(SPEED) Society for Promotion of Excellence in Electronics Discipline Journal of Research in Electronics (SPEED-JRE)

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SPEED Research Journal Special Issue

National Conference

On

Paradigm Shift in Higher Education due to Introduction of Skill Development

21st - 23rd December 2017

Organized by

SPEED

&

Skill Development Centre, Savitribai

Phule Pune University, Pune

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Journal of Society for Promotion of Excellence in Electronics Discipline (JSPEED)

AIMS OF THE JOURNAL

The aim of Journal of Society for Promotion of Excellence in Electronics Discipline (JSPEED) is to disseminate state-of-the-art research papers in the areas Electronics Science and Engineering. The journal will focus on the frontier areas such as Embedded Systems, Power Electronics, Communication Electronics, VLSI design, EDA tools, System design and analysis, rapid prototyping, simulation, testing and verification, Agro Electronics and Instrumentation. The journal values the theory as well as applications; however preference will be given to application oriented work elaborating the theory with respect to the intended implementation. The scope also includes papers that address technical trends, pressing issues, and educational aspects in Electronics Science and Engineering.

The journal aims to endow with a dynamic high-quality international forum for original papers and tutorials by academic, industrial, and other scholarly contributors in the domain of Electronics Science and Engineering. The editorial board comprises of leading professionals from academics, research organizations and industries.

SCOPE OF THE JOURNAL

Journal of Society for Promotion of Excellence in Electronics Discipline (JSPEED) welcomes high quality research papers in all areas of Electronics Science and Engineering.

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Full Length Articles: In this section, novel peer-reviewed findings in all areas of Electronics will be considered for publication based on the blind peer review at least by two referees.

Cutting Edge Articles: Cutting Edge is the rapid publication section presenting short reports describing significant advances in an area of Electronics. Manuscripts submitted for consideration in this section should present scientifically sound and novel research in a clear and concise fashion, and contain pinpoint conclusions. Chief criteria for acceptance are scientific novelty and quality, originality, clarity, and conciseness. In addition to research articles, the Cutting Edge section will publish invited brief commentaries on subjects of broad interest to Electronics fraternity.

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Volume V Issue I ISSN 2349-8226

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Volume V Issue I ISSN 2349-8226

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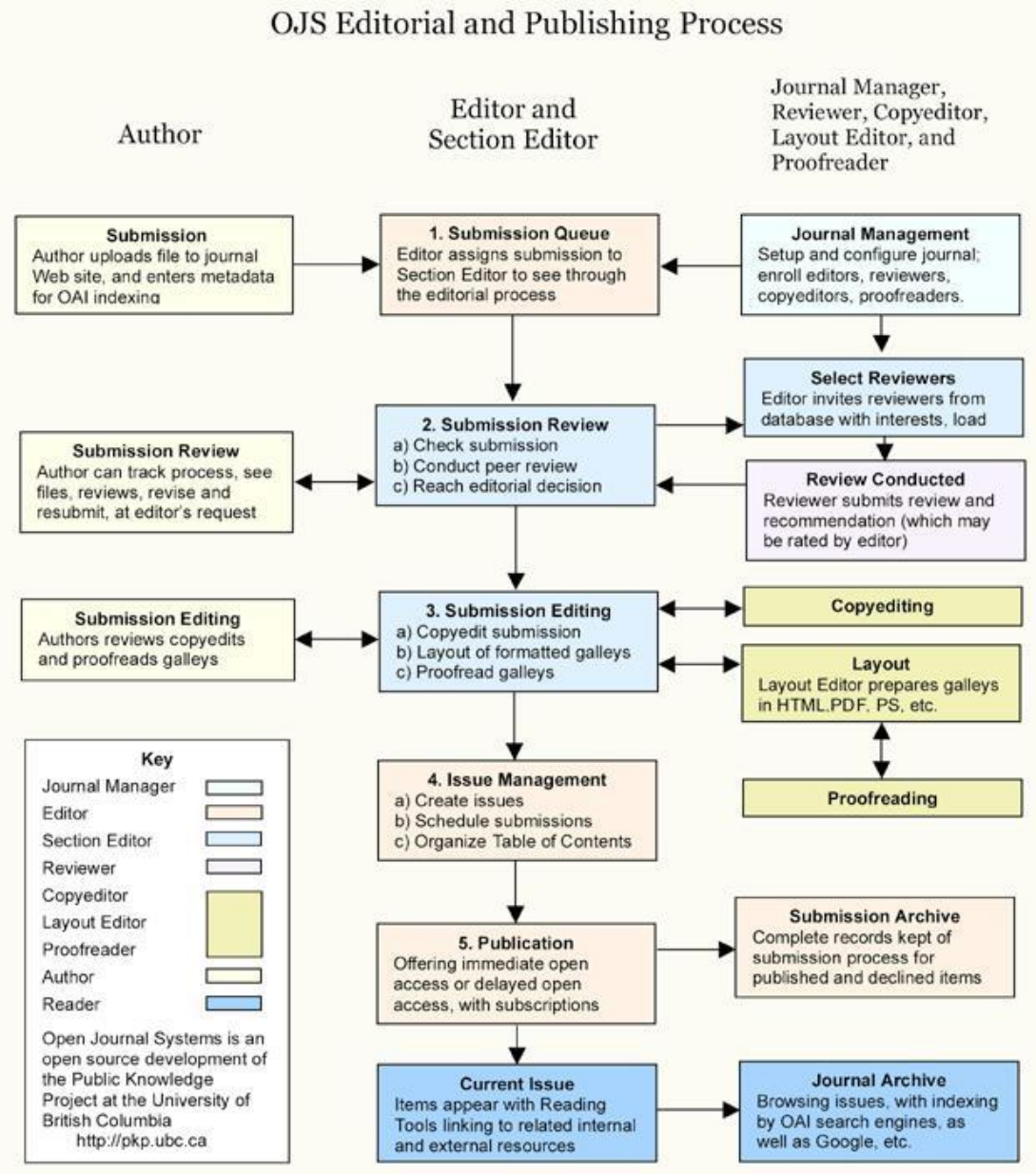

Volume V Issue I ISSN 2349-8226

About Skill Development Centre

Skill Development Centre **runs five Bachelors of Vocation (B.Voc.) degree programmes at its UGC approved DDU KAUSHAL KENDRA.**

- **B. Voc. In Renewable Energy**
- **B. Voc. In Jewellery Design and Gemology**
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About the Conference:

Today, India is one of the youngest nations in the world with more than 62% of its population in the working age group (15-59 years), and more than 54% of its total population below 25 years of age.

It is further estimated that the average age of the population in India by 2020 will be 29 years as against 40 years in USA, 46 years in Europe and 47 years in Japan.

In fact, during the next 20 years the labour force in the industrialized world is expected to decline by 4%, while in India it will increase by 32%.

This poses a formidable challenge and a huge opportunity.

To reap this demographic dividend which is expected to last for next 25 years, India needs to equip its workforce with employable skills and knowledge so that they can contribute substantively to the economic growth of the country. Apart from meeting its own demand, India has the potential to provide skilled workforce to fill the expected shortfall in the ageing developed world.

As India moves progressively towards becoming a global knowledge economy, it must meet the rising aspirations of its youth. This can be partially achieved through focus on advancement of skills that are relevant to the emerging economic environment.

Savitribai Phule Pune University ‘s Skill Development Centre has been set up in March 2014 to give fresh impetus to the Skilling initiatives as has been envisaged Skill India agenda and help create an appropriate ecosystem that facilitates imparting employable skills to the young students pursuing higher education in University and affiliated colleges. This

Volume V Issue I ISSN 2349-8226

conference is an endeavour to discuss skill initiatives on a nation-wide forum for the propagation of knowledge and exchange of ideas pertaining to skill development in higher education.

Instructions to Authors:

Scope and Coverage:

The SPEED Journal of Research in Electronics (SJRE) is an research journal, which published top-level work from all areas of Advances in "Electronics and its Interdisciplinary Applications . Academicians, Students, Researchers, Industrial experts, and Entrepreneurs are encouraged to share their knowledge, ideas and contribution in the field. Journal publishes research articles and review in all domains related to the field of Electronics Science and Technology.

Submissions:

Length

The paper should be as brief as possible and should not be longer than 10 double space typed A-4 size pages including tables and illustrations. Short communications should not exceed four double space A-4 size pages, including tables and illustrations.

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- A concise and informative title
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Manuscripts with mathematical content can also be submitted in LaTeX.

Volume V Issue I ISSN 2349-8226

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Abbreviations should be defined at first mention and used consistently thereafter.

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Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data). Footnotes to the title or the authors of the article are not given reference symbols.

Always use footnotes instead of endnotes.

Acknowledgments

Acknowledgments of people, grants, funds, etc. should be placed in a separate section before the reference list. The names of funding organizations should be written in full.

Citation

Cite references in the text by name and year in parentheses. Some examples:

- Negotiation research spans many disciplines (Thompson 1990).
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- Journal article

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  Slifka, M. K., & Whitton, J. L. (2000) Clinical implications of dysregulated cytokine production. Journal of Molecular Medicine, doi:10.1007/s001090000086

- Book

  Calfee, R. C., & Valencia, R. R. (1991). APA guide to preparing manuscripts for journal publication. Washington, DC: American Psychological Association.

- Book chapter

  O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: Metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), Gender issues across the life cycle (pp. 107–123). New York: Springer.

Volume V Issue I ISSN 2349-8226

- Online document

  Abou-Allaban, Y., Dell, M. L., Greenberg, W., Lomax, J., Peteet, J., Torres, M., & Cowell, V. (2006). Religious/spiritual commitments and psychiatric practice. Resource document. American Psychiatric Association. http://www.psych.org/edu/other_res/lib_archives/archives/200604.pdf. Accessed 25 June 2007.

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Volume V Issue I ISSN 2349-8226

Editorial

SPEED, Society for **P**romotion of **E**xcellence in **E**lectronics **D**iscipline is a registered society established for promoting excellence. There is one thing that constantly determines success, which is EXCELLENCE. As active members of the Electronics fraternity, a group of likeminded people felt the need to come together and promote excellence. During the interactions/discussions the idea of establishing the **S**ociety for **P**romotion of **E**xcellence in **E**lectronics **D**iscipline **(SPEED)** was originated and it came into being through continued efforts. The organization is nonprofit making and working on voluntarily basis. **The SPEED is a legal registered Association active from December 2010.** The aim of the Association is to exchange information, knowledge and expertise among members of the association. It is being done through organizing competitions, symposia, workshops and conferences, group meetings, lectures from eminent scientists and collaborating with other international bodies with common interests, Promoting educational and industrial collaboration and other relevant activities. Primary motives of the SPEED are,

i. Enrichment of students
ii. Empowerment of teachers
iii. Socital commitment
iv. Strengthening Industry relationships

The effects of digital transformation on the contemporary society are very significant. In the 21st century we are enjoying well developed electronics. In some form or the other every day we deal with the electronic devices several times. Innovation is the creative development of a specific product, service, idea, environment, or process with the fundamental goal of pleasing customers and extracting value from its commercialization. The significantly increasing diversity of designs has propelled need for collaboration across technical and business disciplines. Increasing incomes, education requirements, e-Governance initiatives, and the penetration of internet and broadband services have fuelled the demand in this sector. The increased complexity of modern gadgets is metaphorically representative of the change in the composition, skill mix, and tightly collaborative focus of the product development teams.

These developments have increased employment and entrepreneurial opportunities for young aspirants. Today, India is one of the youngest nations in the world with more than 62% of its population in the working age group (15-59 years), and more than 54% of its total population below 25 years of age. In fact, during the next 20 years the labour force in the industrialized world is expected to decline by 4%, while in India it will

Volume V Issue I ISSN 2349-8226

increase by 32%. This poses a formidable challenge and a huge opportunity. To reap this demographic dividend which is expected to last for next 25 years, India needs to equip its workforce with employable skills and knowledge so that they can contribute substantively to the economic growth of the country. Apart from meeting its own demand, India has the potential to provide skilled workforce to fill the expected shortfall in the ageing developed world. Academics, therefore, have to take sincere look at the motives, directions and scope of actions so as to make the education relevant towards the cause of promotion of excellence. The path to excellence is a continual one which requires constant upgrading and skills development.

Skill Development Centre at Savitribai Phule Pune University has been set up in March 2014 to give fresh impetus to the skilling initiatives as has been envisaged in "Skill India" agenda and help create an appropriate ecosystem that facilitates imparting employable skills to the young students pursuing higher education in University and affiliated colleges. To discuss skill initiatives on a nation-wide forum for the propagation of knowledge and exchange of ideas pertaining to skill development in higher education a National Conference on **Paradigm Shift in Higher Education due to Introduction of Skill Development** was organized by the Skill Development Centre at Savitribai Phule Pune University during 21st - 23rd December 2017. It gives me immense pleasure in presenting the **First issue of Volume 5** of the **SPEED Journal of Research in Electronics** based on the proceedings of this conference.

The **SPEED Journal of Research in Electronics** is providing an approachable platform in the pathway to excellence. All the domains in the field of Electronics including fundamentals, theoretical aspects, modeling and simulations, materials, devices, sensors, actuators, control strategies, hardware designs, algorithms and software, smart systems, communication electronics and ever expanding applications of electronics would form the scope of this journal. Anybody wishing to climb the ladder of excellence may conduct good quality research as a first step and seek for publication in this peer reviewed journal. It is hoped that this would create an excellent eco system for nurturing progressive research culture among academicians.

- **Dr. A.D.Shaligram,**
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Greetings from SPEED Journal!!!

The Volume V, First Issue of **SPEED Journal of Research in Electronics** is launched in October 2018 with the help of editorial board.

I am thankful to you for extending your support in this regard. We are now planning to publish second Issue in Volume V of the **SPEED Journal of Research in Electronics** in February 2019.

With Regards

Volume V Issue I ISSN 2349-8226

Volume V Issue 1 ISSN 2349-8226

MOODLE ROOMS IN HIGHER EDUCATION

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ABSTRACT

With Moodle rooms, professors and instructional designers can use this theme to create courses that motivate and attract students. Moodle rooms uses Moodle LMS as the basic platform and adds improvements to functionalities, integrations, extensions, course format, types of reports, subjects to strengthen the online learning capabilities. Moodle rooms eliminates all the typical "mess" and distractions that are not helping the students learn and gives students relevant content that can be used in a timely fashion.

Facilitating communication between professors and students, supporting document sharing, and providing online working spaces, the Moodle rooms learning management system also provides new accessibility features that improve the learning experience for all users, including students with disabilities.

Index Terms:**Blackboard, e-learning,LMS, Moodle rooms, Snap**

Volume V Issue I ISSN 2349-8226

1. Introduction

With the use of technology, education took a big leap and is changing its paradigms, from a closed model, and teacher-centered classroom to a model more open and student-centered. Nowadays it is not possible to think about the teaching and learning process without associating it with the Information and Communication Technologies (ICTs). Actually, ICTs are present in all processes that involve collection of data, processing of information and knowledge creation, being the teaching and learning one of the most typical processes having these characteristics.

ICTs play an important role in education, having a special relevance in the instructional component

supported by Learning Management Systems (LMS), such as Moodle rooms. However, these platforms have many capabilities provided that they are used in their fullness.

The present paper analyses the main functionalities and tools available in the Moodle platform and Moodle rooms.

There are numerous environments that meet a set of features for creating and structuring of courses in the distance. These environments are also known LMS (Learning Management System) or learning management systems. Some of these environments used for creating and managing these online courses are: Moodle,TelEduc, BlackBoard, WebCT, Toolbook, TopClass Server, among others. The Moodle (Modular Object-Oriented Dynamic Learning Environment) platform an Open Source Learning Management System (OS LMS) is being used since 2005 in the Institute of Accounting and Administration of Porto – ISCAP, has been done in 2005.

Moodle rooms is unique and compatible with:

- Predictive analytics (X-Ray Learning Analytics)
- Videoconferencing (Collaborate)
- Open source (Blackboard Open Content)
- User management (Genius) and
- Services as Office 365 portfolio
- Blackboard Integration Tools
- Implementation Packages
- Worldwide presence
- Global Support 24/7
- Training and support plans

User Experience in Moodle rooms

Snap

Snap is a Moodle theme designed in by Moodle rooms to create a modern online teaching and learning experience. Snap is a responsive theme, which means both learners and educators can use it on any device from desktop to mobile without having to install an app. Snap's user centered design makes learning more engaging for learners. Intuitive workflows make educators lives easier too. The educators can focus on teaching instead of figuring out to use the system.

Happier staff + happier learners = better learning

Much more than a Moodle theme. Snap extends Moodle's functionality to better support the needs of learners and educators.

Fig 1.Use of Snap

Snap is an open source Moodle theme, built with Bootstrap & jQuery two of the web's most popular open source frameworks, so developers can dive straight in.

Moodle rooms integration with Blackboard Open Content

- Blackboard Open Content (formerly xpLor) removes restrictions by allowing you to use the same learning materials in various LMS environments with unprecedented ease.
- Blackboard Open Content leverages the strengths of your LMS and moves content to the cloud.
- Together, Blackboard Open Content and the Content Collection create a complete learning content solution that provides personal, course, institutional, and global content management capabilities for all of your learning content.

Volume V Issue I ISSN 2349-8226

- Content Collection: File management system for personal, course, and institutional document management, sharing, and reuse. lackboard Open Content: Cloud-based, global learning object repository for authoring, copyright, sharing, and discovery of rich educational materials and open educational resources.

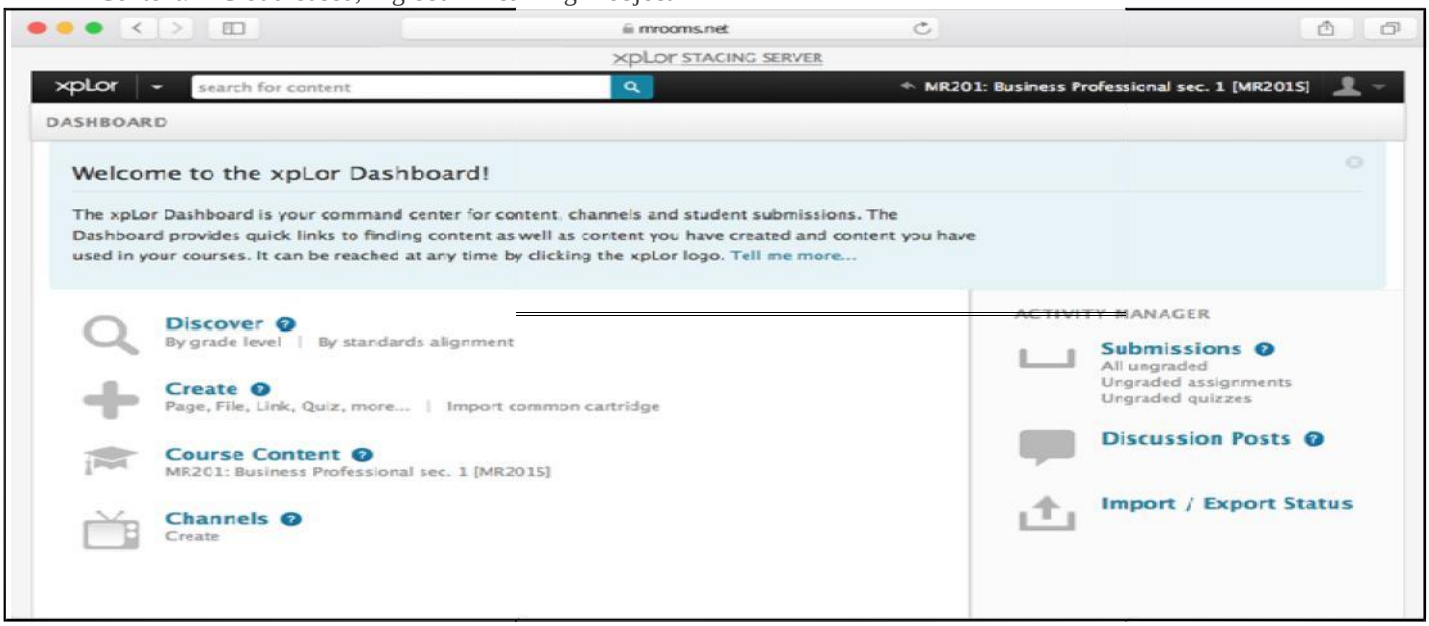

Fig. 2 Dashboards in Blackboard

Fig. 3 E-learning in model rooms

Benefits of using technology in the classroom:

Improves engagement

When technology is integrated into lessons, students are expected to be more interested in the subjects they are studying. Technology provides different opportunities to make learning more fun and enjoyable in terms of teaching same things in new ways. For instance, delivering teaching through gamification, taking students on virtual field trips and using other online learning resources. What is more, technology can encourage a more active participation in the learning process which can be hard to achieve through a traditional lecture environment.

