CHALLENGES EXPERIENCED BY STUDENTS WITH DISABILITIES WHEN PURSUING PROGRAMMES WITH ZIMBABWE OPEN UNIVERSITY (ZOU)

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ABSTRACT

The purpose of this study was to establish the challenges that confront students with disabilities as they undertook studies with Zimbabwe Open University (ZOU). The challenges were those that related to all processes that students interacted with from admission to exit of programmes. A qualitative research paradigm was preferred in which a case study was used. Interviews were used to gather data. The study participants were 19. Categories of students with disabilities comprised those with visual, hearing, physical impairment and mental health challenges. A number of challenges were identified but both staff members and students were resolute in their pursuit of achieving desirable outcomes in their study endeavours. Main challenges were on financial constraints, accessing the physical environment of some Regional Centres, not being well versed in utilising technological devices, shortage of technological devices, failure to modify study materials and examination writing challenges. Focusing on details of challenges faced shows that students were dropping out of programmes because of financial constraints. A number had not received their past semester results owing to failure to pay up the fees. Students with physical impairments were finding it difficult to reach the Regional Offices as lifts had long broken down and the offices on third floor could only be reached by stairs. Both staff members and students needed more staff development on accessing information technologically. The institution and students lacked technological equipment such as computers and other hardware and soft ware to have a sound backup system. Study materials were only partially modified for the visually impaired. The study recommends that a lot more needs to be done in assisting students with varied forms of disability.

Keywords: Disability, impairment, technological devices, challenges, mental health, Braille

INTRODUCTION

The admission of students with disabilities by all conventional and distance education institutions into study programmes of their capability, is the norm for all establishments that are sensitive and responsive to student needs and operating within the inclusive paradigm of practice. Inclusion is providing to all students, including those with severe handicaps equitable opportunities to receive effective educational services, with the needed supplemental aids and support services...(Hardman, Drew and Egan, 1999, p. 139). It increases participation in learning by removing barriers and emphasizes on access to the curriculum. Noble as the idea might sound, the execution of this task demands high commitment by the service providers in availing the requisite support to the students if meaningful learning and success is to be attained. A basic assumption underlying inclusion is the belief that accommodations and supports must be provided as appropriate as possible to

each child's unique needs (Meikamp, 2000 p. 262) Failure to address this requirement will not yield any meaningful benefits in the study endeavor.

The above cited task is even more pronounced in the case of students with disabilities learning through the Open and Distance Learning mode. Service providers will need to double their efforts as distance learning is a challenge even to regular learners. In this respect, the study highlights ZOU policy that guides practice cover curriculum modification, technological issues and barriers to Open and Distance learning.

BACKGROUND

Since its inception, Zimbabwe Open University (ZOU) has been no exception to this trend of accepting such students with disabilities into its varied programmes. It upholds a philosophy that emphasizes success for both its regular students and those with special needs. ZOU created a Centre for Student Management (CSM) that oversees to the welfare of such students through monitoring, coordinating and ensuring that suitable supports are offered, resources permitting. The CSM cooperates with the Unit for Disability Studies under the faculty of Social Sciences in supporting all students in the institution but with specific responsibilities to cater for those with special needs. According to Obiozor (2010) students visit this centre to talk out their problems or just get things off their chest. In addition, ZOU operates at an interdisciplinary level with other independent stakeholders outside itself in either offering or gaining support. One such partner which it cooperates with is the Dorothy Duncan Braille Library, Harare in having materials put in Braille, modules put on audio tape and utilizing magnifying resources. It also partners with some associations for the hearing impaired in getting resource persons who offer support in skills like sign language interpreting. It is the task of this paper to find out the challenges that these students are facing and map the way forward for enabling access to education.

