QUEST IN EDUCATION

Editorial

The current issue of Quest in Education examines contemporary challenges faced the education system.

All over the world, open and distance learning is gaining massive popularity due to its 'anybody' anywhere' and 'any time' Approach towards education. Research based article by **Dr. Nilima Srivastava**, "Bottom-Up Approach: Needs Assessment to Evaluation: A Case Study of Masters' Degree Programme in Women's & Genber Studies in ODL" shows that in ODL system, learners can appreciate any academic programme and maximize their learning if they find it useful to them and helpful in their career advancement.

In their article, 'Studying Mathematics in Higher Education: A Challenge for the Visually Impaired', **Dr. Saba Narvel and Prof. Sujata Bhan** focus on the need to enhance learning of mathematics for students with VI and initiating effective teacher training programs for teachers for the visually impaired so that teaching mathematics is made available and easier at secondary level and put forth the solutions for accessibility of math subject for the visually impaired.

Farsighted article by **Dr. Nandita Mondal**, "Future of Work and Workers Education in India - A view point" makes a strong case in favour of integration of skill-based education to meet the challenges of automation and artificial intelligence in the world of work.

Poems by **Prof. Gouri Srivastava** titled, 'Women's Day' and 'Celebrating Strength' bring positive energy for empowerment of women. Book Review: *Environmental Education* by **Dr. Sunita Vithalrao Magre** motivates us to introduce this valuable publication to our students.

We request authors to send their original research based articles and book reviews on issues concerning education. As Quest in Education publishes peer-reviewed articles, the author's should be ready to wait for seeing their article in print.

Vibhuti Patel   Sonal Shukla   Ratnabrabha Rajmane

Bottom-Up Approach: Needs Assessment to Evaluation
(A case study of Masters' Degree Programme in Women's and Gender Studies in ODL)

Dr. Nilima Srivastava, Professor
School of Gender & Development Studies, IGNOU, New Delhi

The importance, need and reach of distance education is a well-established in the realm of higher education both in India and internationally. Despite rapid and significant growth in distance education, the literature in this field of education primarily focuses on the 'in-course' experiences of the learner. Also, the existing literature throw light on how learning can be improved, how support to the learners can be made more effective and what goes into making a programme successful. (Raphael, 2006) But, there is hardly any literature available about what the learners seek to study and learn in what manner and which form. IGNOU catered to this gap in literature of open distance learning system and created a mechanism to decipher what do the learners actually want to learn. Practice of carrying out a needs assessment study emerged out of this philosophy.

Introduction

In ODL system, learners can appreciate any academic programme and maximize their learning if they find it useful to them and helpful in their career advancement. Therefore, the Programme Coordinators felt that instructional design and curriculum development should begin with assessing what the 'takers' want/need to know. Further, Stewart and Cuffman (1998) aver that an overall advantage of DE is that it may be delivered at the same time to different locations, at different times to the same place, or at different times to different locations. And, the

integration of needs assessment as part of total DE system   benefit all stake holders, be it the institution, faculty or the students.

Women's Studies in 1970's and later Gender Studies emerged as interdisciplinary academic disciplines to address gender discrimination that is rife in contemporary society, through scholarship and research.
It is also the need of the hour that issues related to gender are addressed to harness human potential and capacity that is going under or unutilized because of age old patriarchal traditions and attitude. These disciplines steer a way towards a more just, balanced and productive society where each and every individual has a right to follow   their dreams and fulfill aspirations in their life time.

Justification for the title of the Programme

Reviewing programmes offered by other academic institutions under the rubric of Women's Studies/ Gender Studies revealed that universities and colleges under UGC have been offering MA in Women's Studies (WS), where the focus has been on social, political and economic empowerment of Indian women. WS has been the academic arm of women's movement. The discipline emerged as an analytical tool to view and understand the status of women resulting in building of unconventional, women centric model of knowledge creation. Further, WS is a way of knowledge construction by looking at lived experiences of women through 'gender lens' that is from a feminist perspective. Therefore, power relations that exists between men and women are the fundamental focus of inquiry. In this respect, WS is both the location and point of feminist scholarship in the form of a new discipline.

 Lately, in India some institutions have started offering MA in Gender Studies where the syllabus includes discourses on other sexualities. It was because WS paradigm was critically challenged especially in the West, as gender is not limited to concerns related to women but also men as both women and men coexist, interact and influence each other's lives and perspectives in society. Gender Studies' areas of concern and investigation are based on power relations that determine differential impact on women, men and other sexual minorities. Patel

3

argues that Gender Studies (GS) debunks patriarchy and subordination-domination relations between men, women with an understanding that gender relations are socially constructed and can be changed through social, economic and political intervention. (Patel 2013, p.10)

On the other hand, several scholars from WS had reservations that the use of the term 'gender' fails to focus on subordination of women, their oppression and exploitation, injustice and structural (patriarchal) violence faced by them. In this context, Women's and Gender Studies (W&GS) expands the process of knowledge production by considering what it takes gender, class and sexuality sincerely in the power dynamics of human society. It provides a methodology that is feminist, interdisciplinary and multicultural. (Anand and Srivastava 2013, p. 27) Thus, uncertainties about weakening of WS concerns under the auspices of GS are addressed in the fusion, providing a wider spectrum to transect gender. (IGNOU, 2011)

The terminology Women's and Gender Studies (W&GS) is new to Indian academia, but many universities in the west offer programmes in combination of the two. Keeping the mandate of the School in sight, it was found more desirable to introduce the learners to the concepts and understanding of other sexualities but also keep the emphasis on critically analyzing women's position, situation, status and their location as oppressed and marginalized sections in our society. Thus, it was decided to give the title of the programme as 'M.A. in Women's and Gender Studies' (MAWGS).

After discussing the disciplinary justification of the proposed title, the article touches on the definition and concepts of needs assessment, followed by its relevance and rationale in ODL. In the next section, the paper deals with the methodology of the needs assessment study, profile of the respondents and tabular presentation of data. In the latter section there is data analysis and discussion, winding up with conclusions drawn from the exercise of needs assessment. The article ends with an evaluation of the programme after five years of its launch with respect to increase in enrolment and students' satisfaction.

Defining   Need Assessment

Need assessment is a part of planning process. It is often used for improvement in individual's performance, to fulfill educational and training needs of organizations or communities. The exercise of needs assessment can refine and improve the outcome of any product, programme or policy. It helps in identifying the demands of the users and also in optimum   utilization of available resources for developing and implementing a feasible, desirable and in-demand product. The process of needs assessment involves gathering appropriate and sufficient data to make a definitive statement about the viability of the tested product.

Looking at dictionary definitions of needs assessment, it is defined as a systematic process to acquire an accurate, thorough picture of a system's strengths and weaknesses, in order to improve it and meet existing and future challenges. (www.dictionary.reference.com)
Another definition considers in-put/ output formulation   and states that needs assessment is a process of problem identification that looks at the difference between "what is" and 'what should be' for a particular situation. (www.dictionary.babylon.com) Thus, we can say that needs assessment is systematic process for determining and addressing needs, or gaps between 'current product' and 'wanted product'. For the present paper, it   is filling up of gap between the 'perceived needs' of the institution and 'felt needs' of the students/learners. It is important to understand that need assessments are useful only when these are focused and systematically carried out so that conclusions can be used to determine which of the possible 'means - to- the – ends' are most-effective and efficient for achieving the desired results.

To summarize the present discussion, needs assessment is what Watkin (1984) defined as a systematic approach to setting priorities for future action. (cf. Stewart and Coffman, 1998) While having being used in numerous setting viz. healthcare, business and marketing etc. need assessment is also a systematic approach for successful distance education.

Needs Assessment of Unconventional Programme

In conventional universities it is easier to develop and offer new and unconventional programmes and courses as there is a direct and instantaneous mechanism to get feedback from the students who are meeting the teacher almost every day. It is also easy to pitch the curriculum at the level of the students and reinforcing the understanding by providing important readings or texts. The teacher can suggest ways to cope up with the academic rigour of the programme and students too can immediately put forth their difficulties in a face to face situation. Moreover, resources required to offer any new programme in face-to-face mode is confined to the time spent by the faculty in designing the curriculum.

Whereas, Distance Education (DE) has a totally different set up where the learners are provided with Self Learning Material in the form of printed text, A/V material etc. Human interface in learning is limited to counseling, which is desirable but not mandatory. So, the feedback mechanism is not instant and requires extra time and effort on part of both teachers and students. Also, inability to provide immediate response to learners' query or have a discussion becomes a potential limitation of Distance Education. With the advancement in technology and revolution in IT, these challenges can be reduced but more importantly launching of any programme in DE is very time, cost and labour intensive exercise. After launching a programme it becomes very 'resource consuming' to bring about any change in curriculum or to bring it down to the level at which it is pitched and structured as per the understanding and requirements of the learners. Thus, need assessment assumes a very pragmatic, matter-of-fact and demand driven 'safety valve' in distance education. This assertion finds further support that needs assessment is humanizing process to help make sure that we are using out time and learners' time in most effective and efficient manner possible. (Fenwick and Kaufman,1975; Kaufman, 1977)

Dhal and Singh (2013, p.233) assertion that "need assessment is core process in planning any academic programme as it helps in exploring

the nature, content and the structure of the programme" is fully relevant and for this study too.

With this background, it became imperative to assess the viability of an academic programme of this nature by carrying out a needs assessment exercise. The aim of carrying out   needs assessment for the proposed MA programme, was to provide a strong foundation for   programme development coupled with optimal utilization of resources.