Improves knowledge retention

Students who are engaged and interested in things they are studying, are expected to have a better knowledge retention. As mentioned before, technology can help to encourage active participation in the classroom which also is a very important factor for increased knowledge retention. Different forms of technology can be used to experiment with and decide what works best for students in terms of retaining their knowledge.

Encourages individual learning

No one learns in the same way because of different learning styles and different abilities. Technology provides great opportunities for making learning more effective for everyone with different needs. For example, students can learn at their own speed, review difficult concepts or skip ahead if they

Volume V Issue I ISSN 2349-8226

need to. What is more, technology can provide more opportunities for struggling or disabled students. Access to the Internet gives students access to a broad range of resources to conduct research in different ways, which in turn can increase the engagement.

Encourages collaboration

Students can practice collaboration skills by getting involved in different online activities. For instance, working on different projects by collaborating with others on forums or by sharing documents on their virtual learning environments. Technology can encourage collaboration with students in the same classroom, same school and even with other classrooms around the world.

Students can learn useful life skills through technology

By using technology in the classroom, both teachers and students can develop skills essential for the 21st century. Students can gain the skills they will need to be successful in the future. Modern learning is about collaborating with others, solving complex problems, critical thinking, developing different forms of communication and leadership skills, and improving motivation and productivity. What is more, technology can help develop many practical skills, including creating presentations, learning to differentiate reliable from unreliable sources on the Internet, maintaining proper online etiquette, and writing emails. These are very important skills that can be developed in the classroom.

Benefits for teachers

With countless online resources, technology can help improve teaching. Teachers can use different apps or trusted online resources to enhance the traditional ways of teaching and to keep students more engaged. Virtual lesson plans, grading software and online assessments can help teachers save a lot time. This valuable time can be used for working with students who are struggling. What is more, having virtual learning environments in schools enhances collaboration and knowledge sharing between teachers.

Conclusion:

The paper conclude that ,By using the Moodle rooms Professors and students learn and create their own online teaching and learning habits. Create interactive courses by integrating activities such as videoconferencing, virtual classrooms and offices, open content, and Office 365 services. Fully committed to delivering accessible products and experiences that achieve the highest levels of global accessibility standards. We dig deeper into academic follow-up, integration of technology for diagnosis, and prevision and correction of academic models and experiences.

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Volume V Issue I ISSN 2349-8226

Analysis 0f Study Skills In Secondary School Students

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Abstract-

While developing study skills at the middle school level could lead to higher levels of achievement, students of this age need a substantial amount of instruction and monitoring in their academic tasks because the frontal lobe of the brain which controls executive functioning or one's ability to regulate his or her own behavior is not fully developed during early adolescence (Boller, 2008). Consequently, middle school students cannot be expected to develop and appropriately and consistently use a solid set of study skills without a significant amount of guidance. They need to receive study skills instruction in which the teacher not only models the proper usage of a variety of study skills but also monitors their application to ensure that they select appropriate skills and use them correctly. Moreover, it is important to link study skills instruction to content, as it is difficult for students to transfer these skills to their actual coursework when study skills are taught in isolation (i.e. in a separate study skills course) (Petersen, Lavelle & Guarino, 2006). Therefore, it would seem that the best place to provide study skills instruction is in the core content area classrooms of English, math, science, and social studies, where all students can apply these skills directly to the content they are learning within that particular classroom. Though these studies point to the importance of study skills and instruction, they fail to address the specific needs of middle school students. The purpose of this study was to fill the gap in research regarding what study skills are most important for middle school students to possess, as well as to discover ways for core content area teachers to effectively integrate study skills instruction into their classrooms.

Index Term-,Development, Secondary Students, Study skill, School

Volume V Issue I ISSN 2349-8226

Introduction

Education is indispensable to normal living, without education the individual would be unqualified for group life. (Safaya, et al. 1963). In today's era formal education is valued more than the informal education. Due to heavy competition and changing demand in the job market- formal education and better Academic performance is more in demand. A great deal of emphasis on good Academic performance is laid by parents, Educators and students.

The last decade has seen an increase in the quantum of knowledge, the competition for various professional degrees and the race to be high level achievers. Due to this, students face stress, worries and fear of failure rather than pleasure, happiness and intellectual gain. It is observed that at school level students are given a great deal of knowledge but are not provided with the training to handle it such that they can obtain good grades and also during this whole process enjoy learning as it is said by an unknown author "An Education system isn't worth a great deal if it teaches young people how to make a living but doesn't teach them how to make a life". The training that the students need is the study skills which go on to become study habits.

Study Skill Meaning- Study Skills are strategies and techniques that enable you to make the most efficient use of your time, resources, and academic potential. **Study skills are defined as strategies and methods to efficiently manage learning.** Study skills consist of Effective Reading, time management strategies, note taking and active listening abilities, and summarization and analysis skills.

Theoretical background- The secondary level is a very crucial level as the adolescent is learning to cope with various changes physically, Marshal, W. (1978), mentally, emotionally, Barenboim, Carl (March 1981) and socially Reich, Stephanie M.; Kaveri Subrahmanyam; Guadalupe Espinoza (March 2012). It is a period when they experience a sudden surge in the amount of studies, they are bogged down by expectations of parents. Adalbjarnardottir S., Blondal K.S. (2009) All these theories prove that the Secondary level which is an important part of Adolescence is the time when development in all aspects is high and Academic Achievement is a very important aspect during this period. If the students are guided in the right direction of study habits, study skills and management of stress, it will be very beneficial in obtaining good academic grades. It will help them build confidence in themselves and will also help to make better professionals for the society.

Review of related literature- Sikhwari, T. D.; Pillay, J. (2011) Investigating the Effectiveness of a Study Skills Training Programme A study skills training programme was introduced in the Foundation Programme at the University of Venda to enhance the academic performance of first year students who are considered to be at risk. The study investigated the effectiveness of the study skills training programme using a quantitative approach. The results indicate that the academic performance of students in the Foundation Programme was lower as compared to that of mainstream students who were not exposed to the study skills training programme.

Yuksel, Sedat (2006) **Undergraduate Students' Resistance to Study Skills Course** College Student Journal,The purpose of this research is to investigate reasons why students show resistance to the course of study skills and habits. In this research, a qualitative design utilizing retrospective interviews was employed. Students who showed resistance to the course of study skills and habits were interviewed. The results of this research indicated that the reasons students showed resistance behavior are: do not want to change their study habits, cannot change their study skills, believe the new study skills meaningless, and perceive that teaching study skills to the students in schools is not the responsibility of their counselor.

Miller, Cynthia J. (2014) Implementation of a Study Skills Program for Entering At-Risk Medical Students. A Summer Pre matriculation Program (SPP) was created to prepare entering at-risk students for the demands of medical school. For 2 yr, an emphasis was placed on the development of appropriate study plans and skills. These results indicate that at-risk medical students may have inappropriate study plans that can be improved through participation in a program that emphasizes study skills development.

Cahir, Jayde; Huber, Elaine; Handal, Boris; Dutch; Justin; Nixon, Mark (2012), Using Text Messaging to Support Student Transition to University Study,This article analyses the use of technology in supporting the transition process of "first time" university students enrolled in a second-year accounting course. Study-MATE, a study skills program utilizing the university's learning management system (LMS)--Blackboard, Google Calendar and text messaging--was introduced at the beginning of first semester. Overall, the research results highlight several challenges and necessary considerations in the implementation of study skills programs.

Windham, Melissa H.; Rehfuss, Mark C.; Williams, Cyrus R.; Pugh, Jason V.; Tincher-Ladner, Lynn (2014) Retention of First-Year Community College Students

The research results indicate that successful completion of a study skills course increases fall-to-fall retention for students who enroll in the institution with an ACT COMPASS[R] (American College Test, 2006) score over those who do not participate in a study skills course. It also show that while ethnicity/race and socioeconomic status were not significant, factors of retention, gender, age, and ACT COMPASS [R] Reading score significantly predict student retention..

TuralDincer, Guner; Akdeniz, Ali Riza (2008) Determining the Study Skills of Student Teachers**,**The aim of this study is to examine the study skills of student

Volume V Issue I ISSN 2349-8226

teachers if there is a significant difference regarding to discipline and gender. Setting: Research was implemented at Karadeniz Technical University (KTU) in Trabzon city of Turkey in 2007-2008 academic years. Study Sample: The sample of this study consists of 135 student teachers from the Science and Technology Education Program at Department of Primary Science Education and from Department of Secondary Science and Math Education (Physics, Chemistry and Biology Education Programs) in Faculty of Education at KTU. The findings of the questionnaire showed that study skills of student teachers from each department were at the average level. There was not found any significant difference between the study skills of science student teachers on the gender. It is concluded that student teachers have deficiencies about motivation, time management and preparation for an exam.

Statement of problem- To analyze the study skills of IXth secondary school students .

Study skills- It refers to the text reading skills, taking class notes, memory techniques, test preparation, concentration and time management.

Objectives of the study-1 To study the level of study skills in secondary school students.

Research question- What is the level of Study Skills of Standard IX students?

Research Hypothesis: There is significant difference in Pre-test and Post-test score in the academic achievement of students after implementing the test

Null Hypothesis: There is no significant difference in Pre-test and Post-test in the academic achievment of students after implementing the test.

Scope and limitation- The present study is applicable to all secondary school students. The study is limited to some aspects of study skills like Reading skills, Note taking, Time management, Concentration and Memory techniques. The researcher selected100 students– 50 students from standard IX B and 50 students from standard IXC.

Methodology-Group I was given a Pre-test and then treated using the test of study skills and techniques, After the implementation of the test. the effect of test was using a Post-test. Group II was given a Pre-test and were then not exposed to the test and techniques. After the Pre-test they were directly given the Post-test.

Findings- Objective 1. To study the level of study skills in secondary school students.

In order to study skills and study habits the students of std. IX were given a standardized questionnaire byM. N. Palsane which consisted of 45 question on study skills The questions had three alternate answers viz. always or often, sometimes and rarely or never. Score points 2, 1, 0 are awarded as per the alternative chosen by the subject. The sum of the score point is the raw score. The scores are analyzed and interpretation is drawn whether the students have Excellent, good, Average, Unsatisfactory or very unsatisfactory studying habits and study skills.

.**Techniques-** The teacher conducted the activity to practically develop their skills. The **activities** consist of the following –

1. **Reading**- A passage was given in which the students are asked to read the passage and answer the questions given below the passage.
2. **Note taking-** A passage was given with instructions and questions given above, the students have to read the passage keeping in mind the notes that are required to be made.
3. **Time Management** -The students were given a table and problem and the students are asked to prepare a schedule as to how they manage their time during tests and exams.
4. **Concentration** The students are given a crossword puzzle and they are asked to concentrate and complete the task.
5. **Memory Mnemonics** The students were shown a no of objects and within a stipulated time they were asked to recollect and write the names of the objects seen.

Analysis and interpretation

Table 1: Study Skills Analysis

Grades	**No. of Students (IX B)**	**% of Students (IX B)**
Excellent	0	00
Good	6	13.04
Average	25	54.34
Unsatisfactory	12	26.08
Very Unsatisfactory	3	6.52

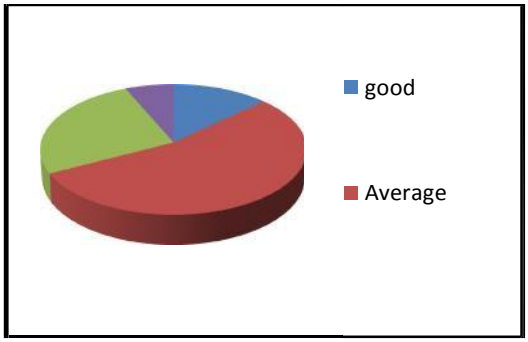

Figure 1: : Standard IX B [Experimental group]

Observation

Out of 46 students 13.04 % students have good study skill, 54.34% are average, 26.08% Unsatisfactory and 6.52 % are very unsatisfactory in their study skills.

Interpretation

A small no of students have good study skills. More number of students have average and unsatisfactory study skills and a very small number of students have unsatisfactory study skills

Volume V Issue I ISSN 2349-8226

Table 2:Study Skills Analysis Standard IXC – [Control group]

Grades	No. of Students (IX C)	% of Students (IX C)
Excellent	0	00
Good	7	14.90
Average	16	34.04
Unsatisfactory	18	38.30
Very Unsatisfactory	6	12.80

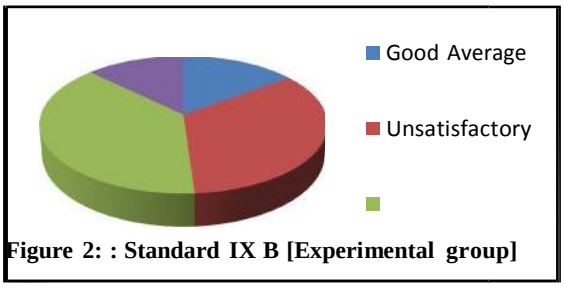

Figure 2: : Standard IX B [Experimental group]

Observation
Out of 47 students 14.90 % students have good study skills, 34.04 % are average, and 38.30 % Unsatisfactory and 12.80 % are very unsatisfactory in their study skills.

Interpretation
A small no of students have good study skills. More number of students have average and unsatisfactory studyskills and a very small number of students have unsatisfactory study skills.

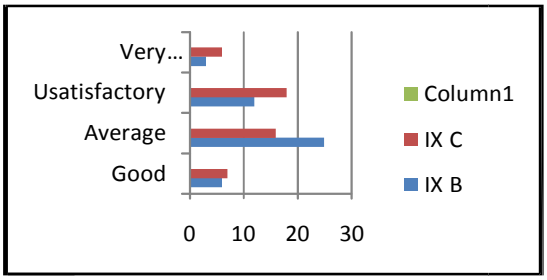

Figure 3: **Comparison of Study Skills Analysis - Standards IX B & IX C**

Observation
Out of 93 students 13.09 % students of standard IX B and 14.9 % of students of IX C have good study skills, 54.34 % students of standard IX B and34.04 % of students of IX C are average, 26.08 % students of standard IX B and 38.30 % of students of IX C were Unsatisfactory and 6.52 % students of standard IX B and 12.80 % of students of IX C were very Unsatisfactory in their study skills.

Interpretation Comparatively more number of students from standard IX C have good study skills than standard IX B.More number of students of standard IX B have average study skills than standard IX C.

More number of students in standard IXC have Unsatisfactory and very unsatisfactory study skills compared to standard IX B.

Discussion- During the course of study it was found that the students have low study skills and their academic achievemenrt could be improved by exposing the students to a study skill programme.The research bears similarity to the study made by the following researchers –

Miller, Cynthia (2014) whose study results indicated that at-risk Medical students have inappropriate study skills which can be improved through participation in a program.

Moreira, Paulo A. S.; Dias, Paulo; Vaz, Filipa Machado; Vaz, Joao Machado (2013) whose study shows that study skills are related to Academic results in Secondary school students.

Thorpe, Christian Made a study on the study and concluded that study skills are important for English, math, Science and social studies in middle school students

Putwain, Dave, sander, Paul, Larkin, Derek (2013) studies showed that study skills preparation and learning skills have a positive impacton College student's academic achievement.

Conclusion- As most of the students are not aware of study skills and study habits for better academic achievement, it should be made a compulsory part of teaching. Students should be taught the art of time Management, note taking, memory techniques, and Reading technique.

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Skill Development and Care Giving: Future Scope of Employability in Elder Care Sector

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ABSTRACT

Population ageing is an important emerging demographic phenomenon in India, warranting a strong multi-sectoral policy and programme response to deal with many significant implications for the elderly in particular and society at large. To reap the advantage of demographic dividend, the attention is mainly on the children and the youth and fulfilment of their basic needs for proper development. With the rapid changes in the social scenario and the emerging prevalence of nuclear family set-ups in India in recent years, the elderly is likely to be exposed to emotional, physical and financial insecurity in the years to come. The current living arrangements and the contribution of elderly to family expenditures suggest that the family is the first source of support. A pool of trained caregivers will have to be made available and different mechanisms of service provision through private entities and civil society organizations will have to be evolved as the number of elderly will go on increasing day by day. The care giver role takes a central stage in the context of home-based and community-based care for the elderly in future. The current study is an attempt to understand the role and responsibilities of family care givers, in order to underline the need of robust skill development programme in care giving and opportunities of employability in elder care sector.

INTRODUCTION

According to the United Nations' projected age structure of population for 2010 (UN, 2008 revision), India is expected to have a total of over 91.6 million persons in 60+ age groups, the second largest population of older adults in the world after China. Growing at a rate of over 3 per cent per annum, this exceeds the annual average growth rate achieved by the younger (0-14 and 15-59) cohorts. UN projections also reveal that India has added a total of about 12.6 million aged persons between 2005 and 2010. This trend is likely to accelerate further in the coming decades for a variety of socio-demographic and health reasons (Dyson, 2004; Visaria, 2004; Guilmoto and Rajan, 2000; Nair and Padmadas, 1999), and points to the need for understanding its various ramifications, particularly those in the realm of health and its delivery mechanism. The number of elderly in India is expected to surpass the population of children below 14 years by 2050(Raju, 2006). A review of old age health and its important dimensions including size, etiology and socioeconomic distribution of the sick and disabled (i.e. Epidemiology of ageing), are issues with considerable merit, especially for evolving policies to meet the heath care needs of the growing number of older persons.

The health issues of the ageing include functional incapacitation due to senescent changes in human organs and frailties. Diseases, infirmities and frailties may push a large number of older persons, particularly those beyond 75 or 80years, below the threshold of physical-cognitive-sensory abilities required to be autonomous and perform basic activities of daily living (ADL) without support. To ensure later life welfare and also to meet likely escalations in demand for the management of complex conditions with the growing number of older persons, it may not be implausible for the government to assimilate most of these issues in its health sector strategies, build necessary infrastructure and evolve instruments to cover health/disability risks of ageing.

Population ageing is an important emerging demographic phenomenon in India, warranting a strong multi-sectoral policy and programme response to deal with many significant implications for the elderly in particular and society at large. Longevity by itself is to be celebrated but for the increasing vulnerabilities of the elderly arising out of poverty, income insecurity, illiteracy, age related morbidity, feminization, dependency and decreasing support base. In most of the western countries, advanced stages of development preceded population ageing but the same is not true for many developing and middle-income countries, including India. In India with majority of its population aged less than 30, the problems and issues of its grey population has not been given serious consideration. To reap the advantage of demographic dividend, the attention is mainly on the children and the youth and fulfillment of their basic needs for proper development. Also, the traditional Indian society and the age-old joint family system have been instrumental in safeguarding the social and economic security of the elderly in the country. With the rapid changes in the social scenario and the emerging prevalence of nuclear family set-ups in India in recent years, the elderly islikely to be exposed to emotional, physical and financial insecurity in the years to come. This has drawn the attention of the policy makers and administrators at central and state governments, voluntary organizations and civil society. Further, India is presently going through a phase of demographic paradox wherein it has to capitalize on the demographic window of opportunity by investing in youth and at the same time focus on an increasing elderly population. The science of gerontology is still in its infancy in India and the interest of social scientists and social work professionals on various issues of ageing is of recent origin. Only recently were older people identified as a priority group in implementation of social welfare policies and government interventions. Population ageing is a matter of concern that requires continued efforts at all levels, but India at present appears to be falling short in its realization and preparedness to deal with major geriatric issues.

BACKGROUND

The Family Welfare Agency (FWA) has been established since 1950 in the city of Mumbai, Maharashtra, India. The FWA has two canters located in Lower Parel, Mumbai (for the elderly and for the mentally ill) and one canter at Dharavi (for the elderly). The agency has developed from working with general community-based issues to providing specialized services in the field of Ageing and Mental Health. The FWA has worked at three levels preventive, promotive and curative within the community and nearby areas. The agency has, thus progressed from 'remedial' to 'therapeutic' and has now broadened its approach with a 'social development' perspective, emphasis on integrating approaches. This integrated development approach has been instrumental in enhancing the quality of life along with people's participation to achieve the same.