Acts and Policies

Regularizing education for persons with disabilities starts with instituting acts, policies and practices that promote involvement in the general education curriculum. Legislation is encouraged to provide an "...inclusive learning environment for students with disabilities" (HEFCE, 200: 5). Within its general ordinances of operation, ZOU drew up policy guidelines that direct service provision for students with disabilities. The guideline is a comprehensive paper that covers aims, code of practice, admission procedures, provision of services, curriculum issues, examinations and implementation strategies Experience informs that these pieces of legislation and policies need to be constantly evaluated to ensure they continue being relevant to service provision for the recipients.

Curriculum Modification

One of the critical issues that a student-centred institution has to address after enrolling students with disabilities is curriculum modification. A variety of options on curriculum adaptations which support the success of each learner needs to be adopted. In order for activities of this nature to succeed there is need for provision of resources. There is no doubt that the faculty and administrative staff of every higher institution is equipped with innovative tools and resources to conduct student-centred instruction and provide support services (Obiozor, 2010 p.7). Without such accommodations, no significant progress would be attained in the general education curriculum. Wehmeyer, Lance, and Bashinski, 2002; Wehmeyer, Lattin, and Agran, 2001 identified two types of curriculum modification. These were coined as curriculum adaptation and curriculum augmentation. Adaptation refers to modification to the ways in which content is presented or represented or in which students engage with and respond to the curriculum (Wehmeyer et al.; 2002) The content is not

watered down or altered but is presented in a manner that allows the students varied accessibility to it. This also includes the formats in which the educator strategies will be varied in line with the student learning styles. Suk-Hyang, Wehmeyer, Soukup and Palmer (2010) suggest the study material formats that teachers could use as texts, graphics or pictures, digital and multiple audio and video media or performance formats of plays and skits and deliver content using lectures, power point, role play or computer mediated instruction. In distance education, teachers have to change in administering distance learning programmes. Teaching styles have to change to being mentors, tutors and facilitators. The teaching content has to accommodate the diverse student needs and expectations. In addition, there are a range of activities that students could be involved in that enhance their learning. Services include, but are not limited to: provision of accommodative testing, note takers, scribes, interpreters, readers, auxiliary aides, adaptive equipment and liaison between students and faculty in classroom accommodations (Obiozor, 2010, p. 10.). Notwithstanding these activities is the concept of differentiated instruction which allows students varied forms of receiving information and making sense of it. Differentiated instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms (Tomlinson, 2001). Instructors would be creative in adjusting the curriculum content in ways that enable the students to acquire it. This also includes the option of one to one instruction where need arises so as to reach most students' needs. Strategies of task analyses where concepts are broken down into smaller units that can easily be understood by pupils are an option to be adopted. Correspondingly, Suk –hyang et al show that, student performance can be evidenced through reports, exams, portfolios, drawings, performances, oral presentations and videos.

On the other hand, curriculum augmentation relates to the provision of more strategies and skills in accessing the general curriculum so as to realize success. Suk-Hyang et al (2001)say that these involve teaching students to learn to learn using meta cognition and executive processing strategies. Lee, Amos,Gragoudas, Lee Shogren and Theoharis (2006) give examples as being of learning to learn strategies, problem solving skills, goal setting skills as some of the ways that would enable the students to engage more successfully in the given content. Further to this, students have been noted to be more successful when teacher behaviour is participative. The academic engagement of students with disabilities is significantly higher during teacher directed instruction than during seat work (Brophy and Good, 1986; Greenwood, 1991; Salend, 2000; Wallace et al.; 2000). In this incident, the teacher seizes every opportunity that arises to support the student according to their needs. Correction is done; guidance is rendered and immediate feedback on attainments given. Obiozor (2010) observed that one aspect of communication that some instructors overlook was feedback on assignments. He further suggested making comments on every paragraph of submitted assignments as it was a definite way of communication especially in distance education. This is usually the behaviour of proactive teachers whose behaviour was noted by Lee et al.; (2006) that teacher and student variables of the quality of student response, teacher instruction and management behaviours and focus were strong predicators of student access to the curriculum. Wallance, Anderson, Bartholomay and Hupp (2002) found out that students with disabilities were more often the focus of teacher attention than were students without disabilities. In the effort to allow constant monitoring to take precedence, some of these students are made to occupy the front seats in the class. Classroom setting and other physical accessibility factors play an important part in the students' learning. These tie up to the curriculum modification strategies in realizing success. It is likely that most of these factors, the design of the delivery of the content, instructional strategies, curriculum modification, classroom and ecological factors and teacher and student factors - interact in ways that influence outcomes such as access and progress (Suk-Hyang et al.; 2010 p. 216.