Objectives
1. To explore the nature, level and the mode to offer a post graduate programme in Women's and Gender Studies (W&GS).
2. To assess the viability of an academic programme of this nature especially when offered through DE.
3. To map the areas to be covered as courses for a PG degree programme.
4. To evaluate usefulness of the programme from Learners' perspective.

Methodology

The need assessment study was under taken in July 2009 and was completed in October 2009. The concluding part of the paper is drawn from data obtained from the University regarding increasing enrollment rates of MA in W&GS from 2013 to 2018 and by briefly providing students' feedback.

 IGNOU has students from all over the country. Thus, Survey method was found more useful for collecting data for the need assessment study. Due to limitation of resources (time, funds and human resources), questionnaire was used for data collection. The questionnaire had about 15 questions which covered demographic profile of the respondent and questions related to the requirement of an academic programme. Questions were closed ended with an option (any other) for adding any other information/opinion not covered in the stated options.
The validity of the questionnaire was assessed through face validity which Dhal and Singh (2013 p. 227) states are the extent to which the

questionnaire is subjectively viewed as covering the concept it purports to measure. The questionnaire was subjected to a pilot study before being administered to the sample.

Two stage sampling plan was devised where sampling was purposive at stage one and simple random at stage two. Efforts were made to collect data from different parts of the country to get a pan- India picture of the programme's viability. Structured questionnaires (750 in number) were sent to eleven locations, covering fifteen Institutes/ Universities covering varied locations in the country viz. Jammu, Kolkata, Siliguri, Delhi, Allahabad, Ahmadabad, Pune, Mumbai, Hyderabad, Pondicherry and Bangalore.

Total number of responses received from targeted locations was 266. No response could be received from Pune, Bangalore and Hyderabad. Questionnaire had questions covering all the objectives and sub-objectives related to the aim of the survey viz. preference for

- a degree/diploma programme
- language/ medium of instruction for the proposed programme
- a generic programme or with specializations
- areas of course contents
- mode of delivery

Data analysis has been done with the help of simple descriptive statistical tools (frequency and percentages) to show the trends emerging from the empirical data. Data has been categorized under mutually exclusive categories to draw interconnections and arrive at conclusive understanding of the exercise.

Analysis and Discussion

The following section of the paper deals with analysis of the data followed by a discussion on evaluation and feedback of the learners who have completed MA in W&GS. Data Analysis and has been woven into the following mutually exclusive categories namely: availability and need for this kind of academic program, operational specificity and approachability preference.

Composition of Respondents:

Respondent came from   varied educational backgrounds at undergraduate level (English, Media, Social Work, Hindi, Sociology, Political Science and Economics). The sample had both men and women, although representation is not equal but fairly represented. Out of 266 respondents, the sample constituted of 28.0 percent men and 72.0 percent women. Majority of them (79.0 percent) were student while a little less than 10.0 percent came from NGO sector and the rest of them (4.00 percent) were working as teachers.

Tabular Presentation of Data
Tables 1:   Knowledge of such Programmes being offered in other institutions

Response	Degree	Percentage	Diploma	Percentage
Yes	110	41.35	85	31.9
No	130	48.8	164	61.6
Can't Say	10	3.7	10	3.7
No Response	6	2.2	7	2.6
Total	266	100	266	100

Tables 2: Need for the Programme in ODL mode

Response	Degree	Percentage	Diploma	Percentage
Yes	155	58.2	200	75.1
No	49	18.4	33	12.4
Can't Say	30	11.2	23	8.6
No Response	32	12.0	10	3.7
Total	266	100	266	100

Table 3: Need for such a Programme in Face to Face mode

Response	Degree	Percentage	Diploma	Percentage
Yes	160	60.1	162	60.9
No	41	15.4	42	15.7
Can't Say	42	15.7	37	13.9
No Response	23	8.6	25	9.3
Total	266	100	266	100

Table 4: Medium of Instruction in ODL

Medium of instruction	Number	Percentage
English	66	24.8
Hindi	14	5.2
English & Hindi Both	180	67.6
No Response	6	2.2
Total	266	100

Table 5: Medium of Instruction in Face to Face

Medium	Number	Percentage
English	61	22.9
Hindi	11	4.1
English & Hindi Both	180	67.6
No Response	14	5.2
Total	266	100

Table 6: Structure of the Programme

Structure	Number	Percentage
General	77	28.9
With Specializations	183	68.7
Others	4	1.5
No Response	2	0.7
Total	266	100

Table 7: Proposed Specializations

N = 266

Specializations	Numbers	Percentage
Women's Studies	103	38.6
Gender, Literature & Culture	134	50.3
Queer Studies	28	10.5
Gender & Film/Cinema	56	21.0
Any other	3	1.1
No Response	10	3.7
Total	266	100

Table 8: Preference for Areas

N= 266

Areas	Numbers	Percentage
Literature	117	43.9
Film	75	28.1
Visual Arts	64	24.0
Culture	133	50.0
History	95	35.7
Social Science	133	50.0
Science	72	27.0
Media	118	44.3
Any other	3	1.1
No Response	6	2.2
Total	266	100

Table 9: Preferred Status for ODL

Response	Degree	Percentage	Diploma	Percentage
Yes	129	48.4	151	56.7
No	73	27.4	81	30.4
Can't Say	46	17.2	25	9.3
No Response	18	6.7	9	3.3
Total	266	100	266	100

Table 10 Preferred Status for Face to Face Programme

Response	Degree	Percentage	Diploma	Percentage
Yes	101	37.9	98	36.8
No	87	32.7	86	32.3
Can't Say	66	24.8	67	25.1
No Response	12	4.5	15	5.6
Total	266	100	266	100

Table 11: Respondents' Preference for Self- Enrollment:

Programme	Degree	Percentage	Diploma	Percentage
ODL	122	45.8	143	53.7
F2F (Delhi HQ)	101	37.9	84	31.5
No response	43	16.1	39	14.6
Total	266	100	266	100

Analysis and Discussion

This section is organized based on the exclusive thematic categories discussed below:

1. Availability and need for such programmes

Under this category following two aspects have been studies:

- Knowledge about other Universities offering programmes in Gender and Women's Studies (G&WS)

Majority of respondent did not know if a diploma (61.6 percent) programme in G&WS was being offered by any other university whereas only 31.9 percent respondents knew if other Universities/Institutes offer it. Knowledge about Degree Programme being offered in other places (48.8 percent) garner higher percentages than that for diplomas. (see table1)

- Need for a PG Programme in W&GS

Following response was gathered when Respondents were asked if there was a need for offering PG Programme in Women/Gender Studies.

A good percentage of respondents (58.2percent) said that there was a need for a degree programme (M.A.) in this discipline (refer table 2 for

details). The percentage is higher (75.1 percent) for a need to offer a PG Diploma in W&GS through Open Distance Learning mode of education.

When the same was enquired about the face-to-face/ on campus mode of offering the programme (table 3), it is found 60.15 percent respondents say there is a need to offer M.A in the said discipline. Almost the same percentage of respondents (60.90 percent) expressed the need to offer PG Diploma in "Face-to-Face" on Campus Mode (at IGNOU Headquarters in New Delhi)

Above discussion highlights that more people are aware of a degree programme in W&GS being offered than a diploma in other Universities and Institutions of the country. Also, need for such a programme was well conceived with projected demand for a diploma in ODL and for an M A in F2F mode at IGNOU HQs.

2. Operational Specificity

Under this category discussion revolves structural specifications of then proposed programme which entails aspects related to programme delivery viz. medium of instruction, focus of the programme, courses/areas of interest to the respondents for an academic programme of this nature and preferred mode for offering MA in W&GS. Let's read abut of them in details.

- Medium of Instruction: Respondents were asked if offered through ODL, what should be the preferred mode of instruction for offering a PG Programme in W and GS? (see table 4) A large percentage of respondents (67.6 percent) opined that the programme should to be offered in both English and Hindi but percentage is higher for medium of instruction being only English (24.8 percent) than only in Hindi (5.2 percent). When the same was asked for the programme being offered in Face-to-Face/ on Campus mode at a Delhi, majority of respondents wanted both Diploma and Degree Programmes to be offered bilingually (69.1 percent) but percentage of respondents desiring only English as the medium of instruction (23.9 percent) was again much higher than for only in Hindi (less than 5.0 percent)

- Focus of the Programme: The objective here was to find out if the students showed inclination for a generic M.A. or interested in a MA with Specializations. (see table 6)

A good percentage of students (69.1 percent) opted for M.A. degree programme with Specialization in comparison to those who have desired a generic M.A degree (28.9percent). When probed for what kind of specializations the students would like to go for, the following picture emerged from the data: (see table 7)
Gender, Literature and Culture (50.3 percent) emerged as the most sought after specialization followed by Specializations in Women's Studies (38.7 percent) and Gender and Film/Cinema (21.0 percent). A small percentage of respondents suggested specialization in Queer Studies (10.5 percent).
The respondents were then asked to list out areas/courses that they would like to suggest for the M.A. in Women's & Gender Studies. The data shows the following trend. Largest Percentage is for the area of Culture and Social Science (50.0 percent each). Media (44.3 percent) and Literature (43.7 percent) have also been opted in high percentages. (see table 8)

- Preferred Mode

Respondents were asked if they were to opt for this kind of an academic programme, would they prefer through DE or On-campus mode. (see tables 9&10)
Respondents in high percentage said that they would prefer the programme in DE mode. Percentages for a PG Diploma are 56.7 percent and for M.A. Programme are 48.4 percent. Here, it is pertinent to quote Dhal and Singh (2013) who write that in the era of globalization and privatization of education, there is a mushrooming of short-term course/programmes and also the possibility of acquiring two certifications simultaneously may be the reason for higher demand for such programmes being offered through DE. Aneja (2017, p.860) too has an interesting analysis to offer here; "the progressive structure MA in W&GS with built-in options and (choice of) specializations is seemingly in tandem with the consumerist trends." When the query was made for Face-to-Face/ On-campus (at Delhi), the percentage are

14

higher for respondents who opted for Face-to-Face Degree (37.9 percent) than for a Diploma (36.8 percent).