The FWA has been providing services for the elderly at the grassroot level in certain geographical areas however, its outreach was minimum in terms of the phenomenal growth in the elderly population and the dearth of organizations working for the care of the elderly in the field. Hence, the FWA elder care initiatives, was strengthened by developing the concept of networking and ward level efforts to enhance the outreach in a qualitative manner since 2000 and 2003 respectively.

The initiatives to develop elder friendly wards and to develop responsive services for the care of the elderly were undertaken along with networking among different organizations which focus on welfare of the elderly and to reach out and sensitise the other organizations towards the needs and issues of the elderly. Social science research has been inherent part of the

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Volume V Issue I ISSN 2349-8226

FWA work with senior citizens as well as training components to develop a cadre of volunteers, para – /professionals who can work with senior citizens. The agency continues to provide experience of working with senior citizens as a field work centre for students of social work. These experiences and contributions in the field of elder care are being strengthened further to gear towards 'Community Care of the Elderly' as a model. The Focus is through 'Elder Friendly Care and Enrichment Centres' to reach out to the various stake holders within the community to showcase and promote Aging in place and active and graceful aging with their participation and support so as to move towards fulfilling the FWA goal of "Care of the Elderly and Building Elder Friendly Enriching Communities in the City of Mumbai".

A rapid increase in the number of older persons as well as their proportion in our population has led to us to being more conscious of the many social, economic, psychological and health problems of the older population. One such initiative is to work at locality level especially in urban context by strengthening community care services. In this regard, generating scientific and systematic information on the living conditions of the older persons in selected localities by conducting a situational analysis is vital. Further, such a study helps in providing information on gaps in the existing services and also valuable clues for designing suitable interventions to promote community care for elderly.

METHODOLOGY

Both quantitative and qualitative approaches were used in the study. A sample survey was carried out in the selected wards viz. F North and F South in Mumbai. Various tools of data collection like interview schedules, field observations, focus group discussions, key informant interviews and case studies were used during field work.

These localities were specifically selected as part of the expansion plans and due to the proximity to the existing presence of Family Welfare Agency (FWA) which has been working for welfare of elderly in the adjacent ward communities of G – South and G – North since more than a decade. The sub-localities that formed the study areas of F-south ward included Ganesh Bag, Shivajinagar, Ramtekadi, Kalewadi, Parel village, BBD Chwal, etc. in Sewri. The sub-localities that formed the study area of F- North ward included Ambedkar Nagar, Bhalerao slum, Prateeksha Nagar, Vijay Nagar, Manjarekar Market, Indira nagar slums, Punjabi camp Building no 1 to 25 in G.T.B nagar.

Table 1. Details of the sample distribution

Name of the Ward	Male	Female	Total
Care Givers			
F North	43	111	154
F South	18	35	53
Total	61	146	207

The tool used for conducting the survey was a closed-ended interview schedule. The interviews were administered on paper and pen by a set of trained investigators. The schedule collected basic information on the demographic profile, housing conditions and living arrangements of elderly, economic conditions, socio-cultural engagement and subjective health and nutrition assessment.

MAJOR FINDINGS

The ultimate goal of development is human well-being at physical, mental and social levels. In the case of elderly in India, the well-being is ensured by care givers who are mostly family members like sons, daughters and spouses. The most common living arrangement of elderly is co-residence with adult children in extended families or multi-generational households where kin provide income, personal care and emotional support to the elderly. At the same time, large number of elderly are also living alone or with spouse only without support and care from kin. Such elderly are more vulnerable to exploitations and abuses.

The study is an attempt to find out the well - being of the elderly from the perspective of the care giver with the intention of supporting family care givers and enhancing their care giving experience. The study of care givers was also carried out among 207 caregivers across both F North and F South wards. Due to the small sample size, the tables are presented focusing on gender only.

Age composition

Nearly half of the respondents (49.3%) are in the age group of 35 to 44 years, followed by more than one fourth of the respondents (27.1%) who are in the age group of 25 to 34 years. It is significant to note than few of the respondents (5.2%) are in the age group of 18 to 24 years.

Volume V Issue I ISSN 2349-8226

Age (in years)	Male N =61	Female N=146	Total N = 207
18 to 24	4.9	5.5	5.2
25 to 34	23.0	28.8	27.1
35 to 44	54.1	47.3	49.3
More than 45	18.0	18.5	18.4

Table 2. Gender-wise percentage distribution of respondents by Age

Marital status	Male N =61	Female N=146	Total N = 207
Married	62.3	76.7	72.5
Widowed	1.6	5.5	4.3
Separated	1.6	0.0	0.5
Deserted	0.0	1.4	1.0
Divorced	1.6	2.7	2.4
Never married	32.8	13.7	19.3

Table 3. Gender-wise percentage distribution of respondents by marital status

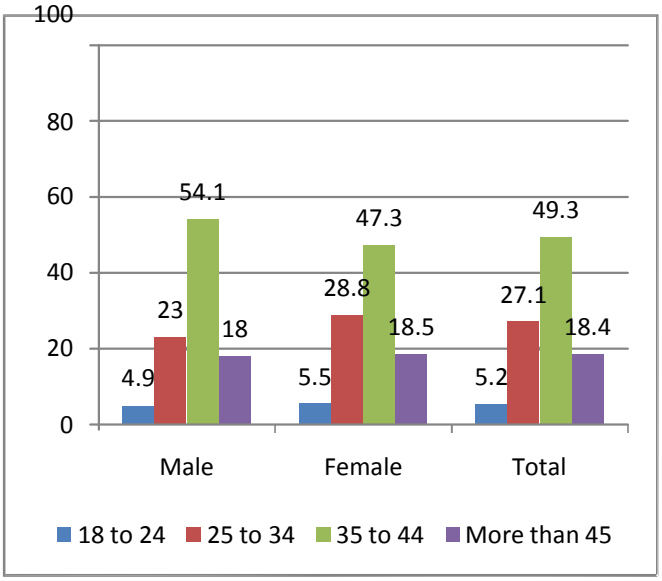

Figure 1. Age Composition

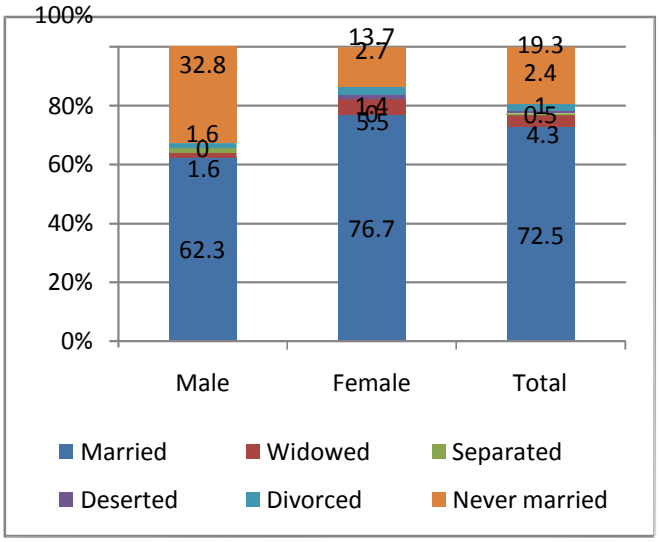

Figure 2. Marital Status

Marital status

The data regarding marital status of respondents reveals that nearly three fourth of the respondents (72.5%) are married, while nearly one fifth of them (19.3%) are never married. The percentage of respondents who are widowed or divorced are 4.3 percent and 2.4 percent respectively.

Educational level

More than one third of the respondents (38.6%) have completed secondary level education, while just below one fourth of them (23.7%) have completed primary education. More than one tenth of the respondents (14.5%) have completed higher secondary level of education. Gender-wise variation reveals that nearly one fifth of the female

Volume V Issue I ISSN 2349-8226

respondents (17.8%) and 4.9 percent of the male respondents are illiterate. More than one fourth of the male respondents (26.2%) have completed higher secondary, comparatively only one tenth of the female respondents (9.6%) have completed the same.

Table 4. Gender-wise percentage distribution of respondents by educational level

Educational level	Male N =61	Female N=146	Total N = 207
Illiterate	4.9	17.8	14.0
Primary	21.3	24.7	23.7
Secondary	36.1	39.7	38.6
Higher Secondary	26.2	9.6	14.5
Graduate / Diploma	11.5	6.8	8.2
Post graduate	0.0	1.4	1.0

Relationship with elderly

More than one third of the respondents (37.4%) are daughter in law of the elderly, while more than one fourth of them (28.0%) are sons. More than one fifth of them (22.3%) are daughters.

Table 5. Gender-wise percentage distribution of respondents by relationship to elderly

Relationship to elderly	Male N =61	Female N=146	Total N = 207
Son	95.0	0.0	28.0
Daughter	0.0	31.7	22.3
Daughter in law	0.0	54.0	37.4
Son in Law	2.2	0.0	0.5
Sibling	1.6	0.7	1.0
Grandchild	1.6	1.4	2.1
Others	0.0	12.2	8.7

Activities requiring help

Around two third of the respondents stated that elderly require help for household shopping (66.2%) and for buying medicines (65.2%), while more than half of them (58.5%) stated that the elderly require help regarding banking services. Gender-wise data reveals that nearly three fourth of the male respondents (72.1%) stated that elderly require help for buying medicines, while more than two third of the female respondents (69.9%) stated that elderly require help for household shopping.

Table 6. Gender-wise percentage distribution of respondents by activities elderly require help in

Type of activities requiring help*	Male N =61	Female N=146	Total N = 207
For banking services	62.3	56.8	58.5
For household shopping	57.4	69.9	66.2
For buying medicines	72.1	62.3	65.2
For paying telephone other bills	47.5	39.7	42.0
For cooking	29.5	26.0	27.1
For cleaning work	29.5	31.5	30.9
For mobility	41.0	42.5	42.0
Attending social occasion	42.6	33.6	36.2

*Multiple responses

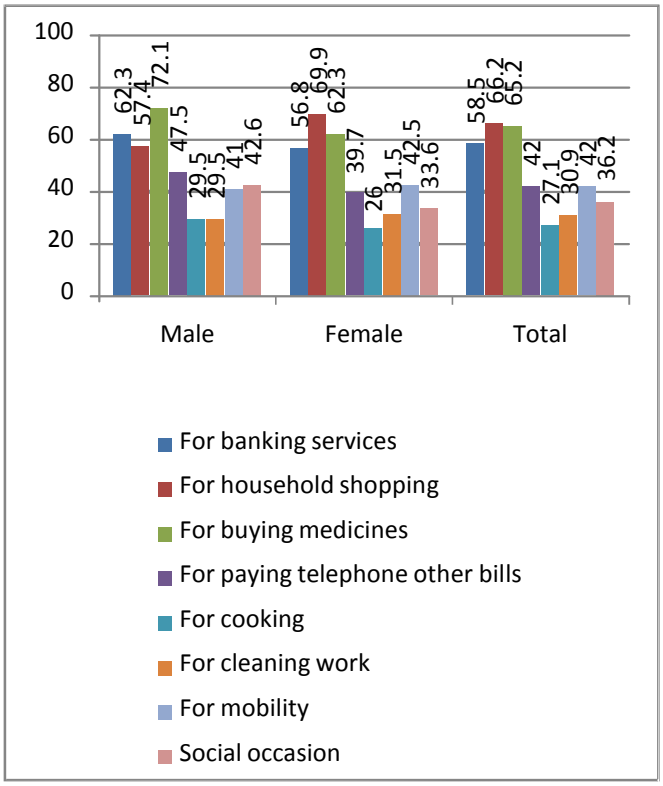

Figure 3. Activities requiring help of care giver

Volume V Issue I ISSN 2349-8226

Work done by caregiver

More than three fourth of the respondents stated that their work mainly involves accompanying the elderly to health clinic/ hospital (76.3%) and giving medicines (74.9%). Nearly two third of them stated that they just have to be with the elderly (62.8%), while more than half of the respondents stated that they help in daily basic needs (55.6%) and in giving food (58.9%). Majority of the male respondents (83.6%) stated that accompanying the elderly to health clinic / hospital is their main work as a caregiver, while main task mentioned by majority of the female respondents (76.7%) is giving medicines.

Table 7. Gender-wise percentage distribution of respondents by work done by caregiver

Type of work	Male N =61	Female N=146	Total N = 207
Giving food	45.9	64.4	58.9
Giving medicines	70.5	76.7	74.9
Accompany to health clinic/ hospital	83.6	73.3	76.3
Being with him or her	62.3	63.0	62.8
Help in daily basic needs	47.5	58.9	55.6
Arrangement of medicines	60.7	43.2	48.3
Making provision for recreation/ social needs	24.6	19.9	21.3
Conduct exercises	4.9	4.1	4.3
Assisting while walking	19.7	22.6	21.7
Feeding	9.8	13.0	12.1
Bathing	8.2	11.0	10.1
Dressing, clothing	1.6	7.5	5.8
Assist in nursing care	1.6	6.2	4.8
Assist in toileting	1.6	1.4	1.4

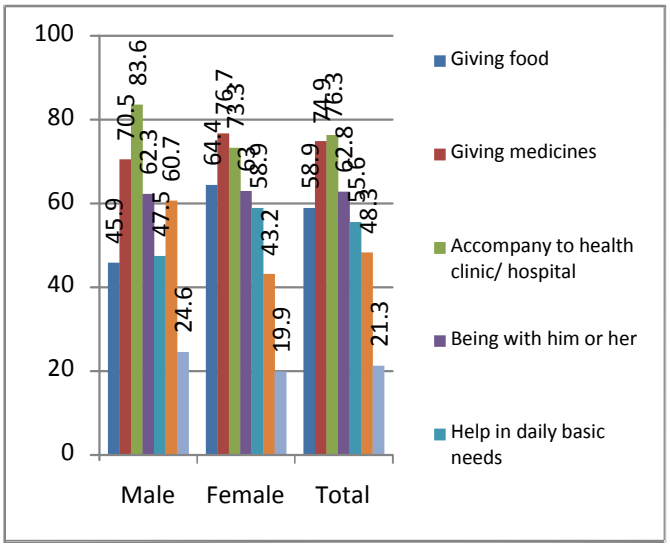

Figure 4a. Work done by care giver

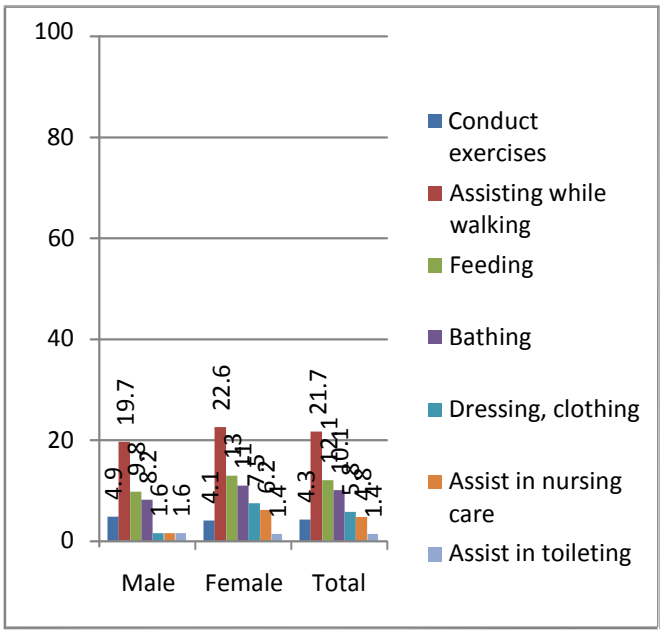

Figure 4b. Work done by care giver

Availability of caregiver

Only 61.8 percent of the respondents stated that they are available full time, while nearly one third of them (32.4%) stated that they are available only during the night. A few of the respondents (2.9%) stated that they are available only when called. Gender-wise variation reveals that majority of

Volume V Issue I ISSN 2349-8226

the female respondents (76.6%) are available full time, while majority of the male respondents (67.2%) are available only during the night. The data regarding alternate provision, in case of absence of respondent, revealed that majority of the respondents (87.9%) felt that elderly are able to manage by themselves, a mere 5.3 percent of the respondents stated that someone else attends to the elderly in their absence. A large section of the respondent (61.4%) felt that they provide sufficient time to elderly (Male:50.8%; Female:65.8%).

Table 8. Gender-wise percentage distribution of respondents by availability of caregiver

Availability of Caregiver	**Male N =61**	**Female N=146**	**Total N = 207**
Full time	26.2	76.7	61.8
Only during the day	3.3	2.7	2.9
Only during the night	67.2	17.8	32.4
Only when called	3.3	2.7	2.9
Provision if caregiver is away for sometimes			
Able to manage by themselves	95.0	84.9	87.9
Someone else comes in	1.7	6.8	5.3
No special arrangement made	3.3	2.1	2.4
I seldom go out	0.0	5.5	3.9
Sufficient time provided to elderly: Yes	50.8	65.8	61.4

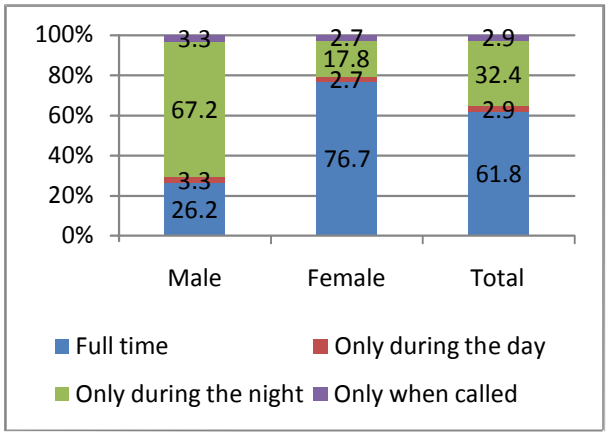

Figure 5. Availability of caregiver

Awareness about government schemes

Only one fifth of the respondents (19.9%) were aware about government schemes for the elderly. Among those who were aware about the schemes, more than two fifth of them each stated that their source of awareness was either relatives (40.7%) or newspaper/media (42.4%). The type of schemes known to respondents mainly included concessional bus pass and half- price ticket for elderly in public transport.

Table 9. Gender-wise percentage distribution of respondents by awareness about government schemes

Awareness	Male N =61	Female N=146	Total N = 207
Aware of govt. schemes for the elderlyYes	24.6	17.9	19.9
Source of awareness			
Friends	15.8	7.5	10.2
Relatives	47.4	37.5	40.7
Newspaper / media	36.8	45.0	42.4
Others	0.0	10.0	6.8

Aspects related to respite

More than two fifth of the respondents (45.6%) stated that they feel stressful while taking care of the elderly, while more than one fifth of them (21.8%) stated that they feel the need to have respite. The inquiry regarding their current way of respite revealed that a large section of them (59.5%) simply ignore the elderly, followed by more than one fifth of them (21.4%) who stated that they go to work. A few of them (7.1%), all of whom are females, stated that they go out of house or sit outside.

Table 10. Gender-wise percentage distribution of respondents by aspects related to respite

Aspects related to respite	**Male N =61**	**Female N=146**	**Total N = 207**
Feel stressful while taking care of elderly: Yes	39.3	48.3	45.6
Need to have respite: Yes	18.0	23.4	21.8
Current ways of taking respite			
Ignore elderly	18.2	74.2	59.5
Go to work	45.5	12.9	21.4
Go out of house/ Sit outside	0.0	9.7	7.1
Other (play games on mobile, call over friends, can't say, don't take elderly outside)	36.4	3.2	11.9
Availability of secondary care givers: Yes	39.3	19.3	25.2

Volume V Issue I ISSN 2349-8226

Only one fourth of the respondents (25.2%) stated that there is availability of secondary care giver in their absence. The percentage was almost double among males (39.3%) as compared to females (19.3%), who stated the availability of secondary care giver.

