COMOSA
Journal of
Open
Schooling

COMMONWEALTH OPEN SCHOOLING ASSOCIATION

AIMS AND OBJECTIVES

The COMOSA Journal of Open Schooling is a peer reviewed international journal committed to school education through open learning methodologies. The journal is inter nationally contributed, abstracted and subscribed. The affairs of the COMOSA Journal of Open Schooling are being managed with the help of an Editorial Advisory Board, and an Editorial Board, placed at NIOS, India .

The aims and objectives of the Journal are:

to provide a forum across the Commonwealth Countries for scholarly discussion on concerns and issues in Open Schooling/Open Learning.

to disseminate research, theory and practices including inter-disciplinary studies.

The COMOSA Journal includes research papers, articles, review of research, review of Books on Open and Distance Education and highlights programmes and activities in Open Schooling in Commonwealth Countries.

The research papers may inter alia reflect need of the study, objectives, research methodology including sample and results of the study. The researches may be empirical, archival, historical etc.

EDITORIAL CORRESPONDENCE

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SUBSCRIPTION INFORMATION

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Chief Editor's Note

Commonwealth Open Schooling Association (COMOSA) , is a non-profit, democratic, collaborative and futuristic organization based on mutual respect and committed to support the efforts of open schooling institutions. The basic objective of the association is to cooperate and collaborate in development, promotion and introduction of innovative, high quality, relevant, equitable, gender-sensitive and cost-effective programmes of school education for sustainable development in commonwealth countries through Open and Distance Learning Mode, and thereby targeting to achieve the Millennium Development Goals (MDG) of the United Nations.

The Association aims at achieving a number of outcomes. One of these is sharing of resources by compiling, publishing and distributing research and other materials. The Journal provides a forum to the member countries to mutually benefit by sharing views, activities, research and innovations, etc. I am happy to share the news that the COMOSA Journal of Open Schooling has been registered and assigned **Number ISSN 0976-0407.**

The present issue of the COMOSA Journal has five articles/research paper on varied themes which cover different aspects of Open and Distance Learning across the commonwealth countries ,a book review and an International conference report.

The paper titled **Open Vocational Education in Bangladesh and Challenges of Using ICT** discusses the challenges of using ICT for vocational education through open schooling in Bangladesh and provides suggestive measures for its successful implementation.

The article titled **Rajiv Gandhi Project for EduSat Supported Elementary Education (RGPEEE) – An Agent for Change of Mindset and Development of Good Practices among Teachers** elaborates the introduction of satellite technology in some rural primary schools in a relatively underdeveloped district in Central India. The Rajiv Gandhi Project for EduSat Supported Elementary Education (RGPEEE) has indeed changed the attitude of the teachers of the schools wherein the project has been set in operation.

The paper on **Increasing Participation Of Women In Higher Education Through Distance Learning : A Case Study On Indira Gandhi National Open University** discusses how the relevance of Open Distance Learning (ODL) in the higher education flora within which vocational skills for female students are successfully achieved.

How the use of mobile and multimedia technology can catalyse to impart quality education to unreached is discussed in the paper titled **Role of Mobile and Multimedia Technology in Open and Distance Learning.**

The paper on **A Comparative Analysis of the Learner Support Services of IGNOU and NIOS** focus on the support services in terms of motivating the learners, keeping them on the right track till the completion of their study,

encouraging them to make use of the facilities provided and ensuring their access as well as success in learning. An indicator of the above may be the satisfaction level of learners.

In addition to these papers, a conference report on **Integration of Academic courses with Vocational Education in Secondary Schools** organisezed by the vocational Education Department, of NIOS, India, is also presented in this issue.

The contributors of this issue of the Journal deserve special thanks for their valuable contribution on varied themes. I appreciate the hard work of the Editorial Board of COMOSA and Printing Unit of NIOS for bringing out this issue of the Journal. We look forward to receive articles for the forthcoming issues of COMOSA. We invite comments and suggestions for quality improvement of this Journal.

Best Wishes !

(Dr. Sitanshu S. Jena)
Chairman, NIOS
&
Chairperson, COMOSA

Open Vocational Education in Bangladesh and Challenges of Using ICT

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Abstract

ICT-enabled open and distance learning (ODL) has already supplemented face-to-face (f2f) education in many developed countries. Exclusive open universities have also come up to provide an alternative channel to acquire education and training. In the developing world, the Bangladesh Open University is one such example. In Bangladesh, the use of ICT in education has been generally perceived as economically cost-effective, socially desirable, culturally and politically responsive. The current Government is implementing the 'Digital-Bangladesh' agenda where the use of ICT in education has been accorded top priority. The Government also issued the Education Policy 2010 which puts emphasis on digitization of the Bangladesh Open University (BOU), the only distance education institute in the country, where the Open School is operating as one of the core faculties. In Bangladesh, the Bangladesh Vocational Education Board launched vocational education (VET) on agriculture through open schooling in 1993 with some self-learning materials (SLMs) where no ICT was used. The Board faced challenges in running the practical sessions for their learners. Besides, NGOs also provide Continuing Education which is known as Open Non-formal Education (ONFE) where a large portion covers livelihood courses with a vocational emphasis. Animated CDs as ICT materials are being used by the large NGOs for ONFE, targeting students who are mostly from the underprivileged background. The BOU-Open School introduced vocational education in its Junior Secondary School Certificate (JSC) program where ICT was used in a small scale and proved very successful in the delivery of practical sessions. ICT was also found as one of the motivating factors for

reducing drop-outs. Distance education providers in Bangladesh have been enjoying, at the moment, the government's patronization as Digital-Bangladesh agenda is being implemented in full swing. The current education policy has also emphasized on vocational education through ICT. Although Bangladesh, at the moment, has an encouraging atmosphere for ICT-enabled vocational education through open schooling, there are some challenges which need to be reflected upon and addressed. This paper outlines the scheme as briefed above, discusses the challenges of using ICT for vocational education through open schooling in Bangladesh, and provides suggestive measures for its successful implementation.

Keywords: Open schooling in Bangladesh, open vocational education, ICT and open schooling.

Introduction

According to the World Bank report (2006), Bangladesh will need to create at least 2.25 million jobs per year to accommodate a near doubling of the labor force from its present size of 55 million to 100 million in 2020. Given a saturated agriculture sector, the industry must create 16 million jobs by 2020 - a 5.5 percent annual increase. The largest portion of the new jobs needed over the next two decades will have to come from the service sectors including trade, construction, transportation and communication (World Bank, 2006). Therefore, Bangladesh has to implement Technical and Vocational Education and Training (TVET) through providing courses related to various applied and practical areas of science, technology and engineering, or with a focus on a specific specialized area. But, the country faces resource constraints in providing TVET through the conventional method that uses face-to-face (f2f) sessions for theoretical knowledge and practical sessions for hands-on exposure. The Directorate of Technical Education (DTE) of the government is responsible for the planning, development, and implementation of TVET in the country. The curriculum is implemented by the Bangladesh Technical Education Board (BTEB). DTE-run TVET seems insufficient when compared to the massive needs of the country. Alam (2010) states that Bangladesh needs to 'plan' its upcoming TVET programme, as recommended in the strategy document, to get the best out of it for the people. This document also puts emphasis on Information and Communication Technology (ICT) education as it is also important for survival in a globalising labour market. The TVET system itself demands a labour-market which is relevant, equitable, efficient, and of high quality. National policies should, therefore, take into account these and other globalisation-induced factors in designing TVET programmes and courses. At the moment, the use of ICT in the delivery of vocational education has been a big challenge for Bangladesh to compete with the global market for its labor forces. As Bangladesh faces resource

constraints, TVET through open and distance learning (ODL) and/or open schooling at the lower level is of most feasible alternative where there is huge opportunities to use ICT. This paper explores the situation in Bangladesh and with reference to future economic development by providing TVET through open schooling and by using ICT.

National TVET Policy

TVET through open schooling has always been a priority of the Government's education policy. The report of the Education Reforms Commission, East Pakistan 1957 recommended as under:

"Recommendations on *Correspondence Schools-*

♦ In order to provide facilities to those whose formal education has been interrupted by the need of earning a livelihood, but who are desirous of pursuing knowledge, technical or otherwise, we recommend that an experimental start may be made with a system of correspondence schools.

♦ A few selected institutions should be asked to open a correspondence section. For example the Engineering College, one or two polytechnic schools, some good science colleges, one training college, and a few good high schools may conduct these courses under the supervision of the Directorate.

♦ An initial grant of one lakh of rupees may be made, to be renewed according to the expanding activities of the department." (GOEP, 1957, p.46)

In fact, the reports of all education commissions have put emphasis on TVET through open schooling due to its flexible and cost-effective nature. The government sometime back had articulated to introduce vocational education through the general curriculum. Rafique (1994) states that there was no articulation of TVET with secondary education till 1993. From 1994, basic trade courses have been introduced as an optional subject for the students of secondary schools. A compulsory subject on agriculture was introduced in secondary schools from 1994. There have always been resource constraints in the delivery of the TVET. The Asian Development Bank (ADB), through a loan project, trained in Bangladesh about 68,200 people over the five years of implementation from 2007, and the project document rightly identified the following: the TVET system is poor and the needs of the employment sectors are mismatched the practical component of the curriculum is not effectively taught; a majority of the teachers lack training

and practical skills and have no industrial experience; the TVET institutions have poorly equipped workshops; there is lack of teaching and training materials, and adequate classrooms and workshops (ADB, 2008).

In 2007, the country undertook a gigantic project with the help of the International Labour Organisation (ILO) to review TVET policies, strategies and systems (TVET Reform Project, 2008). In recent years, Bangladesh had considerable progress in the reforms of the TVET system including reforms in its outdated curriculum and delivery strategies. The Reform Project ended its activities with the following outcomes:

♦ New national TVET policy (that will allow the TVET system to function more effectively at the central and decentralized levels).

♦ New national qualifications framework for TVET.

♦ New skill standards and curriculum in priority occupations.

♦ New quality assurance arrangements for training organizations.

♦ Enhanced links between industry and TVET.

♦ Strengthening of TVET institutions through improved knowledge and skills of managers and teachers.

♦ Improved skills development resulting in enhanced productivity and competitiveness in key growth and export-oriented industries in the formal industrial sector.

♦ Increasing access of underprivileged groups to TVET. (ILO, 2010)

Alam (2010) states that Bangladesh has a vision of an "integrated, peaceful, prosperous Bangladesh, driven by its own people to take its rightful place in the global community and the knowledge economy". The Plan of Action of the country recognizes the importance of TVET as a means of empowering individuals to take control of their lives. It calls for the integration of vocational training into the general education system. Bangladesh also recognizes the fact that vast numbers of its young people are outside the formal school system, and consequently attaches importance to the integration of non-formal learning methodologies and literacy programmes with the national TVET programmes.

TVET Structure

The TVET policy guidelines and implementation strategies are decided by

the National Council for Skill Development and Training (NCSDT) and the Bangladesh Technical Education Board (BTEB) the latter has the jurisdiction over the entire area of Bangladesh to organize, supervise, regulate, control and develop technical and vocational education (BTEB, 2010). The TVET is provided at the secondary level. For the large number of non-formal trade courses, the TVET starts after eight years of schooling, and for a few selected trades after the secondary level. The TVET programmes run by the Government agencies, NGOs, and private institutions are basically non-standard and non-formal, except the vocational training institutes of the MOE and Technical Training Centres of the MOLM (Rafique, 1994).

The Bangladesh Bureau of Educational Information and Statistics (BANBEIS, 2010) provides the complete structure of TEVT in Bangladesh as under:

"For the students whose interests are not strictly academic may find technical-vocational programmes more interesting and more valuable for their future. Government tries to ensure that the course curriculum should be relevant to students' interest and aspirations while at the same time it should address the needs of the job market."

i) Primary level

Rahman and Das (2007) depicted that Bangladesh education system is absolutely diversified particularly at the lower level consisting four methods such as formal schools, technical schools, religious schools or *madrasah* and non-formal education (NFE) schools. There is no technical-vocational institution at the primary level of education. Accordingly, *Ebtedayee* in the first level (what is same to primary level) of *madrasah* education has no scope for technical-vocational education. But, NFE programmes have livelihood emphasis which is treated as vocational component. Technical-vocational education in Bangladesh is, in fact, designed at the levels of secondary and tertiary level of education.

ii) Secondary level

In fact, vocational courses are introduced at the secondary level to prepare skilled workers in different vocations starting from grade-9. At this level, the courses are diversified in different vocations spread over 1 to 2 years duration. Recently, vocational courses of 2 years duration have been introduced at the higher secondary level in the government managed vocational training institute (renamed as Technical School and College). Diploma courses prepare the diploma engineers at the polytechnic institutes. This course spreads over 4 years duration for the graduates of the secondary school certificate examination. There is a technical education board called Bangladesh Technical Education Board (BTEB), which grants affiliation to the technical, institutes (see Fig. 1).

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┌─────────────────────────────────────────────────────────────────────┐
│  Formal or Open/Religious Schools under general/madrasha or BOU:      │
│                                                                       │
│                                                        HSC (voc)      │
│                                         SSC (voc)      (2 years)      │
│                   JSC/ Junior Dakhil    (2 years)                     │
│                     (6-8 yrs.)                                        │
│   PSC/ Ebtedayee                                                      │
│     (1 – 5 yrs.)                                                      │
│                                                                       │
│   Technical schools under                                            │
│     technical board:                                                 │
│                          SSC/Dakhil                                  │
│                          (9-10 yrs.)                                 │
│                                          HSC/Alim                    │
│                                          (11-12 yrs.)   Diploma       │
│                                                         (2/4 years)   │
│                                                      Skills Certificate│
│                                                         (1 year)      │
└─────────────────────────────────────────────────────────────────────┘
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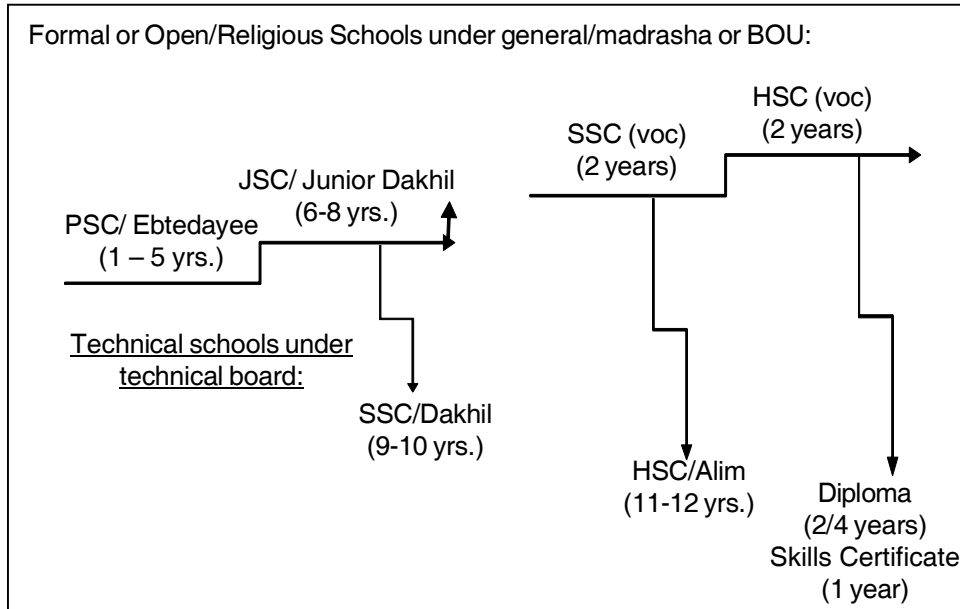
It conducts examinations for the students completing different courses in different vocational and technical education, and awards certificates to the successful candidates.

iii) Professional education

The College of Textile Technology (now a full-fledged university) and the College of Leather Technology offer four-year degree courses in Textile Engineering and Leather Technology respectively after the completion of Higher Secondary education. The minimum requirement to be admitted to the teachers training colleges (TTCs) for Bachelor of Education, and Bachelor of Physical Education in the Physical Education College, is graduation degree. Generally, in-service teachers undertake this professional training course along with some unemployed graduates. Professional education is also imparted in Medical Colleges, Dental Colleges, Nursing College, Homeopathic Colleges, and Law Colleges etc.

Vocational Education and ICT

Starting from 2001, the Ministry of Science and ICT, in cooperation with the Directorate of Secondary Education, and the Directorate of Vocational Education, is developing an e-learning programme with the objective of improving the quality of education at high school and vocational school levels through the use of the internet. But, due to lack of coordination and Government's initiative, this programme is being delayed in its implementation. A plan has been formulated to bring initially 360 *upazillas* (sub-districts) under this program and set up 360 institutes – one in each upazilla. At this

preliminary stage, learning materials are being developed for selective subjects (Khan, 2009). The Directorate of Vocational Education had started this programme since 2001. Its objective is to train teachers and students in using information technology, especially the internet. For this activity the Directorate of Vocational Education cooperates with the Network of School Information (NSI), a community of vocational schools which also uses internet. This network provides the training–aided by the Daffodil International University, the project provides lectures on selected courses through the internet.

The policy was developed under the government's Technical and Vocational Education and Training (TVET) reform project, intended to develop new competency based courses suited to specific demands of industry and certification under a proposed qualification scheme - the National Technical and Vocational Qualification Framework (NTVQF) - which is robust and flexible in that it provides for recognition of prior learning, i.e. skills gained through work; allows for pre-vocational training; and also have the provision of integration of ICT (Rahman, 2010).