Taking a panoramic view of the category of operational specificity, it is found that an MA with specialization had a clear edge over a generic MA. Gender, Literature and Culture had highest projected demand followed by Women's Studies. MA offered bilingually through DE emerged as the most popular choice.

3. Approachability Preference

This question was asked for contacting respondents for the intended academic programme after its launch. Table 11shows, regarding PG Diploma(ODL) 53.7 percent respondents wanted to be contacted whereas only 31.5 percent respondents showed interest for being contacted for a PG Diploma, as a Face-to-Face programme at Delhi.

On the other hand, higher percentages of respondents wanted to be contacted for an M.A in ODL (45.3 percent) than for an On-campus/ Face-to-Face (37.9 percent) programme at Head Quarters in Delhi.

Thus, DE mode emerged as the most recommended choice of respondents for being contacted to join as an academic programme in W&GS. PG Diploma has a larger base than PG degree offered through DE, while in F2F/On-campus mode degree programme garnered more interest among the respondents.

Course of action and results

The following section is a reflection on the journey that MA in W&GS started after its launch in July 2013 cycle.

The title of the programme (MA in Women's and Development Studies), Aneja (cf. Kirkup and Whitelegg 2013, p.11) avers reflects on an ongoing need to sustain the focus on women's issues while locating them within a larger framework of 'gender as a process'. She further analyses that the programmer attracts students especially women and other marginalised groups especially people of non-normative sexualities having Bachelor's degree in any discipline, and an interest in feminist theoretical perspectives and gender issues.

Talking of **the structure** of MA in W&GS, the programme as on offer now is in conjunction to the needs assessment survey which revealed that potential learners were keen to pursue a diploma and/or the Master's degree with specialisations. The programme has been designed in a way that all learners read   first year curriculum that provides a broad-based grounding in concepts and feminist theories, inter-disciplinary gender perspectives embedded in our socio-cultural milieu, in arts and media and also how bodies are gendered. Completing first year provides an option to exit with a postgraduate diploma. To continue with the degree programme, in the second year students opt for   one of two available specialisation areas: 'Gender, Literature & Culture' or 'Women's Studies'. (Aneja, 2017, 858)

Dhal and Singh (2013, p. 229) write that the coverage of the programme (their proposed programme for which they conducted a need assessment study) is interdisciplinary in nature, so there is a possibility that people already working in the related areas may show interest in pursuing this Programme. This ascertain has   found ground for this MA programme also. The programme attracts student not only from humanities and social sciences but from diverse disciplines as commerce, Human Resource, with a background in Law and medicine.
F**inancial viability,** which is critical for any programme in ODL, because of limited enrollments in the first cycle of its launch in 2013, there was skepticism   about potential 'success' of M. A. in W&GS. Thus, initially it was considered a 'low enrolment' programme and remained under scrutiny. Here, Aneja (2017)   writes that such doubts regarding viability are not institution specific but are reflective of higher education's dominant fiduciary rationale as well as a general suspicion of gender studies – perceived as either not important enough to merit academic stature, or associated with limited interest groups (read, too radical or idiosyncratic). Further, the relatively late appearance of Women's Studies on the institutional scene, and the suspicion of 'liberal, feminist agendas', continue to sustain such views. Interestingly Kirkup and Whitelegg (2013) also report similar experiences in the context of UK Open University's Women's & Gender Studies (WGSs) programmes which are under compulsion to demonstrate a 'positive contribution to the finances of the university. (cf. Aneja 2017, p. 857)

16

Progressively increasing annual enrollments is a good response to the above skeptic outlook about programs on Gender & Women Studies, which doubled in the first two years, with an increase from 69 in 2013 to 148 in 2015. As per the latest University's Student Registration Division's data, the latest enrollment numbers (July 2018) have crossed 200 which testifies the growing demand for WS scholarship. Not only that, many mails are received from prospective learners who want to join in January admission cycle but wait till the following July admission cycle to enroll for the proframme as MAWGS is offered only in July admission cycle to cut down the cost of providing counselling for all courses in both the cycles. Also, every year the School especially the Programme Coordinators receive many requests from oversees students who show their interest to pursue the programme and inquire about how to enroll for the same.

Keeping in sight the institutional commitment to democratic values with an educational initiative seeking to reach out to non-traditional learners that may include older/ disabled/ women/ queer/ transgender/ remotely located/ economically disadvantaged people, the programme has achieved its objective as evident from the pattern of registration over period of time. The programme attracts a large number of women (81–89%) and a sizeable number of rural learners (12–17%). (Aneja, 2017, p. 858-859)

Let us now look at what the learners have to say about the usefulness of the programme after getting their degree. **Feedback** from the students is adapted from the responses gathered by the other programme coordinator Prof. Anu Aneja for her paper (listed in the references) and from the students' posts on the asynchronous on-line platform (wgsforum) which works as additional academic students support along with giving space to the learners to express their feelings about the programme and take up contemporary gender issues that need to discussed in open fora. Some of the feedback is from an ongoing evaluative study that the author of the paper is carrying out to assess the transformation in the students after being exposed to women's studies scholarship.

One of the student felt that the 'specialisation is important' because 'one can choose the depth of any stream' after obtaining a 'comprehensive panoramic view across diverse topics, disciplines" Many of the MAWGS courses provoke critical engagements with received knowledge systems, 'eye-openers' in the words of another learner. (Aneja, 2107 p.861)

Another learner feels that one of the greatest insights that the course material has offered is the ability to discern that gender roles, especially after marriage, are constructed. That one is socialised into these roles.…Doing the programme well has given me the confidence to combine academics with being a full time mother. Another commented that – 'understanding power or lack of it has deeply impacted me. So instead of struggling individually I can relate to the context personally as well as when I relate it to others. (Aneja 2017, p.862)

One of them observed that he now saw feminism as 'a break away from traditional definitions of masculinity, of macho-ism, when all sexes can live,'
(http://wgsforum.ignouonline.ac.in/wgforum/mawgsforum/ucp.php, posted on 6 October 2015).

Students feel that the course material is very comprehensive, interesting to read and relevant in their day to day life.
Impact on learners after completion of the MA programme:
- More confident in raising issues related to gender;
- Starting 'Questioning' patriarchal structures in society
- More aware of rights of the women and other sexual minorities
- Understand familial and societal power dynamics better
- Developed gender perspective at workplace
- Developed empathy for people with other sexual orientation

Some of the concerns raised by the learners are as follows:
- Study Material should reach on time
- Poor binding of the study material
- Media to be discussed with fresh perspective & paintings to discussed with in-depth gender perspective

- Course on Research Methodology should to be better explained with more in-built activities
- Study material tends to get repetitive at times
- More case studies should be included while explaining the text

Conclusion:

Findings of the present need assessment study support those of researchers arguing that distance education does not diminish the level of student satisfaction when compared to traditional face-to-face methods of instruction.(_Allen, John, Nancy & Edward Mabry 2010, p 83)

Aneja's (2017) assertion that, Distance Education's mandate to expand outreach to those with limited access to higher education makes it a particularly welcome mode for non-traditional learners is also validated by the enrollment pattern of this program over the past five years. Our learners are mothers of children, employed men and women, professionals viz. lawyers, teachers and doctors and people who want to improve their employability.

Results of need assessment survey, increasing enrollment in successive years of launch and students' feedback show a positive trend and growing receptivity of the programme with the masses. Further, feedback received from the learners supports ODL philosophy of 'learning at one's own pace and location, giving time and space to the learners for their own learning and reflectivity'. Also, students' satisfaction level remains high because of learning without being part of the rat race or unhealthy peer pressure which may pose problems in conventional systems.