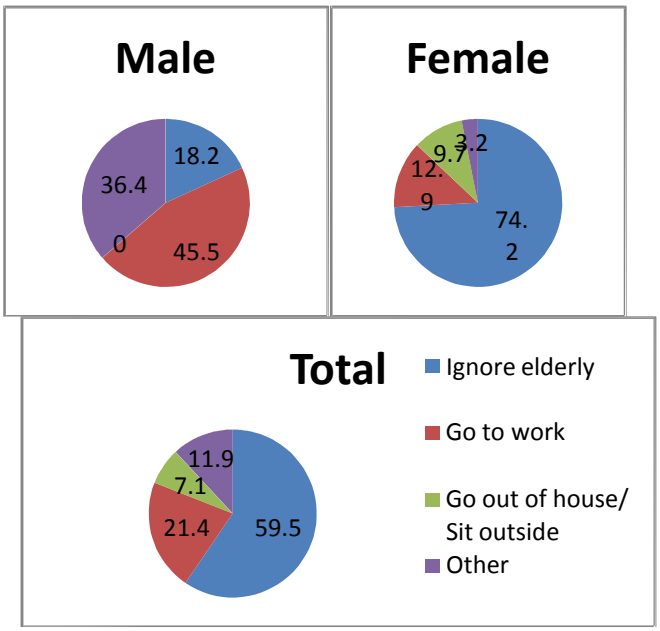

Figure 6. Ways of taking respite

Support for elder care

Less than one fifth of the respondents (16.0%) felt that they need guidance for better elder care. Only 13.1 percent of the respondents were aware about aging / active aging in place. Majority of the respondents (82.0%) stated that home care services like visit by general practitioner/nurse etc are required, among these majority of the respondents (86.9%) were also willing to contribute towards the same. Around three fourth of the respondents stated that they require support service for eldercare (75.2%) and felt that an NGO can help to improve care (78.2%). The respondents showed their willingness to participate in care giving and preparation for ageing sessions (74.8%). Nearly two third of the respondents also stated that they would like to volunteer towards creating a community which cares for the elderly (65.0%) and that there is a need to create a community fund to support care of the elderly (63.6%).

Table 11. Gender-wise percentage distribution of respondents by support for elder care

Aspects of eldercare*	Male N =61	Female N=146	Total N = 207
Need to have guidance for better elder care: Yes	13.1	17.2	16.0
Aware about aging / active aging in place: Yes	16.4	11.7	13.1
Require support service for eldercare: Yes	82.0	72.4	75.2
NGO can help to improve care: Yes	82.0	76.6	78.2
Home care services like visit by general practitioner/nurse etc are required: Yes	85.2	80.7	82.0
Willing to contribute towards the same: Yes	91.8	84.8	86.9
Like to participate in care giving and preparation for ageing sessions	83.6	71.0	74.8
Like to volunteer towards creating a community which cares for the elderly	80.3	58.6	65.0
Need to create a community fund to support care of the elderly: Yes	77.0	57.9	63.6

*Multiple response

Challenges in elder care

The data regarding challenges in elder care revealed that majority of the respondents (80.6%) felt that attitude/ priority towards elder care is the most prominent challenge, followed by nearly two third of the respondents (65.7%) who felt that non-availability of resources for health care is another major challenge. More than one third of the respondents each stated that lack of personal time (39.8%) and limited or lack of community / neighbour support for daily care (36.1%) are challenges in elder care. Nearly one fourth of the respondents (23.5%) felt that burden of physical care is a challenge, while less than one fifth of them (16.9%) stated that no respite for care taker proves to be a challenge. Gender-wise data reveals that challenges like no respite for care taker (Male:11.8%; Female:19.1%) and burden of physical care (Male:15.7%; Female:27.0%) are mainly felt by the females, comparatively more percentage of male respondents felt that lack of personal time (Male:49.0%; Female:35.7%) is a challenge.

Volume V Issue I ISSN 2349-8226

Table 12. Gender-wise percentage distribution of respondents by challenges in elder care

Type of challenges*	Male N =61	Female N=146	Total N = 207
Attitude/ priority towards elder care	83.6	79.3	80.6
Burden of physical care	15.7	27.0	23.5
Non-availability of resources for health care	72.5	62.6	65.7
No respite for care taker	11.8	19.1	16.9
Lack of personal time	49.0	35.7	39.8
Limited or lack of community / neighbour support for daily care	39.2	34.8	36.1

*multiple responses

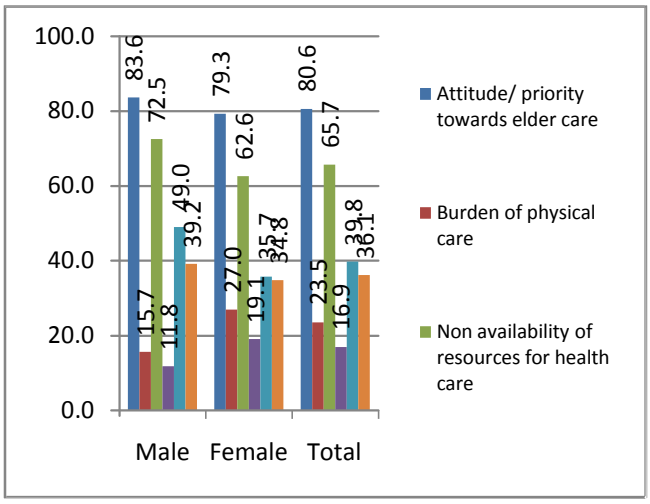

Figure 7. Challenges in elder care

To overcome these challenges the care givers suggested ways like visit by health workers, health camps, mobile medical vans, emergency ward for elderly in government and private hospitals and free medical treatment. Garden for elderly was also one of the suggestions offered by the respondents. They also felt that financial help/pension and travel facility should be provided to the elderly.

CONCLUSION

The study reveals the actuality of old age health as an issue for serious public concern and conform to the observations that socio-economic factors do have a role in shaping old age health. In particular, gender, economic status,living arrangements, and income security are likely to contribute significantly to health outcomes. Growing age, widowhood, low educational levels and economic dependence do not augur well and bring significant health risks to people in later ages.

The current living arrangements and the contribution of elderly to family expenditures suggest that the family is the first source of support. The survey also confirms that the elderly view children as their most preferred source of support, institutional care being the last option. Efforts are therefore necessary to strengthen inter-generational bonds by promoting and training family care-givers in care for the elderly. Further, the existing local community organizations, NGO's, elected representatives, need to be sensitized to evolve and work in cohesion on community-based care mechanisms. A pool of trained caregivers will have to be made available and different mechanisms of service provision through private entities and civil society organizations will have to be evolved.

The care giver role takes a central stage in the context of home-based and community-based care for the elderly. First and foremost, it is important to extend social pension and health insurance to the elderly and the care givers, as financial problem is the most serious problem confronted by the elderly. At the family level, stronger intergenerational bonding needs to be encouraged and at a community level, greater participation of elderly has to be ensured by active involvement of the care giver.

Recommendations

- Considering the living conditions of the elderly and the constraints within which the care giver functions, resources are to be mobilized for the support of the elderly so that the care giver can perform his/her responsibilities in a more efficient way.
- Most of the care givers have studied up to Secondary and higher secondary. Together they make up over fifty percent of the care giving population. As such, they can be further trained for better care giving practices.
- The role of caregivers regarding health issues of the elderly is very important. Hence, they require to be provided information regarding low cost nutritional food, importance of regular health check-up for elderly and availability of discounted medicines.
- The care giver has to be made aware of the various social security schemes for the elderly and encouraged to act on behalf of the elderly for registering them in various schemes.

Volume V Issue I ISSN 2349-8226

- As family care givers have their own limitations, due to their other duties and responsibilities, the survey highlights need of professional care givers.
- Hence trained Professional Care Giving as a skill can increase employability and at the same time benefit the society.

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Need and Importance of Skill Development in Formal Education.

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ABSTRACT

In present context of globalization the demand for skilled & multi skilled worker has been increased there for there is need for quality skill & training. A part from core subject's expertise in some of prominent skill required.

In the changing world scenario with regards to industry and the job market there is now an overpowering need of skills. Because of that we required to develop & promote skills in a current education of India.

For that we required Public awareness, Education and Training are the key elements to move our society towards sustainability. Only a quality future human capital can envision development of its nation to meet the needs of the present without compromising the ability of future generations to meet their own needs. Therefore, the inculcation of soft skills among the students will be two prongs, to produce quality human capital and to develop their knowledge, understanding, values and skills as well. How the two skills blend together will be discussed here e.g. **Communicative skill, Critical Thinking and Problem Solving skill, Team Work, Lifelong learning and Information Management skill, Entrepreneurship Skill, Ethics And Moral Professional, Leadership Skill , Technical Skill & ICT.**

To live to the challenge of globalization which is in line with the era of information economy, the strength of a nation is strongly dependent on the ability of its citizen to be highly intellectual and skillful. The development of human capital is thus important and necessary since it drives the nation to the envision vision and mission. Without a quality human capital, a nation will be weak as there is no human factor that is capable to embark on new initiatives and perspectives. A quality human capital comes from a quality education process. A carefully designed and well planned education system is critical to developing such human capital.

Volume V Issue I ISSN 2349-8226

Introduction

India is on the edge of explosive economic growth. Since coming to power, the Modi-led central government has been striving to put into place measures, and create an ecosystem which fosters industrial activity, domestic manufacturing, and enhanced fiscal health. As such, availability of skilled personnel is going to be the defining element in India´s growth story as the country transforms into a diversified and internationally competitive economy.

Current Status:

India currently faces a severe shortage of well-trained, skilled workers. The government estimates that only 2.3 per cent of the workforce in India has undergone formal skill training as compared to 68 per cent in the UK, 75 per cent in Germany, 52 per cent in USA, 80 per cent in Japan and 96 per cent in South Korea. Large sections of the workforce have little or no job skills, making them largely unemployable. Therefore, India must focus on scaling up skill training efforts to meet the demands of employers and drive economic growth. As per the framework of implementation of the National Mission for Skill Development, India is one of the youngest nations in the world, with more than 54 per cent of the total population below 25 years of age and over 62 per cent of the population in the working age group (15-59 years of age). The country´s population pyramid is expected to bulge across the 15 to 59 years-old age group over the next decade. This demographic advantage is predicted to last only until 2040. India therefore has a very narrow time frame to harness its demographic dividend and to overcome its skill shortages. The power sector in India faces an immense shortage of workers with adequate competencies. The sector is poised for a huge addition in generation capacity to provide 24x7 electricity to everyone in the country. The 12th Five Year Plan estimates that an additional capacity of about 85,000 MW will need to be added by 2017 in order to address India´s growing energy demand. This will only be possible if adequate number of trained and certified skilled workers are available in the entire value chain from generation to servicing the last mile consumer. Professional competence in today´s power sector requires not just cutting-edge technical skills, but also effective commercial and inter-personal skills aligned to the specific needs of the power industry.

Power Skill:

Despite the vital importance of industry-specific skills, training for these skills can be extremely difficult to source. To bridge the competency gap in the power sector, Tata Power has established the Tata Power Skill Development Institute (TPSDI) as a non-profit corporate social responsibility (CSR) initiative in 2015. TPSDI is mandated to provide modular training and certification in the power sector and allied skills leading to employability. TPSDI harnesses the rich experience of Tata Power employees to prepare the youth and others for the huge opportunities coming up in the power sector in the country. The Institute employs a 360 degree approach for holistic development of workers in power-skills and encourages them to reach their full potential. TPSDI´s approach to re-skilling, and up-skilling enables aspirants to pick up and continuously hone skills that would benefit them for life. For every course, skill standards are laid out in terms of requirements of knowledge and skills for each training. These requirements are arrived at after carrying out training need analysis for each skill. All standards are compared with and aligned to National Occupational Standards as specified

Volume V Issue I ISSN 2349-8226

by the National Skill Development Council (NSDC). The Institute currently has two centers in the country - Shahad and Trombay and plans to soon set up five integrated training centers across India.

Way Ahead

If India is to gain its rightful place in the world, skill development will require to be given a place right on top of national priorities. Creating new jobs is only a part of the equation for employment in today´s developing India as over 12 million youth are joining the workforce each year and hence bridging the existing skill gap is of prime importance. Tata Power Skill Development Institute, which aims to bridge this skill gap in the power sector by training the workforce engaged in the sector with skills that make them more employable and helps them excel in their fields is an excellent of the contribution and impact that corporates can make to bridge India´s skill gap. There is need for greater participation from the industry and the private sector to realize ´Skill India´ dream. For any skill development effort to succeed, markets and industry need to play a large role in determining courses, curriculum and relevance. For this, employers need to be put in the driving seat, with the government aiding and abetting industry efforts. India has its task cut out. The Government is trying to do its bit and has given skill development a huge push. It is time for the industry to catalyse investments and raise resources for training.

NSDC Achievements

- Over 5.2 million students trained
- 235 private sector partnerships for training and capacity building, each to train at least50,000 persons over a 10-year period.
- 38 Sector Skill Councils (SSC) approved in services, manufacturing, agriculture & allied services, and informal sectors. Sectors include 19 of 20 high priority sectors identified by the Government and 25 of the sectors under Make in India initiative.
- 1386 Qualification Packs with 6,744 unique National Occupational Standards (NOS).
- These have been validated by over 1000 companies.
- Vocational training introduced in 10 States, covering 2400+ schools, 2 Boards, benefitting over 2.5 lakh students. Curriculum based on National Occupational Standards (NOS) and SSC certification. NSDC is working with 21 universities, Community Colleges under UGC/AICTE for alignment of education and training to NSQF.
- Designated implementation agency for the largest voucher-based skill development program, PradhanMantriKaushalVikasYojana.
- Skill Development Management System (SDMS) with 1400 training partners, 28179training centres, 16479 trainers, 20 Job portals, 77 assessment agencies and 4983Empanelled assessors. Hosting infrastructure certified by ISO 20000/27000 supportedby dedicated personnel.

Today, the world and India need a skilled workforce. Skills and knowledge development are the driving forces behind the financial growth and community development of any country. Skill building is a powerful tool to empower individuals and improve their social acceptance. It must be complemented by economic growth and employment opportunities to meet the rising aspirations of youth.

In present economy, the objectives of a society have also changed from fulfilling the basic needs of all round development to empowerment. The education system instead

Volume V Issue I ISSN 2349-8226

of going by text-book teaching needs to be promoted by skill based teaching learning pedagogy. The human resource instead of being unskilled or semi-skilled needs to be knowledgeable, self-empowered and flexibly skilled.

India is among the "young" countries in the world, with the proportion of the work force in the age group of 15-59 years, growing steadily. However, present status shows only 2% of the total employees in India have undergone skills development training; India can become the worldwide sourcing hub for the skilled employees.

Skills and knowledge are the motivating force of the financial growth and community development of any country. They have become even more important given the increasing pace of globalization and technological changes provide both challenges that are taking place in the world. Skill building can be viewed as a device to improve the efficacy and contribution of labor to overall production. It is an important ingredient to push the production possibility front line outward and to take growth rate of the economy to a higher route. Skill building could also be seen as an instrument to empower the individual and improve their social acceptance.

Quality of 'Skill India'

- Aim is to guide the youths in a manner so that they get employment or start their own business.
- Skill India provide scope not only for the upcoming generation but it also provides training options for the traditional type occupations such as carpenters, welders, cobblers, tailors, nurse etc.
- Skill India provides need-based programmes for the certain age groups which can be the communication or language skills, personality development skills, behavioral skills and job-employability skills.

The hurdles which youth across the world faces regarding their job and skills is completely different from what their parents faced. Due to the competition in global economy, industries and firms in developed and developing countries look for a worker or an employee with higher level of skills, who can engage in innovative task, can improve the quality and services of their company. It is a HIGH-TIME to improve the mental and physical development of the Indian youth so that they can be employed and move forward towards the targeted results. As the Indian youth is the 'future' of the country so they should also be skilled enough to create a 'future'.

The importance of skill development

In a constantly changing environment, having skill development is an important part of being able to meet the challenges of everyday life. The dramatic changes in global economies over the past five years have been matched with the transformation in technology and these are all impacting on education, the workplace and our home life. To cope with the increasing pace and change of modern life, students need new skills such as the ability to deal with stress and frustration. Today's students will have many new jobs over the course of their lives, with associated pressures and the need for flexibility.

Benefits for the individual

In everyday life, the development of skills helps students to:

- Find new ways of thinking and problem solving

Volume V Issue I ISSN 2349-8226

- Recognise the impact of their actions and teaches them to take responsibility for what they do rather than blame others
- Build confidence both in spoken skills and for group collaboration and cooperation
- Analyse options, make decisions and understand why they make certain choices outside the classroom
- Develop a greater sense of self-awareness and appreciation for others

Benefits for employment

While people work hard to get good grades, many still struggle to gain employment. According to research by the CBI (Confederation of British Industry) in 2011 employers were looking not just for academic success but key employability skills including:

- The ability to self-manage, solve problems and understand the business environment
- Working well as part of a team
- Time and people management
- Agility and adaptability to different roles and flexible working environments
- The potential to lead by influence

Benefits for society

The more we develop skills individually, the more these affect and benefit the world in which we live:

- Recognising cultural awareness and citizenship makes international cooperation easier
- Respecting diversity allows creativity and imagination to flourish developing a more tolerant society
- Developing negotiation skills, the ability to network and empathise can help to build resolutions rather than resentments

Volume V Issue I ISSN 2349-8226

A Study of Silver Jewellery Manufacturers of Hupari Cluster Dist. Kolhapur

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ABSTRACT

India is a large consumer of Jewellery products as well as one of the big exporter of Jeweler products. Indian Jewellery products are considered as high quality products due to the quality of workmanship and verity of designs. The buyers are constantly looking for Variety hence Jewellery manufacturers are compelled to come up with new designs. Therefore the Indian Jewellery *karagirs are* known as most skilled in the world.

In India Surat, Ahmadabad is known as diamond processing cluster, Bhavnagar and Jaipur as gems stone processing cluster, Kolkatta, Trissur and Coimbatore as handmade gold Jewellery cluster. Likewise in Maharashtra Hupari is known for silver ornaments.

This paper explains the current scenario of silver Jewellery business in Hupari Cluster. It focuses on the challenges faced by the silver Jewellery manufacturers**.** It further discusses the recommendations for the development of silver Jewellery business.

Key words-Silver Ornaments, skill development, *tanch*

INTRODUCTION

India is a large consumer of Jewellery products. It is also one of the big exporters of Jewellery products. Indian Jewellery products are considered as high quality products due to the quality of workmanship and verity of designs. The buyers are constantly looking for Varity hence jewellery manufacturers are compelled to come up with new designs. Therefore the Indian Jewellery *karagirs are* known as most skilled in the world.

In India Surat, Ahmadabad is known as diamond processing cluster, Bhavnagar and Jaipur as gems stone According to locals, Hupari is well known since the 13th century as center of silver Jewellery manufacture. In processing cluster, Kolkatta, Trissur and Coimbatore as handmade gold jewellery cluster. Likewise in Maharashtra Hupari is known for silver ornaments.

Hupari is a town situated in Hatkangale Taluka of Kolhapur District, Maharashtra State. Hupari is famous for the production of silver ornaments. Most of the families (80 %) in this village have ancestral skill for developing artistic ornaments from silver.

1400-1500 A.D. Goddess Ambabai temple was erected by villagers. The villagers believe that the actual

Volume V Issue I ISSN 2349-8226

progress of Hupari began only after the temple was built. Hupari silver products were in demand during the Kolhapur Chhatrapati ShahuMaharaj. It started with a regular demand for silver ornaments from the Kolhapur royalty. During festivals, elephants and horses were clothed with silver; *Ghungarus/ Ghagari* were in great demands.

OBJECT OF STUDY

- To find out the current scenario of silver manufacturing business in Hupari Cluster
- To identify the skill gap and other support required by Silver Ornament Manufacturers.
- To understand the problems of the artisans, manufacturers, traders and service providers of Silver Jewellery business.
- To find out gaps in current manufacturing and marketing flow.
- To suggest recommendations for the development of Silver Jewellery business of Hupari cluster.

RESEARCH METHODOLOGY

The study is based on primary data collected from silver manufacturers from Hupari cluster. The method applied is unit to unit random sampling physical survey. Questionnaire of around 45 questions has been prepared. Data of the said study is based on the site visits, personal interviews and 325 samples collected during a week-long survey. During survey, the data collected from 260 Manufacturers and 65 service providers. In primary survey visit, the meeting with various traders, trading unions, manufacturer's union has been conducted mostly on sights. Numbers of units have been visited to identify the problems they are facing. Local team has been formed on the basis of merit, experience and communication skills. The team visited following villages.

The details of villages under survey are as follows-

Hupari, Rendal Ganeshmal, Talandge Yelgud,PattanKodolli of Kolhapur District Maharashtra and Mangur, Belgaum District, Karnataka

The following organizations were also visited during the study and collected necessary data.

- Chandi Karkhandar (Udyojak) Association, Hupari (Registration no.14595/Kolhapur).
- Chandi Maal Utpadak Sahkari Sangh Ltd, Hupari (Registration no.P.6052)
- Silver Ornament Manufacturers Association Hupari.
- Silver Zone Jewellery Manufacturers Association
- Kolhapur Zilha Saraf Sangh-.