Other forms of adaptation suggested by Meikamp (2000) are those related to extension of time. This can be in completing assignments or in examination writing. However, Meikamp cautions that it is erroneous for regular educators to believe that mastery of concepts is attained if enough time is given. Providing outlines of text chapters and those of lecture notes gives the students a framework of the content to expect. Similarly, issuing students with handouts with illustrations improve understanding. In addition, tape recording lectures for students with visual impairment and allowing the other students to see films clarify a lot of concealed concepts. Students may also be placed in cooperative groups of discussion and completion of assignments.

Learning Barriers Faced by Students with Disabilities in Distance Education Programmes

Students on (ODL) programmes tend to experience more challenges than their counterparts in conventional study due to the impact of distance that separates them from the institution. These challenges are even more pronounced for those affected by disabilities. Galusha (2010) categorizes general barriers as costs and motivators, feedback and teacher contact, students support and services, alienation and isolation, lack of experience and training. Alongside these are common issues that students present with whose causal effect might not necessarily stem from the institution. These are related to growth and development problems with studies and examinations, personal relations, identity, lowliness, anxiety, depression, anger, suicidal feelings, homesickness, family problems, sex and sexuality, cultural issues, life changes, bereavement and loss, eating difficulties, drug or alcohol problems, life crises, mental health issues, experiences of abuse and discrimination (Rowe, 2002, p. 2). These need to be taken cognisance of and addressed.

Separation from the teacher and other students leads to isolation and may result in loss of very important information. Keegan (1986) reiterates that separation removes a vital link most needed in facilitating learning. The presence of disability may also add to this separation if modalities for passing on information are not created. A student who is blind might not access information from lecturer presented in text instead of braille while a hearing impaired student might fail to comprehend a lecture delivered orally with no sign language support. In turn, either of these students might also fail to express themselves in forms that can be accessed by the lecturers. Keegan (1986) continues in saying that the link of communication between the two parties must be restored through overt institutional efforts so that teaching/learning transactions may be reintegrated. In students with disability, the separation is emphasized by lack of interactivity. This behavior arises from discrimination that often prevails against those with disabilities leaving them uncertain of what reception they would receive in an inclusive environment. According to Knapper (1988), distance learners with disabilities are bound to have insecurities about learning. These insecurities have been described by Galusha (2010) to arise from personal and school related issues such as financing of studies, disruption of family life, perceived failure and irrelevance of studies and lack of support from employers.

Students with disabilities might also lack appropriately modified materials to their needs. The institution might lack staff members in course development and designing distance learning materials.

Technological Issues on Learning

Technological advancement of this era has convincingly brought about numerous benefits to the field of education. In America, according to Honey, McMillan Culp and Spielvogel (2005) in 1994, 3 percent of public school instructional rooms had internet access compared

with 93 percent in 2003. In Zimbabwe, technology accessibility has improved significantly especially in information technology with a lot of computerization, use of internet facilities and mobile phones for communication. It has facilitated to a great extent the nature of distance learning especially in bridging the gap of communication between the learner and the tutor and disseminating study material and supervision thereof. Cantelon (1995) in Honey et al.; (2005) realised this development when he commented in his book that most of higher education will take off-campus through technological methods of delivery (p. 5). The advent of computers, telecommunications, and the World Wide Web provides an unprecedented opportunity for faculty and students to learn in a cooperative environment (Galusha, 2010). This same author interestingly points out that students respond to this changing environment more adeptly than teachers do. The U. S. Bureau of the Census (2003) in Honey et al.; (2005) found that 57percent of all children in school; use a home computer to complete school assignments and three quarters of online teens use instant messaging from time to time to talk about homework, tests, or schoolwork.