References:
- Anand, Meenu and Srivastava, N. (2013). Disciplinary Polemics of Women's and Gender Studies Women's Link, 19 (2) New Delhi: Social Action Trust
- Anu Aneja (2017) Blending in: Reconciling Feminist Pedagogy and Distance Education Across Cultures, Gender and

Education, 29:7, 850-868, DOI: 10.1080/09540253.2016.1237621

- Dhal, Sunita and Singh, Savita (2013). Academic Programme in Gender and Science: A Needs Assessment Study, Indian Journal of Open Learning, 22(3)225-234, IGNOU
- IGNOU (2011). Theories of Women and Gender Studies New Delhi: IGNOU
- Kaufman, R., & English, F. W. (1976). Needs Assessment A guide for Educational Managers. Arlington, VA: American Association of School Administrators.
- Kaufman, R., & English, F. W. (1979). Needs Assessment: Concept and Application. Englewood Cliffs, NJ: Educational Technology Publications.
- Mike Allen, John Bourhis, Nancy Burrell & Edward Mabry (2010). Comparing Student Satisfaction With Distance Education to Traditional Classrooms in Higher Education: A Meta-Analysis, American Journal of Distance Education, 16:2, 83-97, DOI: 10.1207/S15389286AJDE1602_3
- Patel, Vibhuti (2013) Debating Women's Studies Vs. Gender Studies, Women's Link, 19 (2) New Delhi: Social Action Trust
- Peter E. Williams (2010). Roles and Competencies for Distance Education Programs in Higher Education Institutions, American Journal of Distance Education, 17:1, 45-57, DOI: 10.1207/S15389286AJDE1701_4
- Raphael, A. (2006). A Need Assessment : A Study of Perceived Need for Student Services by Distance Learners, Online Journal of Distance Learning Administration, Vol. XI (2) Retrieved from: from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.917.8519&rep=rep1&type=pdf (Last accessed on 11th March 2018)
- Stewart, Robert G. and Cuffman Darcey,M. (1998) Need Assessment: A Systematic Approach for Successful Distance Education http://msevelynpusal.weebly.com/uploads/3/7/1/5/3715984/needsassessment.pdf (last accessed on 10th March 2018)
- www.dictionary.babylon.com
- www.dictionary.reference.com

Studying Mathematics in Higher Education: A Challenge for the Visually Impaired

Ms. Saba Narvel, Assistant Professor, Department of Special Education, SNDT Women's University, Juhu
Dr. Sujata Bhan, Professor, Department of Special Education, SNDT Women's University, Juhu

Abstract

Basic Mathematics education is crucial to primary and secondary education, which is the base for higher education. The level of mathematics teaching and learning in India for the visually impaired is at a very nascent stage currently. A large number of students tend to drop out of studying mathematics in Class 8 in school as various state boards have the provision for them to take substitute subjects. Although this is an optional choice, however, over a period of time it has become the default choice. Even if students with visual impairment (VI) do pursue math during secondary school they continue doing grade 7 math till grade 10. This is due to lack of services and resources and apprehensions of teachers, parents and students themselves. Today technology in the field of education for the VI has also advanced; however, either there is lack of awareness on the part of students or lack of awareness and skills amongst teachers in the knowledge and use of these tools and assistive technology available to facilitate mathematics learning for these users. As a result of this students with VI do not pursue science, technology, engineering and mathematics (STEM subjects) for their higher education which limits their career choices and growth. In order to make inclusive education truly successful it is important to provide equal opportunities to "ALL" students. This conceptual paper emphasizes the need to prepare all the 21st century students for a global society. It focuses on the need to enhance learning of mathematics for students with VI and initiating effective teacher training programs for teachers for the visually impaired so that teaching mathematics is made available and easier at secondary level. In conclusion this paper puts forth the solutions for accessibility of math subject for the visually impaired.

Introduction

Education is a process where the capacities and potentials of children are developed in order to prepare them to be successful in all spheres of life. One of the major objectives of education is to develop age level

appropriate skills and skills which promote lifelong learning. The economic growth, technical development and cultural advancement in a modern society will not be achieved without harnessing the talents of its citizens. The three R's or basic skills of learning are reading, writing and arithmetic; these skills have always been considered as the core foundation of education. This paper focusses on the third 'R', that is arithmetic or mathematics learning which is an integral part of formative education.

Mathematics has found an indispensable position in human civilization, ever since the existence of human race in the world. It is considered an essential element of human life because of its immense contribution to the growth and development of human civilization. Since then, mathematics holds an indomitable position among all the academic disciplines. So, we can say it has been the oldest subject in the history of mankind. As civilization developed, mathematics also grew simultaneously to meet the growing demands of the world, classic examples being development of number system and geometry. Mathematics is the foundation of science and technology and the functional role of mathematics to science and technology is multifaceted and multifarious that no area of science, technology and business enterprise escapes its application (Okereke, 2006). In the increasingly competitive world of education and work, knowledge of mathematics has become an integral part of environment even in traditionally non-scientific areas. Mathematics is also important as a school subject because not only is it needed for the sciences, but it also provides access to undergraduate courses in, for example, engineering, psychology, sciences and social sciences (Norris, 2012).

Importance of Mathematics

Mathematics plays an important role, often unseen, in many aspects of modern life. It has a pervasive influence on our everyday lives. Today mathematics finds a wide application, far beyond the ken of an individual. It is present in many different forms, from balancing a household budget to preparing our taxes to measuring distances and weights to reading timetables, whenever we pick up the phone, estimating how much money we spent while shopping, travel to some

place; mathematics touches every part of our lives. We need to ponder, what the world will be like when the child becomes an adult? What kind of skills will a child need to succeed in life in this ever changing world? In a world where mathematics is required to understand the development of science and technology in automobiles, medicals, computer and database management, surgery, agriculture, working of the universe, etc. and so on. The concept of mathematics is extremely essential. A strong background in math education will not just prepare the child for further studies in college or work after graduation but will also open doors to success with better opportunities and higher paying jobs.

Teaching & Learning Mathematics

Teaching and learning mathematics for children is very important due to its utility value in one's daily life. There are many objectives of teaching mathematics. One of the major objectives is to develop various skills in children; skills like computation, reasoning, problem solving and logical thinking. These skills enable the child to participate in the day-to-day activities of family and the community. Learning of mathematics is considered important because of the complexity involved in its operations as well as due to its application value in one's daily life. Mathematics helps children to make sense of their world inside and outside school. Developing mathematical understandings at an early age is considered to be crucial, as it is through mathematics, children tend to understand the world around them in terms of numbers, shapes and patterns. They learn skills like reasoning, connecting ideas and thinking logically. "Mathematics cultivates thinking and reasoning skills. It lays the foundation for systematic thinking through the numerical and spatial aspects of the objects" (Agrawal, 2004). Mathematics is much more than the operations and rules we learnt in school. It is about making connections and seeing relationships in everything that we do. It is true that mathematics plays an important role in the society and this is evident considering the position it has in the school curriculum. As a subject in school, mathematics is given a central and significant place in it because its knowledge plays a crucial role in understanding the contents of other school subjects such as social studies, science, music and art. So while teaching there is a need to make connections between mathematics and other subjects of study. Therefore, mathematics is a compulsory subject, teaching and learning

mathematics is compulsory right from primary level to the secondary level.

Mathematics at Secondary Level

Concepts need to be well acquired at the pre-primary and primary levels as it forms the basis for secondary level. According to Paul (2014), lack of adequate background knowledge of mathematics from primary school is inadequate to help them to understand new concepts at secondary school. These findings concur with Howe and Richards (2011) who observed that students' shallow background knowledge of mathematics causes them to develop mathematical anxiety. Mathematical anxiety has detrimental effects on students' cognitive processes. It disrupts students' cognitive systems that enable them to store and process information concurrently.

It is at this stage when mathematics comes to the student as a more formal academic discipline. In a sense, at the earlier stages, math education should be guided more by the logic of children's psychology of learning instead of the logic of mathematics. But it is only at the secondary stage when the student begins to perceive the formal structure of mathematics.

Objectives of Mathematics at Secondary Level (NCERT 2006) are to develop understanding of those mathematical concepts, facts, terms, procedures, symbols, relationships and principles which are needed to solve every day problems, to develop such qualities as working with speed, precision, accuracy and neatness; estimation and approximation; and capacity to apply mathematics to simple, concrete situations. According to Kapur (1993), "Secondary school mathematics is the basic structure on which the whole super structure of mathematics, mathematical sciences, physical sciences, social sciences and technology in the universities and technical institutions rests". Weakness in the basic structure in the past can lead in future to considerable weaknesses in the super structure. There is an urge and requirement to ensure students have access to high-quality mathematics learning opportunities at secondary level.

Visual Impairment & Educational Implications

The most important organs of sense are our eyes. According to the NIH's National Eye Institute (2008), "80 percent of the sensory information the brain receives comes from the eyes". Loss of sight or vision leads to visual impairment. Visually impaired students are those who have the inability to tell light from dark or the total inability to see. Visual Impairment (VI) can affect all areas of development. The implications of VI are significant. Lowenfeld (1973) stated that "blindness imposes three basic limitations on the individual: the range and variety of experiences, the ability to get about, and the control of the environment". Vision being considered as the primary sense upon which most traditional education strategies are based the direct effects of VI have certain educational implications. As the term indicates, VI involves an issue with sight which interferes with a student's academics. VI imposes many limitations on a student, particularly for tasks that require vision. Children with VI are as unique and as varied as any other group of children. A child with VI will typically learn about the world around in a different way from a child without VI. Students with VI have unique educational needs and in order to meet their unique needs, they must be given specialized services catering to their individual needs, adapted books and materials in appropriate media (including braille, audio, large print). They also need specialized equipment and assistive technology to assure equal access to the core and specialized curriculum (plus curriculum) which will enable them to most effectively compete and be at par with their peers in school and ultimately in the society.

Another important factor that needs to be taken into consideration is whether the child has been visually impaired since birth or has acquired it later in life. "Students' ability to grasp certain concepts will be greatly influenced by whether they have ever had direct visual experience of the world around them or not. People who have lost sight recently have some experience of objects and can still draw on visual images in their memory", (Dick & Kubiak, 1997).