To understand the views of new generation about the future of this business the interaction with young generation was conducted at Chandrabai Shantapa Shendure Junior college Hupari. Around 75 students whose parents are engaged in this business traditionally were interacted with the survey team and researcher.

The secondary data was collected through websites and reports.

LITERATURE REVIEW

General antiquity of business

The general antiquity of the Karigari goes back to 1904 as per Gazette records. During 1750 A.D., village was conquered by Patwardhan from Miraj-Sangali. Fortification was completed around the city, in 1800. Maharaja of Nipanikar Desai had attacked fortified Hupari. King of Kolhapur conquered Hupari back, since then it became part of Kolhapur State.

Skilled workers of the village used to make different types of design Jewellery for the royal family of Kolhapur. In this way Hupari got name and fame. The village of Hupari has today become a busy and well

Volume V Issue I ISSN 2349-8226

known place for silver Jewellery. Silver Jewellery of unique craftsmanship is executed here with traditional artistry. Hupari specialty is *Payal* or anklet of varied designs. Hupari is also famous for the seamless silver balls known as *Gujrav*. These hollow silver balls and solid ones, known as *Rawa* are used in to the *Payals* design. There are varieties of designs created through the stamped-out dies. Hupari's specialty in this business is Payal, also includes *challe, kaddore*, which are in great demand all over India. After World War II in 1944, approximately 60- 70 skilled workers came together and formed "Hupari Chandi Karkhandar" (Udyojak) Association. The main objective of this association was to give opportunity to new entrepreneur and build association strongly. New comers in this industry were provided all sort of Co-operation by giving silver on credit with a condition that he should be known to some local people. There is no written agreement in the business but for only oral commitment. Chandi Saraf Association, Dhadi Utpadak Union and Dhadi UtpadakSanghatana is also in practice.

CURRENT SITUATION OF THE TRAINING FOR BEGINNERS

As entire town and most of the families are into this business there is very little need of basic training for the beginners though that training is not suitable for growth of business. Most of the workers or artisans acquire the skill through tradition, from generation down.

Raw material supply and suppliers

The method of transaction for Silver in Hupari is based on Silver returns. A trader or Wholesaler gives raw silver bricks and making cost to artisan as an ancillary. An artisan submits the finished products. *Karagirs* settle the transactions only in the form of Silver. There is no cash exchange. The source and cost of raw material i.e. Silver was not disclosed. Recycled silver bars or bricks are called *Dhadi* and are given to *Karagir) (Artisans)* bythe traders who want them to work.

Process on raw material

The artisans send raw silver bricks to local refinery labs for testing the purity of silver. These labs are non-approved and follow traditional methods of testing. There is only one lab in Hupari which is quite well equipped. In local language the Purity testing is called *"Tanch Kadhane*". Refinery is called *Tancha Dukan* in vernacular. The traditional process is not accurate, hence there is no standard product.

JEWELLERY MAKING PROCESS

Process of making silver Ornaments-

- Procurement of raw silver
- Testing of purity
- Melting
- Rolling Process for Making Strip & Wire
- Design Cutting
- Assembling
- Polishing
- Meena Work (Enameling)
- Diamond Polish
- Electroplating

OBSERVATIONS AND FINDINGS

- Almost every second family in the village Hupari is involved in Silver Jewellery business. It is unorganized in nature. Mostly family members work in the business. In addition to that workers are also employed on contract basis. The economic year starts from the first day of Diwali in and around Hupari village.
- There is no job security and legal protection as well as welfare schemes applicable to these workers.
- Women participation in silver business in Hupari is significant. The assembling is mostly done by women. Women prefer work from home.

Volume V Issue I ISSN 2349-8226

- The working Environment is not conducive, hence 95% respondents working in this industry have lots of health hazards. No proper safety measures are taken by the workers. Most of the working areas are not well ventilated.
- Although there is a special place for business called "Silver Zone". Unfortunately people are using it for only residential purpose and says that there is no security for business as it is away from the village.
- The supply of impure silver which is a raw material is the biggest problem. The authentic raw material is not available. There is no proper facility for testing the purity of raw material as well as finished products.96.5% respondents said that there is a need of standardization and hallmark Centre and Govt.Refinary.99%respondents are in the opinion that there is a need of MMTC Refinery and Bank.
- Traditional method of manufacturing, old style designs having limited market. The designs and methods are not up to the mark.95% respondents
- Products. The small scale manufacturer make his *Zangad* on his own by carrying bags by hand from Hupri to market in Satara, Pune districts or in other states without any security or protection.
- Many manufacturers complained that they have great fear about Police as they are taking bribe and demand from manufacturers as the sector is unorganized. They further want to know the process of legal business.
- There is local demand for Italian machines (?), which are used in Agra silver cluster. Artisans and Manufacturers think that Italian machines will give better finishing to their products.
- No proper accounting system for transactions related to production, sale and other business activities followed. All transactions are based on faith.
- The wastage is about 9 % which manufacturer has to bear.
- There are fluctuations in profit margin due to fluctuations in silver prices.

are in the opinion that there is a need of Design Development Centre.

- Old small houses where production is going on which is not at all suitable for the business. They still use traditional furniture which is uncomfortable and hazardous for health. It is in use for a long duration. Using traditional furniture causes constant pain in waist, knees and neck as well as eyes No proper assembly line system of production, which results limited and old design production.95% respondents reported that there is a need of common facility Centre.
- It is observed that no single person using modern suitable table and chair instead of traditional seating methods and furniture.
- 93% male respondents and 90% female respondents said that they will be ready to migrate anywhere for better job opportunities once advance training will be given to them.

- Term "*Zangad*" is used in local language for transportation of silver
- No cash transaction in practice. The Traders give raw material and making charges to the manufactures and take finished products.
- No risk coverage by way of insurance is practiced by manufacturers.
- Heavy investment is blocked in dies and out dated machines are serious problems of many manufacturers.
- No formal training is taken by any one as it is a hereditary business. No training facilities are known to people. No sufficient work is there due to limited demand for their products. Hence they have started selling products of Agra, Rajkot, Selam and Bangkok. Recently a suicide case is reported because of lack of business or work to do.97% respondents reported the need of Jewellery Design Training Centre.
- It is locally said that the USP of Hupari made Jewellery is the only technique of its kind which can be rejoin, if the ornament is broken.
- There is belief among the people that working with silver melting process cause the impotence.

Volume V Issue I ISSN 2349-8226

- Only 1% manufacturers export their products.97%respondents said that there is scope for export their products.
- There is no logistic facilities available for all manufacturers. Only 5%manufacturers use logistic facilities.
- 99.5% respondents said that they need Government Support for branding their products.
- 97% respondents said they need training for personality Development.
- 95%respondents said that other correlated business like casting, semi-precious stone will be helpful and they will take up those activities.

RECOMMENDATIONS

- Training is a dire need, hence it is strongly recommended GJSCI to set up a 'Center of excellence' at Hupari sopeople involved in Jewellery business will get training at their doorstep. It will help them to improve their production process, introduce new designs and expansion of markets.
- Common Facility Center with modern Machineries and equipments required for all processes such as testing, melting, pasta and wire making, dye cutting, soldering, polishing etc. may be installed at Hupari.
- Raw Material Bank of Metals and Minerals Trade Corporation of India (MMTC) may be started at Hupari.
- For testing purity of Silver, refinery may be opened at Hupari so supply of quality raw material will be assured.
- For Branding and Marketing of Hupari products, need of Co-operative society is felt.
- GJSCI may help the manufacturers of silver ornaments in branding and marketing their products in India and abroad.
- Hallmarking of products as per the BIS standards i.e. 75, 85 and 92.5 may be introduced.
- For taking care of health issues a medical facility center may be started.
- To increase participation of women in Jewellery industry crèche facility may be provided, so women can keep their children in the crèche and can work without any tension.
- Easy access to credit facility is very important aspect of any business. There is need of credit facility though various nationalized banks to finance the silver manufacturers.
- Apart from technical training there is need of soft skills training, training of marketing etc.
- In second phase GJSCI can start training center for new work force.
- GJSCI can provide training facility such as CAD, Hand Sketching, wax setting and manual designing.
- The new trained work force may take opportunity to work in Pune Mumbai and other places.
- It is recommended that the Government and GJSCI may prepare a plan for sustainable development of cluster.
- GJSCI may collaborate with NID, NIFT, and IDC for designing to give new direction to traditional components.
- We recommend GJSCI to provide training to Hupari Karigar in Minakari and color bead work so they compete with others.
- Awareness programs may be conducted to change the mindset of the Karigar, so they can easily adopt the new technology. For creating awareness folk performing art forms such as Powada, Lawani, Vasudeo etc. may be used.
- We highly recommend GJSCI that, a pilot CFC may be initialed immediately at Hupari and after taking review of its results further action may be taken.

CONCLUSION

Hupari is known for silver Jewellery since long time. Almost every house hold is engaged in silver Jewellery

Volume V Issue I ISSN 2349-8226

manufacturing .Some of the products like Payal, Ghunguru are unique. There a huge potential for employment and export if proper skill development training is given along with other support for the business development. Common facility Centre is a dire need of the silver Jewellery manufactures. Hupari can be developed as Silver Jewellery hub of India.

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Volume V Issue I ISSN 2349-8226

Skill Gap in Management Education: Role of Private Sector in Scaling the Skill Development in India.

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ABSTRACT

Inspite of having an engrossing journey since last 55 years, management education in India is facing the severe problem of employability due to skill gap between demand of skill from corporate and supply of skills from management institutions. As per the study conducted by ASSOCHAM, amongst the thousands of management graduates churned out by 5,500 B-schools in the country, only 7 percent turn out to be employable.The problem of un-employability increases as we move from top B-Schools of tier-I cities to the low-quality business schools from tier-II and tier-III cities.This paper suggests practical suggestions for improving the employability status of management graduates of tier-II and III cities through innovative practical training. The paper also suggests some modifications in the present structure of MBA program to make it skill oriented.

The second section of the paper discusses the role private sector in scaling the skill development of management graduates through an active participation of corporate in skill development program at Government and Non-Government level. The article concludes with the discussion on how skill development at school level can be the solution to most of these problems so that skill development becomes the integral part of education and not the supplementary add-ons for the sake of the show.

Index Terms:
Employability,Management Education, Skill Gap, Skill Development, Role of Private Sector

Volume V Issue I ISSN 2349-8226

INTRODUCTION

With the introduction of MBA program by Harvard Business School in 1921, Management education is hardly 100 years old, but in India, Management education is around 55 years old. It has emerged as a vibrant field for professional education. The government of India established Indian Institutes of Management at Calcutta and Ahmadabad in the year 1961. As of now, there are 13 IIMs in India to professionalize management education through research, consultation, teaching, and training. When IIMs were established, many Indian Corporates did not believe that business management could be taught in Schools. With increasing demand for professionally trained workforce from the corporate sector,the number of management institutions increased exponentially. Please refer Figure-1.

Figure-1

Inspite of this upward trend the picture of management education in India is not very fascinating today. Particularly the employability of management education is in deep distress. As per the study conducted by ASSOCHAM, amongst the thousands of management graduates churned out by the 5,500 B-schools in the country, only 7 percent turn out to be employable. Very few other management institutions except IIMs are able to claim of quality management education that can help their graduates secure employment. Inspite of spending lacks of rupees on MBA education, MBA graduates are struggling to get the jobs and those who succeed to get the one, are hardly getting Rs. 8000-15000 per month as their initial salary. The management programme is expected to provide a holistic development of managerial skills through exposure to case studies, teaching, industry training, consultancy and research and interaction with industry leaders. But very few business schools from Tier-I cities are found fulfilling these expectations and rest are just distributing degrees without enough development of managerial skills. Following are the reasons for this tragic situation of management education in India.

The top 100 business schools in the country with required facilities have very less number of seats available; therefore they can accommodate only those students who qualify with a top quality 80 percentile score or above. The batch of remaining 80% student then is forced to get the admission in the low-quality business schools which are not keen on skill development of management students.

LACK OF SKILL-BASED EDUCATION:

Skill-based education is lacking in most of the management institutions in India. The B-schools need to focus on skill-based education with a more practical and dynamic approach.

Though case study based teaching is effective method, its excessive use may limit the thought process of the students only to the case. Apart from case studies, management education should emphasize on imparting the practical expertise attained from actual application of the management theory in real business situations. Many B-schools severely lack in imparting hands-on training to their students.

The corporate world takes less than a year to evolve, but the syllabus of the management programs is designed once in five years and in some low tier universities even for ten to twelve years. In such case, it is hardly possible that the management student acquiring the management degree based on such outdated knowledge will get employment in the contemporary vibrant corporate world. Therefore, the revision of curriculum should be made compulsory after every two years wherever applicable.

Qualified faculty members are the pillars of any institution. Some institutes found appointing non-

Volume V Issue I ISSN 2349-8226

eligible faculty members for the sake of saving salary pay-outs. The distinction between reputed business schools and others is through an intellectual contribution by faculty members in the form of research, publications, usage of innovative pedagogical tools, conducting management development programmes and by providing consultancy services.

The vigorous corporate world wants the student to be technologically proficient. But the limited use of technology in the classroom is another deterrent in developing relevant job-ready skills among the students.

SUGGESTIONS TO IMPROVE THE EDUCATION QUALITY OF TIER-II AND TIER III B-SCHOOLS.

Undoubtedly, the Tier-II and Tier-III B-Schools should be keen for faculty development, infrastructure development, assessment through NAAC or NBA and imparting the inputs of international standards. But **the students from these B-schools are generally absorbed in small organizations. Therefore these B-Schools should focus on nurturing managerial and entrepreneurial talent for the regional and local markets.**

To boost the employability of management graduate, management education needs a radical transformation in structure (which will be modified after every two years), in delivery mode and evaluation pedagogy. Managerial skill development should be at the center of each level to produce the job ready management professionals. **Students should be evaluated on the basis of their risk-taking ability, entrepreneurial mind-set, visionary approach and decision-making capacity. The written examinations can be replaced with ongoing test based on the preparation of the report on various activities. If this is not possible written test should be reduced by considerable proportion.**

The inclusion of project reports preparation has failed to meet its objectives. On the basis of my personal experience of last 14 years, except few sincere students, all other students either submit copied project report or outsource it from difference agencies or individuals. Therefore **the component of project report can be removed, instead, the student can be asked to come out with any start-up idea and actually work on till it comes into operation. This exercise can start at the end of the third semester and the student can be evaluated on the basis of its status by the end of 4th Semester.**

The private sector can also contribute significantly towards scaling the skill development in management education.

While the government and skill-development/vocational training organizations, each have their role to play in bridging this gap, the private sector is a crucial player in the skilling ecosystem of India.

The Government of India stated many skill development initiatives in the form of 'Skill India Mission' and Make in India'. But still there exist the gap between the demand and supply of skills due to which studentson one side claim that they do not have enough opportunities, industry on other side complaints about lack of skilled talent. Therefore government needs to undertake the concrete action plan at every stage to comprehend the objectives of these skill development initiatives. The private sector in collaboration with government organisations can contribute significantly towards this mission.

Many Private sectors organisations have started in-house training and skill-building. Private sector holds the necessary resources and the expertise in various domains and have now started various skilling initiatives. However, the private sector needs to have a deeper penetration with formal colleges and government initiatives in order to create a better impact with a long term solution.

Government of India started the schemes like 'Pradhan Mantri Kaushalya Vikas Yojana' and 'Deen Dayal Upadhyay Grameen Kaushalya Yojana' to inspire the youth of the nation to acquire skills. But this is not sufficient; while the initiative is progressive,the government should enter into MOU with the private sector so that, these skilled youths will be recruited by the industry. **The courses must not only be ending in certificates but should result in employment.**

Skill development is an ongoing process. Most of the skilling courses are short-term courses that only drive knowledge to the learners. However, in order to master their skills, courses need to be for a longer duration and with a deeper focus on practical learning.The private sector can also contribute to this

Volume V Issue I ISSN 2349-8226

long-term learning process by sharing the practical training responsibility of the course.

The private sector can also contribute to the process of curriculum development of skill education. Curriculum thus designed will be closer to the industry standards thus will help certainlyto enhance the employability of the youths.

A mix of classroom and on-job training will accelerate skill development, therefore, private sector should happily come forward to extend their co-operation to provide the platform for on-job training. At present only a few companies offer such training assistance in India, but more and more companies should come forward willingly for this cause.

Private sector which includes a blend of big corporates and MSMEs is the major job creator in the country. It has huge potential to influence the scale, quality and sustainability of skill development programs and in integrating them with employment and livelihoods for the informal sector.

Here are some ways, the private sector can create a positive impact on the skilling landscape in India:

The private sector in collaboration with Sector skill council can contribute immensely by investing in research, analysis and setting quality standards for training courses. Experts from corporate sectorcan help in identifying skill gaps in current job roles, development of existing and new job roles through National Occupation Standards (NOS) with performance criteria, or linking productivity with technological interventions.

Around 80% of the jobs are generated in companies with less than 20 people. This is particularly true of the manufacturing industry and is a significant indicator of how the very small players could be powerful influencers. In such a scenario, it is critical that small companies and other employers of the informal sector verify and validate the job roles and performance metrics (NOS/QPs) from their perspective and adapt, modify or change them to suit their requirements.

All private companies are not equipped to do in-house design, development and delivery of training to suit their productivity requirements. Therefore if they align with training providers at different stages in creating a talent pipeline for their needs, the success rate of connecting the right skills with the right people and the right job roles would improve.

The private sector can solve many issues related to the actual delivery of training by working closely with training providers. This may require planning for training–sites on their work premises, jointly identifying public places like community canters and hostels or exploring other avenues of delivering the training in proximity to the workplace. Corporates can also fund/subsidize specific training labs/equipment which might otherwise be too expensive for training partners to invest in.

There is nothing like learning directly from experts who have put in years of work in various industries for trainees and apprentices who are learning and earning at the same time. The private sector can encourage and support willing employees to take up roles as subject experts, practical guides and mentors through various train-the-trainers programs or guest lectures which will go a long way in ensuring better training outcomes.

FINANCING FOR SKILL DEVELOPMENT:

A look at the funding of 'Technical and Vocational Education and Training' TVET quickly shows up the contradiction between the emphasis on skills and the limited funding. This is one of the significant obstacles in the process of Skill development. Therefore private sector can realise the objectives of skill development by funding these skill development projects through their CSR funds. While the 2% CSR mandate might be a huge impetus to the social sector as a whole, private companies should view this as an investment, when it is spent on skill development initiatives.

The further investigation of root causes of failure of skill development in Indian scenario also leads to one important bitter truth that, in India, skill development programs are available at graduate or post graduate level. But if the skill development starts with school education it will be rightly understood and absorbed in the process of personality development of the student.

There must be options available for skill development courses at the school level, and they must be provided in the secondary stage of schooling. The basic introductory courses can be from various fields such as Hospitality and Tourism, Handicraft, Healthcare, Textiles, Photography, IT, Retail, Banking, Insurance…etc. For instance, if a student opts for hospitality and tourism they can learn to be a

Volume V Issue I ISSN 2349-8226

good communicator to improve the convincing ability for business promotion. They can also study subjects like history and geography from the perspective of tourism business. For delivery of inputs, the pedagogy has to be practical; learning can be enhanced through field visits, e-learning, industry-driven projects, digital or video inputs…etc.

CONCLUSION:

The paper started with the concern for tragic status of employability of the management education in India. But with the discussion on various components like revision of MBA structure to suite the industry requirements, inclusion of practical training and increasing participation of the private sector in scaling skill development, the turnaround of the current state is possible. The real skill development is continuous process and should be understood in the right perspective and spirit to realise the goals of its introduction.

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Need and Importance of Skill Development in Formal Education

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BSTRACT:

India is a fast developing country. India is facing many challenges in industrial sector such as competition, technology, skilled workeretc.Among these challenges, one of the most important challenges is scarcity of skilled worker. If skilled worker is available easily then it can accelerate growth of nation and can lead as developed country. For this, India has to improve its traditional education system. Such system should include the syllabus having potentiality of providing jobs to all who need it. The syllabus should be skill based or practical based because as per today scenario after completion of graduation, student did not get job immediately in all over India. This is most prevalent tragedy of Indian education system. That is why it is necessary to adopt skilled-based education system in Indian economy. All sectors in India need skilled workforce to meet global standards of quality, to increase their foreign trade, to bring advanced technologies to their domestic industries and to boost their industrial and economic development. Thus, skills and knowledge becomes the major driving force of socio-economic growth and development for any developing country. In developing countries with highly skilled human Capital tend to have higher GDP and per capita income levels and they adjust more effectively to the challenges and opportunities.This paper focus on the concept of skill development, its need and importance, challenges and future of skill development in India.