Of critical importance is for the faculties to be competent in using the technology so as to service adequately the distance courses. Galusha (2010) observed that computer, video equipment, communication software, and the like, present challenges and frustrations. In view of this observation above, a plan needs to be adopted for overcoming impediments related to utilizing technology by both student and tutor. According to Goldman, Cole and Syer (1999) in Honey et al.; (2005) learning how to use the technology at its initial stages takes more attention at the expense of content acquisition. There is need for proper training in this respect. A great number of adult students who are also the majority of distance learners are illiterate in computer, internet and basically technical skills. Accessing technologically based information in this instance will be a great challenge. The challenge of helping teachers and students achieve ICT literacy and the challenge of establishing frameworks for assessing their skills as most acute in schools serving low-socioeconomic, minority students were identified (Becker, 2000b; Becker & Ravitz, 1997). Another challenge observed is of costs that accompany the introduction of technology for both student and institution. Costs relate to initial costs of financing new technology, installing, maintaining, using and upgrading systems to enable continued service provision. Connectivity costs are on- going and include payment of staff who maintain the system. These and other related expenses might be too demanding for underfunded institutions to manage. The existing telecommunications systems are inefficient and and/or expensive to use, so that educational institutions are unlikely to place too much reliance on them for teaching, support, or information searching (Harry, 1992, p. 190). Galusha sees this development as the reason why developing countries still use print, cassettes, and radio delivery methods. Most of the students as well do not have personal computers with modems and some live in remote areas where there is no electricity. Communication systems that are available are the phone, mail and sometimes the cell phone.

The purpose of different types of technology and the type of content they deliver in learning is vital information to know. An example is of word processing and e-mail which promote communication skills. Technicians with knowledge on these aspects are critical in advising on what applications to use for such purposes as supplementary instruction, introduction of topics, provision of self-study or even learning new concepts.

Research questions

1. What challenges do students with disabilities face in their studies with ZOU institution?
2. How has technology facilitated their learning in distance education?
3. How has inclusion transformed their learning?

METHOD

A case study design under the qualitative research paradigm was employed to gather the challenges that students with disabilities were facing as they pursued studies with ZOU. This was rated the ideal design as it allowed participants to air their personal views about service received directly to the researchers.

Participants and Setting

The study comprised 19 participants drawn from 7 Regional Centres of ZOU. There are 10 of these centres but no response was received from the other 3. Numbers of respondents from each Region were as follows, Harare (n= 7); Mashonaland East (n= 5); Bulawayo (n= 2); Manicaland (n= 2) Masvingo (n= 1); Matabeleland North (n= 1); Mashonaland Central (n= 1).Programmes they were undertaking were Bachelor of English and Communication (n=1); Bachelor of Science Special Education (n= 4); Masters in Special Education (n= 1) Masters in Business Administration (n= 3); Psychology (n= 4); Physical Education (n = 1); Counselling (n= 2); Bachelor of Arts Media Studies (n= 1); Bachelor of Education (n= 1); Masters in Educational Administration (n= 1).All these participants were disabled and were currently pursuing programmes with ZOU. Participants were coded according to the disability category they fell under. Physical impairment (Phy/ Imp -01); Hearing impairment (H/ Imp -02); Mental health challenges (M /Cha -03); and Visual impairment or Blindness (V/ Imp – 04).

There were 10 males and 9 females. They were all working adults in different professions of teaching, computer programming and business enterprises.

Research Instruments

Each participant was asked questions that related to challenges they faced in interacting with ZOU processes of study such as admissions, study materials, inclusion practices, policy guidelines and benefits accrued from using technology facilities at their disposal. Students responded by ticking and filling in where they could. They also enlisted the services of student advisors to sign and to tick on their behalf where this support was needed. Some students were contacted through the cell phone or e-mail.