Open Schooling and ICT

Ferreira (2010) pointed out, in her speech, on the Foundation Day of the National Institute of Open Schooling (NIOS), India that ICT integration in open schooling can enhance access to school education for a large number of deprived and disadvantaged students (Ferriera, 2010). In addition, ICT integration provides entertainment in the delivery of education. It is today playing a very important role in transforming the mode of imparting vocational education. While the interactive white boards are increasingly becoming common in the school classrooms, online courses are helping the developing countries in improving access and quality of education. Application of technology in imparting education is thus not only helping a lot in bridging the rural–urban divide but also in improving the quality of life. Bangladesh Open University (BOU) provides need-based education and Open School, the one of the core faculties of the University, has been catering to the disadvantaged rural learners who are the dropouts for various socio-economic reasons through different school programmes namely JSC, SSC and HSC at par to the conventional board of education (Rahman and Alam, 2010). Advent of BOU-Open School was through the integration of radio broadcast as technology in 1956, then TV-broadcasts and finally virtual interactive classroom (VIC) through video and SMS of the mobile technology in 2007 with a view to bridge the rural-urban divide as the entire country is under the mobile network (Islam, 2007; Rahman and Panda, 2012).

In Bangladesh, the Bangladesh Vocational Education Board launched vocational education (VET) in agriculture through open schooling in 1991

with some self-learning materials (SLMs), though no ICT was used. The Board faced challenges in running the practical sessions for the learners. Besides, NGOs also provide Continuing Education (CE) which is known as Open Non-formal Education (ONFE) where a large portion covers livelihood courses with vocational emphasis. Yeasmin *et al* (2012) state that NGOs organize CE programme for the neo-literates to keep them active in pursuing the higher courses of literacy programme using the blended approach of ODL. Dhaka Ahsania Mission (DAM), the second largest NGO in the country, uses animated CDs as ICT materials such as Candle Making, Power Tiller for agriculture, and for vocational part of the ONFE, targeting groups comprising students who are mostly from the underprivileged background. In addition, it also uses learning CDs for life skills part of the CE programmes such as Air & Its Importance, Contribution of Science and Science for Better Life. Although Bangladesh, at the moment, has an encouraging atmosphere for ICT-enabled vocational education through open schooling, there are some challenges which need to be addressed.

Vocational Education and Open Schooling

i) Diploma in agriculture

BTEB, in 1993, launched a Diploma in Agriculture through open schooling targeting the Block Supervisors (BSs) who work as agriculture extension agents with the farmers in villages (Rahman & Rafique, 1995). This programme was a unique example of on–the–job training through open schooling towards capacity building of the employees who work in remote areas. Most of the BSs had one/two years of experience of post-secondary training on agriculture extension. The urgency for upgrading and updating the BSs to the agriculture diploma of the BTEB was seriously felt as a result of simple analysis of the productivity in crop production.

This programme came into existence after a long process. The concept was developed in 1978 and after that, study and advocacy activities were conducted in the beginning of the 80s (Uzzaman, 1988). In addition, the Honorable President of Bangladesh expressed his desire, in the conference organized by the Agriculture Diploma Holders, on December 2, 1984, to launch this program with a duration of 3 years. Finally, the DAE provided technology support to BTEB for designing the program.

The programme was planned and implemented jointly by the BTEB and the DAE for updating and upgrading the BSs through open schooling. A total of 36 self-learning materials (SLMs) were developed with the help of ODL experts from the Institute of Education and Research (IER), Dhaka University under the coordination by the BTEB. The programme was designed containing five Units (semesters) of four 4 months duration each. The BSs study the SLMs distributed to them through designated centres in the seven

7 Agriculture Training Institutes affiliated with the Board. Each BS continues working on–the–job and comes to the designated centres for 20 days (F2F) for each Unit for theoretical instructions and for doing some practical for which facilities are not available in the field. The BSs were to take test after completion of study of each module once every after 4-months. The in-the-field study of the modules is guided by the instructors from the designated centres.

The successful completion of the programme leads to award of a Diploma in Agriculture. The first cycle of the programme was started with 6,000 BSs in June 1993 and was completed in December 1995. The second was cycle started in December 1995 and finished in May 1997. An interview on February 2, 2011 with Mr. S M Shajahan, Dy. Inspector, BTEB, who was the key person in coordinating the programme, revealed that that was the highly successful vocational education programme under distance mode. He also added that this may be more interesting due to the use of ICT in the difficult parts of the SLMs, and also due to the practical sessions.

The programme used a mix of yearly formative (50%) and summative (50%) assessment tools such as Class Test (10% +10%) and Quiz (2.5% + 2,5%) for the theoretical part. The programme also allocated 50% weight for practical which also involves both formative and summative evaluation as under:

- Job assignment: 30%
- Home task: 15%
- Laboratory notebook preparation: 10%
- Viva voce on the jobs during the session: 10%
- Class attendance and behavior during the f2f session: 10%
- Midterm test: 25%

Mr. Shajahan put emphasis on using ICT for short courses in agriculture through open schooling which will help in each segment of assessments.

ii) The JSC programme

The Open School of the Bangladesh Open University runs the JSC (Junior School Certificate) programme for grades 6-8 in association with the NGO coalition, Campaign for Popular Education (CAMPE) for disadvantaged children who are graduated from the Non-formal Education (NFE) schools. The JSC program courses focus specifically on the livelihood skills and knowledge required by the clientele. The JSC students are provided with a study path that ensures that students gain a solid grounding in core knowledge at par to the conventional schooling and can also select options that allow

for specialization in particular areas of the vocational courses. The JSC attempts to bring together different perspectives on crossing traditional disciplines of the formal schooling. The JSC integrates the separate vocational courses on agriculture and giving educational form to a growing awareness by the learners of the need for an integrated approach to development (Rhman et al., 2010). In the JSC program, ICT was used in a small scale which proved very successful in the delivery of practical sessions. ICT was also found as one of the motivating factors for reducing drop-outs. JSC used three leaning CDs namely Fish culture, Beauty Culture and Mushroom Culture for vocational component of the programme which were very much handsome to the learners and found very helpful for achieving livelihood skills. JSC tutors demand more learning CDs for the programme as it encourages learners more and created positive impact on the programme delivery (Gomes, (2003).

iii)   NFE vocational programmes

NGOs also provide continuing education which is known as Open Non-formal Education (ONFE) where a large portion covers livelihood courses with vocational emphasis. Animated CDs as ICT materials are being used by the large NGOs for ONFE, targeting groups comprising students who are mostly from the underprivileged background. The Dhaka Ahsania Mission, the second largest NGO in Bangladesh, runs the ONFE through its regional resources centres named *GonoKendras* where 5 of them are fully ICT-based. It uses animated CDs, video and mobile technology for vocational courses of the CE or ONFE education programmes (DAM, 2011). Some of the NGOs also develop the ICT-based vocational content and others use it for their CE programmes. ICT mediated activities of the Bangladeshi NGOs are recently regarded at the government level and also within the international donor agencies.

Challenges of ICT

This section highlights key challenges faced by the VET system as well as the potential options to address some of the constraints.

i) ICT infrastructure

Previous discussion suggests that ICT-based learning materials are very attractive to the school level learners, particularly the distance learners of the JSC programme; but there is a big challenge of achieving access to the materials as there is lack of well-developed ICT infrastructure because of budget constraints. The national curriculum already introduced ICT in the secondary and higher level curriculum which will bring positive attitudes in the school management to set up more ICT labs, and the cost of ICT equipment has been declining and coming to the purchasing power limit of

the general people. For instance, the first **Bangladeshi** laptop brand **'Doel', priced -** around Tk. 12,000 (US$120) **-** is distributable to government institutions, offices and schools. In addition, government is deploying the computers in the government-run and private recognized schools through project activities. Therefore, there is likelihood that this initiative will provide huge input to the ICT-integrated open vocational education as the conventional schools are used as tutorial centres of the ODL delivery. By this time, ICT literacy development for common people is tremendous in the country. Moreover, ICT is introduced to a great extent in the polytechnic & vocational programmes (Huque, 2011). This has created a huge potential on the ICT-integrated vocational education in Bangladesh. Education policy 2010 also put emphasis on the BOU to be the digital University.

ii) Concerns exist about the management of the system

The Open School delivery system is mainly a collaborative one as it partners with local institutions for tutorial services and examination centres. The delivery of vocational courses has been very challenging as practical sessions are of importance for achieving the programme quality. It is only possible through the partnership development with the BTEB as they have the expertise in the vocational delivery. At the policy level, there is confusion regarding the roles and responsibilities of BOU - OS and BTEB - as was identified in the meetings held between these two organizations. Development of a policy framework, in coordination with the potential partners, which clarifies roles and responsibilities of various agencies is of importance for successful programme management.

iii) The importance of general education

In Bangladesh, general education is more popular and employers seek individuals with general skills, rather than narrow vocational skills. This has been a very big challenge. Therefore, policymakers can focus on strengthening general education coupled with vocational courses so that job markets can accommodate graduates with well-grounded skills rather than narrow specialization. But, it is very challenging to deliver integrated education – both general and vocational. BOU JSC has been very successful in this nature – piloting experience will be of important for the future programmes.

Conclusion

The following conclusions are drawn about the vocational courses delivered through ODL integrating ICT.

Vocational education in Bangladesh starts from grade 9; therefore, JSC – grade 8 certificate – is the academic prerequisites for course entry work

against attracting learners from marginalized groups, usually regarded as the national clientele for ODL. This requires a careful analysis to launch open vocational education integrating ICT. Vocational programme through f2f is relatively costly than usually associated with distance education. In addition, Bangladesh lacks the infrastructure of f2f vocational delivery; but distance education providers in Bangladesh have been enjoying, at the moment, the government's patronization as digital-Bangladesh agenda is being implemented in full swing. The current education policy has also emphasized on vocational education through integrating ICT. The programme has great promises in the future development of human resources in various vocations to meet the national and regional requirements in Bangladesh. In this situation, ICT-integrated vocational education needs to be addressed if ODL delivery of vocational education is to work as a viable alternative. From a policy point of view, this would indicate that training should be offered as part of a wider policy package, accompanied by other institutional partnership support and the effect needs to be made explicit in policy making. In addition, social implication of the ICT integrated vocational education needs to be made explicit in designing training programmes.

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Rajiv Gandhi Project for EduSat Supported Elementary Education (RGPEEE) – An Agent for Change of Mindset and Development of Good Practices among Teachers

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Abstract

India has a history of low levels of schooling and literacy. Though the Indian constitution had set its goal for providing free and compulsory education to all children under the age of 14 by 1960, even after 50 years it remains elusive. There are many primary schools in rural India functioning without basic facilities like drinking water, toilets, writing desks, electricity, etc. and even many do not have roofs. A large number of schools have insufficient number of teachers. There are many schools with just one teacher. There are a large number of schools where untrained teachers have been employed. The Government of India has implemented many educational programmes for strengthening infrastructure and thereby improving quality in the delivery of elementary education. There are set goals for improving access to and participation levels of children in elementary education.

Harnessing technology, particularly in the domain of education has been recognised to benefit both the student and the teacher. Launching of the education satellite, 'EduSat' has been one of the milestones in India's quest for espousing technology for education. This study investigates the introduction of satellite technology in some rural primary schools in a relatively under developed district in Central India. The Rajiv Gandhi Project for EduSat Supported Elementary Education (RGPEEE) has indeed changed the attitude of the teachers of the schools wherein the project has been set in operation. This project is an offshoot of a similar tele-education project launched in Karnataka in 2004-05. The RGPEEE has worked as an agent for change of mind-set and developed many a Good Practices among the teachers. The teachers have got motivated towards use of Information and Communication Technologies (ICT) in elementary education not only to assimilate technology-

based learning with traditional chalk-and-talk-learning for giving better education to the learners but also to a leap forward to update, upgrade and acquaint themselves to the newer technologies for meaningful assistive learning that takes place among their students.

Keywords: EduSat, RGPEEE, teachers' mindset, good practices, ICT, technology enabled teaching, chalk-and-talk-learning, assistive-learning.

Background

Educational Technology *(ET)* is an agent of change in the class rooms anywhere in the world. The Indian Space Research Organisation *(ISRO)* undertook the Satellite Instructional Television Experiment *(SITE)* in 1975-76. Through this experiment, satellite television signal was received in 2400 Indian villages for the first time. The experiences of SITE led to the development of the INSAT system and also to substantial education television broadcasts from the University Grants Commission *(UGC)*, National Council of Educational Research and Training *(NCERT)* and Central Institute of Educational Technology *(CIET)*.

The classroom mode and the open distance learning mode are in the process of converging. This is not only due to the success of dual and mixed-mode experiences of Open Distance Learning but also the progress in information and communication technologies and their permeating all learning environments in most developed countries *(Trindade et al., 2000)*. India is no exception. Over the past decades, educational technology in India has taken two routes: The *first route* involved a large number of experiments aimed at the qualitative improvement of schools, which adopted the systems approach to analyse the problems plaguing any particular situation, and have generated a wide range of solutions. These have included the development of flexible systems, alternative curricula, multilevel organisation of classes; low-cost teaching-learning materials, innovative activities, continuous support systems for teacher training, etc. The *second route* is the government-sponsored schemes such as the Educational Technology *(ET)* Scheme and the Computer Literacy and Studies in Schools *(CLASS)*, etc. This included the supply of audio visual devices, computers and even satellite-receiving terminals *(NCERT, 2006)*. These schemes have largely remained supply-driven, equipment-centred, and disseminative in design. These efforts were followed by the application of one-way-video and two-way-audio-teleconferencing for Education and Development Training. This network was later made operational as the Training and Development Communication Channel *(TDCC)* used by distance education institutions.

A number of institutions use technology for education dissemination and training. These include the Central Institute of Educational Technology *(CIET)*, State Institute of Educational Technology *(SIET)*, State Councils of Educational Research and Training *(SCERT),* District Institutes of Education and Training *(DIET),* etc. Under the University Grants Commission *(UGC)*, Consortium of

Educational Communication *(SEC)*, Educational Media Research Centres *(EMRC)* and Audio Visual Research Centres *(AVRC)* function. National Institute of Technical Teachers' Training and Research *(NITTTR)*, State Open Schools, the National Institute of Open Schooling *(NIOS)*, several State Open Universities, the National Open University, Indira Gandhi National Open University *(IGNOU)*, etc. also make use of electronic media technology for students, for training programmes, for disseminating information, conducting education related discussions, meetings, etc.

But it is an irony that little attention was paid to the development of the entire support system that would establish ET as a reliable, relevant, and timely intervention till the launch of EduSat, the exclusive Indian education satellite. Now, many educational institutions make use of satellite technology available through EduSat.

The satellite 'EduSat' has coverage of the entire India through its multiple beaming transponders.   The five Spot Ku-band footprints cover the northern, north eastern, eastern, southern and western regions of the country.   The national beams in Ku-band and Extended C Band cover the Indian mainland. The Hubs *(Uplink and Studio Facility)*, Receive only Terminals *(RoT)* and the Satellite Interactive Terminals *(SIT)* are the set up on the ground.

Rajiv Gandhi Project For EDUSAT Supported Elementary Education (RGPEEE)

One of the most backward districts of India, Sidhi in Madhya Pradesh and the adjoining districts of central India were identified for launching a unique primary school education initiative in the country through EduSat. The Rajiv Gandhi Project for EduSat Supported Elementary Education *(RGPEEE)* is an outcome of a decision taken at the Indian Parliament with regard to making access to education mandatory for every Indian in the age group of 6 to 14 years by the year 2015.

In the year 2004-2005, there was a major collaboration between School Education Department of Government of Karnataka and ISRO under which, 885 primary schools were brought under the cover of EduSat supported network with the purpose of adding value in school education through tele-education. The project was launched for teaching and learning transactions in Kannada medium and was observed to have an encouraging response *(Masood & Pandey, 2011)*. Gaining strength and inspiration from this, the RGPEEE, considered as a revolution in the school education scenario of the country, was inaugurated at Jabalpur on 17 December 2005.

It is a collaborative project of Indira Gandhi National Open University *(IGNOU)*, Indian Space Research Organisation *(ISRO)* and the Ministry of Human Resources Development *(MHRD)* and several state governments. The project envisaged providing value-added and ICT enabled education for the children at the elementary level in the Hindi speaking states and support to achieve

the complete literacy goal. The project covered all the primary schools in one revenue district of Madhya Pradesh *(Siddhi)* and one block each from the states of Uttar Pradesh, Chhatisgarh, Rajasthan, Uttarakhand and Bihar.

The main objectives of the project are:

1.   Ensuring availability of quality content online and through a variety of other access devices in elementary schools and DIETs.

2.   Enriching existing curriculum and pedagogy at different levels by employing available technologies, including virtual classrooms and video on demand through EduSat.

3.   Promoting a shift from passive instructions to active learning.

4.   In-service and recurrent training of elementary school teachers for their professional development and breaking of isolation.

5.   Training teachers and master trainers in multi-skills for handling IT-supported and ICT-enabled education through EduSat.

6.   Supporting total literacy/adult education and compulsory education for children in the age group 6 to 14 years. *(Masood & Pandey, 2011).*

Technical Infrastructure

The RGPEEE works as a Direct-to-Home *(DTH)* network using the digital technology in Ku-band having coverage across the country with 3.8 m antenna and 16-watt power amplifier at the Hub. The Ku-band supported Hub and well facilitated recording studio for tele-lesson production have been set up at Jabalpur, Madhya Pradesh.

The content development and programme production are undertaken at the RGPEEE studio. The infrastructure includes high quality 3-camera setup and a video production system which provides advanced features like audio-video transition, titling for superimposing the text information and recording on a computer-based workstation.

The Receive only Terminals *(RoT)* are erected at the receiving ends, i.e. at the identified primary schools located at remote places. Solar energy is the source of power. Continuous power is assured through battery backups for 2.5 sunless hours. RoTs are meant to receive regular broadcasts from the RGPEEE studio. In all, 1082 *(695 in the district of Siddhi out of 739 in Madhya Pradesh)* RoTs have been installed mainly in the far flung schools where the situation regarding availability of teachers and physical infrastructure is very poor. Most of these schools are located in highly disadvantaged areas where even availability of electric power is a major constraint. The basic idea behind establishing such terminals is that, the deficiency of teachers can be compensated by the regular curriculum-based broadcast from the RGPEEE Hub at Jabalpur. This project is unique in the sense that the Receive only and

Interactive Terminals are both supported by Solar Panels or Uninterrupted Power Supply *(UPS)* to ensure continuous connectivity.