Index Terms: -Challenges,India Need and Importance, skill Development

Volume V Issue I ISSN 2349-8226

INTRODUCTION:

Skills and knowledge are important drivers of macroeconomic growth and socioeconomic stability. Looking at the socially stable economic performance of economic giants

Such as Germany and China across business cycles, we see an interesting fact. That is, those equipped with market-relevant vocational and business skills – especially young people are better placed to take advantage of the knowledge-shifts that are shaping economic growth and to adjust to economic shocks. About to be home to one-fifth of world's working-age population, India's path to becoming a high performance nation is certainly going to be shaped by its ability, at scale, to impart market-relevant business and vocational skills to its youth. India's 12th five-year plan calls for faster, more inclusive and sustainable growth. A highly skilled workforce will only make such growth possible. Skills development is more critical than ever. To contribute significantly to the overall target of developing new skills in 500 million people in India by 2022—mainly by fostering private-sector initiatives in skill development programs—the government created the NSDC in 2009. On their own, a host of private organizations including Accenture also came forward and launched a series of initiatives to achieve this national goal.

OBJECTIVES OF STUDY:

[1] To study the concept of Skill Development and its various aspects in India.

[2] To point out the need and importance of Skill Development in India.

[3] To study the challenges of Skill Development in India.

[4] To suggest the necessary ways for effective implementation of Skill Development in India.

RESEARCH METHODOLOGY:

This research is exploratory research. For the purpose of study the information have been collected from secondary sources such as reference books, magazines and internet websites etc.

CONCEPT OF SKILL AND SKILL DEVELOPMENT:

Skill is an ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carryout complex activities or job functions involving ideas. In today's age of globalisation and technological volatility, skill development is an important instrument to increase the efficacy and quality of labour for improved productivity and economic growth. Skill development is a powerful tool to empower individuals and improve their social acceptance

The employableskillswhich should be introduced to school students from an early age of 6-7 years onwards in an incremental manner.

- ***Primary school*** (classes 1 to 5) (age 6 to 11): Communication skills, attitude, adaptability and IT skills
- ***Middle school***(classes 6 to 8) (age 11 to 14): Above skills plus self-management, teamwork, creativity
- ***Secondary education*** (classes 9 to 10) (age 14 to 15): Above skills plus stress management, self-motivation

Volume V Issue I ISSN 2349-8226

- ***Upper secondary*** (classes 11 to 12) (age 16 to 17): Above skills plus initiative, interpersonal sensitivity
- ***Higher education*** (graduation or professional programmes): Above skills plus commercial awareness, problem solving, lifelong learning

In general, apart from the core subject expertise, some of the prominent employable skills that employers seek are:

- communication skills (verbal and written)
- commercial awareness
- attitude towards work
- lifelong learning
- self-management
- teamwork
- problem solving
- initiative
- self-motivation
- adaptability
- stress management
- creativity
- interpersonal sensitivity
- technology/it skills

NEED AND IMPORTANCE OF SKILL DEVELOPMENT IN INDIA:

After liberalization it has been observed that Indian economy demands employability. According to 12th five-year plan, India has set a target of rise in 25% formal skilled workforce. About 50-70 million jobs will be created in India over the next five years. Out of these, 70-90% jobs will require some kind of vocational training. Our existing vocational skill development resources are not sufficient to meet the quantitative as well as qualitative needs in case of employability. According to 2013 data, India has a training capacity of around 4.3 million, whereas around 12 million people are expected to join the workforce each year during the next decade. Thus, 7.7 million people will be left untrained in this regard. IMAR has assessed some realistic skill gap figures, which turn out to be in between 249 and 290 million by 2022. Due to lack of formal training infrastructure, the unorganized segment has to rely on informal training. The Indian government recognizes the importance of skills development as part of driving economic growth. Its 12th five year plan calls for faster, more inclusive and sustainable economic growth. Manufacturing, retail, construction, banking and tourism are among the key sectors that will serve as India's next growth engines. However, cost competitiveness alone can no longer drive sustained and accelerated growth for businesses in these sectors. Increasingly, these enterprises will need to continually enhance value for their customers while remaining competitive on the cost front. To do so, they will require not cheap labor but a skilled workforce that can harness capital, knowledge and technology to drive growth across these key sectors and transform India into a high performance nation. Vocational education and training (VET) will be essential for equipping these workers with the skills needed to be employable and to drive national growth. To support this skilling effort, key stakeholders—including trainees, educational institutions and businesses—must work together .Livelihood opportunities are affected by supply and demand side issues. On the supply side, India is failing to createenoughjobopportunitiesand on the demand side, professionals entering the job market are lacking in skill sets. This I resulting in a scenario of rising unemployment rates along with low

Volume V Issue I ISSN 2349-8226

employability. The importance of Skill Development can be enumerated by following points;

- ***Job Creation****:*

Between 1999-2000 and 2004-05, the number of jobs increased by 59.9 million against an increase in labour force of 62 million. However, the increase in employment kept pace with increase in labour force for the next 5 years, the total increase in jobs was only 1.1 million. Employment generation picked up from2009-10, with 13.9 million people finding jobs in 3 years. However, 14.9 million people entered the job market during this period. Currently about 26 million people enter the working age group every year with about 65% of them looking for jobs.

- ***Youth Skilling****:*

While keeping pace with employment, generation is one issue, employability and productivity of those entering the labour market is another issue. As per the India Skills report 2015, only *37.22%* of surveyed people were found employable - 34.26% among male and 37.88% among female. NSSO (2010) showed that only 10.1% of the labour force had received vocational training, with only 25.6% among them receiving a formal vocational training. India rankend*last*among 60 countries on labour productivity.

- ***Demand for Skilled Workforce:***

CII (2009) had projected Incremental Human Resource Requirement till 2022 at 201million, making the total requirement of skilled work force by 2022 at 300 million. A major share of these jobs was to beaded in the manufacturing sector, with the National Manufacturing Policy (2011) targeting 100million new jobs in manufacturing by 2022. The National Skill Development Policy (2009) had set a target of skilling 500 million people by 2022.

CHALLENGES OF SKILL DEVELOPMENT IN INDIA:

The challenge of Skill Development in India is Multifoods. There is a large proportion of the existing workforce, which needs skill training support of varying levels. While it is estimated that at least 1.70 crore will enter the workforce every year for the next 7 years. The current annual skilling capacity is inadequate to match this demand, with much initiative sun-aligned and suffering from a lack of coordination. The situation is further complicated by different states having different demographic situations, hence different skilling needs and challenges. “Vocational Training” falls under the Concurrent list, which means State Governments have a key role and responsibility in realizing the objective of “Skill India”. The Ministry of Skill Development and Entrepreneurship however, will have a crucial role in coordination between a range of stakeholders – including skill training providers, governments at all levels, and the end beneficiaries. Workforce giving the Indian Economy a ‘Demographic Dividend’. Currently a major proportion of this population is not productively engaged in economic activities due to a ‘skills v/s jobs requirement’ mismatch. The skills v/s jobs mismatch often leads to economically inactive working age group people. This not only affects the economy, it also has serious consequences for the society. Social unrest such as insurgency, red belt has been witnessed in several areas of India should be heeded with a measure of urgency.

Volume V Issue I ISSN 2349-8226

SUGGESTION AND REMEDIES FOR BETTER IMPLEMENTATION OF SKILL DEVELOPMENT SCHEME IN INDIA:

Following remedies and suggestion are suggested for effective implemenation of skill development scheme in India.

- Needs of learners and labour markets should be identified to make the necessary skills available by forming partnership among administrator, educational services and industry.
- There is a need to focus on informal sector and reach out to the people and livelihood promotion institution.
- A national vocational qualification framework is necessary to provide vertical mobility for those pursuing skills and make them eligible to shift between academics and skill based training depending on his choice.
- Need to develop advanced curriculum framework in order to train learners as per relevance.
- As the Government of India has set a target to impart the necessary skills to 500 million people by 2022in the Twelfth Five Year Plan whereas in reality the country is facing a significant
- One of the important requirements for the proper implementation of the skill and training development programs is the availability of the basic infrastructure for the same. It has been noticed that many skill development institutions suffer from lack of proper infrastructure
- At school level, there must be options available for skill development courses and they must be provided in the secondary stage of schooling
- Many more courses in fields such as Hospitality and Tourism, Handicraft, Healthcare, Textiles, Photography, IT, Retail, Banking, Insurance can be added that would interest students to learn from. For instance if a student opts for healthcare , he could learn to be a blood-collection expert and later can add further courses to become full-fledged pathology technician or nurse
- The pedagogy has to be practical; learning can be enhanced through field visits, e-learning, industry driven projects, digital or video inputs and so on
- Considering the Indian population, there is an acute need for training the young workforce, just to shape them in a better way
- In today's scenario, there are ample opportunities that one can choose from and excel in. However, the Indian thought process is more clued on to the typical traditional academic streams and careers in the field of engineering, medicine, accounts, MBA etc
- There are also those set of students who are not able to cope with mainstream education. This could be because of economic reasons or academic in-capabilities. So what are the options available to them, such that they lead a dignified life without being exploited or being vulnerable? Introducing skill training at a young age will go a long way in directing these students to opportunities that

Volume V Issue I ISSN 2349-8226

will have a larger impact on the general fabric of the workforce in this country

- Vocational education in India is now moving within the purview of a formal structured program at the university level. The 1st step in this direction has been the BVoc degree (Bachelor of Vocational Education) introduced by the UGC though it's notification in April 2012.
- Hence, this will open up opportunities for millions of students to pursue a graduation in various vocations apart from the regular main stream subjects
- The BVoc degree is at par with any mainstream graduation degree and thus, gives opportunities to students to apply for post graduate courses where the eligibility is any graduation
- The BVoc programme is also considered as an eligible degree for those seeking government jobs. The ITI system, the government established the National Skill Development Corporation (NSDC) in 2009. This unique public-private partnership (PPP) aims to promote skills development by fostering the creation of large, high-quality vocational institutions. NSDC funds are used to build scalable, for-profit vocational training initiatives. Its mandate also includes enabling support systems such as quality assurance, information systems and train-the-trainer academies directly or through partnerships with training providers. The NSDC has a target to train 150 million youth by 2022 through the PPP model.
- Adequate number of institutions in respective sec-tors in order to impart training to the employable can resolve the second type of challenge.
- In order to impart skill training Government of In-dia has set a target to train around 500 million peo-ple by 2022. Till June 2014 1.49 million people has been trained. Still a long way to go to absorb the new entrants in the skill development training and amplify the economy of the country.

CONCLUSION:

Skill Development is need of hour. It is the prime factor for development of our formal education system. To make India internationally competitive and to boost its economic growth further, a skilled workforce is essential. As more and more India moves towards the Knowledge economy, it becomes increasingly important for it to focus on advancement of the skills and these skills have to be relevant to the emerging economic environment. For transforming its demographic dividend, an efficient skill development system is the need of the hour. Therefore to achieve its ambitious skilling target, it is imperative to have holistic solutions of the challenges instead of piecemeal interventions.

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Privacy Preservation of Location Information in Geo-Social Application through Cloud

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***Abstract*: Now a day's use of smart phones and tablets is drastically increased. Various services are available to us by just one click on our mobile devices one such a service is Location Based service. Many Geo-social applications are getting popular like Foursquare, Facebook Places etc. which uses user's location data. Handling large requests from users and preserving their location privacy becomes major research problem in use of Geo-social applications. There are various methods introduced in past for preserving location privacy, however such methods suffered from the limitations such as less security, less accuracy, less scalability etc. Our system provides secure, scalable and efficient method which provides privacy in Geo-social application. The system uses encryption technique to achieve privacy**

Index Terms Geo-social application, privacy, Encryption

INTRODUCTION

The use of internet and smart phone, tablets has been inflated drastically in previous couple of years. Various additional services offered by smart phones along with basic calling service, made it popular amongst folks. One such service offered by smart phones is location based service. Using GPS current location of the user is collected and based on location different services are provided to user. Location based services are again of two types, the one in which current location of user is used to provide service to user like weather condition, route navigation etc and other is location sharing service in which location of user is shared with friends like recommendations from friends for nearby club, restaurant for dinning, cafe, rendezvous point to meet, friend finder, collaborative network service and games etc. Geo-social applications are based on location sharing services.

In Geo-social application the location and data related to location like geo-tag is share between friends. Facebook places, Foursquare, Banjo, and Gowalla are some of the popular Geo-social applications. Even though various Geo-social applications are getting popular now days, it comes with increased risk of privacy. Without proper mechanism to provide privacy, the information of user can be misused for home invasion, stalking, Political affiliation etc.

Geo- social application stores co-ordinate to run query and Geo-tags the additional information user want to share with his/her friend. Location of user and Geo-tag data both can be used by an attacker to infer the location information of user. By collecting and analyzing this information with public database an attacker might infer the daily activities of user, his habits etc. An attacker may use this information for carrying out numerous malicious activities mention above and hence there is a need to provide strong privacy mechanism. Various methods were introduced in past to provide the privacy to location based services, some of them can be used with Geo-social application while some not as the privacy requirement of Geo-social application is different than traditional location based services. Here we proposed a system in which cryptography method is used to provide privacy to user. The Secret keys are shared between friends, thus the friend with sufficient privilege only can access data. The system also ensures the integrity of data by using the third party auditor.

RELATED WORK

Various techniques were introduced in past to provide location privacy. The most popular method is

Volume V Issue I ISSN 2349-8226

based on K-anonymity. The basic principle of it is to hide the user among the k-1 user so that probability of user to getting identified get reduces to 1/k. Here k represents minimum number of user in cloaked region. An anonymizer a trusted third party server is placed between user and server. Every time user query server an anonymizer creates cloaked region using spatial and temporal cloaking and forward the cloaked region containing k user to server. Also an anonymizer removes the identity information such as network address before forwarding the cloaked request to server. In this way probability of user of getting indentify get reduces to 1/k. This basic Principle is used with little modification by various methods like temporal and spatial cloaking method [1], Casper [5], clique cloak, PRIVE [22].In temporal and spatial cloaking method using quad tree cloaked region is generated but this methods fails for outliers. The Casper provides flexibility to user to decide size of its cloaked region. Users profile mainly contains minimum area to be covered in cloaked region and value of k. This method uses pyramid data structure to create cloaked region. Clique cloak method on the other hand uses user's privacy profile containing value of k, time and space tolerance to create minimum bounding region as cloaked area. Even though this method is free from location distribution attack, it requires high computational cost for searching and creating clique and also it degrades quality of service as some request can't be anonymized as they won't form clique, hence it is not much beneficial. All these methods are not suitable for Geo-social application as users has to get accurate information about his friend only and with cloaked region it is not possible as it contain information of all k-1 user also. Also these approaches show less accuracy and take longer time to response.

The second method is based on dummies. As the name suggest the dummies means false location information. Dummies are send to the server along with users current location, server runs the query for each of the request and send result back to the user. At user side response for false location is dropped and only result for actual request is used. But continues observation of data ends up in detection of dummies as they were generated randomly thus distance pass by them would possibly get vary than real time .To overcome this problem two methods were introduced by Kido Hidetoshi [4],Moving in neighborhood and Moving in limited neighborhood. But both the method fails to prevent trajectory of user. To overcome this problem You T-H[7] propose a method in which three parameters short term disclosure, long term disclosure, distance deviation are used for creating trajectory of user. Using random pattern or rotational pattern the trajectories are created. Dummy method is not suitable for providing location privacy in Geo-social application because with this method storage and computation complexity get increased and unnecessary dummies get stored at server side.

The third method is based on location transformation .In this method the location of user is transformed before sending it to server. Mostly an intermediate server is used to carry out such transformation. There are various ways by using which transformation can be carried out like changing 2D co-ordinates into 1D co-ordinate, transformation using scaling and rotation etc. One way space transformation [6] is one of the method in which Hilbert curve is used to map 2D co-ordinates into 1D co-ordinate. The query is run on transformed co-ordinates. Another method is based on multiple transformations [9].It is used to provide location privacy to moving objects. Multiple agents are used in this method which acts as intermediary between user and server. Multiple functions are used by each agent. Whenever user query to server, one of the intermediate servers carry out location transformation using transformation function and keep a count for that function. When this count reaches to zero the function is removed. As multiple agents uses multiple transformation function at server side a super query is run over database which cover all transformations. The result is send back to same agent which again forwards the query. Then only appropriate result is send back to user. This method provides high level of privacy but it complex to implement.

Mix zone [2] method is based on pseudonyms. In this method mix zones are specifics region in which identity of user is kept hidden to avoid long term tracking of user activities but it supports short term goals using pseudonyms. In this method whenever user enters in mix zone the pseudonyms is assign to user because of this server won't able to trace user in this region but response to his/her request. This method is mainly used when user wants to hide his/her location only at specific regions only. This method lacks when used with multiple responders.

Private Information Retrieval [8] is another technique used to achieve location privacy. The method is based on cryptography. It uses special hardware to achieve privacy. User privately retrieves the data from server without letting know the server what data is requested and what data is retrieved. Users send the private query to server and server sends cipher block of data to user. Cipher block of data contain users point of interest. This method provides high level of privacy but hardware used to implement it makes it costly. LocX[10] is one of the method

Volume V Issue I ISSN 2349-8226

introduced recently to provide location privacy in Geo-social application. The LocX uses Encryption technique and location transformation to achieve privacy. The Secretes are share between friends includes transformation parameter and encryption key. In this Data and co-ordinates are kept separately in two different servers index server and data server. For each new request to be updated at server, a random number is generated. Using encryption keys the data and random number is encrypted. An encrypted index along with transformed location co-ordinates is stored at index server and Random index and an encrypted data at data server. Whenever friend comes to same region and wants to query the server, it first transforms his current location using the location parameters of his/her friend and then query index server. Index server returns the list of encrypted index to user. As user has encryption key it decrypts the index and queries to data server. For requested index data server sends the list of encrypted data which again decrypt by user. This method provides the privacy in Geo-social application but it results into lot of computation and communication overhead.

SYSTEM OVERVIEW

Geo-social applications:

There are various types of Geo-social applications available in market. Here we first discuss some of them to understand first the concept of Geo-social applications. Friend finder or buddy system is one of the popular example of Geosocial application. In this user get notification of the friends in his/her vicinity. The current location of user is get tracked down using GPS and similarly location of his/her friend. Upon applying range query over the data the notification is given to user regarding nearby friend. The Recommendation system is another Geo-social application in which recommendation is given to user by friends. Users comments, review about particular location is updated in database when his friend comes to nearby vicinity ask for recommendations, the data get retrieve from server and suggestions are given to him. Location Based reminders is also an example of Geo-social application. In this application users puts remainders for friend regarding particular location (like collect notes from friend when reach to college, buy a milk when close to grocery store) and once the buddy is at that location an alert is generated on the device.

Location based games are also an example of Geo-social application. So all this example shows us how Geo-social applications uses current location of user and his/her social circle to carry out various activities. A for sake of understanding we explain system in terms of recommendation system. With little or with no modification system can be used for all other applications also.

System Design:

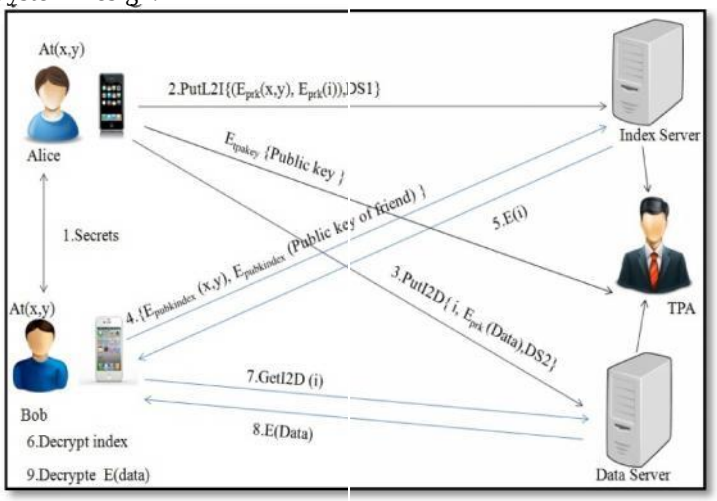


Fig.3.1 Architecture Diagram

The fig.3.1 shows architecture of the system. The system mainly contains Users (Application), Index server, Data server and Third party auditor(). Our system is mainly based on LocX system but due to encryption and location transformation the system result into computation overhead to overcome this problem our system uses only encryption technique only. Here we used an asymmetric encryption technique RSA to achieve privacy.