Procedures

Student advisors in the 10 Regional Centres of ZOU were first contacted to furnish the researchers with data on the number of students with disabilities in their regions. This was followed up asking them to administer the instruments as in some cases the students with disabilities needed guidance in the exercise. The researchers interviewed those students in Harare Region. A follow up to other Regional Centres was conducted by telephone to verify what the other student advisors had done. The codes cited above, (Phy/ Imp -01); (H/ Imp - 02); (M /Cha - 03); (V/ Imp – 04) were used in analyzing the data gathered.

RESULTS

Results were presented under the sub themes that were used to guide the data gathering process.

Challenges Faced by Students with Disabilities

Admission Procedures

All participants applauded the incorporation of disability categories on the ZOU application form. This reflected a positive move by planners of including persons with disabilities into the general system of education. Participants from the (Phy/ Imp -01), (80%) deplored the

under utilization of this opportunity. They noted that only a few persons with disabilities were enrolled into the programmes of the institution as most of them did not possess requisite entry qualification required. People without disabilities are more than 40% more likely to enter higher education as those with disabilities (National Audit Office, 2002, p. 7). In the Zimbabwean situation, this percentage is way higher than the above for the regular students. The above authors explain that this under representation emanates from an earlier stage in the education system. There was need to raise awareness, increase support and create more enabling structures for persons with disabilities at primary level so as to transform the current low enrolments at tertiary level.

Disabling Conditions

Data from the participants of (M/ Cha -03) category showed that these students were victims of disabling factors. These factors were recurring conditions that affected them after a spell of anxiety or intense depression. This derailed study progress. Two participants in this study had a history of this condition. Previous assessment results of one of these students reflected that the student had challenges of schizophrenia. The student had to drop out of the programme and had to rejoin later. The other student is currently showing symptoms of disturbances and yet his previous performance used to be very good. Honey et al. (2005) noted that approximately one third of university students in Britain suffer from poor mental health at some point during their studies. There is need for support to cushion them during such periods. Students with mental health problems required a dedicated system of student support and that staff needed to be made aware of mental health issues (Buxton, 2002, p. 10).

Accessibility of Regional Physical Environment

All participants of the (Phy /Imp -01) category mourned the inaccessibility of the Regional offices. This is especially so with the Harare and Bulawayo centres which are not accessed by lifts and students have to use the stairway to reach the third floor where offices are located. Most students including the regular ones find this issue a big challenge. Sometimes programme coordinators and student advisors leave offices to go down stairs to give service to students needing support.

Technological Challenges

All participants expressed a desire to fully exploit the benefits that accrue from technological exploits. Unfortunately they were confronted with a lot of challenges that denied them enjoying these innovations. Ninety seven percent of the participants did not own a computer. In addition, they could not afford the costs of getting connected to internet. Galusha (2008) observed that some students, particularly those without home computers with modems could have difficulty communicating with the university or teacher. Galusha further says that lack of adequate hardware and the subsequent cost barrier of obtaining equipment could place undue hardship on some remote students. This is true especially for students with disabilities. To mention but just a few examples, are those with visual impairment who could benefit immensely from a computer with an in built voice for reading texts while those with celebral palsy could use the computer for writing purposes. In addition, participants in all programmes, 95% lacked training particularly in reference to technical issues. Most students and staff members are not well versed in technology such as computers and the internet. One student advisor for a participant who is hearing impaired who works in rural areas said that he assisted the student to have access to internet when he visited the city during weekends. One other student with physical impairment required ZOU to provide him with a computer to write an exam and this raised transportation challenges especially with rented accommodation during exam writing period. One blind student uses audio cassettes on which

course content has been recorded The message sending facility on cell phone is immensely used for communication.

Financial Challenges

All participants are self financing. At the time of writing this paper, half of the participants had not collected their results because they had not paid up the previous semester fees. This is a major setback for a lot of students including the regular ones. The institution has however devised a staggered payment plan that allows students to pay the fees over a period of three months. In addition students are referred to some financial institutions that arrange loan facilities for working students with some collateral security. This leaves out a potential number of students with disabilities who might be academically talented but out of employment. Their situation becomes worse off than that of able- bodied students.