Satellite Interactive Terminals *(SITs)* are interactive terminals which are upgraded versions of RoTs with facilities for interaction from receiving ends. These facilities have been made available at present, only in those locations where institutions are able to make physical infrastructure sufficiently available for EduSat activities. A bouquet of programmes is telecast covering all aspects of learning at primary and secondary school level.

Teacher Training Programmes

The conventional teacher training programmes are meant for individuals interested to take up primary school teaching as a profession. The teacher training courses are mostly full time programmes of one or two years' duration. Upon successful completion of the programme, the prospective teachers are awarded diplomas and are subsequently inducted into the teaching profession.

For skill upgradation and to familiarise in-service teachers with new developments in the field, short-term refresher courses and orientation programmes are arranged. However, a range of constraints restrict the reach of these courses to the target group, the teachers:

● Inadequate number of available seats

● Economic constraints in paying teachers for their travel and lodging arrangements at the training centre

● Unwillingness of the teachers to stay at distant places, keeping aside their family commitments

● Hesitation of the heads of the institutions in sparing one or two of their teachers from the few available in the school.

However, the teachers seek for new learning opportunities for many reasons: They may want to learn something new to upgrade their position in the teaching profession; they may want to bring change for better. They may want to accrue monetary benefits upon completion of an orientation programme. The new learning might give them a new identity or certification. Attending a skill development programme could be just for pleasure and an escape from mundane work at home and school. By attending in-service orientation and training programmes, some teachers may want to genuinely improve upon their class room teaching. In the above situations, the RGPEEE has come as a solace.

Electronic Media Technology Under RGPEEE Meant For School Teachers

Teacher education and training is one of the main objectives of RGPEEE. The intended outcomes are achieved through satellite communication enabled

programmes of RGPEEE comprising:

● Virtual classrooms for teacher training

● Teachers' access to data base and repositories

● Recurrent training and upgradation of skills of teachers for new emerging technologies

Satellite technology was alien to most of these communities and technology had not entered classrooms. Most of the teachers had the conventional teacher mindset which was largely confined to 'Chalk and Talk' method of teaching. Blending the skills of these teachers with technology aided systems; initiating them into new systems of teaching and learning; and at the same time making the teachers realize the potential of the ICTs was a huge challenge for the project officials. Therefore, it became necessary to sensitize the end users and give them an orientation about the project and its objectives and seek their cooperation for successful and effective implementation. *(Masood & Pande, 2011).*

The teacher orientation programmes are telecast regularly on Saturdays from 1330 to 1400. They are mostly curriculum based. Long duration virtual teacher training and orientation programmes are held from April to June during summer vacations. Besides these, RGPEEE invites resource teachers, who are directly associated with the teaching activities at the school level. Such teachers are provided studio trainings for the production of quality video programmes for telecasting.

One of the unique features of RGPEEE is that the resource teachers, who are directly associated with the teaching activities at the school level are invited to the studio. The teachers themselves prepare the tele-lessons as per the prescribed curricula of the participating states. Teaching programmes meant for students of Class I to VIII are recorded in the DVD format at the studio in Jabalpur. The tele-lessons are generally based on the common hard spots of the syllabi prescribed. Hindi is the medium of instruction. Each programme is of 40 minutes duration. The programmes are recorded and telecast on weekdays *(Monday to Friday between 1030-1110, 1110-1150 and 1150-1230)* in the forenoon. The same programme is repeated in the afternoon at 1400.

Research Method: The Questionnaire

Teachers working in schools, especially those in remote villages, bring a wealth of grassroot knowledge and a variety of information and experiences for the benefit of educational researchers. Keeping in mind this aspect, we visited the following schools in the districts of Sidhi and Jabalpur where the RGPEEE has been activated:

Government Middle School Karaundiya, Gopaldas, Sidhi; Government Middle

School, Karaundiya Pani ki Tanki, Sidhi; Government Middle School, Kotaha, Sidhi; Government Middle School Model Girls, Sidhi; Government Adarsh Girls High School, Sidhi; Government Middle School, Indrana, Sidhi; Government Primary School, Gada, Sidhi; Government Girls High School, Gada, Sidhi; Government Middle School, Gada, Baban Singh, Sidhi; Government High School, Maharajpur, Panagarh, Sidhi; Government Middle School, Khamaria; Government Middle School, Rampur, Jabalpur; Government Middle School, Adhartal, Jabalpur; Primary School, Medical College, Jabalpur; Model Cluster, Jogipur; Government High School, Jogipur, Sidhi; Government Middle School, Manegao, Jabalpur; Government Middle School, Bargi, Jabalpur; Government Middle School, Barela, Jabalpur; Government Middle School, Saliwara, Jabalpur; Government Middle School, Buniyadi, PSM, Jabalpur.

To prompt the teachers provide us feedback on the RGPEEE project in general and teacher orientation and in-service training programmes in particular, we distributed a set of questionnaires among the teachers and the head teachers. The comprehensive questionnaire *(Personal-7, General-25 and Training/ Orientation Programmes-15 questions)* was developed. *(The translated version of vernacular Hindi is placed at Annexure-I)*

Prior to the distribution of the questionnaires, a short interactive session was conducted with them in the staff room. Besides eliciting specific responses to the questions raised, we encouraged constructive suggestions from the teachers through the feedback form. The teachers were apprised of the *(purpose for conduct of the)* study. Their responses *(69 Nos)* were collected and analysed.

A separate questionnaire was set for the parents/guardians of the students *(The translated version of vernacular Hindi is placed at Annexure-II).* Besides these, personal interviews were taken from the Head of the RGPEEE, the staff members at the main studio at Jabalpur, the District Project Officer and the staff at the Collectorate of Siddhi Revenue District who are stakeholders and responsible for the implementation of the project.
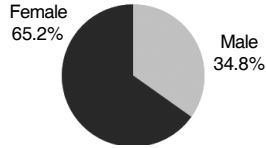
Results and the Best Practices

Teachers of these schools did not have any semblance of about how effective teaching can be by making use of technology. They know about other apparatus of technology like television, compact discs, washing machines and the multiple applications and utility of mobile phones. But when it came to application of technology for teaching they drew a virtual blank.

The feedback received from the teachers, parents/guardians/others were scrutinised independently. The analysis of the outcomes is given in the form of pictorial presentations *(pie and bar diagrams)*.
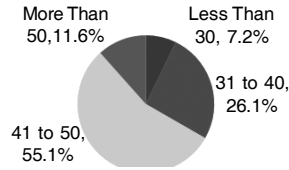
The outcome of the feedback received from teachers

A. In the *first section*, the questionnaires *(8 Nos)* meant for teachers contained their personal profile. These included:
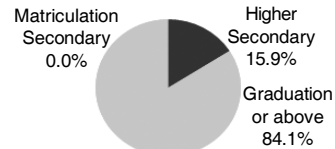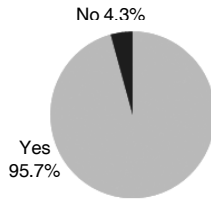
Male and Female ratio of the Teachers

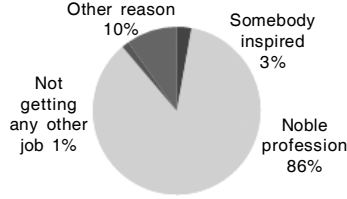Female 65.2%

Male 34.8%

Age Group

More Than 50,11.6%

Less Than 30, 7.2%

31 to 40, 26.1%

41 to 50, 55.1%

Qualifications

Matriculation Secondary 0.0%

Higher Secondary 15.9%

Graduation or above 84.1%

Like to enhance academic/ professional qualification

No 4.3%

Yes 95.7%

Reason for opting teaching as profession

Other reason 10%

Somebody inspired 3%

Not getting any other job 1%

Noble profession 86%

Any student in your family attending the school where RoTs have been installed?
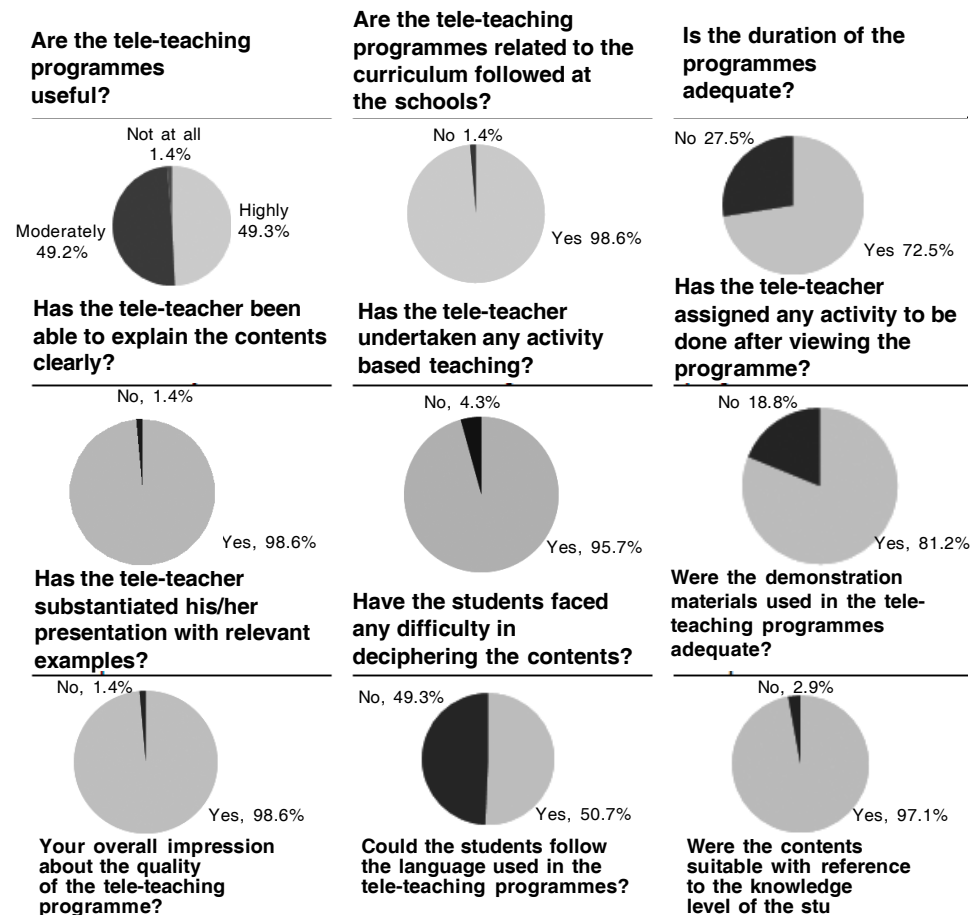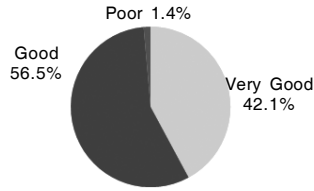
Yes 7.2%

No 92.8%
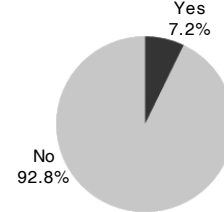
As a teacher, what steps would you take to improve the quality of life of your village?

♦ To uplift the lifestyle of the villagers as a teacher.

♦ Would try to educate all the children in the village and create interest in the parents to educate their wards.

♦ Create awareness among people of the benefits of education and make sure that each and every child is sent to school.

♦ Uplift the status/level of education.

♦ Would motivate children of 5-14 years to go to school.

♦ To encourage children to go to school and emphasis on the importance of education in one's life.

♦ To educate villagers about cleanliness, caring the nature and on benefits of leading a healthy life

♦ To make teaching more efficient.

♦ Contacting parents I would convince them to send their children to school and imbibe value education within them.

♦ I would advise parents to educate their children for fruitful employment.

♦ Create interest in the children and parents to be literate.

♦ Will ensure that children of all sections of the society get basic education.

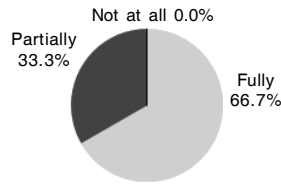♦ Every child is the future for his parents. The child should be sent to school daily.

♦ To change the family atmosphere in the village.

♦ The children of the weaker sections of the society to be given the benefits *(mid-day meal/free books/free education/scholarship, etc.)* of the government schemes to lure them to school.

♦ The women at home must be encouraged to send their wards to school.

♦ Imbibing truthfulness, responsibility through education.

♦ 100% literacy in the village

♦ I would ensure that villagers are aware of all the policies of the government and welfare measures meant for each citizen.

♦ To create the awareness among students for paving the way for development of society as a whole.

♦ Adult education, learning and teaching activities to be taken up for the upliftment of the village.

♦ Educating all the girls in the villages.

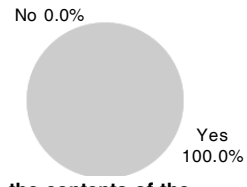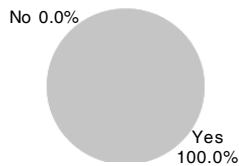**B**.   The **second section** contained general questionnaires *(25 Nos)* on pedagogical aspects. These included:

Are the tele-teaching programmes useful?

Not at all 1.4%
Moderately 49.2%
Highly 49.3%

Are the tele-teaching programmes related to the curriculum followed at the schools?

No 1.4%
Yes 98.6%

Is the duration of the programmes adequate?

No 27.5%
Yes 72.5%

Has the tele-teacher been able to explain the contents clearly?

No, 1.4%
Yes, 98.6%

Has the tele-teacher undertaken any activity based teaching?

No, 4.3%
Yes, 95.7%

Has the tele-teacher assigned any activity to be done after viewing the programme?

No 18.8%
Yes, 81.2%

Has the tele-teacher substantiated his/her presentation with relevant examples?

No, 1.4%
Yes, 98.6%

Have the students faced any difficulty in deciphering the contents?

No, 49.3%
Yes, 50.7%

Were the demonstration materials used in the tele-teaching programmes adequate?

No, 2.9%
Yes, 97.1%

Your overall impression about the quality of the tele-teaching programme?

Could the students follow the language used in the tele-teaching programmes?

Were the contents suitable with reference to the knowledge level of the stu

Were the students attentive during the telecast?

Poor 1.4%
Good 56.5%
Very Good 42.1%

Are the students briefed about the tele-teaching programmes before the telecast?

Not at all 0.0%
Partially 33.3%
Fully 66.7%

Are the contents of the tele-teaching programmes being discussed after the telecast?

No 0.0%
Yes 100.0%

Did you enquire with the students regarding their opinion about the tele-teaching programmes?

No 0.0%
Yes 100.0%

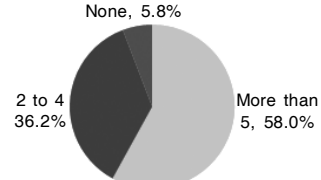**Normally, how many students ask about the tele-teaching programmes before the telecast?**

No 13.0%
Yes 87.0%

How many students normally ask questions after each telecast?
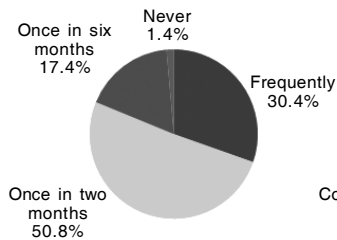
No 0.0%
Yes 100.0%

How many times parent-teacher interactions take place?
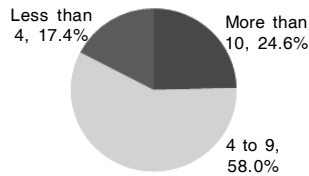
No 0.0%
Yes 100.0%

Integrating tele-teaching into classroom teaching is convenient or cumbersome?

Less than 4, 17.4%
More than 10, 24.6%
4 to 9, 58.0%

The tele-teaching lessons that are being used in the class-room are

None, 5.8%
2 to 4 36.2%
More than 5, 58.0%

Once in six months 17.4%
Never 1.4%
Frequently 30.4%
Once in two months 50.8%

Cumbersom 1.4%
Convenient 98.6%

The real substitutes for classroom teaching 47.8%
Supplementary/ complementery teaching material 52.2%
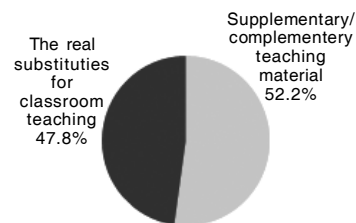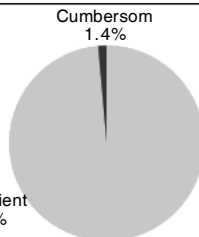
The content of the tele-teaching materials should be only supplementary materials to the existing teaching modes like pictures, demonstrations, presentation of models, graphs, audio and visuals which are otherwise not easy to make available in the classrooms. How do you react to this?

● Fully agree.

● Helping materials should be supportive to the classroom-learning.

● The tele-lessons should include pictorial models, stories and happenings.

- Tele-lessons are definitely helpful to increase the standard of the children.

- The learning aids *(assistive technology)* are available if one tries. But making an aid is a difficult task, especially, for a physically challenged, deaf, dumb and blind student.

- In the present scenario, it is very helpful if we assimilate pictures, practical experiments, models, scenes and materials as learning aids.

- The learning materials and the curriculum should be supportive/matching each other.

- The learning materials should be used.

- The tele-lessons should be made available to the learners at their convenient time.

- The tele-lessons help in explaining a situation with ease.

- The learning aids can easily be collected from the natural resources and our surroundings. Tele-lessons would further enrich the teaching-learning process and instill creativity/interest among the children.

- It enhances interest and concentration in study.

- Providing learning aids in all the subjects is not possible in classroom-teaching. So it is easy to explain through tele-lessons.