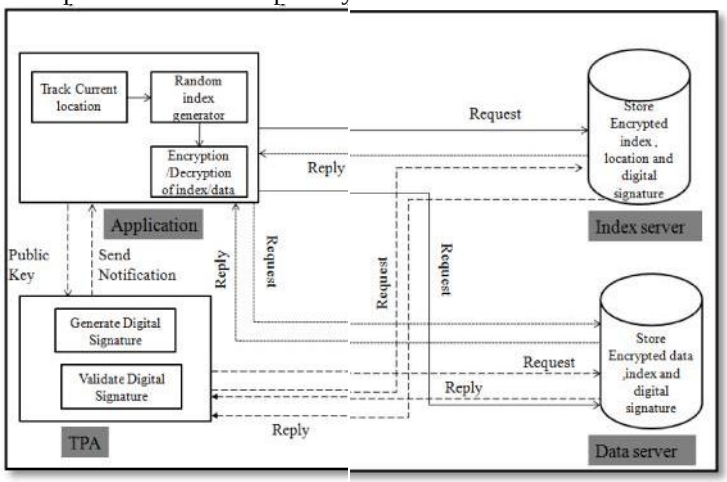


Fig 3.2 Block Diagram

The functionality of each component is shown in Fig 3.2.We explain each component and their interdependencies one by one.

Volume V Issue I ISSN 2349-8226

Geo-social application: An application is responsible for collecting the location of user, generating random number, Encrypting and decrypting data and showing information to user. An application interacts with index server, data server and TPA. We further discuss how they interact with each other in section IV.
Index server: This server stores encrypted index, encrypted co-ordinates and digital signature. Also process query and sends encrypted index back to application.
Data server: This server stores encrypted data, index and digital signature. It also run the query and sends the result back to application.
TPA: TPA is responsible for checking integrity of data stored at index server and data server.

SYSTEM MODULES

Module 1:
1) Registration and Login: To use any service we need to subs first subscribe to serviceso it first step is to do registration.When user register with the system pair of encryption keys are assinged to him private key and public key.As mention we are using RSA algorithm for encryption.To achive better security and to avoid man in middle attack we are genrating keys uing prime number concept of the RSA and appending it with timestamp.Once the registration is done user kept his private key with himself only but share his public key with his friend either through personal meeting or through Emails.To use system some login name and password is set by user.

2) Location tracking: Whenever user wants to updates his review to the system an application trace his current location using GPS. The random number generator generates random number as index. An index, data i.e. review and location co-ordinates are encrypted using users private key. Also to insure integrity digital signature is generated for encrypted index and encrypted co-ordinates using users private key. Also as data is kept on other server another separate digital signature is generated for index and data. For sake of simplicity we mention it first digital signature as DS1 and second as DS2.To generate a digital signature RSA with MD5 algorithm is used. Encrypted index, Encrypted co-ordinates and DS1 is stored at index server and index, Encrypted data, and DS2 at data server.

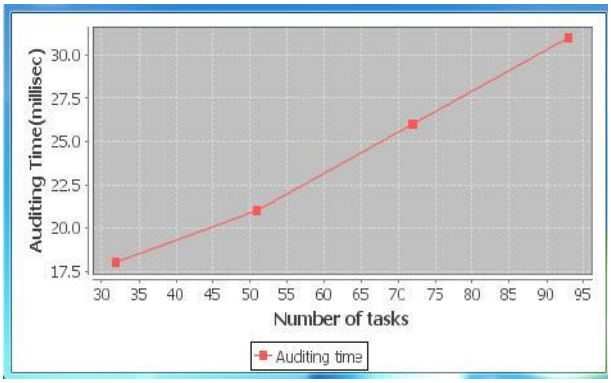
Module 2:
Whenever user comes to any location and wants to visit some place nearby, he queries application. An application track current location of user using GPS. Then encrypt it using index servers public key and also encrypt the list of public key of friends. Users Encrypted location and list of public key is decrypted by using private key of index server at index server side. Then index server decrypt the data using public key of friends. The nearest neighbor query is run over the data and corresponding list of indices are send to application. At application side again decryption of encrypted index is carried out using public key of friends.
Then request is made for data server for corresponding data. Data server search for data for corresponding index and send them back to application .As data is encrypted it is decrypted again using public key of friend and represented to user.

Module 3:
In this module the integrity of data is checked, as malicious user may corrupt the data.TPA request the public key from user. An application sends the public key of friend to TPA by encrypting it using TPA public key. The TPA requests data from both the server for verification. An index server sends encrypted index, encrypted co-ordinates and digital signature in read only format to TPA. An auditor generate new signature using public key of user and verify both the signature if they matches then no modification is carried out otherwise data is tampered and notification is send to user. Similarly for data server index ,encrypted data and digital signature is requested form data server by TPA.A new digital signature is generated using public key and cross verified with digital signature stored if matches then no tampering is carried out with data otherwise data is modified.

RESULTS

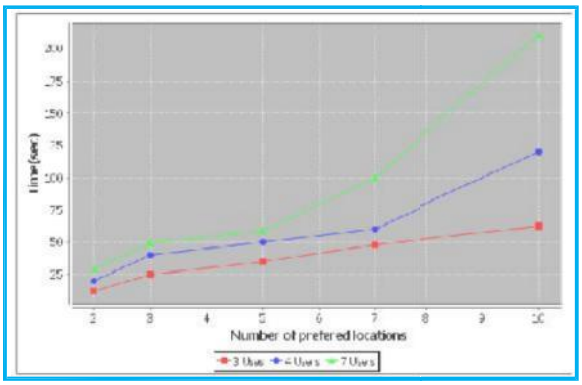
The project ensures distributed data(location) sharing and security in android & cloud. After uploading data on cloud, this project will maintain all the records about users. Also bundling of the data with users information and accessing that data or location by getting that particular key which is associated with that information & through that we can preserve our location privacy.

Volume V Issue I ISSN 2349-8226



Graph 5.1 Auditing Response

Here above graph shows the auditing response which is time required to audit data in millisec for number of entries.



Graph 5.2 Comparative Response Time

We are performing a series of controlled experiments in order to evaluate the performance of our system. In the first set of experiments, we measure the performance of our system with 3 users and 2,3,5,7,10 number of preferred locations. For this set of experiments, we are using Motorola Mobile having 1GB RAM and Quad-core processor, we observe execution time of around 9 seconds on the client for getting the notification and it increases as the number of users increases.

Parameters	**Preserving Location Privacy in Geo-Social Applications**	**Privacy Preservation of Location Information in Geo-Social Application through Cloud**
Security on location	1) Transformation query is applied on location	1)Encryption is applied on location
Indexing	2) Yes	2) Yes
Data validation and verification	3) No	3) TPA is used for data verification and validation
Query support	4) point query, circular query and nearest neighbor query	4) point query, circular query and nearest neighbor query
Location information security	5)Yes	5)Encryption is applied on information Server
Location notification	6) Only friend can see the notification	6)Only friend can see the notification
Proxy Server	7) Proxy server is used to hide IP of requesting client	7) No Proxy server is used
Attack Prevention and detection	8) man in middle attack	8) prevention man in middle attack, Sql injection attack and detection of data modification attack

Table 5.1 Comparative Table

In existing system, proxy server is vulnerable in case of location value extraction; all transformation happening in system is through only proxy server,
In our case we eliminated the option of transformation and used Asymmetric key encryption while in existing system symmetric key encryption technique is used which is vulnerable in this kind of system with huge chunk of data and users. We prevent man in middle attack and SQL injection asymmetry with encryption and verify data and check data integrity and detect data modification attacks.

CONCLUSION:

Privacy is one of the main concern to the user whenever he/she uses any application. Application can subtend in market only if it provides assurance to user about privacy of his/her location data. We proposed a system for Geo-social application that provide privacy to user location data and also assure integrity of data. Proposed system can be extended by integrating it with location transformation scheme.

Volume V Issue I ISSN 2349-8226

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Volume V Issue I ISSN 2349-8226

Need and Importance of Skill Development in Formal Education.

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ABSTRACT

In present context of globalization the demand for skilled & multi skilled worker has been increased there for there is need for quality skill & training. A part from core subject's expertise in some of prominent skill required.

In the changing world scenario with regards to industry and the job market there is now an overpowering need of skills. Because of that we required to develop & promote skills in a current education of India.

For that we required Public awareness, Education and Training are the key elements to move our society towards sustainability. Only a quality future human capital can envision development of its nation to meet the needs of the present without compromising the ability of future generations to meet their own needs. Therefore, the inculcation of soft skills among the students will be two prongs, to produce quality human capital and to develop their knowledge, understanding, values and skills as well. How the two skills blend together will be discussed here e.g. **Communicative skill, Critical Thinking and Problem Solving skill, Team Work, Lifelong learning and Information Management skill, Entrepreneurship Skill, Ethics And Moral Professional, Leadership Skill , Technical Skill & ICT.**

To live to the challenge of globalization which is in line with the era of information economy, the strength of a nation is strongly dependent on the ability of its citizen to be highly intellectual and skillful. The development of human capital is thus important and necessary since it drives the nation to the envision vision and mission. Without a quality human capital, a nation will be weak as there is no human factor that is capable to embark on new initiatives and perspectives. A quality human capital comes from a quality education process. A carefully designed and well planned education system is critical to developing such human capital.

Volume V Issue I ISSN 2349-8226

Introduction

India is on the edge of explosive economic growth. Since coming to power, the Modi-led central government has been striving to put into place measures, and create an ecosystem which fosters industrial activity, domestic manufacturing, and enhanced fiscal health. As such, availability of skilled personnel is going to be the defining element in India´s growth story as the country transforms into a diversified and internationally competitive economy.

Current Status:

India currently faces a severe shortage of well-trained, skilled workers. The government estimates that only 2.3 per cent of the workforce in India has undergone formal skill training as compared to 68 per cent in the UK, 75 per cent in Germany, 52 per cent in USA, 80 per cent in Japan and 96 per cent in South Korea. Large sections of the workforce have little or no job skills, making them largely unemployable. Therefore, India must focus on scaling up skill training efforts to meet the demands of employers and drive economic growth. As per the framework of implementation of the National Mission for Skill Development, India is one of the youngest nations in the world, with more than 54 per cent of the total population below 25 years of age and over 62 per cent of the population in the working age group (15-59 years of age). The country´s population pyramid is expected to bulge across the 15 to 59 years-old age group over the next decade. This demographic advantage is predicted to last only until 2040. India therefore has a very narrow time frame to harness its demographic dividend and to overcome its skill shortages. The power sector in India faces an immense shortage of workers with adequate competencies. The sector is poised for a huge addition in generation capacity to provide 24x7 electricity to everyone in the country. The 12th Five Year Plan estimates that an additional capacity of about 85,000 MW will need to be added by 2017 in order to address India´s growing energy demand. This will only be possible if adequate number of trained and certified skilled workers are available in the entire value chain from generation to servicing the last mile consumer. Professional competence in today´s power sector requires not just cutting-edge technical skills, but also effective commercial and inter-personal skills aligned to the specific needs of the power industry.

Power Skill:

Despite the vital importance of industry-specific skills, training for these skills can be extremely difficult to source. To bridge the competency gap in the power sector, Tata Power has established the Tata Power Skill Development Institute (TPSDI) as a non-profit corporate social responsibility (CSR) initiative in 2015. TPSDI is mandated to provide modular training and certification in the power sector and allied skills leading to employability. TPSDI harnesses the rich experience of Tata Power employees to prepare the youth and others for the huge opportunities coming up in the power sector in the country. The Institute employs a 360 degree approach for holistic development of workers in power-skills and encourages them to reach their full potential. TPSDI´s approach to re-skilling, and up-skilling enables aspirants to pick up and continuously hone skills that would benefit them for life. For every course, skill standards are laid out in terms of requirements of knowledge and skills for each training. These requirements are arrived at after carrying out training need analysis for each skill. All standards are compared with and aligned to National Occupational Standards as specified by the National Skill Development Council (NSDC). The Institute currently has two centers in the country - Shahad and Trombay and plans to soon set up five integrated training centers across India.

Way Ahead

Volume V Issue I ISSN 2349-8226

If India is to gain its rightful place in the world, skill development will require to be given a place right on top of national priorities. Creating new jobs is only a part of the equation for employment in today´s developing India as over 12 million youth are joining the workforce each year and hence bridging the existing skill gap is of prime importance. Tata Power Skill Development Institute, which aims to bridge this skill gap in the power sector by training the workforce engaged in the sector with skills that make them more employable and helps them excel in their fields is an excellent of the contribution and impact that corporates can make to bridge India´s skill gap. There is need for greater participation from the industry and the private sector to realize ´Skill India´ dream. For any skill development effort to succeed, markets and industry need to play a large role in determining courses, curriculum and relevance. For this, employers need to be put in the driving seat, with the government aiding and abetting industry efforts. India has its task cut out. The Government is trying to do its bit and has given skill development a huge push. It is time for the industry to catalyse investments and raise resources for training.

NSDC Achievements

- Over 5.2 million students trained
- 235 private sector partnerships for training and capacity building, each to train at least50,000 persons over a 10-year period.
- 38 Sector Skill Councils (SSC) approved in services, manufacturing, agriculture & allied services, and informal sectors. Sectors include 19 of 20 high priority sectors identified by the Government and 25 of the sectors under Make in India initiative.
- 1386 Qualification Packs with 6,744 unique National Occupational Standards (NOS).
- These have been validated by over 1000 companies.
- Vocational training introduced in 10 States, covering 2400+ schools, 2 Boards, benefitting over 2.5 lakh students. Curriculum based on National Occupational Standards (NOS) and SSC certification. NSDC is working with 21 universities, Community Colleges under UGC/AICTE for alignment of education and training to NSQF.
- Designated implementation agency for the largest voucher-based skill development program, PradhanMantriKaushalVikasYojana.
- Skill Development Management System (SDMS) with 1400 training partners, 28179training centres, 16479 trainers, 20 Job portals, 77 assessment agencies and 4983Empanelled assessors. Hosting infrastructure certified by ISO 20000/27000 supportedby dedicated personnel.

Today, the world and India need a skilled workforce. Skills and knowledge development are the driving forces behind the financial growth and community development of any country. Skill building is a powerful tool to empower individuals and improve their social acceptance. It must be complemented by economic growth and employment opportunities to meet the rising aspirations of youth.

In present economy, the objectives of a society have also changed from fulfilling the basic needs of all round development to empowerment. The education system instead of going by text-book teaching needs to be promoted by skill based teaching learning pedagogy. The human resource instead of being unskilled or semi-skilled needs to be knowledgeable, self-empowered and flexibly skilled.

India is among the “young” countries in the world, with the proportion of the work force in the age group of 15-59 years, growing steadily. However, present status shows only 2% of the total employees in India have undergone skills development training; India can become the worldwide sourcing hub for the skilled employees.

Volume V Issue I ISSN 2349-8226

Skills and knowledge are the motivating force of the financial growth and community development of any country. They have become even more important given the increasing pace of globalization and technological changes provide both challenges that are taking place in the world. Skill building can be viewed as a device to improve the efficacy and contribution of labor to overall production. It is an important ingredient to push the production possibility front line outward and to take growth rate of the economy to a higher route. Skill building could also be seen as an instrument to empower the individual and improve their social acceptance.

Quality of 'Skill India'

- Aim is to guide the youths in a manner so that they get employment or start their own business.
- Skill India provide scope not only for the upcoming generation but it also provides training options for the traditional type occupations such as carpenters, welders, cobblers, tailors, nurse etc.
- Skill India provides need-based programmes for the certain age groups which can be the communication or language skills, personality development skills, behavioral skills and job-employability skills.

The hurdles which youth across the world faces regarding their job and skills is completely different from what their parents faced. Due to the competition in global economy, industries and firms in developed and developing countries look for a worker or an employee with higher level of skills, who can engage in innovative task, can improve the quality and services of their company. It is a HIGH-TIME to improve the mental and physical development of the Indian youth so that they can be employed and move forward towards the targeted results. As the Indian youth is the 'future' of the country so they should also be skilled enough to create a 'future'.

The importance of skill development

In a constantly changing environment, having skill development is an important part of being able to meet the challenges of everyday life. The dramatic changes in global economies over the past five years have been matched with the transformation in technology and these are all impacting on education, the workplace and our home life. To cope with the increasing pace and change of modern life, students need new skills such as the ability to deal with stress and frustration. Today's students will have many new jobs over the course of their lives, with associated pressures and the need for flexibility.

Benefits for the individual

In everyday life, the development of skills helps students to:

- Find new ways of thinking and problem solving
- Recognise the impact of their actions and teaches them to take responsibility for what they do rather than blame others
- Build confidence both in spoken skills and for group collaboration and cooperation
- Analyse options, make decisions and understand why they make certain choices outside the classroom
- Develop a greater sense of self-awareness and appreciation for others

Volume V Issue I ISSN 2349-8226

Benefits for employment

While people work hard to get good grades, many still struggle to gain employment. According to research by the CBI (Confederation of British Industry) in 2011 employers were looking not just for academic success but key employability skills including:

- The ability to self-manage, solve problems and understand the business environment
- Working well as part of a team
- Time and people management
- Agility and adaptability to different roles and flexible working environments
- The potential to lead by influence

Benefits for society

The more we develop skills individually, the more these affect and benefit the world in which we live:

- Recognising cultural awareness and citizenship makes international cooperation easier
- Respecting diversity allows creativity and imagination to flourish developing a more tolerant society
- Developing negotiation skills, the ability to network and empathise can help to build resolutions rather than resentments

Volume V Issue I ISSN 2349-8226

NUMERACY, AN ESSENTIAL SKILL FOR EMPLOYABILITY - A REVIEW

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ABSTRACT

Numeracy is an ability of an individual to understand and apply mathematics in making decisions of day today life. Numeracy is an essential skill for employability leading to sustaining the job in the long run. In today's competitive world having a qualifying degree in not enough to bag a job. Employability skills are the mandatory skills for the employees to get hired. Innumeracy leads to poor decision making, lack of health, wealth and poverty. Thus innumeracy leads to increased crime rates and also afflicts the country's economy. This paper discusses about the various issues regarding the lack of numeracy, importance of numeracy, functional numeracy required at workplace and also reviews the literature to understand different models for embedding of numeracy content in the curriculum for educational institutes.

Keywords: Curriculum , Employability Graduates, Numeracy Skills

INTRODUCTION

In order to get job in various sectors one must be flexible enough to get adapted to the requirements and needs of various sectors. This not only increases the job opportunities but also makes one a dynamic, flexible and versatile performer. In order to increase the flexibility, one need to learn the transferable skills. Transferable skills are not sector specific but are common to all employment sectors. Moreover these are not the skills which are innate but these skills can be learnt.

Job seekers can see on various job portals about the basic qualification required for a job. But in today's competitive world qualification has taken a back seat. In fact, the employers are more interested in the skill sets attained by the candidate in that particular field. For employers Skills are beyond qualification and experience. Such skills are called as employability skills that makes you employable.

The concept of 'employability' has been most usefully defined recently as 'the ability of an individual to secure and sustain employment and progress within the workplace', recognising that different types of employment have different 'employability' requirements (Belt *et al.* 2010: 1-5, UKCES 2010: 2-3).Although you may have qualification or experience related to hard skills required for the job role but without soft skills employers are less interested in hiring you. According to Brown and Hesketh (2004), In UK, the qualification are just considered as a "threshold requirement" whereas employers' are increasingly interested in the personal attributes like soft and relevant hard skills.

Thus employability skills are those which helps you in getting and being successful in a job. Such skills helps the candidate to solve day today issues, decision making, interpreting information and thus an asset to the organization. Such skills are lacking in the large mass of candidates who apply for the jobs. However employers spend lot of money on training there staff related to soft skills, but they immediately fire the employee if they don't find them performing well. Numeracy skills has been identified as one of the most important basic skill required for getting a job.

Volume V Issue I ISSN 2349-8226

Even the Twelfth Five-Year Plan recognized the centrality of the quality challenge and has explicitly committed to a target of: "Improving learning outcomes that are measured, monitored, and reported independently at all levels of school education with a special focus on ensuring that all children master basic reading and numeracy skills by class 2 and skills of critical thinking, expression and problem solving by class 5." Numeracy skills has been identified by Dearing (1997) as the “key to the future success of graduates whatever they intend to do in later life” considering it as one of the essential skill for employability. Numeracy is a skill which is not only required for employment but is a skill relevant throughout life (NCIHE, 1997). In a list of specific skills required for any job produced by DfEE , in 1998, Basic literacy and numeracy occupied the first place.For freshers , Martin et.al. (2008) has mentioned that the employers expect candidates to '*at least be enthusiastic, literate, numerate and able to turn up on time*'.