Challenges in Learning Mathematics for Students with Visually Impairment
Mathematics as a subject in school has been associated with terms like anxiety, fear and failure. A Majority of children have a sense of fear

and failure regarding Mathematics. Hence, they give up early on, and drop out of serious mathematical learning (National Curriculum Framework 2005). Mathematics has often been considered beyond the capacity of the visually impaired to master. Mathematics content is rich with visually presented concepts and information due to which traditionally it has always been inaccessible to students with VI. Lowenfeld (1973) stated that "the blind person gains knowledge but he gains it in a different way and the knowledge itself is sometimes of different nature. For example, the Piagetian notions of object permanence, conservation of mass and conversation of volume are a few of the developmental milestones that may be delayed for visually impaired students". Simple concepts such as 'up', 'down', 'here', 'there', 'more' and 'less' involving direction or quantity may remain unclear without spatial efforts to develop a sense of these concepts through tactile experience. Mathematics is a highly visual and abstract subject, thereby posing difficulties for the visually impaired learners (Schleppenbach, 1997). Students with VI face multiple challenges in math problem solving, including gaining access to the problem information, mapping the problem information to the appropriate representation, and providing the resulting answer (Beal & Shaw, 2008). Mathematics as a discipline is highly visual in nature and therefore can present many challenges for students with VI. However, there are many adaptations that can be made to the various areas of mathematics in order to make it easily accessible to students with VI.

Higher Education for the Visually Impaired

Mathematics within primary and secondary education often serves as a conduit into higher education and success in STEM majors. Research strongly suggests that success in STEM careers is positively correlated with ample preparation in mathematics within primary and secondary education (NSF, 2012). Higher education is more than a stepping stone to future career opportunities. Each and every child regardless of their abilities should have access to explore all opportunities in education. So, it becomes extremely important for educators to make sure that the pool of talent in the visually impaired population should not go untapped and consequently wasted. Students with VI should be given necessary opportunity, if they so wish, to explore STEM subjects. As it

is the STEM subjects that form the base for many of humanity's major advances and if given the right training, opportunities, the students with VI can also perform at par with their sighted peers.

Scenario in India

Mainstream education has always focused on the three Rs of learning – Reading, Writing and Arithmetic. However, education in the world of a person with VI, especially in India, has often left out the third R – Arithmetic. In India students with VI have always been traditionally viewed as not competent to study Math. A majority of students with VI either drop out of studying mathematics at grade 8 in school and take substitute subjects or they continue doing grade 7 Math till grade 10. This is clearly due to lack of awareness, services, resources, and apprehensions of teachers, parents and students themselves. Students with VI substitute math with other subjects at grade 8 as many state boards have provisions for the same as is the case in the state of Maharashtra. Even though this is an optional choice, over a period of time it has become the default choice for many students. According to Taraporewala (2013), currently the percentage of students undertaking mathematics education in India even up to the 10 grade is negligible.

Challenges faced by the Teachers

A teacher is the central figure of the student's educational team. A teacher is responsible to create the learning environment for students. Teachers who teach mathematics experience major challenges not only in the mathematics content they teach but also in the way they teach. According to Martino and Zan (2013), the biggest challenge for a teacher is to help the student with VI to overcome the built up fears, inhibitions and beliefs she or he may have developed. The problems associated with teaching mathematics to the VI are long standing. The methods and strategies used by the teacher in teaching mathematics have a direct bearing on the learning of the student. Teachers have limited access to assistive technology particularly in information and communication technology (ICT) to teach mathematics to students with VI; technology such as DAISY reader with math capability, LaTex, Tactile Math graphics & Math type etc. There are fewer teachers for the VI who have enough knowledge of mathematics at higher secondary level. According to Taraporewala (2013) there is lack of awareness and

skill amongst teachers including special educators on the know-how and use of tools and technologies that can be employed for an effective teaching-learning experience.

Role of Assistive Technology and Strategies in Educating the Visually Impaired

In the recent years there have been major developments and advancements in technology for the visually impaired that has led to significant improvements towards independent living, education and vocation. The same holds true for teaching and learning of mathematics. There are many aids developed that are being used in teaching mathematics to students with VI, however, not all are being used as resources for students in India. Some of the teaching aids and technology used to teach mathematics to students with VI are 3-D models, Braille, Taylor frame, Nemeth code, Abacus, Arithmetic calculation using the Braillewriter etc. Visually disabled students can be good achievers in Mathematics if an emphasis on concrete experiences is given to be able to develop their skills (Clamp 1981, Kapperman and Sticken 2003). Use of assistive technology especially information technology facilitates the teaching-learning process. According to Zhou et al. (2011), the use of assistive technology, such as books in the appropriate format, mobile devices, computer programs with screen readers, CCTV (Close Circuit Television), and Braille devices, may increase the mathematical achievement of VI students by eliminating the exclusion of VI students in a learning environment. The use of tactile manipulatives, Braille codes, assistive technologies, and suitable teaching methods, enables VI students to learn Math like other sighted students (Tanti, 2006).

Conclusion

In the present scientific world mathematics has a very important role to play in the building up of each individual's personality. The utility value of learning of mathematics is unbelievable, considering the amount of application in one's everyday life. The importance of teaching and learning mathematics has been considered crucial not only for the sighted but also for the students with VI. Learning of Mathematics can be effective only when the subject is made interesting by making use of different strategies of instruction that are matched to

the students' abilities, and using the appropriate tools that help in achieving the desirable results. Currently the percentage of students with VI undertaking mathematics education in India even up to the 10 grade is negligible. Students with VI can be good achievers in Mathematics if an emphasis on concrete experiences is given to be able to develop their skills at the pre-primary and primary level itself as these levels form a strong base for students when they move to the secondary level. Success in mathematics at the secondary level becomes very crucial in order to pursue mathematics in higher education and to be able to explore the STEM subjects which include, Science, technology, engineering and mathematics. There are many aids and assistive technology available which can be used to overcome the challenges teachers face while teaching and students face when learning mathematical concepts.

Education for the visually impaired in the 21st century requires all teachers including special educators to provide them with an enriching learning environment. For which teachers and educators are required to be given the right kind of support, training and resources. There is an educational need for trained teachers in this field. Teachers need training in teaching mathematics at higher secondary level as well as they need to be trained in various assistive technology such as Arithmetic calculation using the Braillewriter, DAISY reader with math capability, LaTex, Tactile Math graphics & Math type etc. Resources and materials like brailler, geo boards, tactile manipulatives, computers, computer programs with screen readers all need to be easily available in all schools with VI students. So it is important that, all students are given equal opportunity to explore all options for higher education and their career choices that will benefit their career growth in future contributing to the global society at large.

References

- Agrawal, S. (2004). *Teaching Mathematics to Blind Students through Programmed Learning Strategies*. Delhi: Abhijeet Publications.
- Alves CCF., Monteiro, G. B., Rabello, S., Gasparetto, ME., de Carvalho KM. (2009). *Assistive technology applied to education of students with visual impairment*. Rev Panam Salud Publica. 26(2):148-52.

- Attard, C. (2010). Students' Experiences of Mathematics during the Transition from Primary to Secondary School. *Mathematics.*
- Rosenblum, L. P., & Amato, S. (2004). Preparation in and use of the Nemeth braille code for mathematics by teachers of students with visual impairments. *Journal of Visual Impairment and Blindness*, *98*(8), 484-498.
- Rule, A.C., Stefanich, G.P., Boody, R.M., and Peiffer, B., 2011, Impact of adaptive materials on teachers and students with visual impairments in secondary science and mathematics classes: *International Journal of Science Education*, v. 33, no. 6, p. 865–887.
- Schleppenbach, D. (1996). Teaching science to the visually impaired: Purdue University's Visions Lab. *Information Technology and Disabilities E-Journal*, 3(4).
- Spindler, R. 2006. "Teaching Mathematics to a Student Who Is Blind." *Teaching Mathematics and Its Applications: An International Journal of the IMA* 25(3): 120–126.
- Tanti, M. (2006). *Teaching Mathematics to a Blind Student: A Case Study*, Unpublished Master in Education dissertation, University of Exeter, UK.
- Taraporewala S. (2013) Xavier's Resource Centre for the Visually Challenged (XRCVC) (2013). *A Report on Mathematics and Science Access for the Visually Challenged*. Mumbai: India
- Zhou, L., Parker, A. T., Smith, D. W., & Griffin-Shirley, N. (2011). Assistive technology for students with visual impairments: Challenges and needs in teachers' preparation programs and practice. *Journal of Visual Impairment & Blindness*, 105, 197–210.

> "I am conscious of a soul-sense that lifts me above the narrow, cramping circumstances of my life. My physical limitations are forgotten- my world lies upward, the length and the breadth and the sweep of the heavens are mine!"
> **— Helen Keller, The Story of My Life**

Future of Work and Workers Education in India - A view point

Dr. Nandita Mondal, Asst. Professor, Centre for Labour Studies, School of Management & Labour Studies, TISS, Mumbai

Human Capital report 2017 from the World Economic Forum suggests "How nations develop their human capital can be a more important determinant of their long-term success than virtually any other factor". Indian job scenario is undergoing a slowdown in core sector whereas witnessing concurrent emergence of new engines of job creations. Rapid infrastructural and construction activities across India, new self-employment models and new technology aggregator models are bringing sea change in job sector of India. In a few years' time in future, many other factors such as the levels of FDI flow, impact of exponential technologies on offshoring, decrease/increase in volume of overseas job opportunities especially for Indian labour force, rate of adoption of emerging technologies, rising volume of middle class population in India, demands resulting from environmental sustainability would be very important determinants of future of jobs.