- It enhances logical thinking, knowledge skills. We should help in solving the problems/impediments in making available such learning-aids to the learners.

- It is quite helpful but the time-slots for the telecast should be pre-planned and informed.

- Tele-lessons are useful. But classroom-teaching has its own value and is more effective.

- Learning aids can be made available easily with a little effort but time is a major constraint making learning aids.

- Yes, children do learn easily through pictures and supportive materials through television.

- Tele-lessons should be livelier, corresponding to the subject.

- The tele-lessons should be used. It attracts the child to sit for learning with interest.

- I do fully agree. The children are upgraded and influenced for informative & technology-based learning.
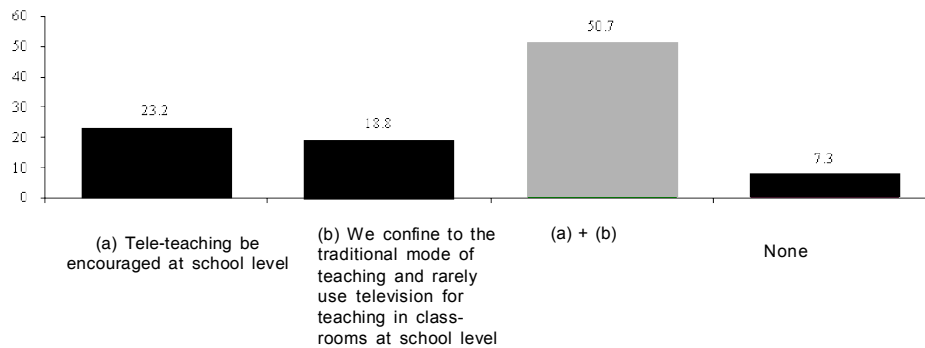
Do you think teaching-learning transaction does not take place effectively through tele-teaching and believe that traditional mode is the most appropriate in school?
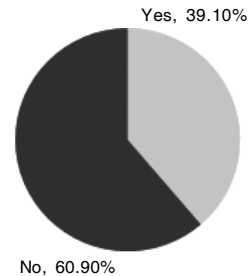
- Tele-lesson is more effective. The children like those lessons.

- The intelligent students learn the lesson easily in the way of entertainment.

- It helps in enhancing the imagination of the children.

- Tele-lesson is effective only with classroom-teaching.

- Both are effective.

- It is good. But today's teacher is not aware of it.

- It is effective but not so effective in village areas because the standard at the village level is low in comparison to town areas.

- Tele-lesson is not so useful in comparison to class-room teaching.

- There is no proper order in presentation. Sometimes, it is out of course. That's why it is not so effective.

- In tele-lesson, there is no provision of question-answer system. So the learning is more effective in classroom-teaching.

- More awareness should be created about tele-lesson.

If 'Yes', what suggestion can you give on integration of technology which is imminent at higher education and easily accepted by students during his/her studies.

- Experienced teachers should be engaged in preparation/presentation of tele-lessons.

- There should be sound along with pictures and scenes wherever

required to make it livelier.

- The subject-based real photographs/videos/recordings should be shown for example, while showing a volcano, a live video of the eruption of volcano should be shown for better understanding.
- New learning materials should be utilised in tele-lessons.
- Lessons to be prepared interest.
- The tele-lessons should be updated after understanding the requirements/loopholes in the lessons.
- The timings of the tele-lessons should be increased.
- The tele-lessons should be more elaborative.
- Pictures/scenes/live presentations/models/symbols should be included as far as possible.
- New skills and new technological inventions should be shown.
- The tele-lessons would be more effective if the lessons follow exactly the prescribed syllabus.
- There should be continuity in presentation.
- It can be shown in groups.
- The presentation should be to the point according to syllabus/subjects.
- Tele-lessons would be more successful if the teachers are motivated/ aware/interested and enthusiastic.
- The learners should be explained about the lessons taught through tele-lessons through Question-Answer methods.
- Yoga lessons should be taught through tele-lessons.
- There is always possibility of technical threats and security in newer technologies/technological learning. The external immunity is required to save the tender minds.
- It is better to teach with the locally available learning aids.
- Adequate teachers should be available in the school proportionate to the students.

C. The ***third section*** contained questionnaires *(15 Nos)* based on training and orientation programmes. These included:
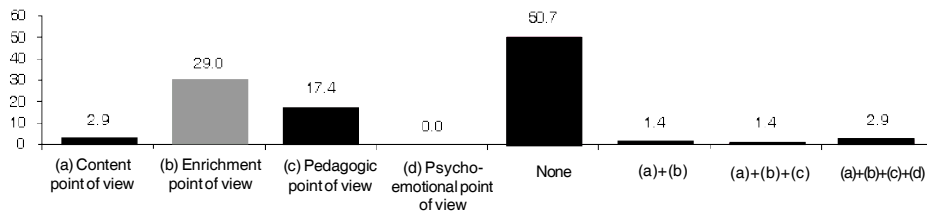
In your point of view why is training required for the teachers?

What do you think about?

What do you know about teachers' training?

- The training programmes should be arranged periodically for refreshment of knowledge.

- It creates interest in teaching.

- It helps to explain the subject lessons easily.

- It helps in understanding the difficult aspects of the lesson easily and know newer knowledge on the subject and activities.

- It helps in upgrading the knowledge of the teachers.

- The thoughts and knowledge are exchanged which helps in new ideas and learning for better teaching.

- It helps in better teaching-learning process.

- Helps in mastering a subject.

- New knowledge is explored out of training.

- Training is given to create interest within the learners.

- It is like watering the plants.

- It creates interest in teaching and enhancing the quality teaching.

- The resource teacher should be subject expert and should have more knowledge of the subject and activities.

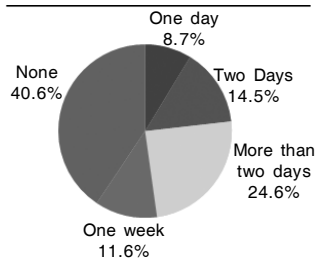**What are the types of teachers' training?**

- Skill-based training.

- In-service training.

- Refresher course training.

- Other training programmes.

- Explaining after the question-answer session.

- How to teach.

- Teaching-learning process.

Training in which other mode, apart from the present mode of training you think would be more viable?
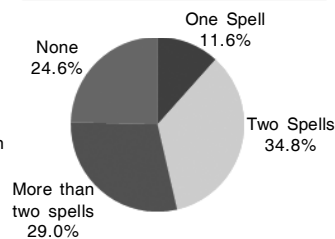
- The new technologies should be used compulsorily.

- Subject-based training should be given to master the subject.

- Training should be based on the difficult areas of the subject identified, well before.

- Master trainer should be properly/more trained so that they can train others.

- Training is required to make the teaching-learning more effective.

- Training should cover all the subjects.

- Periodical training should be organised for familiarising with new knowledge & skills.

- Continued upgradation in training modules.

- Scientific models/practical knowledge-based programmes should be included in training.

- Seminars can be organised.

- Training schedule should be 10 am to 2 pm. It should include more interactive modules among teacher and students.

- Good teachers should be chosen as good trainers.

What was the duration of Orientation Programme provided through RGPEEE?

One day 8.7%
Two Days 14.5%
More than two days 24.6%
One week 11.6%
None 40.6%

How many spells of training have you attended to?

One Spell 11.6%
Two Spells 34.8%
More than two spells 29.0%
None 24.6%

Was this duration of training sufficient to enhance your teaching skills?

Sufficient 36.2%
Insufficient 13.0%
None 50.7%
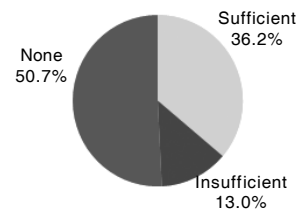
In what ways does the programme meet your needs?

- It enhances knowledge along with quality teaching.

- It enrich/refreshes/fertilises and develop our mind according to the need.

- Through orientation we refresh our life.

- It is required to make the teaching skill more effective.

- All the subject-based required knowledge & skills are being trained in the training. That enriches us further.

- It brings constructive changes in the teaching process.

- It helps in the development of a child.

- Some new knowledge is acquired.

- We learn the easy way to teach and the teaching activity becomes easier.

- It enhances knowledge and skill.

- In training we are tuned to new technologies.

- Proper utilisation of resources is known out of training.

- It helps in understanding Mathematics very well.

- The training programmes are not being organised by the learned trainers from whom we may learn the newer knowledge & skills.

**What difficulties did you face while undertaking the training programme?**

- The purpose fails in the absence of skilled trainers.

- Lack of best trainers/resource persons.

- The resource persons do not have control over the trainees.

- The training materials are not as per new syllabus.

- During training programmes, there are lot many problems like non-availability of drinking water, proper meeting arrangements and lack of good resource persons.

- Adequate training tools not available.

- Sometimes, some sessions are not clearly understood.

- The course materials are covered very hurriedly and bookish language is used.

- No problem.

Did you find the trainers skilled, competent and energetic and could arouse interest in you in undertaking the Orientation Programme?

Yes 18.8%
No 29.0%
Not responded 52.2%
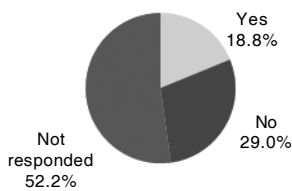
The training programme was not up to the mark, quite lethargic, not enthusiastic. Subsequently, the resource persons leave the venue after signing.

Do you think the training session(s) has/have helped you in performing your classroom tasks better and meet the desired objectives?

Yes 24.6%
To some extent 11.6%
No 5.8%
Not responded 58.0%
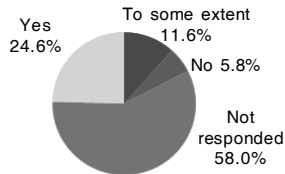
Orientation is helpful in enriching the teaching-learning transactions.

Was at any instant your training session affected due to technical snag?

Yes 13.0%
No 37.7%
Not responded 49.3%
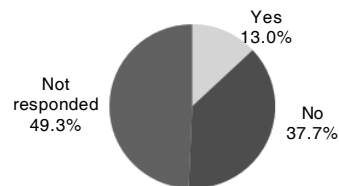
i. If 'Yes', how many times? *Many times/For the last one year*

ii. What was the problem? *Power Failure/LNM out of order/No material available*

Are you willing to undergo more such training sessions in the future?

Rate your overall satisfaction level of the training you received through the RGPEEE

Yes 31.9%

Not responded 65.2%

No 2.9%

Very Satisfied 7.2%

Satisfied 15.9%

Not responded 39.1%

Average 11.5%

Very Dissatisfied 1.4%

Dissatisfied 24.6%

Any suggestion/comment you wish to make on RGPEEE

- The weekly/monthly schedule of the tele-lessons should be transmitted.

- The tele-lessons should be made compulsory.

- The untrained teachers at school should be trained.
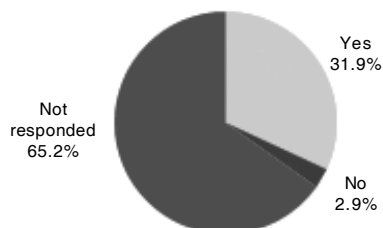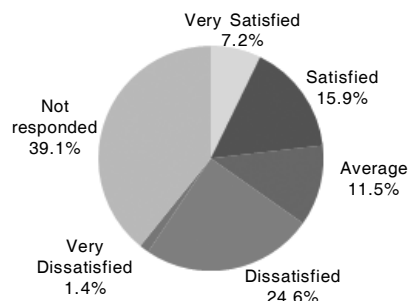
- The teaching-learning should be based on new/latest technologies so that the students can learn the lessons easily.

- The tele-lessons should be revised with the change in the syllabus/books.

- The students are much benefited with EduSat. The subject/course that are telecast is known well before through the schedule. This is a positive approach.

- More orientation programmes should be organized periodically which helps the participants to upgrade their own knowledge and skills.

- We should stress upon the all-round development and value education for children.

- The tele-lessons are being tele-cast from 1030 to 1400. It should be extended up to 1630 to benefit the students.

- The tele-lessons should be made as a compulsory component of the curriculum.

- The orientation programmes/trainings are required for the teachers and should be organised periodically to update/upgrade the knowledge levels/ skills.

- The tele-lessons should be based on stories and songs for better understanding.

- If we really want to enrich our education system with technology, a two-day orientation programme should be organised every month and based on the Unit.

- The English and Math programmes of tele-lessons should be repeated so that the children understand the lessons easily.

- Science/English/Math tele-lessons should be aided with supportive materials and prepared in the poetic form to make it more effective.

The outcome of the feedback received from parents/guardians

Are you aware of the tele-teaching facility available at the school of your ward?
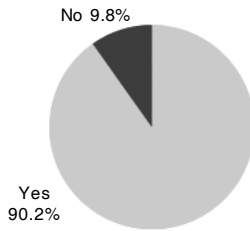
No 9.8%

Yes 90.2%

If 'Yes', then, wherefrom did you get the information?

Category	Value
(a) Children	65.9
(b) Teacher	14.6
(c) Headmaster	13.0
(d) Other student	0.0
(a)+(b)+(c)	2.4
(b)+(c)	2.4
(a)+(c)	2.4

Have you been invited by anyone among the school authorities to come and watch the programmes?

No 17.1%

Yes 82.9%
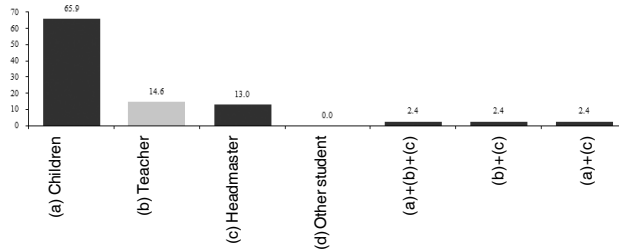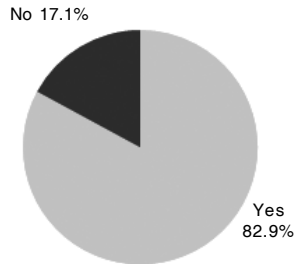
Have you seen any programme till now?

No 14.6%

Yes 85.4%

If 'Yes', how many?

None 14.6%

More than 5, 36.6%

1 to 2 46.4%

3 to 5 2.4%
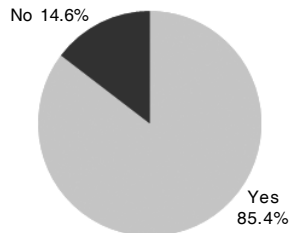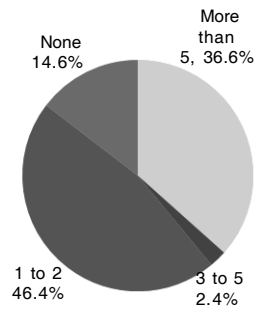
Do you feel that the learning capability of your ward has improved after introduction of tele-teaching?

No 4.9%

Yes 95.1%

Is your ward taking more interest in his/ her study at home after the introduction of the tele-teaching programmes?

No 2.4%

Yes 97.6%

Does your ward discuss the tele-teaching programmes with you?

No 12.2%

Yes 87.8%

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Does your ward take greater interest in going to school after the introduction of the tele-teaching programmes?

Not at all 2.4%
Moderately 44.0%
Remarkably 53.6%
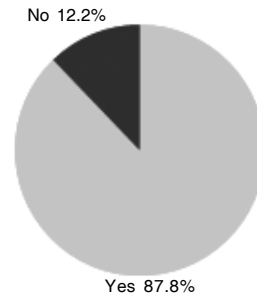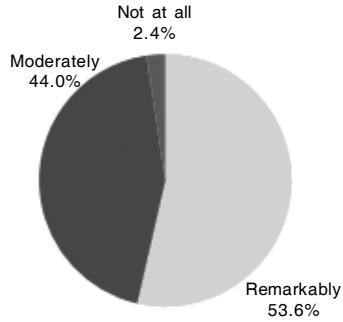
At have does your child most often talk about the big happening at school?
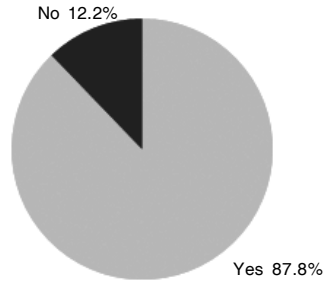
No 12.2%
Yes 87.8%

Does your child at any time talk at home about television lessons he gets at school?

No 14.6%
Yes 85.4%

Do you think these tele-teachings are appropriate for your child?

No 2.4%
Yes 97.6%

Have you ever been told by your child's teacher what is tele-teaching and your child is experiencing a new mode of learning, i.e. tele-teaching at school?

No 14.6%
Yes 85.4%
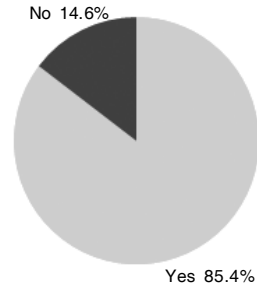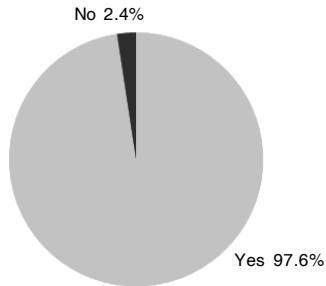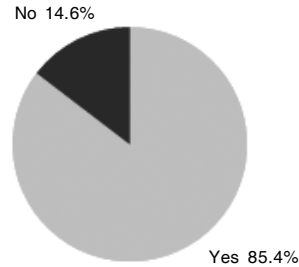
Your suggestions/comments, if any, on tele-teaching system in your ward's school

- Interest is created in our children for studies. They become more creative & intelligent.

- More such lessons be taught to the students.

- Children always like to watch television. So tele-teaching is more useful.

- Children are more interested in studies because of tele-teaching.

- The children learn very quickly with this system.

- The children are very happy after watching such lessons.