Materials/Curriculum Modification

Participates in the (Phy/ Imp -01) and (M /Cha - 03); categories reported that they received materials that were not modified in any manner. Those in the (V/ Imp – 04) category either received materials in Braille or in audio cassette form. This was the only modification they noted. Those in the (H/Imp -02) category sometimes got some signing interpretation to content delivered during tutorials. Apart from this, there was no other modification to the curriculum which they received. Meikamp (2000) observed that for whatever reason, modifications have not been implemented. Wehmeyer et al.; (2006) concurs with this observation when he concludes that curriculum adaptations and augmentations were rarely present in the instructional experiences of students with disabilities but also found that students who were provided with this support achieved at higher rates than expected. On this same note, Russel (2004) suggested that curriculum modifications were rarely implemented, in spite of the fact that they have been widely considered as a best practice to enhance access to and progress in the general education curriculum. It is clear that students do not benefit from this non responsiveness by educators. When curriculum modifications were provided, students were engaged in more academic- related responses and fewer competing behaviours and teachers were engaged in fewer classroom management activities (Lee, 2010, p. 213).

Support from Faculty Staff

Participants from the (H/Imp -02) and (V/ Imp – 04) categories indicated that the programme coordinators were willing to support them, but were not conversant in Braille and signing skills. Some staff members needed staff development on how to support students with disabilities. Sanderson (2001) stressed the need for information to be provided in Braille and for interpreters to work alongside students with hearing difficulties. This same author argued that lecturers need to be educated into the needs of disabled students, perhaps through the introduction of a compulsory course for lecturers on disability issues The services of note takers would also be an added support as hearing impaired students face challenges taking note while wanting to watch the face of speaker to gather more information in the lectures. In order to meet with students' needs, Honey et al (2005) recommended identifying a named person who would ideally possess in depth knowledge on the subject and be located in the department. In ZOU, such a person is the student advisor who is serving that role though not a specialist in subjects but in areas of managing persons with disabilities. This arrangement will also do away with the challenge of isolation in the distance education environment.

Assignment and Examination Writing Challenges

Two participants of (V/ Imp – 04) category stated that they had a challenge in responding to some questions that required them to make some drawings. The invigilator, who was a student advisor, ended up drawing on behalf of the student while following instructions on

what to draw. In both assignment completion and exam writing, there were other students with low vision who enlisted the services of a scribe to write while the student dictated for them. The student's own writing overlapped and encroached into other lines, hence making it illegible. Healey (2004) advised that since students with disabilities encounter more obstacles than the majority of students, there was need to be mindful when designing assessment packages.

Specialised Equipment

All students in the (H/Imp -02) category required hearing aids and other modern devices that make it easier for communication. Students who were (V/ Imp – 04) needed specialized computers to cater for their reading needs and magnifiers which can enlarge print. One student in the (Phy/ Imp -01) category needed a computer for writing with as he had celebral palsy and his manual dexterity was weak. It has been noted that assistance required by students with disabilities often includes funding or equipment, scanners and computers with voices synthesizers in libraries, flexible systems in library, information networks, disabled parking and access and exam arrangements which take into account the needs of disabled students (Holloway, 2001).

SUMMARY AND CONCLUSION

This study has been instrumental in pointing out the challenges faced by students with disabilities while on ZOU programmes. Main challenges faced related to accessing of the physical environment of some of the Regional Centres, meeting financial obligations ,lack of modification of study materials, lack of skills in technological functioning and failure to afford purchasing the technological devices. Irrespective of this situation, both staff members and students were persistent in achieving good results as a number of students were managing to complete studies.

