff member from each faculty. A total of six current and former ZOU students with disabilities, two staff working in organisations for people with disabilities, and twelve academic staff at ZOU, Mashonaland East Region made up the total population for the study. Being a small population, all the twenty in the members in population made it into the purposive sample.

10. PRESENTATION AND DISCUSSION OF RESULTS

In order to answer the main research questions, the study had four sub-problems which stood as research questions. Data are presented in tables, pie charts and graphs.

Sub problem 1: *To what extent are institutional factors inhibitive to the enrolment of PWDs in ODL?*

Respondents were asked if PWDs were accessing ODL .Responses were shown in Figure 1.

Figure 1. *Responses on whether learners with disabilities are enrolled in ODL settings*

Figure 1 shows that only 2(10%) respondents agree that learners with disabilities are enrolled in ODL settings. The other 18(90%) disagreed with the idea that such learners are enrolled in ODL settings. In support of the minority of the respondents, several research studies have revealed that most inclusion of PWDs has positive social benefits for both types of ODL students (Downing & Peckham-Hardin, 2007; Fisher & Meyer, 2002; Matzen et al., 2010), hence under such circumstances PWDs are enrolled in education systems.

However, there are institutional factors inhibitive to the enrolment of PWDs in ODL as presented in the data in Table 1 below.

Table 1. *Institutional factors inhibitive to the enrolment of PWDs in ODL*

Challenge	Number	Percentage
Unfriendly environments	16	80
Lack of expertise	20	100
Inadequate resources	17	84
Negative attitudes	14	70
Poor funding	19	94
Lack of policy direction	16	80
Lack of technology	12	60
Lack of admission policy	16	80

Data in Table 1 show that 16(80%) respondents indicated unfriendly environments as an inhibitive factor and an overwhelming majority of 20(100%) respondents stated that lack of expertise was an inhibitive factor. This is in concurrence with previous findings where educators find it difficult to accept learners with mental disabilities into their institution (Chimedza & Peters, 2001). Choruva (2009) has also found that most buildings are inaccessible for PWDs, thus they are not user friendly to PWDs. Jung (2003) and Johnson (2006) identify negative attitudes of faculty and administrative staff as being unfriendly, hence deterring access by PWDs. Inadequate resources were singled out by 17(84%) respondents as a challenge while 14(70%) indicated negative attitudes as a challenge. Poor funding and lack of policy direction were singled out by 19(94%) and 16(80%) respondents respectively. These findings are in support of other studies, which have established that there are many challenges in accessing ODL by PWDs among which are that PWDs require a high level of human resources (Hayden and Thompson, 2000; Choruva, 2009). Twelve (60%) respondents cited lack of technology and 16(80%) indicated lack of admission policy as challenges. Chataika (2007) concurs when she identified institutional factors such as physical access, inappropriate application and admission procedures, inappropriate teaching methods, inadequate support services and resources and political will as challenges in accessibility. In line with these findings, several studies have shown that there are challenges to do with those established in the current study which include, funding, policy issues, large class numbers, insecurity and lack of encouragement (Ainscow, 2003; Avramidis and Norwich, 2002; Badza and Tafangombe, 2010). To further support the findings of the current study, Foreman et al, (2001), Jung (2003), Johnson (2006) and Mpofu and Wilson (2004) in Sachs and Schreur (201) explain that low enrolment and high dropout of (PWDs) can be understood as the result of inadequate accessibility of higher education institutions , lack of support, adverse social attitudes and social isolation as well as low financial capacity."

Sub problem 2. *How has technology been embraced to facilitate ODL delivery to PWDs?*

Respondents were asked if they thought technology could enhance accessibility for PWDs. Figure 2 below shows the responses.
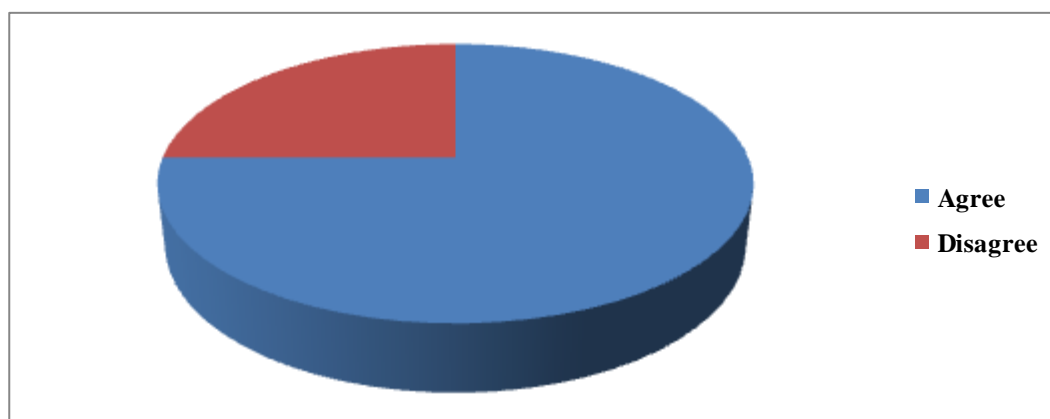