- The programme should be continued for the betterment of children.

- The RoTs are to be saved by the management.

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Now, an analysis of changes in mindset of teachers has been provided in a tabular form.

S.No.	Attributes	Mindset		Remarks
		Before RGPEEE	**Post RGPEEE**	
1.	Teaching at a distance	Not known	Acceptance	They could not believe that a teacher can become omnipresent, even being absent. They have begun accepting the distance teacher.
2.	Standing before the camera to take a lesson	Camera shy	Gained confidence	They had a feel of intimidation while standing in front of the camera to teach. But after the exercise quite a few of them expressed that they would also like to deliver tele-lessons.
3.	Evaluating a lesson	Indifference due to inferiority complex	Proactive	While attending a tele-lesson they would put themselves into the shoes of a learner and feel that it is their task only to absorb the lesson and not to comment. But gradually they felt comfortable about making comments. Initially they were inclined only towards making positive comments. But with time they picked up the art of making positive criticism. Their plea to involve only the experienced teachers for conducting tele-lessons and to use locally available learning aids is an outcome of this exercise.
4.	RoT Vs. SIT	Quite happy with RoT	Demand for SIT	It shows that the exercise encourages the spirit of enquiry.
5.	Creativity	Dormant	Activated	After the tele-teacher demonstrated making different geometrical shapes and figures of objects out of plasticine, we heard young students requesting the class teacher "let us also make shapes and figures out of clay in the next class".

6.	Classroom Teaching	The only way to transact a lesson	There are suitable alternatives	They started advocating for blended learning. A lesson on 'Cow' reads as "The cow is a very useful animal. It has four legs and two horns. It has eight teeth and one tail. Its baby is called a calf. It gives us milk. It eats grass and fodder. I like her milk. It makes us healthy and strong. We also prepare curd, butter and ghee from its milk." Whereas a tele-lesson may show the same text in video format where a milkman milks cow, by the side a calf standing; he is making manure out of cow-dung, using the manure in the field to produce crops, his wife preparing curd, butter and ghee from milk and milk carried to the factory for the preparation of milk products. This blended teaching helps the class-teacher to explain the case better, widening the imagination of a village student and exposing him to technology-assisted learning.
7.	Rural-urban divide	They felt that the plight is their destiny	The gap can be narrowed	The tele-teacher asks her/his students to write down the names of five fruits they have eaten. What the students sitting in studio classrooms in Jabalpur city wrote appeared on screen, "apple, orange, grapes, peas, banana". In our presence the students of a Sidhi village school struggled to write beyond mango, banana and grapes. The class teacher came for their help suggesting few a more fruits
8.	Value of a learner	A child who is not likely to have a bright future	A human resource to be nurtured with care	A school-going child in the village was not given the due importance. It was felt that excellence in education is the monopoly of the urban students. Buth now a child is treated as a resource which needs to be nurtured, handled with care. Traits like inquisitiveness, coming out with bright ideas, being imaginative, etc. got triggered after the exercise.

On the basis of the analysis we bring out the good practices observed.

- The Government's support to the project and deputing the teachers as Resource Persons for script writing and contributing towards generation of e-content of tele-lessons has been observed from the extract of a communication that reads "*I am grateful to you for looking after my teachers while they were in Jabalpur and giving them an important feedback regarding preparation of educational contents to be broadcast through EDUSAT. I would also like to convey my thanks to you for giving them 16 DVDs which had been re-edited by you. These DVDs had been seen by a group of our Resource Persons engaged in script writing for the educational contents to be broadcast by Haryana. They have liked the contents prepared by you. I would like to congratulate you and your team for preparing these contents which were the need of the day. I would like to request you to send us any other DVDs which have been finalized by you after re-editing so that children studying in primary classes in Haryana Government Schools can benefit from your successful venture.*" (Sharma, 2007).

- From the above the best practice is also observed of sharing the teaching-learning materials. Sharing of quality materials to assure quality of programmes, reduce duplication of efforts and cost of services, ODL institutions in India share study materials ....sharing across the institutions and to enable them to offer high quality courses in regional languages for wider access among students. *(Ansari MM, 2002).*

- It is observed that more than 80% teachers have chosen teaching as it is a noble profession. More than 60% are female teachers which have strengthened the fact that mothers are to be educated to educate their children. More than 50% teachers are of 41 to 50 age group, more than 80% of teachers are graduates. It is quite heartening to know that 95% teachers want to enhance their academic/professional qualification. Almost all the teachers have broaden up their mindset for achieving 100% literacy and have made up their mind to change the lifestyle of the village by way of creating interest within the parents for educating their children and bring the good qualities within to stand up to the standard of technological society.

- There has been a shift of mindset to a great extent among the teachers with regard to technological intervention in teaching. 50% teachers are rating the tele-lessons very high though the other 50% teachers rate them as moderate. Though 70% of them are satisfied with the duration of the programme telecast, 30% of them have observed that it is not adequate. It shows a good practice being imbibed within the teachers for using the satellite-based learning as far as possible.

- There has been a great satisfaction and relief on the part of the teachers

that the tele-lessons have come out as great support for them, which has eased their effort in the teaching process, especially in explaining the children the hard spots.

- A 50% divide is seen in understanding of the students about the contents of a tele-lesson but a good practice is observed by the teachers that they discuss and clarify the doubts of the students after a tele-lesson is over.

- A good practice that has come out of the tele-lessons is that it has disciplined the students,   i.e. to be attentive to the lessons. It has increased their concentration and they have become more receptive. This has made the teachers happy that they do not need to resort to harsh punishments to control around 40-50 students in a class.

- The teachers brief the students about the lesson to be taught before and discuss the contents after the telecast. They also enquire with students regarding their opinion about the lesson and the teaching. It is observed there has been a steady increase in raising inquisitiveness among the children.

- It is observed that there has not only been an increase in attendance of the students but also a steady increase in parent-teacher interactions which is a good sign of change

- A good practice observed was that the teachers who once were opposing the intervention of technology-based teaching are finding it convenient to integrate tele-lessons into classroom teaching. A great mindset change has been seen among almost 50% of the teachers who have begun thinking the tele-teaching as the real substitutes for classroom teaching in comparison to the 50% teachers considering it as supplementary/ complementary teaching material.

- The teachers are very happy that they are supported with assistive-learning for which they need not break their heads and time for preparation of a teaching aid/picture from an artist or the difficulties in collecting a specimen/object to show the children which is out of their reach. They need not worry regarding repeating a class room teaching as the   tele-teaching programmes get repeatedly telecast as per the schedule. The teachers have started agreeing to the fact that the tele-lessons and technology-based teaching have the capacity to enhance knowledge skills, logical thinking, creativity and thereby upgrade and influence information processing among students. There has been a judicious mix of traditional mode of teaching and tele-teaching emphasizing also the fact that we cannot completely do away with the classroom teachers as they are needed to regulate, control and guide the learning process

- Though 50% teachers do not answer to their view point why training is required, 50% voted it is required for enrichment of knowledge, content

generation and pedagogic skills. The discussion, awareness and competition for acquiring training & orientation have been increased to a great extent. They have understood that continuous updation in the subject and knowledge is required to stay tuned with the technological advancement.

- The teachers who are trained are very happy and feel upgraded and proud to be the part of tele-lessons. They have learnt widening their thoughts with images, animations, power point presentations and experiential learning in the development of tele-lessons. They have acquired the skills of content generation and are able to identify the hard spots for   e-content. The untrained teachers are much enthused and a hope raised among them that their turn would come to be part of the tele-teaching system when they would be trained as master trainers.

- Teachers from different states are brought in for development of lessons at the studio. Knowledge sharing and upgradation of skills of teaching has been developed among teachers of various regions.

- The teachers have developed a positive approach towards tele-teaching as a unique integration of technological learning enriching the traditional teaching-learning process and have started looking forward to make use of the system for orientation/training programmes, organizing various governmental programmes like adult literacy, health and family related programmes and child development programmes, technology-based farming for better produce and all other need-based programmes for a better society.

- A good practice that has emerged out of RGPEEE is that the parents/ guardians have begun understanding that educating their child is the only way forward to progress. They have started sending their wards to schools. It is quite encouraging to see 100% attendance at many schools. They are quite happy to see that their children are slowly tuned to the mainstream with tele-lessons, computer-based learning, opening up for raising questions and spreading their wings for quest of knowledge.

- Apathy among a few teachers in using electronic media is a cause of concern for the educational planners. Despite attempts being made to reach technology to the classrooms under the RGPEEE, a privilege their co-teachers in other district schools do not have, 39% of the respondents believe that traditional mode of teaching is most appropriate in school. Access to electronic media in education has the been made easier. Nevertheless, situations also arise like equipment is non-functional due to theft of the solar panel, malfunctioning television sets, etc. Our inability to respond to such eventualities is a kind of apathy *(Roy & Ghosh, 2011)*. Time has come to undertake electronic media sensitisation progammes among the teachers so that educational initiatives set in motion by the government get fullest utilisation.

Conclusion

Distance learning and e-learning *(electronic or web-based learning)*, mobile learning or m-learning has become the buzzword of 21st century education *(Lahiri & Moseley, 2012)*. Higher education has been benefited most because of technology integration. Application and popularization of use of electronic media in school education system requires concerted effort from all stakeholders. This is particularly to be emphasised in places and among communities where literacy and educational levels are low.

Growth and application of electronic media in Indian education system has been discussed as a backdrop to the study conducted by the researchers on RGPEEE at Sidhi and Jabalpur. It has been established that the launch of EduSat has raised the hope of extensive reach of satellite communication technology to ensure universal access to quality education at the primary/ elementary level. It assures the fact that ICT can be harnessed not only for strengthening higher education but also for primary education.

Personal interviews were conducted with school teachers who are the beneficiaries of RGPEEE. Discussions were held with other stakeholders, the head teachers, the guardians and the parents of the school students, etc. Sets of questionnaires were distributed and the feedback received. The data have been analysed. RGPEEE is understood to have become an agent for change of mindset and development of good practices among the teachers. This interest need to be sustained. The responsibility lies with the government as well as the society at large to do due justice to the potential of satellite based teaching-learning transactions. We may quote "Optimal utilisation of its capabilities to facilitate and accelerate the pace of progress in all sectors of education system is a challenge." *(Desai, et al, 2007).* The findings presented establish the fact that electronic media has been successful in facilitating the process of learning in primary schools where RGPEEE has been implemented. A number of good practices have been identified. It is hoped that similar projects with larger geographical coverage are put into operation by developing countries to catalyse the global movement led by UNESCO, 'Education for All'.

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Annexure-I

Format of the Feedback from the Teachers in r/o RGPEEE

A. **Personal**

1.   Name ……………………………………………………….… Male   □ Female

2.   Address/Phone No/E Mail Id …………………………………………….…………

3.   Age   □ Less than 30   □ 31 to 40   □ 41 to 50   □ More than 50

4.   Your Qualification   □ Matriculation/Secondary □ Higher Secondary □ Graduation
      or above

5.   Would you like to enhance your academic/professional qualification further?
      □ Yes   □ No

6.   Reason for opting teaching as your profession?

      □ Because somebody inspired me to become a teacher

      □ Because teaching is a noble profession

      □ I was not getting any other job

      □ Any other reason (please mention) …………………………….................................

7.   Is there any student in your family attending the school where RoTs have been
      installed?   □ Yes   □ No

8.   As a teacher, what steps would you take to improve the quality of life of your village?
      ……….

General

1.   Are the tele-teaching programmes useful?   □ Highly □ Moderately □ Not at all

2.   Are the tele-teaching programmes related to the curriculum followed at the schools?
      □ Yes   □ No

3.   Are the duration of the programmes adequate? □ Yes   □ No

4.   Has the tele-teacher been able to explain the contents clearly?   □ Yes   □ No

5.   Has the tele-teacher undertaken any activity based teaching?   □ Yes   □ No

6.   Has the tele-teacher assigned any activity to be done after viewing the programme?
      □ Yes   □ No

7.   Has the tele-teacher substantiated his presentation with relevant examples?
      □ Yes   □ No

8. Have your students faced any difficulty in deciphering the contents?   □ Yes
□ No

9. Were the demonstration materials used in the tele-teaching programmes adequate?
□ Yes   □ No

10. Your overall impression about the quality of the tele-teaching programme?   □ Very Good   □ Good   □ Poor

11. Could the students follow the language used in the tele-teaching programmes?
□ Fully   □ Partially   □ Not at all

12. Were the contents suitable with reference to the knowledge level of the students?
□ Yes   □ No

13. Were the students attentive during the telecast?   □ Yes   □ No

14. Are the students briefed about the tele-teaching programmes before the telecast?
□ Yes   □ No

15. Are the contents of the tele-teaching programmes being discussed after the telecast?
□ Yes   □ No

16. Did you enquire with the students regarding their opinion about the tele-teaching programmes?   □ Yes   □ No

17. Normally, how many students ask about the tele-teaching programmes before the telecast?   □ More than 10   □ 4 to 9   □ Less than 4

18. How many students normally ask questions after each telecast? □ More than 5
□ 2 to 4   □ None

19. How many times do parent-teacher interactions take place?   □   Frequently
□ Once in two months   □ Once in six months   □ Never

20. Integrating tele-teaching into classroom teaching is convenient or cumbersome?
□ Convenient   □ Cumbersome

21. The tele-teaching lessons that are being used in the classroom are

□ Supplementary or complementary teaching material
□ The real substitutes for classroom teaching

22. The content of the tele-teaching materials should be only supplementary materials to the existing teaching modes like pictures, demonstrations, presentation of models, graphs, audio and visuals which are otherwise not easy to make available in the classrooms. How do you react to this?
_____

23. What do you think about?

□ Tele-teaching be encouraged at school level

□ We confine to the traditional mode of teaching and rarely use television for teaching in classrooms at school level

24. Do you think teaching-learning transaction does not take place effectively through tele-teaching and believe that traditional mode is the most appropriate in school?
□ Yes   □ No

25. If 'Yes', what suggestion can you give on integration of technology which is imminent at higher education and easily accepted by students during his/her studies. ……………………………………………………………………………………………

Training/Orientaion Programme

1. In your point of view why is training required for the teachers?

   ☐ Content point of view   ☐ Enrichment point of view
   ☐ Pedagogic point of view   ☐ Psycho-emotional point of view

2. What do you know about teachers' training? …………………………………………...

3. What are the types of teachers' training? ………………………..…………………...

4. Training on which other mode, apart from the present mode of training you think would be more viable? …………………………………………..

5. What was the duration of Orientation Programme provided through RGPEEE?

   ☐ One Day   ☐ Two Days   ☐ More than Two Days   ☐ One Week

6. How many spells of training have you attended to?

   ☐ One Spell   ☐ Two Spells   ☐ More than Two Spells

7. Was this duration of training sufficient to enhance your teaching skills?
   ☐ Sufficient   ☐ Insufficient

8. In what ways does the programme meet your needs? …………………………………...

9. What difficulties did you face while undertaking the training programme? …..……………...

10. Did you find the trainers skilled, competent and energetic and could arouse interest in you in undertaking the Orientation Programme?   ☐ Yes   ☐ No

11. Do you think the training session(s) has/have helped you in performing your classroom tasks better and meet the desired objectives?   ☐ To some extent   ☐ Yes   ☐ No

12. Was at any instant your training session affected due to technical snag?
    ☐ Yes   ☐ No

    (i) If 'Yes', how many times ? ....

    (ii) What was the problem ? ....

13. Are you willing to undergo more such training sessions in the future? ☐ Yes ☐ No

14. Rate your overall satisfaction level of the training you received through the RGPEEE

    ☐ Very Satisfied ☐ Satisfied   ☐ Average   ☐ Dissatisfied   ☐ Very Dissatisfied

15. Any suggestion/comment you wish to make on RGPEEE.

    …………………………………………………………………………………………

Format of the Feedback from the Parents/Guardians in r/o RGPEEE

1. Name …………………………………………………………….… ☐ Male   ☐ Female

    Age.................…... Educational Qualification …...............…...…...............…...…...….............

    Village/Cluster………................. Profession…………..…

2. Your ward's name ……………………………………………… ☐ Male   ☐ Female

3. Which class does your ward study in? …..……………………………..……………………..

4. Name of the School where your ward studies …..……………………………..…………...

5. Are you aware of the tele-teaching facility available at the school of your ward?
    ☐ Yes   ☐ No

6. If 'Yes', then, wherefrom did you get the information?

    ☐ Children   ☐ Teacher   ☐ Headmaster   ☐ Other sources

7. Have you been invited by anyone among the school authorities to come and watch
    the programmes?   ☐ Yes   ☐ No

8. Have you seen any programme?   ☐ Yes   ☐ No

9. If 'Yes', how many?   ☐ More than 5   ☐ 3 to 5   ☐ 1 to 2   ☐ None

10. Do you feel that the learning capability of your ward has improved after the introduction
    of tele-teaching?   ☐ Yes   ☐ No

11. Is your ward taking more interest in his/her study at home after the introduction of the
    tele-teaching programmes?   ☐ Yes   ☐ No

12. Does your ward discuss the tele-teaching programmes with you? ☐ Yes   ☐ No

13. Does your ward take greater interest in going to school after the introduction of the
    tele-teaching programmes?   ☐ Remarkably Yes   ☐ Moderately Yes   ☐ Not at all

14. Does your child most often talk about at home as the big happening at school?
    ☐ Yes   ☐ No

15. Does your child at any time talk at home about television lessons he gets at school?
    ☐ Yes   ☐ No

16. Do you think these tele-teachings are appropriate for your child? ☐ Yes   ☐ No

17. Have you ever been told by your child's teacher what is tele-teaching and your child
    is experiencing a new mode of learning, i.e. tele-teaching at school? ☐ Yes ☐ No

18. Your suggestions/comments, if any, on tele-teaching system in your ward's school
    ……………………………………………………………………………………………..