REFERENCES

Brophy, J. & Good, T. (1986). Teacher behavior and student achievement. In M. Witrock (Ed.), *Handbook of Research on teaching (pp. 348-370)*

Becker, H. J. (2000). Who's wired and who's not: Children's access to and use of computer technology. *Future of children, 10*(2), 44-75. Los Altos, CA: The David and Lucile Packard Foundation. Retrieved charts on May 15, 2103 from http://www.gse.uci.edu/doehome/DeptInfo/Faculty/Becker/packard/saveall.html#top

Becker, H. J. & Ravitz, J. (1997). August) *The equity threat of promising innovations: The Internet in schools.* Paper presented at the annual meeting of the Society for the Psychological Study of Social Issues in Chicago.

Galusha J. M. (2008). *Barriers to Learning in Distance Education*.USA University of Mississipi.

Greenwood, C. R. (1991). Longitudinal Analysis of time, engagement, and achievement in at risk versus non risk students.*Ecxeptional Children, 57,* 521-535.

Hardman, M. L,. Drew, C. J. & Egan, M. W. (1999). *Human Exceptionality: Society School and Family (6^{th}ed).* Allyn& Bacon, Boston.

Harry, K. (1992). Distance education today and tomorrow: A personal perspective. *Educational Media International, 29*(3), 189-192.

Holloway, S. (2001). "The experience of higher education from the perspective of disabled students,' *Disability and Society, 16,* 597-615.

Honey, M., McMillan Culp, K. & Spielvogel, R. (2005). *Critical Issue: Using Technology to Improve Student Achievement.* United States, North Central Regional Educational Laboratory.

Keegan, D. (1986). *The Foundations of Distance Education.* London: Croom Helm.

Knapper, C. (1988).Lifelong learning and distance education. *American Journal of Distance Education, 2*(1), 63-72.

Lee, S., Amos, B. A., Gragoudas, S., Lee, Y., Shogren, K. A. & Thoeharis, R., et al. (2006) Curriculum augmentation and adaptation strategies to promote access to the general curriculum for students with intellectual and developmental disabilities. *Education and Training in developmental Disabilities, 41,* 199-212.

Meikamp, J. & Steve, R. (2000). *Bridging the gap: Curricular adaptations rural regular educators are using for inclusion.* Charleston- USA, West Virginia Graduate College.

National Audit Office (2002). *Widening participation in higher education in England.* London: The Stationary Office.

Obiozor, W., E., and Onu, V., C., and Ugwoegbu, I. (2010). Academic and Social Challenges Facing Students With Developmental and Learning Disabilities in Higher Institutions: Implications to African Colleges and Universities. *Journal of Academic and Social 1*(1), 126-140.

Rowe, S. (2000). Student services. London, MetraNet. Retrieved on May 22, 2013, from http://www.londonmet.ac.uk/studentservices

Salend, S. J. (2000). Strategies and resources to evaluate the impact of inclusion programs on students. *Intervention. 35,* 264-270, 289.

Sanderson, A. (2001). Disabled students in transition", *Journal of Further and Higher Education, 25*(2), *228-240.*

Suk-Hyang, L., Wehmeyer, M. L., Soukup, J. H. & Palmer, S. B. (2010) Impact of Curriculum Modifications on Access to the General Education Curriculum for Students With Disabilities. *Council for Exceptional Children, 76*(2), 213-233.

Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd Ed.) Alexandria, VA: ASCD.

U. S. Bureau of the Census. (2003), October). Current Population Survey, Internet and Computer Use.

Wehmeyer, M. L., Lance, D. & Bashinski, S. (2002). Promoting Access to the general curriculum for students with mental retardation: A multi level model*, Education and training in Mental Retardation and Developmental Disabilities, 37,* 223-234.

Wallace, T., Anderson, A. R., Bartholomay, T. & Hupp, S. (2002).An ecobehavoural examination of high school classrooms that include students with disabilities, *Exceptional Children, 68,* 345-359.

Wehmeyer, M. L., Lattin, D. & Agran.M. (2001). Achieving access to the general curriculum for students with mental retardation: A curriculum decision – making model, *Education and Training in Mental Retardation and Developmental Disabilities, 36,* 327-342.