Figure 2. *Respondents` views on whether they thought technology can enhance accessibility for PWDs*

Figure 2 shows that the majority of 15(75%) respondents agreed when asked if tesschnology could enhance accessibility by PWDs. Only 5(25%) disagreed.

Respondents were asked which of technology aspects they thought could be used in accessing ODL for PWDs. Responses are shown in Figure 3 below.
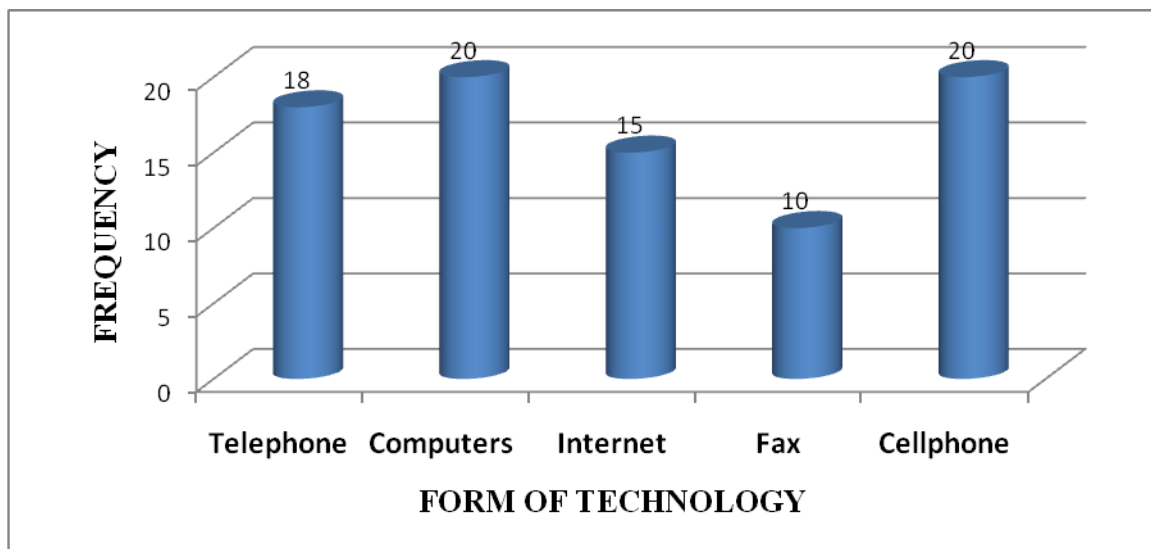

Figure 3. *Technology aspects used in accessing ODL for PWDs*

Figure 3 shows that the use of computers and cellphones accounted for 20(100%) respondents each while 18(90%) indicated the telephone was used in accessing ODL by PWDs. The internet and fax had 15(75%) and 10(50%) respondents respectively. The results concur with those by Inbar (2003) who indicated that adding computers, assistive technology and other adapted learning equipment is assumed to have resulted in an increasing number of students with disabilities entering higher education. Kamba (2009) is also in agreement as he asserts that capacity for e-learning can spearhead the process of inclusion of PWDs in higher and tertiary education. This technology should be used in conjunction with assistive devices and accessible e-books, that is, textbooks in electronic format for disabled students as this will also be useful improving accessibility by PWDs (Valverde et al, 2011).