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Increasing Participation Of Women In Higher Education Through Distance Learning : A Case Study On Indira Gandhi National Open University

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Abstract

Education has been the stepping stone for the progress of any nation. India, being a developing country was challenged with the declining rate of literacy. In order to overcome this challenge Government conducted several surveys and came out with the innovative approach of providing mobile education and launching of the open schooling system. The present study is situated in one of the premier institutes of open learning system, i.e. IGNOU where within specific master's degree course in social work is taken into account and its increasing rate of female students within the time period of four years (2008-2012) is studied. The validation of the universe or purpose behind such a selection refers to the reason that the nature of course is dedicated to the social service and at the master's degree it marks the participation of women in the higher education through the Open University as well. The methodology used in the study is mainly empirical in nature, where the records of enrollment checked and interactive sessions with the continuing and passed female students are to be undertaken. It also uses descriptive and exploratory research design. It unveils the relevance of Open Distance Learning (ODL) in the higher education flora within which vocational skills for female students are successfully achieved.

Keywords: Empowerment, female dropout, masters in social work (MSW),vocational training, open distance learning (ODL).

Introduction

Education has been in consideration with the cardinal aspect of socio-economic development both at the micro and macro level since long past. But more specifically modern education has proved itself to have great implications on shaping up of the overall development goals at the levels of individuals, families, communities and finally nation as a whole. Socio- economically, a nation is more advanced if its people are literate and educated as compared to others. Education as explained by Functional Sociologist, Emile Durkheim refers to the system which mushrooms sufficient degree of homogeneity among the students in order to maintain cohesion in the society. There are several positive

impediments of education. These may broadly include improvement of self esteem, empowerment of pupil, increased political participation which would contribute to quality of public policies and democracy, cultural benefits , cultural unity and improvement in health and gender equality.(UNESCO, 2006: 136-145)

Education performs several functions in the society. The specialized branch of Educational Sociology deals with the entire process of such functioning. It explains that education is a critical input in human resource development and is essential for the country's economic development, via growth rate of economy, birth rate, decrease in economy, birth rate, literacy rate/and decrease in infant mortality rate infant mortality rate and literacy rate. Education not only shapes the future of the country but also transmits the cultural elements of a society into the individual concerned.

The Constitutional provisions for proper education, run through several articles, one of which is Article 45 of the Constitution which stipulates that the State shall endeavour to provide within a period of ten years from commencement of the Constitution, for free and compulsory education for all children until they complete the age group of fourteen years. Further the canvas of the accessibility to education is widely opened through- the right to education. It is a universal entitlement to education, and is recognized as a fundamental human right. According to the _International Covenant on Economic, Social and Cultural Rights_ the right to education includes the right to free, compulsory primary education for all, an obligation to develop secondary education accessible to all, in particular by the progressive introduction of free secondary education, as well as an obligation to develop equitable access to higher education, and ideally by the progressive introduction of free higher education. The right to education also includes the responsibility to provide basic education for individuals who have not completed primary education. In addition to these access to education provisions, the right to education encompasses the obligation to rule out discrimination at all levels of the educational system, and to set minimum standards and to improve quality of education.

In continuation to encourage the right to education, at the International level even the United Nations celebrates the UN Literacy Decade (2003-2012). UNESCO has developed a major new strategy for achieving literacy for all: the Literacy Initiative for Empowerment or LIFE. Linking literacy with gender, sustainable development, health and empowerment, LIFE works towards the achievement of several goals of the United Nations Millennium Development.

A literate population is essential for the overall development of the nation. India a signatory to the global commitment of Education For All (EFA) has put in place several innovative schemes to achieve its EFA targets within the specified frame. These include a renewed thrust on open and distance education with the aim of bringing out persons into fold of education through equivalency programmes at different levels. Through all these multi faced

awareness aspects gradually a demand for the higher education also emerged. In order to meet the growing demands for higher education, supplementary systems of educational process was introduced in order to reinforce the students. Thus Open Distance Education was introduced.

Open distance education thus took the charge to educate all those who missed education either due to lack of opportunities or socio-cultural compulsions. In India Universal education was reinforced due to mushrooming of open distance educational institutions. Further, the Governmental initiation to boost the correspondence education includes several instances. One such instance was the appointment made by the Central Advisory board of Education for D.S Kothari committee in 1961, which recommended several creative means to enhance the correspondence courses in higher Education. Further the Directorate of correspondence course, Delhi University also encouraged the Gender oriented courses in Distance learning so as to encourage the participation of women in the whole wave of Distance learning.

Indira Gandhi National Open University is one such major institute of Distance Learning with student strength of almost 2.6 million. IGNOU is a unique institute with multiple certificates, Diploma, Bachelors, Masters and other creative level courses. Its professional course structuring and distributive method of evaluation process makes its students compatible with the functional mechanism. The present study concentrates on the Masters in Social Work programme where within the number of enrolments of Female students in a longitudinal scale of Five years is studied at the Bhubaneswar Regional Centre of IGNOU.

Theoretical Grounding

Functionalist perspective on Education explains that education is indispensible in the society. Durkheim explains that the major aim of education is to transmit society's norms and values. Education thus injects the social being in the individual being. Similarly, Parson (1959:51) explains that education in the schools makes the students aware of the future role played by them in the societal setting. It includes several commitments such as commitment to the implementation of the broad values of society for specific roles within the structure of the society. Gender theorist Marry Wool stone Craft explains the necessity of education for women in order to overcome the gaps in the gender relations in the society. Integrationists postulate the role of education to be much of role realization. For instance Mead explains that individuals adhere to the learning of role through education during school days only. Further Gender Sociologist, Nancy Chodorow also explains that parents must understand the importance of education in the life of a boy and girl and should give them equal opportunity to excel in education.

Rationale of the Study

Social Work course at Masters level is chosen for the purpose to know that

how there are alterations in the trend of women participation in such professional and promising discipline. Overcoming all odds of the social work service, how there is a growing shift of women's participation in the service to mankind from the private to the public domain. This also indicates the societal metamorphosis from the conventional role allocation and stereotyping to the modern , promising choice of career for women. Further it aims to bring a comparative analysis of the admission rate of the male candidates in the course during the same academic year. The study aims to encourage further participation of women in several courses and increase the literacy rate of women through open learning processes.

Enrolment of Students

The enrolment pattern of any academic course indicates the distribution of the gender connotation of the same and the demand rate of the course among the students. Before the explanation of the pattern it is essential to know that the seats available in the Masters course in Social Work in any specific regional centre of IGNOU is limited as a result of which meritorious students only find a place. Further the University provides a double roll period system according to which the student may extend the course to just the double period of the course. This is made functional with the consideration that in case any student is unable to appear for the exam due to certain unavoidable situation, then also he can appear for the exam in the next academic session. This system basically is favouring to the female students because in case there is any familial problem or mishap then also she can appear the exam next time. For instance- If the Masters in Social Work holds originally a period of two years then it can be extended till four years with validation

Here it is purposefully chosen to indicate the gender distribution in the academic admissions of the Master's in Social work for a time period of five years. (Table-1).

Table 1:

SESSION	MALE	FEMALE	TOTAL
JAN 2012	5	5	10
JAN 2011	8	13	21
JUL 2011	20	31	51
JAN 2010	11	8	19
JUL 2010	31	32	63
JAN 2009	11	12	23
JUL 2009	44	58	102
JUL 2008	28	38	66

SOURCE- Compiled from University Records- IGNOU , Regional Centre , Bhubaneswar (Figures in numerical).

Table 1 shows that in the academic session of January 2012, the total number of male was 5 and the female were also 5 which amounted to total 10 students. In the session of January 2010 the males in admission to Master in Social work were 11 and the female students were 8 in number which was less than the male admission. This accounted to a total number of 19. But in the academic session of July 2012 the total males who took admission was 31 whereas the females were 32 which amounted to a total of 63 number of students .In the academic session January 2011 the male enrolled were 8 and the females enrolled were 13, accounting to total number of 21 students. In the academic session July 2011, the males enrolled were 20 and the female enrolled were 31 accounting to total 51.In the academic session January 2009, the divide between the male and female was 11 and 12, where the female enrolled were more than male amounting to total 23 students. In the academic session July 2009, the males enrolled were 44 and the females enrolled were 58, which accounted to total number of 102 students. And last but not the least in the academic session July 2008, the male admission number were 28 and the female were 38, which accounted to total of 66 students. This numerical clearly reflects the higher participation of the women in the course as compared to the male students.

Student Interactive Session

Purposefully for the collection of information from the students regarding their evaluation of the course two students, one male and one female from the Bhubaneswar regional centre were interacted by the researcher and the interaction is used as the method of narrative to confirm the inference.

A tribal female student of January 2011 session- explained that she has undertaken the course as she is orienting to join some Non Governmental Organization in the upcoming years for her livelihood. She further revealed that there runs a scholarship provision for the girl students who perform well in the course, which motivates her and her friends to work for the home assignments and end semesters. Further since the classes are mainly scheduled on the holidays and the weekends, i.e. Sundays therefore it becomes easier for the female students to access the facilities.

Further, she says that there are several alluring means through which the students are made to hold a constant interest with the course work such as audio programming , video sessions and field visits.

Another male student from the course run in the January 2011 session speaks out his experience that, even though the number of female candidates outnumber the male students still they share a considerable healthy environment to gain knowledge and excel in their over all total performance. He explains that the practitioner and the counsellor provide equal attention to all students and clarify their doubts as well. He explains that the course has

enough scope for including the societal issues and problems in its ambit. Further it has space for including creativity as well.

Analysis and Discussion

The emerging trends in the admission patterns of the Masters in Social Work in IGNOU, clearly reveal the fact of women empowerment. The professional discourse of education is now dominated by female students in the Open Distance Learning. The cultural alterations of the conventional notions of the female students are vastly changing and it is the reason because of which such changing scenario is marked. For the placement and service orientation the Social work course works as a boon for the candidates. This trend also marks the success of Government and ODL at primary and secondary level of education such as National Institute of Open Learning, because without their successful effort the dropouts at the primary level could not have been checked out thus, the higher education access of the women students would have been difficult.

There are several implications of this trend such as –changing dynamics of gender in the employment and education sector, emerging wave of awareness and motivation for self reliance and economic independence among the female students, support of the family and society etc. Thus, a healthy and happening tomorrow can be visualized with the help of better education for women in the society.

Innovative Initiation

The encouragement for the women participation can definitely be enhanced through awareness. A proper attention for the participation of women from the minority community and the weaker sections of the society must be emphasized. The online systems through computer online admissions must be made popular among the interior locations of the country. The family of the women students must be encouraged to extend their support to the women folk, despite family constraints. Further, scholarship or some amount of reinforcement must be made compulsory for the female students. Vocational training must be also made a compulsory part of each functional course for women. On the whole the job opportunities of the women candidates after completion of the higher education must be clarified which would encourage them. This would bring a causal effect on the second generation to access education through the Open Distance Learning.

Conclusion

In order to achieve the Universal education of the Nation, education of Women particularly in the higher education level is very essential. The encouraging trend of the Masters in Social Work course of IGNOU is one of the burning examples of the same. In a cost effective form of education like distance learning women participation can really open the doors of economic growth and enhance the Educational index of the country.

As the father of the Nation, Mahatma Gandhi explained that one should practise the change he or she wants to see in the world, similarly the change has to be brought from within our families itself. This work is thus dedicated to encourage further participation of women in the Open Distance Learning in the higher education. Hence, a healthy society can conceive in the womb of educated women. Therefore, we have to practise in reality- "Padhega India to badhega India" (Educate India and Grow India).

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Role of Mobile and Multimedia Technology in Open and Distance Learning

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Abstract

In Open and Distance Learning(ODL), it is time to prepare an environment for transition from e-learning to mobile-leaning(m-learning). As a matter of fact, the developments of multimedia technology and internet networks have contributed to immense improvements in the standard of learning as well as distance learning in developing countries like India. In India, learners residing in village areas are still not in a position to take advantage of these improvements because of limited spread of these technologies, lack of proper management and infrastructure problems. Unless we succeed in solving these problems to enable learners to take advantages of mobile learning for distance learning, the vast majority of the learners will be lagging behind. This paper tries to highlight the current situation and suggest some future directions in resolution of these problems. We recommend use of mobile and multimedia technology to reach this vast population of open and distance learners to impart quality learning in effective way, especially for open schooling.

Keywords: Distance learning, multimedia technology, mobile technology.

Introduction

The concept of distance learning is prevalent in India for the last few decades (Passerint, K., and Granger, M.J., 2000, Ruth, S., and Giri, J 2001). In India it started like in many other countries did with correspondence courses where printed learning materials were used to be dispatched to the students at regular intervals and students were expected to read the materials and answer questions. The basic philosophy was that teachers would be physically away from the students and would conduct the teaching process from a distance (Rahman, H ,2000).

With the development of computer industry and internet networks during the last three decades, things have changed and global communication has reached an unprecedented height (Passerint, K., and Granger, M.J., 2000).

With these developments, immense scope has come to the surface to impart learning in a much more efficient and interactive way. Multimedia technology and internet networks have changed the whole philosophy of learning and distance learning and have provided us with opportunities for close interaction between teachers and learners with improved learning materials compared to what was existing only with the printed media. It has gone to such an extent to create a virtual class room where teachers and students are scattered all over the world. Although some of these facilities are expensive, still India is in a position to take advantage of these facilities to impart quality distance learning to students residing in remote areas. In this paper we focus our attention on defining the problems of using these technologies for much more improved and extensive distance learning and would suggest how we could possibly reach these vast majority of people with improved quality of distance learning provided by multimedia and mobile technology .

Analysis of Works Done

In distance learning, institutional implementation, administrative and organizational resources will have greater role than other elements such as individual course design techniques. In an individual delivery unit, instead, course design and management techniques will have a key role (Passerint, K., and Granger, M.J., 2000).

The open-universities, like IGNOU, reached off-campus students delivering instruction through radio, television, recorded audio-tapes and correspondence tutoring. Several universities particularly in developing countries, still use educational radio as the main instructional delivery tool.On the same pattern, the National Institute of Open Schooling, India, has started Internet Web Radio for personal contact programme (PCP). With extended application of information technologies (IT), the conventional education system has crossed physical boundaries to reach the unreached through virtual education system. In the distant mode of education, students get the opportunity for education through self learning mode supported by technology-assisted inputs. Efforts are being made to promote distance education in remote regions of India through institutional collaborations and adaptive use of collaborative learning systems (Rahman, H ,2000).

'Science@Mobile' is an innovative scheme by IGNOU's National Centre for Innovations in Distance Education (NCIDE) in collaboration with Vigyan Prasar, a government body involved in science popularisation tasks. Interesting science facts, latest science news, health tips, green tips, events and days of scientific importance will be at your fingertips with this service.

The basic objective of this scheme is to exploit the potential of mobile phones for science popularisation in society so as to create interest among the people towards science.

Initially, computers with multimedia facilities can be provided in the Regional Centers and media rooms can be established in those centers to be used as multimedia labs. Running these labs would necessitate involvement of two or three IT personnel in each centre. To implement and ascertain the necessity, importance, effectiveness, demand and efficiency, a questionnaire can be developed. Distributing periodically survey questionnaire among the learners would enable the researcher to find out the effectiveness of the project for necessary fine-tuning.

After complete installation and operation of a few pilot tests in specific regions, the whole country can be brought under a common network through these regional centers (Rahman, H ,2000).

In addition to purely technological issues, the development of appropriate human resources skills are required, i.e., extensive training of the people who are going to use (and train others how to use) the resources. Training is seen as particularly important as this is not the technology for just a few people to benefit; rather it would benefit many. During the last ten years 'conventional' e-learning has been exemplified technologically by the rise of virtual learning environments (VLEs), such as Web CT and Blackboard, and the demise of computer-assisted learning 'packages', by expectations of ever increasing multi-media interactivity, power, speed, capacity, functionality and bandwidth in networked PC platforms. Pedagogically, we have seen the rise of social constructivist models of learning over previous behaviorist ones. In India, the term 'mobile learning' is recognized but as something grafted on to a tradition of open and distance learning and on to different pedagogic traditions, ones that have concentrated on didactic approaches rather than discursive ones. Mobile learning is a reaction to different challenges and different limitations – usually those of infrastructure, poverty, distance or sparsity (Traxler, J., "Mobile learning in 'developing' countries 2008).

Experimental Evidences

According to an estimate, IT-based education and the e-learning market across the globe is projected at $11.4 billion (United State's dollars) in 2003). The Report mentions that 44.8% of internet users are from Asia followed by 22.1% from India, 12% from North America, 10.4% from Latin America and 6.2% from Africa. In Asia, India had the second largest users followed by China which had a total penetration of 38%. Japan was the third largest at a penetration level of 80%.(Times of India). India achieved a 10.2% internet penetration rate till now. India has 121 Million Internet Users, 39 Million 3G Subscribers.

The Bangladesh Open University (BOU) is the only national institution in Bangladesh which is operationalising distance education in the country. It has extensive network through out the country to provide readily accessible

contact points for its learners. After elapse of 15 years since its inception, BOU has lagged behind in using technologies. In consideration of its limit to conventional method in teaching, a project was undertaken to test the effectiveness and viability of interactive television (TV) and mobile's Short Message Service (sms) classroom and explore the use of available and appropriate technologies to provide ICT enabled distance tuition. In this project, the mobile technology's sms along with perceived live telecast was used to create ideal classroom situation for distance learning through the Question Based Participation (QBP) technique. The existing videos of BOU TV programs were made interactive using this technology and technique. The existing BOU TV program and interactive version of the same were shown to same learners of BOU to evaluate their effectiveness. It has been found from the study that this interactive virtual classroom significantly performed well in teaching than BOU video programs (non-interactive) which are used at present (Alam, M.S., and Islam, Y.M 2001) .