Introduction

Overall, Indian Industry today needs to focus on rapidly changing business models due to emergence of these new technologies to ensure competitiveness and to push large scale re-skilling of the existing workforce. Here comes the issue of Workers Education to align them with newly appearing job challenges. This paper aims at bringing in certain critical points that play a pivotal role in shaping the Workers education in respect of job landscape of India. The first part of the paper deals with the sources of jobs in future and its impact on labour market and second part would obviously deal with aligning the workers' education in recent and future. The paper is entirely based on secondary research.

Sources of job in concurrent time and in future

The landscape of jobs in India is rapidly changing over the years. Gradual and rapid growth of technology based sectors and e-Commerce

are leading to create the bulk of jobs for future workforce of India as well as asking the overhauling of present workforce. The future of jobs in India depends on country's response to the very important three elements like globalisation, demographic changes and adopting industry 4.0 exponential technologies by Indian Industries. These primary forces will influence the nature of new jobs being created as well as a new skill set required for present workforce on roll.

Over last few years India is experiencing decreasing trend of jobs in core organised sectors. The rapid adoption of exponential technologies transforming the hitherto unorganised sector like transportation, food catering and software development services etc.

Government is increasingly investing in infrastructural endeavours like highways, renewable energy, shipping, urban transport, Swatch Bharat, Smart Cities and affordable housing etc. These pattern of investment springs up the employment opportunities in contractual employee engagement. Additionally, there are huge emergence of job opportunities in Micro-entrepreneurship/ Self-employment area. PMMY has given boost to this specific area with Banks disbursed almost INR 3.7 lakh crore loans to that end[1]. The internet and exponential technologies are creating a different sort of space in current time and would create in future time. It is called gig economy. This has been creating a space of job opportunities for Software developers, Multimedia professionals, writers, translators, online sales etc. The significant area is being led by Amazon, Flipkart etc., which are serving the both -- Small Scale Enterprise and Artisan entrepreneurs at production side as well as the new slew of jobs for drivers, delivery boys, warehouse assistants, Managers at the delivery side in managing logistics.

India today has third largest ecosystem for Start-ups with almost 4750+Start-ups as of December 2016. Out of these 1400+ new star ups are established in 2016. This start up sector has been able to attract US$ 4 billion as an investment directly in this sector. Investors are mostly considering agritech, edutech, healthtech, fintach models to stay

---

[1] www.mudra.org,in

invested. The spread of such business models are finding roots to tier II and ties II cities of India.[2]

One very important perspective that should be pondered over- demographic dividend of India. Part of the world is undergoing a change in demographic distribution. Japan, Europe are experiencing aging citizens whereas India is walking towards holding most young adults as much as 30% of its population. Most importantly, these young adults are all belonging to the millennial who grew up consuming advance technology based products. Hence, the market is already gaining ground which would push the job scenario along with abovementioned reasons.

Considering the above discussion on changing face of Industry across world and Indian milieu specifically, let us see the inevitable impact of such changes on the labour market. In the later part of 20 the itself firms are increasingly abandoning the massive assembly line production to more robotic equipment based production. Rather than investing large amount of fixed capital for mass production of same goods, new 'flexible' and 'lean' production gained the ground. Thus, new process of production makes it possible to re-tool and re- programmed machinery to produce to produce small customised batches of different varieties designed to fit customer needs of present day. The modern manufacturer is modern manufacturer is a multi- product firm characterized by flexible machinery with low set-up costs, short production runs, continuous product improvements, a focus on product quality rather than volume, low inventories, and a reliance on outside suppliers or vertical disintegration rather than vertical integration (Laing 2011). Labour markets in advanced economies are no longer unambiguously characterized by skill-upgrading. Although there is continued growth in the employment share of skilled white- collar jobs at the expense of medium-skilled employment, the fraction of unskilled service workers is also growing. This process, rising shares of skilled and unskilled and falling share of medium skilled employment, is known as "job polarization" (Goos, 2013). Indian

---

[2] NASSCOM Start Up India Report

33

sector too is witnessing the same trend. Such type of production has accelerated the task based approach to labour markets.

While First and second Industrial revolution fuelled the employment of medium skilled blue collar machine operators, the recent computerisation has displaced their tasks as these tasks can be codified and be done more efficiently than prior time. Hence, there is down trend in jobs in manufacturing sector. Nowadays, the non-routine tasks like managing team, delivering group tasks etc. cannot be done by computerisation. This non-monotonic relationship between task routineness and skill necessitates a "task approach" to labour markets. In a task-based framework, workers supply a pre-market set of skills, most notably their education. Based on their comparative advantage, these workers are then sorted across jobs that differ in their task demands (Goos, 2013).

Most notably, Autor, Levy and Murnane (2003) were the first to analyse such a task-based framework and they argue convincingly, using data from the US, that computers have been displacing workers from routine tasks. Goos and Manning (2007) then showed that for the UK this leads to job polarization because computerization decreases the demand for medium-skilled labour relative to both skilled and unskilled labour. Some of the results in Autor, Levy and Murnane (2003) and Goos and Manning (2007) are summarized below. More recently, a number of studies have successfully used a task approach to get a better understanding of labour markets.

Now this polarization process demands the organisational preparedness with its taskforce be aligned with a new work processes where they need to understand why a machinery operates as the way it does and what are its capabilities rather than mere knowing the 'how' to operate the machinery like before. In such scenario, the organisation has to set up a team to work together in solving the problem where the non-managerial workers also participate, job rotation is set in to facilitate the workers to perform the wide variety of tasks. Therefore, there has be better screening of job application to search for desirable attributes suiting the new job environments. In short, computerization is having profound impacts on the structure of employment in aggregate labour

markets and within firms. Since 1980, labour markets have been polarizing into "lousy" and "lovely" jobs that are non-routine task-intensive at the expense of middling employment that is routine task intensive.

That the labour market has been reallocating employment towards non-routine jobs is also evident from the recent emergence of high performance work practices, particularly those concerning human resource management.

Now, seeing the push to task based labour market with specific demands in skill set, it is imperative that the educational level of labour force is an important issue. Hence, let me turn towards the worker education issue.

Workers Education in India

A tripartite semi-autonomous body known as the Central Board for Workers Education, registered as a society, was set up under the Ministry of Labour, Government of India, to formulate policies and programmes and to administer the Workers Education Scheme. The Board has representatives from Central and State Governments, Organisations of Employers and Workers and Educational Institutions. In the organisational set up, the Indian Institute of Workers Education, Bombay, Regional Centres, the Sub-Regional Centres and the Unit level classes are under the Head Office. At present there are 49 Regional Centres all over India, each under the charge of a Regional Director. The aims and objectives of the Scheme are: (a) to develop stronger and more effective trade unions through better trained officials and more enlightened members, (b) to develop leadership from the rank and file and promote the growth of0 the democratic process and tradition in trade union organisation and administration (c) to equip organised labour, to take its place in a democratic society and to fulfil effectively its social and economic functions and responsibilities (d) to promote among workers a greater understanding of the problems of their economic environment and their privileges and obligations as union members, officials, and as citizens.

For achieving its objectives, the Board has developed a need-based, three-tier training programme for Education Officers, Worker-Teachers, and Workers. In the first stage education Officers are trained. The period of training is generally four months' full time after which they are employed in the services of the Board and posted at different Regional Centres. Nominees of different trade unions are also admitted to this course in order to enable them to undertake worker's education programmes under the auspices of their unions. The next stage in the programme is to train selected workers as worker teachers at the Regional and Sub-Regional centres, by the Education Officers.

The Board continuously encouraged trade unions/other institutions to undertake need based worker's education programmes on their own. For this purpose, it provides them financial assistance in the form of grants-in-aid. The Board has recently extended its educational programmes to different categories of rural workers to help them shape their personality and develop their organisations through which they can effectively fulfil the role expected of them. It also encourages the trade unions to conduct more Rural- Workers Education Programmes through the Board's Grants-in-Aid Scheme.

This Scheme as it has operated so far, has been subjected to several critical evaluations from time to time. The Board has also made its own internal evaluation. The National Commission on Labour (1969) recommended certain alterations and modifications relating to organisation and administration of the Scheme and suggested certain additional objectives for improvement. According to it, Workers Education should make a worker (i) responsibly committed and disciplined operative; (ii) understand the basic economic and technical aspect of the industry and the plant where he is employed so that he can take an intelligent interest in its affairs; (iii) aware of his rights and obligations; (iv) understand the organisation and functioning of the Union as well as develop qualities of leadership loyalty and devotion towards trade union work so that he can intelligently participate in the affairs of his union; (v) lead a clean and healthy life based on a firm ethical foundation; and (vi) a responsible and alert citizen. The Estimates Committee of the Lok Sabha (1971-72) in its 31st report examined the Workers Education Programmes and made useful

recommendations. In August 1974, the Government of India appointed a Workers Education Review Committee under the Chairmanship of Sri G. Ramanujam, General Secretary of the INTUC. The Ramanujam Committee (1974-75) has made several recommendations for extension of the Scheme to cover workers of unorganised and rural sectors. For this purpose, the Committee has suggested that a large number of trained personnel and necessary finance should be placed at the disposal of the Board. The Committee has also recommended to make necessary modifications in the structure and organisation of the Board. On the recommendations of the Workers Education Review Committee, the objectives of the Organization have been redefined as follows: (a) to equip all sections of workers, including rural workers, for their intelligent participation in social and economic development of the nation in accordance with its declared objectives; (b) to develop among workers a greater understanding of the problems of their social and economic environment, their responsibilities towards family members, and their rights and obligations as citizens, as workers in industry and as members and officials of their Trade Unions; (c) to develop leadership from among the rank and file of workers themselves; (d) to develop strong, united and more responsible trade unions through more enlightened members and better trained officials; (e) to strengthen democratic processes and traditions in the Trade Union Movement, and (f) to enable Trade Unions themselves to take over ultimately the functions of workers' education.