Sub problem 3. *What personal factors inhibit PWDs from enrolling in ODL institutions?* Respondents were asked whether they thought personal factors inhibit PWDs from enrolling in ODL institutions. Responses are shown in Figure 4.
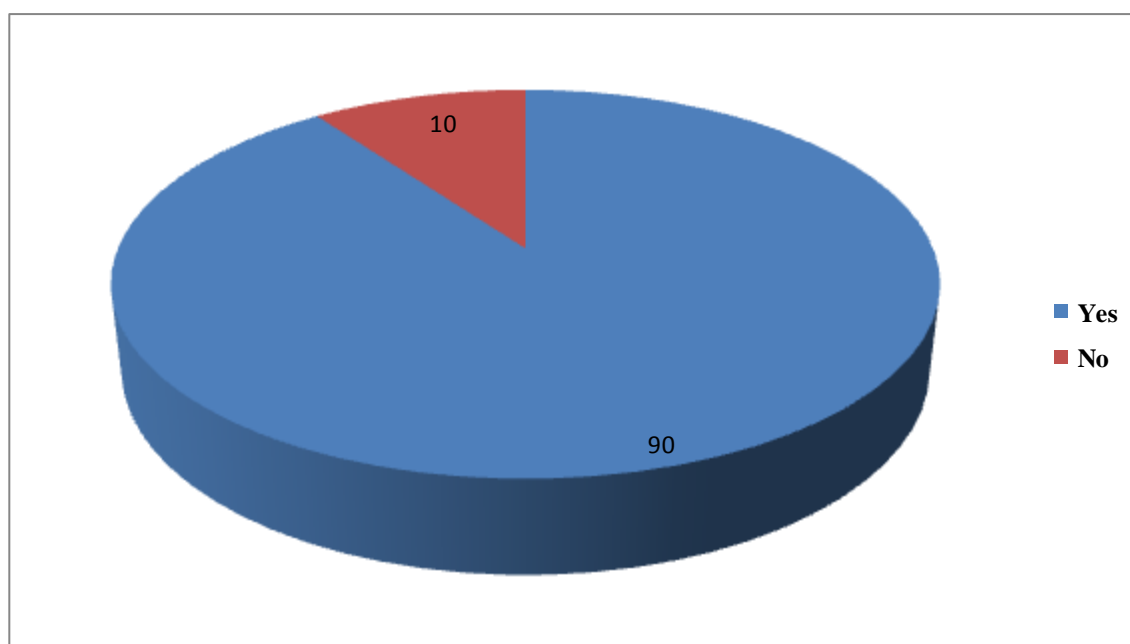

Figure 4. *Responses on whether ODL institutions enrolled PWDs*

Eighteen (90%) agreed that personal factors inhibit PWDs from enrolling in ODL institutions while only 2 disagreed to this. When further asked as to why this majority disagreed, it was pointed out that most PWDs were not seen in most education institutions. Even at ZOU very few students with disabilities were enrolled in all the faculties. Choruva (2006) reveals that PWDs say they frequently face negative attitudes in education sector. These attitudes are largely attributed to uncertainty among education personnel about how to deal with PWDS.

Respondents were asked to rank personal factors that inhibit PWDs from accessing ODL. Their responses are presented below:
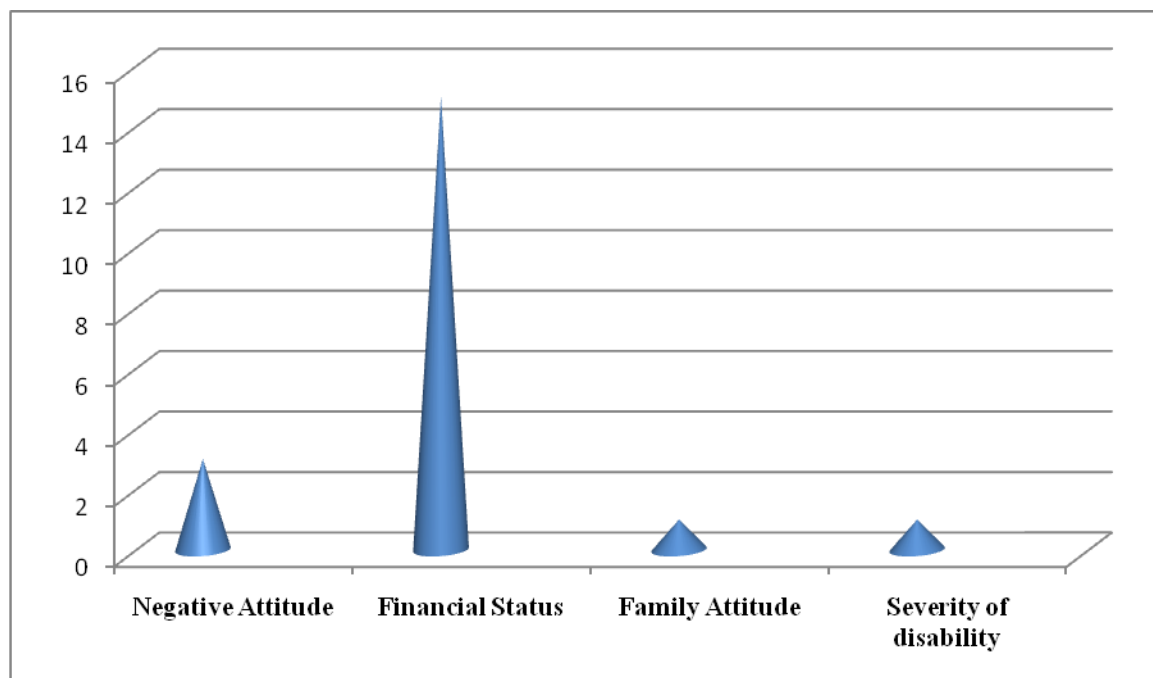