The major challenges are related to lack of time and to the unstable infrastructure, causing some of the registered students to drop out without completing the course. The lack of infrastructure and access to modern technology is often argued against the strategy for offering distance education to target groups in developing countries through internet. However , the statistics show, that the situation is changing rapidly.

IGNOU launched SMS alerts services in the year 2008. Approx 40,000 learners across India is benefited by this service. IGNOU is having a total of 3.1 million learners across the World. However, approx 90% of the students belongs to India. With the launch of SMS services, the communication gap between IGNOU and its learner has significantly reduced. The current facility enables all IGNOU learners across the Globe to SMS their queries to IGNOU. IGNOU is receiving approx 2000 queries per day by SMS.

There is no subscription fee for the Short-Messaging Service (SMS) and the target group includes educated as well as uneducated people including homemakers and children. Subscribers will be given option to select the type of content and frequency of the messages as per their choice and interest.

Suggested Research in this area

Presentation of course materials through multimedia in remote locations where there could be Study Centre for making presentations is feasible. Of course the learning materials must be self-explanatory and not boring. Using multimedia facilities like videos, audios, graphics and interesting textual descriptions, it is possible to reach the remote locations of the India where computer technology has not reached yet. As the areas not covered by computer and internet technology are still profoundly vast in India, this approach

seems to be very viable and should be pursued. Wherever possible the distance learning through multimedia should be imparted through internet, as internet and networks are the vehicles of multimedia. But since bandwidth connection are still very limited in vast areas of India, it would still take long time to reach major parts of the population of the above-mentioned regions with multimedia and web.

Mobile technology offers a very hopeful way to reach the vast population of the developing countries as it does not require bandwidth connections. We have to develop distance learning using multimedia through mobile technology. This seems to be the most viable way to reach billions living in the rural areas of the India and other developing countries. Hence considerable research efforts must be dedicated to this line. How to use mobile technology to provide open and distance learning in India in an efficient way using advanced multimedia tools is a matter of concern . Some issues had been identified from research related to this issue

i)   There is a wide range of roles for mobile technologies supporting the learner in many ways ranging from relatively simple use of SMS texting to the more advanced use of smart phones for content delivery, project work, searching for information and assessment.

ii)   Although books are now being downloaded onto mobile devices, the author believe that to support the learning process a great deal of thought has to be given to the structure of the learning and assessment material.

iii) The value which is put on possession of a mobile phone, especially by young people is surprising and the data on ownership suggests that this will be a ubiquitous tool for all very shortly.

iv)   Open and distance learning institutions like NIOS, India, are required to advise the potential students on the range of devices that are most suitable for the curriculum, as they do currently with regard to computers. The convergence between small lap tops and handheld devices will continue until they are regarded as different varieties of the same species of technology.

v)   There is a great potential for educational providers to work with large phone companies, both to reduce costs and to co-develop appropriate software .

vi)   On Demand Examination can be conducted through mobile technology .

A major challenge to design solutions for users of mobile technology who wish to study also while on the move. Thus, when students are mobile and wish to study, the equipment and technologies they use will be in addition to the equipment used at home or at work. The solutions must be designed in

such a ways as to allow both users and non-users of mobile technology to participate in the same course.

This means that we have looked for solutions that are optimal for distributing content and communication in courses, independent of whether the students and tutors apply mobile technology or standard PC and Internet connection for teaching or learning. The learning environment must cater efficiently to both the situations and both types of learners. During the time of the development and research the technologies have developed rapidly. In principle, the aim of developments is to design solutions that can be used in any kind of mobile devices.

From experience, we also know that the learners often download content for reading offline and often also take print out of content on paper for reading. All aspects and functions of mobile learning in open and distance learning system are additional service to the learners.

Mobile assisted distance learning may be an approach to distance learning that is assisted or enhanced through the use of a handheld mobile device. Mobile assisted distance learning has evolved to support students' distance learning with the increased use of mobile technologies such as mobile phones (cellphones), MP3 and MP4 players, and devices such as the iPhone or iPAD.

Conclusion

In this paper we studied the problems of imparting distance learning through multimedia in different countries. We have suggested mobile technology a viable and affordable media through which distance learning could be imparted to millions of learners in India. We presented some examples of achievements in this field in this paper. More research needs to be carried out to tap the vast opportunity of reaching to billions of learners through mobile technology and gearing up multimedia technology to be easily transported to those locations.

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A Comparative Analysis of the Learner Support Services of IGNOU and NIOS

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Abstract

Throughout the world, the growth in terms of number of enrolments in distance learning institutions is increasing at a faster pace resulting in the demand of increased learner support services. Same is applicable to Indira Gandhi National Open University (IGNOU) as well as to National Institute of Open Schooling (NIOS). Today both educational institutes are fulfilling the aspirations of a lot of learners. The Present paper is an attempt to compare the learner support services of IGNOU and NIOS. It plays an important role in Open and Distance Learning system from the time a learner joins the system till the end of his/ her successful completion. Beside the level of teaching and learning, the learner support services are similar at the university level as well as at the school level.

It consists of a range of services including academic and non-academic support to the present as well as potential students. Major support services are pre-admission counselling, tutoring and counselling, interactive teaching through television and radio, feedback concerning assessment and progress, career guidance, peer group support, administrative problem solving etc. As the education is regarded as the key to growth of every nation, maximum utilization of educational services is a must. Just as the learning of the enrolled students is highly significant so is to successfully meeting the challenge of reducing the dropouts rate by the means of efficient learner support services. In the light of above, the present paper would mainly focus on the support services in terms of motivating the learners, keeping them on the right track till the completion of their study, encouraging them to make use of the facilities provided and ensuring their access as well as success in learning. An indicator of the above may be the satisfaction level of learners. Hence this study was conducted to comparatively analyse the support services of IGNOU and NIOS.

Keywords: Learner support services, distance education, open schooling.

Introduction

Support services are necessary and complementary in the open and distance learning (ODL) system across the country. These support mechanisms help learners from the time a learner joins the system till the end of his/ her successful completion. The learner support services identified mainly in the fields of pre-admission services, tutoring and counselling, information services and interactive teaching through media, feedback concerning assessment and progress, career guidance, peer group support, administrative and academic matters .These services play a pivotal role in open and distance learning system. Same is applicable to Indira Gandhi National Open University (IGNOU) as well as to National Institute of Open Schooling (NIOS). These distance education institutions have played an increasingly important role in the educational system across the country. They have created enormous opportunities to expand the educational opportunities. In IGNOU, learner support services are mainly provided to learners during pre-entry stage, the programme stage, and post-programme stage by Study Centres and Regional Centres. At the study centers, the learners interact with the Academic Counsellors and other learners, refer to books in the library, watch/listen to video/audio cassettes and interact with the Coordinator on administrative and academic topics. NIOS as an open and distance learning institute provides planned human support in academic and non-academic ways. Support services are mainly provided to help open distance learners to learn well by providing timely and proper academic support. It facilitates learners in solving their problems through the study centres and learner support centres. Are learners satisfied with the services offered by IGNOU and NIOS? Which institutes provide better learner support services? Can these institutes think about improvement in the learner support-services with an objective of providing better academic and administrative support? To find out the answers to these questions, the study proposes to analyse learner support services (location wise) provided by IGNOU and NIOS to its learners and redesign these services on the basis of feedback received from the learners.

Significance of the Study

This study helps ODLs educationists and administrators to gain information about support needs and preferences of distance learners and identifies possible areas of improvement in existing learner support services. The findings of this study might have implications for similar distance education institutions in developing and implementing quality learner support services.

The distance learners need help before, during and after the learning programme. In pre-entry stage, IGNOU provides counselling facilities for deciding what kind of individual support they might need and

Learner Support Services in Indira Gandhi National Open University (IGNOU)

The distance learners need help before, during and after the learning

programme. In pre-entry stage, IGNOU provides counselling facilities for deciding what kind of individual support they might need and during the learning programme; At the beginning of programme, when the learners have already received their packages (study materials, programme guides, assignments, experimental kits, etc.), they may need some guidance. Many learners might have returned to their studies after a long gap, so they may need constructive help at this stage. As the learners are unfamiliar with the self learning materials, assignments etc. they may ask for some guidance on study skills, the process of dealing with the assignments. During the middle stage of the programme, the learners may want to discuss their progress, assignments grades, study visits, projects, seminars, practicals, improving study skills, learning from media, overcoming personal and technical problems. At the final stage, the learners may need some guidance for incomplete tasks/assignments, difficult units, revision work, preparation for term-end examination. The institute gives help and guidance to learners according to rules and regulations. After the learning programme; After completion of a particular programme the learners may want to do some advanced programmes on which they would like advice. The institute also provides information on new programmes. Thus, IGNOU provides academics, administrative, and informative support to the distance learners. The division dealing with learner support services is known as the *"Regional services Division".*

Learner Support Services in National Institute of Open Schooling (NIOS):

The learner support services identified mainly in the fields of academic and non-academic ways. In academic way, NIOS provides tutorial, advising and counseling services. In administrative point of view NIOS supports, such as enrolment, admission, registration, record keeping; information provision, and delivery of study materials.

Comparative Analysis of the Support Services of IGNOU and NIOS:

Learner Support Service System is the fundamental component of success in ODL system. Learners get attracted to ODL system due to the open and flexible character in this type of education. In the beginning, counselling is essential to new learners. Feedback is also an important factor in ODLs, on time. This can help in not only increasing enrolment ratio but also checks the drop out rate. Keeping the current circumstances of IGNOU and NIOS in mind, the learners were contacted to know exactly what kind of support they wanted. This study was conducted using the survey method. About 100 distance learners pursuing different classes/programme in IGNOU and NIOS were approached. The learners were contacted randomly in IGNOU Regional Centre, Chandigarh, NIOS Regional Centre, Chandigarh; IGNOU Regional Centre, Kolkata and NIOS Regional Centre, Kolkata. They were asked questions about the support services provided by their institutes.

Table 1.1: Learners Opinion on The Support Services
Offered by IGNOU and NIOS

S.No.	Questions	%age of IGNOU learners (yes)	%age of IGNOU learners (no)	%age of NIOS learners (yes)	%age of NIOS learners (no)
1.	Received sufficient advice and support in getting admission.	76	24	64	36
2.	Received right information from institution staff when needed to.	40	60	30	70
3.	Received study materials on time.	54	46	48	52
4.	Good advice available from institution when learners have questions about their studies	56	44	52	48
5.	Received any support and supervision to assignment Services from institution.	64	36	56	44
6.	Satisfied with Examination related Services.	44	56	40	60
7.	Institute provide ICT (Information and Communication Technology) support to learners	62	38	56	42
8.	Want any Improvement in the Existing System.	98	02	100	0
9.	Staff positive attitude towards Learners	38	62	30	70
10.	Satisfied with Availability of Media facilities	16	84	10	90

Source: Primary data collected in the year 2012.

Table 1.1 shows response to the questionnaire, 25 learners responded from each regional centre.76% of total learners in IGNOU and 64% of total learners in NIOS expressed their satisfaction regarding easy process in respect of receiving sufficient advice and support during the admission process. But 60% from IGNOU and 70% from NIOS learners did not receive the right information from institution staff when they needed to. Most of the learners did not receive study material on time. More than 50% learners did not receive- good advice and guidance about their study. 64% from IGNOU and 56% from NIOS learners feel that they have problems in the assignments. 56 % IGNOU and 60% NIOS learners have difficulties in examination related services. 62% in IGNOU and 56% in NIOS have received ICT support and expressed a desire that the audio/video programmes are made available during the contact sessions at Study Centres. Nearly all the learners expressed a desire to see a change in the attitude of the staff of the institutions. They also wanted to see improvement in the existing system.

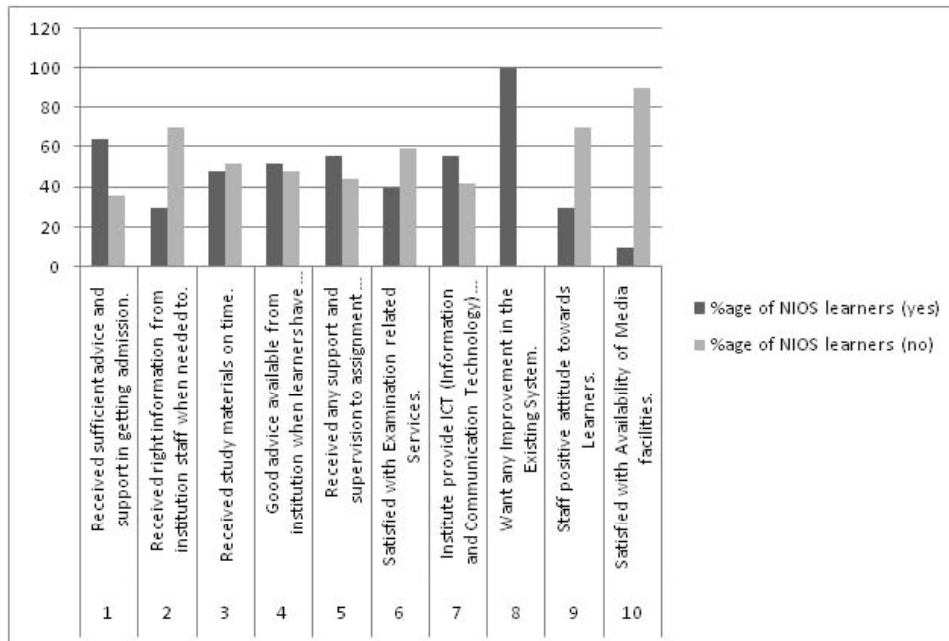**Figure.1.1: Learners Opinion on The Support Services Offered by NIOS**

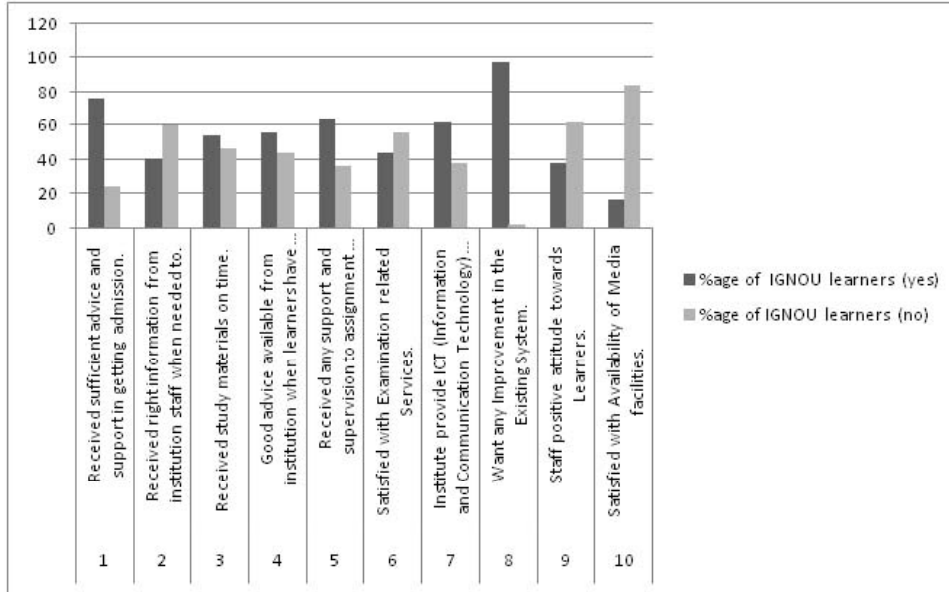**Figure 1.2:Learners Opinion on The Support Services Offered by IGNOU**

**Figure 1.2: Learners Opinion on
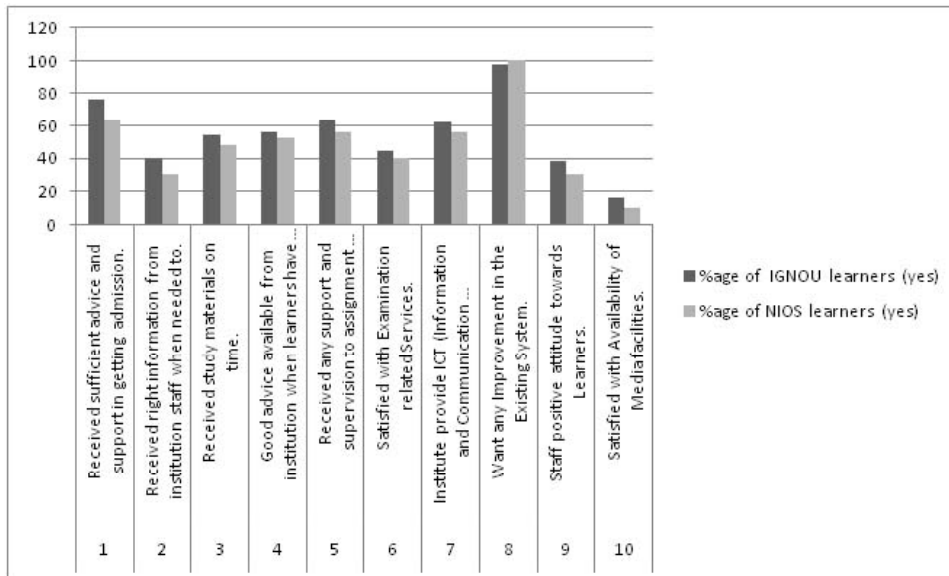The Support Services Offered by NIOS & IGNOU**

Figure 1.4: % of Dissatisfied Learners from The Support Services Offered by NIOS and IGNOU
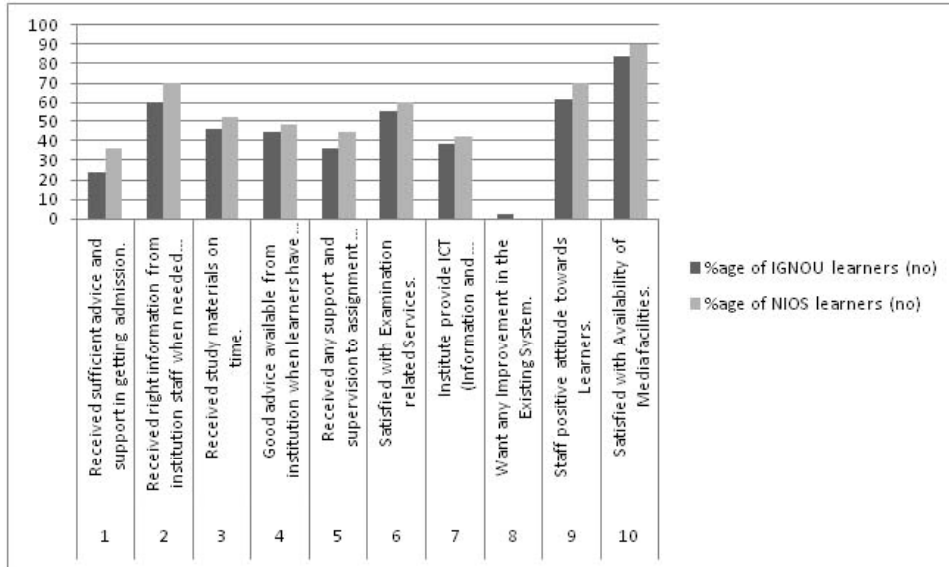