Concluding remarks

The brief historical background of workers' education brings home a point where it is evident that there has been an effort to orient the workforce. But the question remains unanswered whether the issue of worker's education been handled keeping in view the nature of job that they are going to incorporate in changing scenario of economy in globalised era. The collective forums like trade unions/ workers associations should have been used tactfully to realigning the present workforce. The marriage between new technological advancement and today's labour market experiences much more complexities than the time before 1980s. Together with ongoing and future technological advances made it explicit that it would take time for firms, labour and

the state to reorganise them and reap the benefits of such change. And most important point in this saga is it entirely depends on how fast each stakeholder would reorient their functioning and adopt the new skills.

References:

- IT Data: NASSCOM Strategic Review 2017   www.mudra.org.in

- Bandyopadhyay, Swaraj (1977) "Impact of Workers Education: A Case Study" *Workers Education Journal of the Central Board for Workers Education*, December.

- David H. Autor (2013) "*The Task Approach to Labor Markets: An Overview*", Journal of Labour Market Research, 46: 185-199.

- David H. Autor, Frank Levy and Richard J. Murnane (2003) "*The Skill-Content of Recent*

- *Technological Change: An Empirical Investigation*", Quarterly Journal of Economics, 118: 1279-1333.

- Derek Laing (2011) "*Labor Economics: Introduction to Classic and the New Labor Economics*," Norton.

- Hadap, G. N. (1979) "Impact of Workers Education: A Research Study", *Workers Education, April.*

- Maarten Goos, and Alan Manning (2007) "*Lousy and Lovely Jobs: The Rising Polarization of Work in Britain*", Review of Economics and Statistics, 89: 118-133.

Poems by Gouri Srivastava, DESS, NCERT, Delhi

WOMEN'S DAY:

Women's day—every day
epitome of courage, endurance
selflessness, willpower, courage
home-maker ,professional, tiller, helps
evolving amazingly, all in all
adversaries, misfortunes
iron, steel willpower-undefeatable
ingrained attitude ,never to give-up
take all challenges , treading road blocks
learning lessons , carving pathways
scripting their own destiny
harbinger of change
leaders of better
Tomorrow.

CELEBRATING STRENGTH

World community across the globe
designates days, months, years
euologising persons societal concerns
to remind, revisit, commit ourselves
for upliftment, betterment, amelioration
of downtrodden, marginalized
promises of quality, healthy life to All.
Women's day, marking ,reminding
the torchbearer, pathfinder
amazing leader, contributor
known ,lesser known mortals
their spirits high ,willpower
in all adversaries, trying times.
leaving inspiring accounts
oral, documented, unfolding
for present ,future ,and eternity
that come what may ,hail, storm
never give-up, keep breathing
doing every bit for betterment of HUMANITY.

BOOK REVIEW

Dr. Sunita Vithalrao Magre,
Associate Professor and Head, Department of Education
University of Mumbai. email-sunita.magre@gmail.com

Environmental Education (2017), ISBN-978-81-7648-262-2, authored by Dr. Prabhakar Sahebrao Chavan and published by APH Publishing Corporation, New Delhi- 110002

Overview:

This book highlights on various aspects of Environmental Education. It gives a deeper look of the basic concepts of environmental education. It is an initiative taken towards understanding the challenges of an imbalance exiting in our environment and being aware for proactive measures that we as responsible citizens can imbibe towards a healthy and peace loving environment. This book is well crafted with the basic concept clearly and has made clear the technical aspects through appropriate pictorial descriptions and systematic explanation. The language used for this book is lucid and the sequence maintained is as per the needs of the reader. This book in its various chapters showcases the pulse of the reader to read and know more and be acquainted with the basic environmental facts and issues. This book is an attempt towards creating awareness and can be a medium for further understanding on the topic of Environmental education.

Index:

The indexing of the book is very systematic and well synchronized. It provides with a key at the end of the book arranged in alphabetical order of the various terminology used in the book mentions the page numbers. This becomes easy for the reader to go to the concerned page easily.

Chapter 1: Concept of Environmental Education focuses on the basic concepts of Environmental education. It begins from the origin of the word and goes deeper in explaining the meaning of the word, thus

leading the reader in understanding the basics of Environmental education. The book clearly states the objectives, principles, components which form the basis of Environmental Education. It leads Environmental Education as a system and envisages its impact in formal and non-formal education. It directs the thinking process to segments of the environment which we have learnt in School subject – geography. This chapter closes with emphasis on public awareness and measure taken towards combatting environmental degradation. It focuses on the role of a teacher and student which could be written as the role a responsible citizen, because the role does not limit only to teachers and students but the world at large. It could also be deciphered as the role of teachers towards Environmental education through various teaching methods/ activities/ projects/ awareness campaign where the students play a vital role. T

The segment role of teachers/ students can be conceptualized in a more well-defined manner highlighting the role that the teachers / students should be actively involved.

Chapter 2: Natural Resources in the Environment discusses primarily on the endowments by nature such as land, soil, water and special emphasis on forests. Orissa was chosen as an example to explain the resources in detail; a clarity or basis for choosing Orissa as a sample for greater understanding could be given. The chapter focuses on a very crucial topic of Bio-diversity; it also gives emphasis on trailing aspects as renewable and non-renewable sources of energy. The chapter focused on classification and usage of natural sources it could focus on depletion, protection and management of the same. However, the chapter deals with all the aspects very clearly and explanation is simple to understand for all age groups.

Chapter 3: Environmental Pollution is an exemplary work presented in a systematic and concise manner. The chapter focuses on the different types of pollution that we are entangled in our environment. It throws light on the meaning, causes, effect and the control measures that can be adopted to combat the same. Each, pollution – Air, Land, Water, Noise has been well described and facts associated to the same are also dealt in detail. This chapter is given due importance in view of

the existing environmental degradation that our world is engulfed with and is eye opener to the impact that we may face in future.

Chapter 4: Environment and Human Health deals with the hazardous impact that human life faces due to the environmental degradation exiting in our society. This chapter smoothly is an extension of the previous chapter which focuses on pollution and its effects and hence suits well in the order of the impact on physical life. The later part of the chapter focused on environmental values and later proceeded to human rights. It gave a lot importance to human rights – primarily focusing on women rights, dowry deaths, female foeticide, infant foeticide, status of women, child welfare, child abuse, HIV aids, prevention and celebration of Aids day etc. This part of the chapter does not directly link to the chapter title and has taken a detour to other aspects which are not important in this context. It lacks linkage and the need for describing these aspects remains unanswered. A major chunk of this chapter is not related to the topic and hence can be either taken it as supplementary reading or as a fact file at the end of the book.

Chapter 5: Environment Law analyses the laws that are important to safeguard our environment. It begins with the constitutional provision and moves ahead to various Acts that is pertinent to be aware with respect to environment. The Acts are well in line with the previous chapters which discuses about Green environment, Forests, the different types of Pollution which is well considered in this chapter. It gives a proper weightage and reinforcement of the topics dealt ahead.

Chapter 6: Environmental Education and Teacher Training concentrates on training teachers on Environmental Education. It can be percolated to the B.Ed. aspirants too for a total amalgamation of the teacher workforce working towards the campaign of save environment. The chapter gives an insight of assessing the content on the various aspects of environmental education, deals with curriculum related topics and various activities to delve into water resources. The same can be suggested for other resources such as Air, Land, and Noise which were recorded as pollution hazards. If these topics can be dealt at length, then it would be a comprehensive teaching resource for teacher training. It also focuses on the various threats to environment

42

Chapter 7: Social Issues and Environment is well depicted with the prime topic of objectives of sustainable development which can be achieved through the various methods. It deals with water conservation, rain-water harvesting and lays importance on Environment ethics which is the need of the hour. Few images/ pictures have been depicted in this chapter and the language and content fluidity is maintained well.

Illustrations and Resources:

The book provides effective on illustration/ examples in few chapter and the resources provided are useful to the reader to a large extent. The book holds to the grip of the reader's interest but certain topic is extensively dealt or not pertinent to main topic which can make a reader disconnect to the main theme or essence of the book.

References and Bibliography:

Appropriate references and bibliography has been well documented and reference check can be done for the same.

In conclusion, this book is good for a person who needs to be introduced to the facts and facets of environmental education and can also be considered as a self-learning material or a reference book for better understanding environment and its related issues.

> Children inherit the qualities of the parents, no less than their physical features. Environment does play an important part, but the original capital on which a child starts in life is inherited from its ancestors. I have also seen children successfully surmounting the effects of an evil inheritance. That is due to purity being an inherent attribute of the soul.
> **Mahatma Gandhi**

Convocation report 2015-2017
GANDHI SHIKSHAN BHAVAN'S
Smt. Surajba College of Education Juhu (North)
Mumbai - 400 049

Dr. Ratnaprabha N. Rajmane
Principal
Gandhi Shikshan Bhavans,
Smt. Surajba college of Education,
Juhu (North), Juhu, Mumbai - 400049

The University of Mumbai has asked colleges to organize the convocation programme in the respective colleges since the year 2014 - 15, and the Convocation Certificates to be handed over to the students in the colleges itself. Accordingly the Convocation is now being organized in all the colleges affiliated to the University of Mumbai.