Figure 5. *Responses on personal factors that inhibit PWDs from accessing ODL.*

The most influential inhibitor to PWDs enrolment in ODL institutions is their financial status. This finding is in concurrence with Mpofu and Wilson (2004) in Sachs and Schreur (2011) who explain that low enrolment of (PWDs) can be understood as the result low financial capacity. The financial status of PWDs is generally low due the special arrangements that have to be made in the facilities they use. These modifications and adjustments push up their cost of living making it difficult for them to cope with ODL financial obligations which do not factor in their disabilities.

Sub problem 4. *What needs to be done to improve accessibility of PWDs in ODL institutions?*

Table 3. *Strategies needed to improve accessibility of PWDs in ODL institutions*

Strategy	Number	Percentage
Disability Resource center	10	50
Clear policies admission	12	60
Improvement of funding	19	95
Environmental adaptation	16	80
Financial assistance	20	100
Embracing technology	18	90
Resource mobilisation	20	100
Training of ODL personnel	20	100
Assistive devices	18	90
Adaptation of teaching strategies	18	90

Table 3 shows that 8(16%) respondents advocated for Disability Resource center while a sizeable 30(60%) asked for clear policies on admission. These findings support those by Forlin (2006) and Chimedza and Peters (2001) who advocated for individual differences to be catered for when teaching learners with mental disabilities. In the same vein, Winter (2006). This is the policy that has been lacking in ZOU system since the system relies on the quality document. A majority of 19(95%) required an improvement in funding for ODL programmes in concurrence with existing

findings (Badza and Tafangombe, 2010). All 20(100%) respondents advocated for financial assistance and resource mobilisation training of personel has been seen to be crucial in a number of studies which should include forms of training such as school-based development workshops, in-service courses and seminars that may assist lecturers to gain additional knowledge (Kisanji, 1997; Ainscow, 2003; Forlin, 2003; Engelbrecht, Green, Naicker and Engelbrecht, 1999). Embracing technology was advocated for by 18(90%) and in agreement with previous studies. Adaptation of teaching strategies and assistive devices were advanced for by 18(90%). Previous studies have also revealed a wide variety of teaching methods and strategies can be employed in the teaching so as to cater for learners' individual needs (Slavin, 1996; Mpofu, 2000 & Forlin, 2006).

11. CONCLUSIONS

From the findings above, it is concluded that:

- Whilst the quality policy manual has an affirmative policy for students with disabilities, there is no explicit affirmative enrolment policy to waiver the entry qualification for the same.

- There is also no clear-cut policy on financial assistance for students with disabilities. Geographically, Zimbabwe Open University is strategically placed and operates in such manner that it is easily accessible to students with disabilities.

- Zimbabwe Open University Mashonaland East Region's lecturers are not articulate with basics needed to assist students with disabilities except for those in the department of special needs education.

- Offices and other facilities in two different sites is a challenge to students with physical disabilities.

- The infrastructure in the region is generally not friendly to students with physical disabilities as there are no ramps.

- Assistive devices are not readily available and materials in the form needed take some time to be availed.

12. RECOMMENDATIONS

In view of these findings, it is recommended that:

- The university must pay attention to the admission policy, infrastructure, and training of lecturers from the different departments and be responsive to the needs of students with disabilities.

- There should be an explicit affirmative enrolment policy to waiver the entry qualification for people with disabilities.

- There should be a clear-cut policy on financial assistance for students with disabilities.

- ZOU Mashonaland East Region's lecturers should be trained so that they are articulate with basics needed to assist students with disabilities.

- The infrastructure in the region should be friendly to students with physical disabilities as there are no ramps.

- Assistive devices should be readily available and materials in the form needed should be availed in time.

- ZOU should create a disability resource centre which is housed in the student support services

- MDU to work with other organisations, for example, the Dorothy Duncan centre to develop, adapt or create study materials for PWDs.

- There is need to create a Disability policy which stipulates structures and resources for PWDs.

- There is also need to staff develop course teams on developing study materials for PWDs.

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