Figure 1.5: % of Performance of the Learners on The Support Services Offered by NIOS and IGNOU
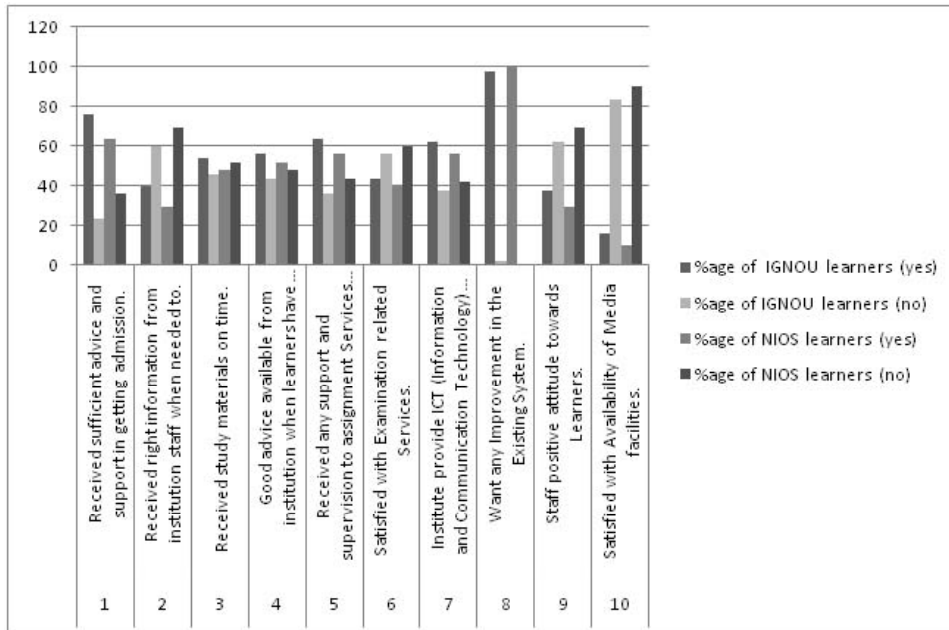
Fig. 1.1 and Fig. 1.2 give interesting information that the learners have expressed about the support service offered by both IGNOU and NIOS. There is a category of both satisfied and dissatisfied learner in both the institutes. More than 50% learners are satisfied with the advice and support given during the admission process. Although less than 50% learner were dissatisfied with the services provided yet nearly all the learners wanted improvement in the existing system.

Percentage of satisfied and dissatisfied learners of the support services offered by NIOS and IGNOU are presented diagrammatically from Fig. 1.4 and Fig. 1.5. The common observation from these two figures is that percentages of satisfied and dissatisfied learners are almost similar in both institutions.

TABLE 1.2: LEARNERS TOTAL ANSWER ON THE SUPPORT SERVICES OFFERED BY IGNOU AND NIOS

Institutes	Learners Answers		
	Yes	No	Total
IGNOU	274	226	500
NIOS	244	256	500
Total	518	482	1000

Table 1.2 reveals that there are 274 yes answers in IGNOU and 244 yes answers in NIOS. With this, there are 226 no answers in IGNOU and 256 no answers in NIOS. The result shows that there exits a light negative correlation coefficient ($X^2 = 3.602$) between IGNOU and NIOS learners' answers. However, without applying the test of significance, we cannot generalize this negative relationship. The test is carried out in the following manner:

$$X^2 = \Sigma \frac{(\text{Observed frequency} - \text{Expected frequency})^2}{\text{Expected frequency}}$$

$X^2 = 3.602$

The computed value of X^2 is less than 5% tabulated value (3.841). It is statistically insignificant. Thus on the basis of light negative correlation, we conclude that there is a small percentage of difference in the satisfaction levels regarding the learner support services offered by IGNOU and NIOS. IGNOU learners are more satisfied with support services in comparison to NIOS learners. The support services provided by IGNOU are marginally better than NIOS.

Conclusion

The results of this study revealed that although open and distance education systems have installed a mechanism of support, the changing needs of the learners require that the system is evaluated from time to time and reformed accordingly.. It is also concluded that both systems do not have an effective method of receiving periodic feedback and hence are largely unaware of the felt needs of the learners. A large needs gap was identified in support services provided by both IGNOU and NIOS. The largest felt need was for the Support Services staff with specific training in counselling. This would ensure an enabling environment positive staff attitude towards learners, dissemination of correct information specially about the availability of ICT facilities, counselling regarding selection of subjects, career and self management. Almost all the learners want improvement in the existing system. Statistical tests (Chi Square)) revealed that the learners of IGNOU are more satisfied than NIOS learners even though the difference is minimal. A well-functioning learner support system not only helps the uninformed learners to develop attitudes and skills associated with distance learning success, it would also play a positive role in bridging the education gap, thus fulfilling an important millennium development goal.

Suggestions

- The learner support system should be learner centric and the needs and expectations of learners should be central to the development of effective learner support services. The official and staff of the learner support system should be trained in academic, career and personal counseling

- Clear and precise information about the course, the facilities available and what they can expect from these facilities should be provided to learners.

- The information provided to learners should be reviewed periodically to ensure that it is clearly understood and there is no gap in the knowledge of the course they are studying.

- Study materials should be dispatched on time. The materials should also be uploaded on website so that they are available in case of delay. Administrative information on website should be updated immediately.

- The materials both in print and audio and video should also be placed in the Library of the study centre. Library and publication support for learners should be increased from the point of view of quantity and quality. The learners must have an access to the library of the study centre.

- Tutors/Academic Counselors should be trained to effectively handle the Personal Contact Programmes and to respond to the Tutor Marked Assignments. They should be supported by the study centers. These centers should aim at reducing learner individual deficiencies.

- Tele-orientation/orientation programme should be organized from institution time to time for learners, tutor/academic counsellors.

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BOOK REVIEW

Thinking Skills

by

John Butterworth and Geoff Thwaites

Cambridge University Press, 2010 , ISBN-13: 978 0 521 69636 pp 280

The book helps the readers to reflect on the processes of thinking. It is divided into two parts: Critical thinking and Problem solving. Using the constructivist approach the authors take the book forward by providing opportunities to analyse and evaluate arguments, analyse numerical and graphical information for concept clarification. Both the sections provide opportunities to practice and develop these skills as well as help readers build a sound foundation in these areas.

Part 1 on Critical Thinking is comprised of 28 Units that introduce the higher order thinking skills like analyzing arguments, drawing conclusions and synthesis. **Part 2** deals with Problem Solving and has 16 Units that essentially deal with solving problems by processing data, recognizing patterns, spatial reasoning and making choices and decisions.

Written in an informal manner with a conversational tone, it is almost a self learning material. The authors have taken care not to talk down to the readers but talk to them. Introduction of activities, case studies, puzzles etc play an important role in involving the reader. Interestingly the content has been dealt with after the reader had solved a puzzle. In this way the authors have stayed away from the didactic approach and assured complete involvement of the readers. The readers in turn gain understanding by co-creating the content. The unit on Critical Marking under the synthesis type of thinking has effectively explored higher order thinking skills. Care has been taken to keep language simple for easy comprehension.

Focus over there is on growing interest in developing learners' thinking skills. People have begun to recognize that rote learning does not prepare individuals to meet professional and personal challenges. The lack of employability skills of the workforce is having a detrimental effect on both the industry as well as on the morale of the work force. The result of Programme for International Student Assessment (PISA) has initiated a healthy debate about the adequacy of the traditional education system. It is time that a paradigm shift is made

from teaching content to teaching skills. Open schooling systems, especially in the developing world, address the educational concerns of a large number of people who are either in work or are ready for work. Hence it becomes increasingly imperative for open schooling systems to address these concerns.

Although all the life skills are very important for youth empowerment the significance of thinking skills cannot be undermined. This book will be a valuable asset for all the material developers as it introduces them to the importance and method of developing thinking skills. Creating content of self learning materials that is experiential and constructivist, engaging and simple, and yet is technically sound is the principle challenge for every lesson writer. This book is a handy reference and a ready reckoner in this regard. It will assist the lesson writers in developing activities and questions that apply the content to real situations, where their critical and creative thinking, planning, goal setting, problem solving and decision making skills are constantly challenged. Discussion at the end of activities provides an insight into objectives of designing the activity and the expected outcomes. There is enough space for reflection which provides an opportunity for unlearning and relearning. The end-of-unit assignments provide a rich cache of exemplar exercises that lesson writers will find very useful. Fortunately the answers and comments to end-of-unit assignments are available at the end of the book. This is very helpful in understanding the process of thinking involved. The same methodology can be effectively transferred to produce audio and video support materials also.

Information is expanding at an exponential rate and it is available at the click of a finger. What is important is that an individual is able to access the information, comprehend it and apply it to generate new knowledge and processes. The challenge is to develop educational materials that equip all learners with these competencies. The question is- are the functionaries of open schooling system ready to take this challenge? They must.

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International Conference Report

A Brief Report of the International Conference on Integration of Academic courses with Vocational Education in Secondary Schools

The vocational Education Department of NIOS India, organisezed a three day **International Conference on Integration of Academic courses with Vocational Education in Secondary Schools** from 17 to 19 February 2012 in New Delhi, India.

Vocational Education and Training (VET) is recognized as an important aspect of the nation's educational initiatives. In order for the VET to play its part effectively in the changing global environment, there is an urgent need to redefine the critical elements of imparting VET to make them relevant, flexible and sustainable to suit the contemporary needs of the learner and industry.

In this backdrop, the NIOS, UNESCO and COL held a three day International Conference on **"Integration of Academic courses with Vocational Education in Secondary Schools" from 17 to 19 February 2012 in New Delhi, India.** The Conference deliberated upon the impending challenges and issues in the academic courses at the secondary education level and tried to develop a framework and recommendations to establish linkages of skills training through vocational education at secondary school level with emphasis on knowledge base through academic subjects.

The **objectives** of the conference were to:

Explore the modalities for increasing the access to sustainable and learner centric quality school education equipped with vocational skills;

Develop strategic plan to strengthen the environment and image of TVET and

Establish linkages on the quality assurance system for the TVET to promote the quality and equity among learners at all levels.

Participants:

Experts from Australia, Bangladesh, Fiji, India, Germany, Namibia, New Zealand, Malawi, Tanzania, USA and Zambia representatives from UNESCO,

COL, academic institutions, Trade and Industry Associations, Federation of Indian Chambers of Commerce and Industry (FICCI), Confederation of Indian Industries (CII), Technical and Vocational Education Institutes, UNEVOC National Centers, Educational planners and administrators and international experts in vocational, secondary and open learning participated in this conference.

Themes:

The various sessions of the Conference centred on the sub-themes of:

Vocational skills and training to empower citizens;

Designing the curriculum and quality framework to strengthen the impact of vocational courses,

Use of technology in providing education;

Developing framework for the Recognition of Prior Learning;and

Development of Assessment and Certification Framework.

Organizers received 90 abstracts from the national and international experts, out of which 45 were shortlisted and presented in different parallel sessions.

Inaugural

On 17th February, the Conference was inaugurated by Ms. Anshu Vaish, Secretary, School Education, MHRD, Government of India. There was a special address by Mr. Shigeru Aoyagi, UNESCO Representative to Bhutan, India, Maldives and Sri Lanka, and Director of the UNESCO New Delhi Cluster Office for Bangladesh, Bhutan, India, Nepal, Maldives and Sri Lanka.

There were five thematic sessions, two panel discussions besides the parallel sessions on all the three days.

The first theme for the plenary session on 17th February 2012 was "Use of Technology in Providing Education". The speaker on the theme was Prof. Sugata Mitra, MIT Media Lab, USA. Prof. Mitra shared his experience with the experiments that he had done with the use of IT and search engines in educating children. He presented the "Hole in the wall" experiment and emphasized on the need for self organized learning environment. He also showed the interesting results of various experiments which were conducted in several countries where he showed that there is a uniform learning curve when children learn without any assistance. Children, when given free access to computers, pick up basic computer literacy skills by with minimal intervention adults. This has been called Minimally Invasive Education (MIE) by Dr. Sugata Mitra and is basis for the Hole-in-the-Wall Learning Stations.

The second theme was Vocational Skills and Training to empower citizens.

The two speakers Mr. Sharda Prasad, Joint Secretary & Director General (DGET), Ministry of Labour, Government of India and Mr. G. Vaz, International Development Consultant.

Mr. Vaz highlighted the need to change the mindset and perception of the public towards VET and discussed the importance of knowledge, skills, and innovations which are essential for a country to succeed.

Mr. Prasad presented an overview of the strategies being adopted to bring about necessary changes in vocational training imparted in ITIs.

The Third theme was shared on the second day "Designing the Curriculum and Quality Framework to Strengthen the Impact of Vocational Education at School Level.

Mr. Dilip Chenoy and Mr. Basab Banerjee from (National Skills Development Council, India) NSDC presented the role that the organization is playing in development and implementation of National Vocational Education Qualification Framework (NVEQF) in India. Mr. Chenoy emphasized that multi-skilling should be done to enhance the employability of rural youth. They also highlighted the role of the Industry in mapping of skills and curriculum development.

Ms Belinda Smith, Consultant, TVET, Australia highlighted the need to adopt ways of integrating vocational skills by using ICT and simulated learning environment.

The fourth theme was Developing Framework for the Recognition of Prior Learning, which addressed the issues of identification of informal knowledge and skills and attaching importance to it. In this session there were two very distinguished speakers Ms. Liz Bowen from Competency International Ltd., New Zealand and Ms. Madhu Singh from UNESCO Institute of Lifelong learning (UIL) Germany. Ms. Liz began with a motivating presentation and mentioned that lack of formal qualification does not mean that someone is not competent. Ms Madhu Singh from UIL dwelt upon the need for policy and guidelines for the RPL and different approaches to governance of RPL.

The session was followed by a panel discussion on Vocational Education in Secondary Schools and its implications for NVEQF. Dr. Alka Bhargava, from MHRD, Dr. Swati Majumdar, Director, symbioses institute of open learning, Pune, Mr. Inder Gahlaut, president, Saksham Bharat, Ms Darshika Sanghani from Wadhwani foundation were the panelist and Dr. Kuldeep Agarwal director academic NIOS was the moderator.

The fifth theme of the conference was the Assessment and Certification framework. The theme addressed the issues pertaining to development of framework in an integrated situation for both academic and vocational subjects, credit transfer and assessing skills by educational institutions in partnership with industries. The two speakers for these sessions were Ms Maria Peters from Australia and Mr. Shailendra Sigdel, Statistical Advisor from UNESCO

New Delhi. The topic for the Ms. Peters presentation was "Working in partnership to engage young people in TVET". She gave the overview of the Australian education context and the TVET policy framework. Mr. Sigdel's presentation topic was "Student Assessment in Technical and Vocational Education and Training (TVET)". He provided details methodologies of TVET assessment. His presentation has covered the definitions and coverage of TVET, purpose of assessment, phases and types of assessment with some examples of assessment questions and methodologies adopted by different countries.

Recommendations:

Following are the major recommendations:

- The integration of academic and vocational education needs to be done at the school level through the NVEQF Framework;

- Greater emphasis on developing competencies should be made through an integrated system;

- Competency Standards need to be developed for lower, intermediate and higher levels of skills, keeping in view the occupational structure and classification;

- Academic courses should be made more vocationally relevant, focusing on the workplace skills;

- Revision of all curricula and instructional materials for integration of academic and vocational competencies needs to be done;

- New vocational courses should be introduced to meet the new skill demands;

- Obsolete courses should be phased out of the education system;

- Capacity building of teachers and trainers in best vocational pedagogical practices;

- Promote ICT as a tool for integration of academic and vocational learning;

- Develop the framework for RPL and institutionalize it especially for the non-formal learning;

- Industry Participation in the development of curriculum and its transaction.

The Conference was co-ordinated by Dr. Mamta Srivastava, Dy. Director (Vocational Education), NIOS India. Email: mamtasrivastava@nios.ac.in.

(Report prepared by Dr. Mamta Srivastava, Dy. Director (Vocational Education), NIOS, Noida, INDIA and Conference Secretary).

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5. Sub-items with headings relating to:

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6. Innovative initiatives to address the problems, implications for ODL in the country's context/context of other countries, action points (if any)

7. Conclusion

8. Acknowledgements (if any).

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6. Description of the case, methodology, quantitative/qualitative aspects, critical analysis, comparison of the case study with other countries in the concerned area.

7. Special Features/Innovative Initiatives/Success Points

8. Conclusion – Implication and needed follow up, replicability,

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8. Methodology

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10. Conclusion - major findings, implications, needed follow-up action, suggestion for further research in the area.

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