In Smt. Surajba College of Education, conducted by Indian Council of Basic Education, the tradition of holding a convocation programme in the Institution for the students was from the year 1971. This programme was first conceptualized and organized under the leadership of our founder Shri Vajubhai Patel and the Management members at that time. The Programme is organized in a very unique manner and the same tradition is being followed till date. The students of the institution are given special certificates from the college for the hard work and their contribution in all the activities and the programmes of the college as well as the special abilities exhibited by them are acknowledged.

This year the convocation Ceremony was held on the **7th of April 2018 at 3.30 p.m.** in the campus of Gandhi Shikshan Bhavan. **The Chief Guest Smt. Yogini Ghare Director Academic Authority University of Mumbai.**

This day at Smt. Surajba College of Education is very special and all of us look forward to this day which also gives us a feedback of where the students are placed, as well as the present students and past students get a chance to interact with each other. The programme began with a very

disciplined Convocation March of glory in the campus where the Chief guests, Management Faculty, Staff and the past students receiving the convocation certificates and the present students , all have a March, before which a traditional Khadi Scarf is put on the left shoulder of all the invitees except the present students. After which all assembled in the Hall and the formal programme begins.

Smt Yogini Ghare Madam gave the Convocation address which was truly motivating for the students. In her speech she emphasized on the importance of teachers and teaching as a profession. She said that where ever the students worked they need to work wholeheartedly, no matter what kind of work is given. She saw that 95% of the BEd. Students were girls and she spoke about how the girls need to be motivated to make a career. She said that the life of women in general is very challenging and one has to do a lot of hard work and multitasking. The women need to take care of their physical and mental health at the same time. It is therefore important for women to delegate work which can be done by keeping help and not unnecessarily try to be a super woman at the cost of her own health. She highlighted on the importance of values like dedication and discipline which we need to inculcate in one self. She congratulated and blessed each and every student present for their future.

Convocation Report read by Principal Dr. Ratnaprabha Rajmane She started her report with the Quotation I remember Rabindranath Tagore's famous quotation **"The highest education is that which does not merely give us information, but makes our life in harmony with all existence".**

A good educational system tries to establish a healthy relationship between the individuals and the society by inculcating in them the virtues of respect, tolerance, discipline, commitment, culture, compassion and sensitivity. **Gandhi Shikshan Bhavan Smt. Surajba College of Education** plays a crucial role in strengthening democracy through developing good citizenship values in their students. The institution works steadily towards its mission "To promote purposive education through globalization, to perform effectively different roles as a teacher in the present society".

The year 2015- 2016, 2016 -2017 was a different academic year as this was the first time B.Ed. became Two Years course. We had two batches of students together. The F.Y.B.Ed. and the S.Y.B.Ed. Thus the year was challenging for the teachers with reference to planning and execution of all programmes as the duties were doubled. The planning meetings were conducted so that all the activities could be conducted smoothly and together for both the batches as per the requirements of the NCTE and University.

In Practice teaching each teacher had two batches in school one from the F.Y.B. Ed. and the other from the S.Y.B.Ed. The internship and lessons were conducted and completed properly. Since new courses in EPC- Enhancing Professional Competencies were introduced in the syllabus efforts were put in by teachers to conduct these courses and workshops were conducted and a number of activities were organized in - Drama and Art in education/ Reading and Reflection of text/ ICT/ Understanding the self.

The subject Inclusive education was also introduced in the academic year 2016-2017, for which students were taken for visits to 5 special schools to learn by interacting with children with special needs and the teachers teaching these children. The students presented their experiences and this activity sensitized them to the children with special needs. Students gave the feedback that they learnt a lot. The teachers felt that B.Ed. Students should be sent to special schools for a week for internship so that they could learn more about special children and their educational needs.

Now I would give a brief report of the programmes conducted for the students.
Celebration:-
- Independence Day
- Onam Celebrations
- Teacher's Day with the Institution and with the B.Ed students
- Gandhi Jayanti Celebrations
- Varsha Mangal
- Navaratri
- Constitution Day

- X'mas Celebration (Joy Of Sharing)
- Convocation
- Republic Day Celebrations
- Vasantosav
- Makarshankaranti
- Sports day
- Marati Bhasha Bhavan
- EId Celebration
- Hindi Bhasha Divas
- Farewell

Visits:-
- KVIC Visit
- Mani Bhavan
- Visit to Discovery of India & Planetarium

Workshops:-
- Vacha
- Maxims of Teaching
- Life Skills
- Street Play workshop
- Trail Blazers Work Shop on Environment
- Rural Camp at Wakadi
- Workshop on Drama-Mr . Makaranth Deshpande.

Expert talk:-
- Chinmaya Mission on Peace education.
- Good Citizen Abide by Road Safety Rules Road Safety Time for Action-RTO (Andheri).
- Cancer Control Mission
- Expert Talk on Environment and Waste Management
- Smt Ashatai Kulkarnis Lecture on Anti Dowry Movement
- Challenges of Teaching Language in a Diverse Classroom - Kirsty Evans, London -Teacher British Council
- Reading Day' Developing Essentials for Reading Culture Dr. Sushma Paudwal

- Train the trainer program- Role of teachers in diagnosing eye problems of students Ganger Eye Nation
- Women Crimes safety needs   - Police from Juhu Police Station.(Under Woman Cell)

Seminar and conferences:-
- Correlation Why & How?
- National Seminar 'Status of Women in Transitional Society: A Futuristic Vision'
- National Seminar "Making Learning Zesty through Drama and Art in Education"
- International Seminar - Redefining the Vital Role of Teachers in Shaping Global Society

Changes in the College Infrastructure:-
The Academic year began with a lot of changes in the college infrastructure and facilities in   the beginning of the academic year 2016-2017. Following changes were made:-
- Conference room for various meetings.
- Research room for Ph.D. and M.Ed. students.
- Pathways in the Garden area of the campus.
- The class rooms were also renovated with a LCD projector and screen.
- Visiting room for visitors.
- Canteen construction work done.
- Herbal Garden

Improvement of Facilities in the college:-
- New Chairs donated in college library by our President Smt. Nupur Mitra.
- Bar code machine and Xerox machine purchase for library.
- Special arrangement of a hospitality cupboard
- Fridge and Microwave for the staff.

For harmonious work culture:-
- Celebration of 50th birthdays of the teaching, non teaching staff and support staff.

- Quarterly teaching and non teaching staff meetings with management.
- Open discussion on each programme to find out its strength, weakness and progress.
- Felicitation and appreciation of Staff for obtaining future academic Degrees during convocation programme.
- Education tour for faculty to develop team spirit, mind relaxation**.**

Institutional programmes
- Methodology workshops for school and college teachers.
- Language Lab training for school and college teachers.
- Collaborative programme with Lions Club, Police – Cyber crime, Road safety and Mission Mrityunjay for school and college students, teachers.
- Vasontotsav celebration.
- 15th August Independence day Celebration
- 2nd October Gandhi Jayanti
- 30th January Gandhi Punyatithi
- 26 January Republic Day.
- Teachers day celebration

Placement cell - 2015-18
Placement arrangements were done for students through Watts up. Out of 48 students, we are proud to announce that 44 students have got jobs. 2 have not taken jobs due to further education and 2 have not taken jobs due to household requirements

Ph.D. Research Cell at Gandhi Shikshan Bhavan:-
According to the University Grants commission, research work is one of the important activities. In Gandhi Shikshan Bhavan, research is carried out on the various programmes conducted by our Institution.
Year 2013 -14 five students were admitted for Ph.D. programme out of them 2 students has submitted their THESIS to the University of Mumbai. 10 more students have been admitted after getting continuation for the Ph. D. cell.
Fund raised by the College:-Principal, teaching faculty, Rs 50000/- for Canteen flooring**.**
Fund raised by the Community:-Rs 75000/- for Garden Pathway.

The extension programme

The extension programme of University is under taken every year. Orientation for the Department of Life Long Learning and Extension and the different projects are oriented under it. The teachers also appointed two student managers –They will be the coordinating link between teachers and us. The College has conducted various expert talks for students under this programme.

NAAC report over all Analysis :- The NAAC Visit was also scheduled for 2016-2017 .Thus preparation for NAAC was also being done along with the handling of two batches of students.

This year was the special year for us Smt. Surajba College of education has completed 3rd cycle NAAC Accreditation with **A+ with 3.54** grade marks. It was an herculean task but we have done it successfully.

Institutional strengths:-

- Good image in the society and good infrastructure
- Strong commitment towards Gandhian philosophy
- Supportive Management
- Progressive and Positive attitude of students, staff and management
- Students participate in curricula and Co curricular activities
- Harmonious interpersonal relationships

This institution is working on the principles of Gandhijis philosophy trying to provide quality teacher education programme. Every effort is being made in our institution to achieve this goal. **Learning to teach and Teaching to learn** is the everyday landscape of teaching here.

Teachers are backbone of the educational system and reflective members of society. We Smt. Surajba College of Education try to equip the prospective student teachers with proper attitudes and a variety of skills and tools which they can effectively use according to the demand of Indian society. As the alumni of an institution you are the **Torch Bearers** for the future generation.

I would like to conclude my report with the quote -

"Even the best curriculum and the most perfect syllabus remain dead unless quickened too life by the right methods of teaching and the right kind of teachers"

- **Secondary Education Commission**