This paper tries to understand the importance of numeracy skills as even the employers give importance to numeracy skill . Recruitment process involves screening of candidates having poor numeracy skills, irrespective of their degree subject. Since numeracy tests are being conducted for recruitment in almost all types of jobs. According to Standard Occupation Classification (SOC), the numerical tests for recruitment purpose has been used for recruitment on following posts: Professional posts (75%), Managerial positions (48%), Administrative positions (39%), Associate professional and technical (31%), Secretarial and clerical positions(29%), Sales and customer service(19%), Skilled trade (14%)and Process, plant and machine operative posts (10%). In fact only 32% of jobs demand a first degree in a specific academic discipline which is even less in banking/ financial and service sectors where only 16% and 29% of jobs do. 70% of employer consider it essential to pass the numeracy tests and 30% consider it desirable. Many graduates are rejected without interview because of their poor numeracy skills.

Hence it becomes need of time to prepare the students with the sufficient level of numeracy skills in order to increase employment opportunities for the fresh graduates. This highlights how important it is for undergraduate programs to be more inclusive of intra-curricular activities that give opportunities to students to develop their numeracy skills.

DEFINITION OF NUMERACY

Numeracy, an important component of literacy, can be broadly defined as the ability to use numbers in everyday life. Literature Review provides various definitions, to quote few as below:

The term ‘Numeracy’ was first coined in 1959, by the authors of Crowther Report as follows:

“ numerate is defined as a word to represent the mirror image of literacy…. On the one hand…an understanding of the scientific approach to the study of phenomena – observation, hypothesis , experimentation, verification. On the other hand... the need in the modern world to think quantitatively, to realise how far our problems are problems of degree even when they appear to be problems of kind. Statistical ignorance and statistical fallacies are quite as widespread and quite as dangerous as the logical

Volume V Issue I ISSN 2349-8226

fallacies that come under the heading of illiteracy. (Cockcroft, 1982).

Numeracy skills is described as a "New currency of modern societies around the world" (OECD, 2010). Numeracy is also defined asthe ability to access and use mathematical information in order to handle the numerical demands of a rangeof situations in adult life (OECD, 2013a)

Mathematical Literacy (Numeracy) is an individual's capacity to identify and understand the role that mathematics plays in the world, to make well – founded judgments and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen.(PISA).

According to Peters et.al. (2012), Numeracy can be defined as the ability to understand and process basic notions of numbers and chance events, aids decision making in the real world over a wide range of health, financial and social issues. Hence it can be assumed that person with low numeracy skills may not be a good decision maker.

According to Programme for the International Assessment of Adult competencies (PIAAC), numeracy is defined as "the ability to access, use, interpret and communicate mathematical information and ideas in order to engage in and manage the mathematical demands of a range of situations in adult life."

The main goal of mathematics education in schools is the *mathematisation of the child's thinking*. Clarity of thought and pursuing assumptions to logical conclusions is central to the mathematical enterprise. There are many ways of thinking, and the kind of thinking one learns in mathematics is an ability to handle abstractions, and an approach to problem solving (NCERT, 2006).

The mathematical and the process skills identified include the ability to: *Understand a situation, choose an approach to tackle the problem, formulate a model using maths, use maths to provide answers, interpret and check results, evaluate the model and approach, explain and analyse, apply and adapt to the situations as they arise.*

According to EU High Level Group of experts on Literacy (2012), Numeracy can be classified in three categories: Baseline Numeracy (Having a sound knowledge of numbers , measures and structures , basic operations , basic mathematical presentations and the ability to use appropriate aids that enable further development), Functional Numeracy (The ability to apply basic mathematical principles and processes in everyday contexts at home, school and work (as needed for banking, payments etc.)) and Multiple Numeracy (The ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentation (formulae, models, graphs, charts) that enable a person to fully function in a modern society.)

Thus numeracy can be understood as any activity in day to day life that can be solved by using mathematical calculations. For instance:

Household finances – budgeting, paying bills , negotiating car payments, loans and mortgages, understanding credit cards , interest rates and payments.

Media – Critically assessing statistics used by advertisers, politicians etc.

Volume V Issue I ISSN 2349-8226

Shopping – Comparing prices by size and weight, estimating the amount of bill, calculating change, and estimating discount and sale prices.

Cooking – Adjusting recipes, measuring ingredients and determining cooking times, counting calories.

Home improvement – measuring, planning the use of space and designing layout, determining amount of materials, time and money needed.

THE ISSUE

The need for numeracy skills have been identified after encountering the facts, figures and data that shows the shortage of employees who are well versed with the numeracy skills. The basic concern is the lack of numeracy skills throughout the world.

There is substantial amount of data that supports the statement that majority of people are innumerate. A study by Schwartz et.al.(1997) found that only 16% of women veterans from New England Army Registry were able to get high scores on numeracy test comprising of questions on simple concepts of chance events and proportions. In a survey by National Assessment of Adult Literacy (2003) , more than 110 million Americans have basic or poor quantitative skills.Fifty-five per cent of Canadian adults have inadequate numeracy skills—a significant increase from a decade ago. In another study by Kirsch et.al.(2002), it was found that approx. 50% of Americans lack the basic numeracy skills that includes interpreting the data provided in the printed form. Simmilarly Lipkus, Samska and Rimer (2001)found in their study that only 18% of respondents were able to answer all the questions correctly in the 3-item general numeracy questionnaire. According to Council of Australian Governments, 2008 approximately 50% of the Australians aged between 15 to 74 years do not have the literacy and numeracy skills which is required to deal with the everyday life and work.

Though it's quite clear from the above findings that even in the developed economies there are evidence for low numeracy, which makes clear that the situations can be worse for the developing countries. But to the surprise of all a study by Gaurav and Singh (2012) gave an extraordinary finding where the rural farmers from Gujarat were found to have high numeracy skills. Another study by Sunder and Virmani(2003) indicates low numeracy level amongst the rural farmers in forest areas of Andhra Pradesh. Men were found to have higher numeracy skills in comparison to the females. The respondents were able to do the calculation orally however they find it difficult to recognize the arithmetic symbols.

The major concern is that in a study by PIAAC it was found that innumeracy which was found to be in 49% adults in 2003 has increased to 55% adults in the year 2012 despite various efforts taken by the Canadian government to improve numeracy skills.

Volume V Issue I ISSN 2349-8226

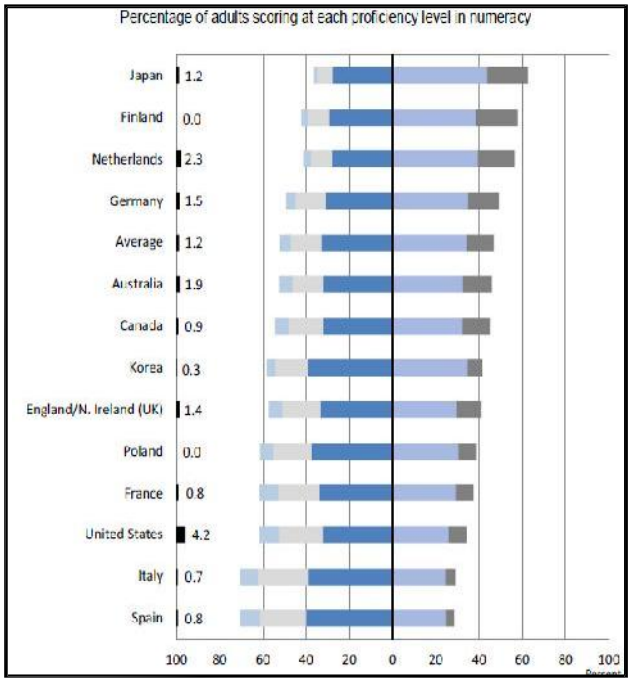


Figure 1 Numeracy Proficiency among Adults
Source: Survey of Adult Skills (PLAAC) (2012)

> Drug calculations, and basic numeracy, are huge issues within healthcare.Given that patients may die if these are wrong, it is clearly extremely important that ODP andnursing students can demonstrate numerical competency.
> _(Operating Department Practice tutor)

Figure 1 shows that share of adults at different levels of numeracy proficiency. For example, in the United States 25.9% of adults scored at Level 3 and 8.5% of adults scored at Level 4/5. Countries closer to the top of the chart have proportionately more adults who score at higher levels of numeracy.

IMPORTANCE OF NUMERACY SKILLS

According to Mathematics Learning Study Committee (2001), "Citizens who cannot reason mathematically are cut off from whole realms of human endeavour. Innumeracy deprives them not only of opportunity but

But, mathematics is very important in day to day life. It saves ones time, money and helps in interpreting various information. Thus increases the wellbeing. Inadequate numeracy skills makes one prone to health and safety hazards. As, the health and safety documents are mostly written in the charts , data and tabular form which needs to be interpreted. This may put public life in danger at the workplace. In the USA, the ratio of low-skilled people in poor health are four times that of with highest skills. A person with innumeracy may feel embarrassed by their difficulties and will ultimately lose self-confidence and self-esteem. A person with low numeracy is more prone to poverty thereby increasing the crime rates.

Literacy and numeracy skills undoubtedly contribute to economic and social well-being (Finnie & Meng, 2007). However, those at the bottom end of the economic ladder are not completely trapped in a secondary labour market with few available options. Nevertheless, skills matter, and helping individuals increase their literacy and numeracy capabilities could be important for improving their labour market

Volume V Issue I ISSN 2349-8226

opportunities.Such people don't find them competent enough to search for more jobs leading to unemployment as the demand for unskilled jobs have reduced drastically.

According to Paulos(1988), innumeracy has adverse effects on both the educated and uneducated people. It adds that innumeracy leads to irrational and chaotic decisions in response to the illogical chance events. According to Statistics Canada, "The cost of innumeracy to society in terms of bad decisions made on the basis of misunderstood math and misinterpreted risk is great."

> Application for employment as a police officer requires the candidate to submit to numeracytests. Often this one test alone prevents some applicants progressing through the process. (Policing and criminal investigation tutor).

Various researches have proved the importance of Numeracy as mathematical skills have contributed to the development of economies (Hunt & Wittman (2008), Cokelt et.al. (2012). Inadequate numeracy skills afflicts individual's potential for getting jobs, promotion which ultimately affects country's economy thereby worsening its productivity.

Positive association has been identified between the numeracy skills and wealth and income levels. The proves has been given by the researches from Lusardi et.al.(2009,2011,2012) that the respondents who were not able to calculate the interest rate were not able to calculate their savings from income and hence fail to do financial planning. Hence, the innumeracy leads to low wealth in the long run.

EMPLOYER'S OPINION

Various researches gives the evidence about the employers giving more importance to the numeracy skills amongst the graduates. Four key reports namely ACME (2011), CBI (2010), CBI (2012) and UKCES (2012a) were referred to understand the opinion of employer's towards numeracy skills. There is consensus across all the four reports regarding the requisite of basic numeracy skills amongst the prospective employees even in the non – numeric professions. It was especially mentioned in the reports of CBI and UKCES that the school drop outs and other employees were found to have low numeracy skills. Some UKCES employer's also reported that low numeracy skills lead to vacant positions. These vacant positions were further kept vacant because of shortage of applicants with appropriate skills, qualification or expertise.

According to the study by Hoyles et.al.(2002) , numerate literate graduates are more in demand by the employers. In a survey by Institute of Directors (2007), a list of 28 essential employability skills, numeracy skills was ranked as the sixth most important skill. The survey also exposed the fact that according to the 21% of employers, their employees used their numeracy skills occasionally or never, which raise the questions on the applicability of the mathematical knowledge gained by the graduates.

Volume V Issue I ISSN 2349-8226

NUMERICAL CONCEPTS IN DEMAND

The Basic mathematics which is usually expected from the prospective employees areAddition, Subtraction, Multiplication, Division , Percentages and Averages. According to the report by CBI (2010, p.5) following mathematical skills and abilities constitutes "Functional numeracy in the workplace":

a. Mental arithmetic without using a calculator
b. The ability to interpret and respond to quantitative data
c. Calculation of a percentage and interpretation of its significance
d. The ability to work comfortably with fractions, decimals and ratios
e. Awareness of different measures and the ability to convert between them
f. Instinct to pause and check potentially rogue results and calculation errors.
g. Basic understanding of odds and probabilities

According to CBI(2010) and ACME(2011) reports that only the acquisition of these skills is not important, it is equally important to able to apply it confidently in the workplace . From the studies by Lusardi (2012), it's quite clear that numeracy skills are important in everyday life for financial decision making, hence it becomes imperative to impart training comprising of concepts of basic arithmetic like interest calculations, inflation, and time value of money, discounts, selling cost and calculation of volume of objects.

Such knowledge shall be of use to people in their household financial decisions. It's equally beneficial for farmers where they will be able to calculate the work done and payment received. This shall save them for debt traps and help them to make safe borrowing decisions. Numeracy concepts can be used in fitness industry as well like for estimate and measure weight, work out ratio, proportions and percentages, measure and record time and use decimals in measuring and money.

According to Naureen Durrani and Vicki N. Tariq, (2012), numeracy skills expected by prospective employees were use of statistical software (25% of employers), representative sampling (32%), use of database software (48%), and understanding the language of maths (48%), 70% of employers selected the numeracy skills like understanding the concept of number, handling fractions and decimals, calculating rates, calculating percentages, working with ratios and proportions, understanding measures of central tendency, data interpretation, numerical problem solving, understanding basic finance and using spreadsheet software.

According to Richard Cameron (2009), Numeracy tests conducted by employers usually involves questions on Problem solving with multi- step calculations and extraction of data. Questions are usually presented as multiple choice with, typically, six choices.

Volume V Issue I ISSN 2349-8226

Example:

Question *Figure II is a graph of oil price (Brent crude) versus time for a 12-month period. The grid is at the first of the month named on the axis.*

a) What was the oil price on December 1st?

b) In which month was the maximum price reached?

c) Which calendar month saw the greatest percentage reduction in the oil price?

d) Which 3 month period saw the most stable prices?

According to British Broadcasting Corporation 's Skillswise – English and Maths support for adults, the numeracy skills that needs to be acquired are Numbers – number lines, decimals and negative numbers, Calculation – Addition, Subtraction, Multiplication and Division, Percent & Fractions, Measuring, Shapes and Graphs.

Hence, on the basis of the above reviews following are the skills and capabilities that are required by the employers in the prospective employees:

Numerical skills

• Performing mental arithmetic – concept of numbers, adding, subtracting, multiplying, and dividing.

• Calculating percentages and conversion between units.

• Working out proportion and ratios, fractions, decimals

Statistics

• Understanding averages: mean, median and mode.

• Identifying trends correctly from a variety of sources.

• Making comparisons in order to draw conclusions. And Sampling techniques

• Interpreting graphical information accurately, e.g. in tables and charts.

- Probability

Applying general arithmetic

• Using and applying mathematical concepts in a work environment.

Geometry

- Size, Shape and volume of objects.

Understanding of financial terminology and awareness of organisation's financial position

• Simple Interest, compound Interest, time value of money, discount, selling cost, Buying cost

- Show evidence of understanding current economic terminology, e.g. gross domestic product (GDP), inflation, procurement, tendering, key markets, customer base.

• Show evidence of knowing key information about the organisation, e.g. if a Public Limited Company (PLC), its current share price and that of competitors and its position in the FTSE top one hundred; if a public sector organization, the funding streams available.

Use of Software

- Database software, Spreadsheet software, Statistical software

IMPARTING NUMERICAL SKILLS IN EDUCATIONAL INSTITUTES

The need for skill development can be addressed by the Higher Education providing Educational Institutes. Thus it becomes the responsibility of Higher Education providers to inculcate employability skills amongst students thus to meet the needs of Graduate Labour Market. According to GIZ, numeracy is a relatively

Volume V Issue I ISSN 2349-8226

"ignored facet" of International education.According to Binay Pattnayak, School mathematics takes place in a situation where: (1) Children learn to enjoy mathematics, (2) Children learn important mathematics, (3) Mathematics is a part of children's life experience which they talk about, (4) Children pose and solve meaningful problems, (5) Children use abstractions to perceive relationships and structure, (6) Children understand the basic structure of mathematics and (7) Teachers expect to engage every child in class.

Educational Institutes may follow the acquisition process followed by Sarva Shiksha Abhiyan which is as follows:

a) Preparations at national and state levels for improving quality of maths education in schools joyful and activity based classroom process by mathematizing the thinking process of children to create interest in mathematics, help in conceptual clarity and thereby reduce the math-phobia among children, development of mathematical learning aids, guidebooks, teacher training manual and mathematics worksheets, remedial teaching, innovative maths promotion activities like Metric mela, Maths club, Maths festival, Maths marathon, Ganitha Mela

b) Envisioning exercises at national and state level for better understanding about mathematics education

c) Material development for different activities

d) Training of trainers and teachers for maths related activities

e) Promotion of innovative 3 'R's (Reading, 'Riting & 'Rithmetic) guarantee programmes in states

f) Diagnosis and remedial measures for children who need special assistance

g) Action research on basic numeracy related issues

h) Internal and external Learning Achievement Tests to track children's progress

i) Quality monitoring for tracking children's performance on a regular basis

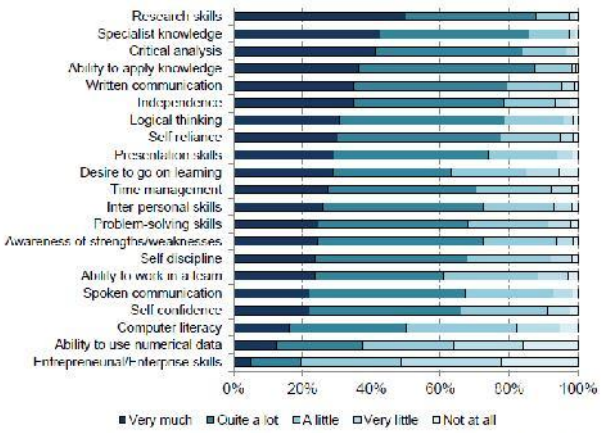
According to DIUS (2008): '*We want to see all universities treating student employability as a core part of their mission. So we believe it is reasonable to expect universities to take responsibility for how their students are prepared for the world of work*'

Higher Education institutes are expected to design the curriculum and courses in order to cater to the current needs of the industry thereby leveraging the students with the required employability skills (Knight & Yorke, 2004). Numeracy skills needs to be integrated to the course syllabus itself. In order to improve numeracy skills, skill development should be incorporated in the teaching and learning provisions. Modifications should be made in the existing course content, through including the content related to numeracy skills. New skill based courses can be started at the department- level or on a university-wide basis. The research findings by Mason et.al. (2006) found that there was no independent effect of teaching employability skills on graduate employment. Numeracy problems arise in many subject areas and they are often dealt with by individuals or small group of colleague's .Hence, it is the high time to reintroduce the data handling and numerate techniques into courses to improve the employability of the graduates. In a research by Mason it is found that when the employability skills content were embedded in the course itself, the learners showed positive result with respect to higher retention and success rate. Also it was

Volume V Issue I ISSN 2349-8226

found that when a single teacher was supposed to teach the vocational as well as Employability subjects the learner's performance declined. Hence it is advisable to have different teacher for the vocational and for the numeracy skills, provided the content of the two should be synced.

Figure III: Extent to which students considered that their course had enabled them to develop different skill



Source: Futuretrack 2006 combined dataset. UK based final year students (weighted).

Figure 3 shows that very small proportion (less than 20%) of students felt that their numerical ability was developed by their course. Thus these skills are not developed sufficiently in Higher Education.

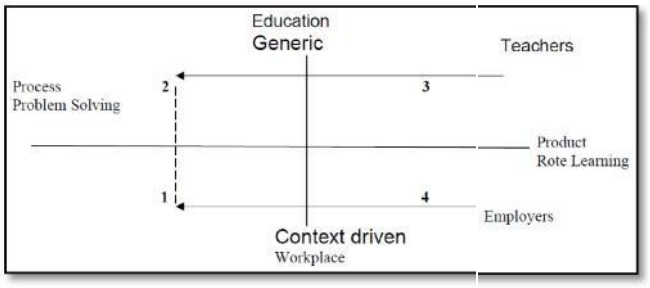
CBI (2010) and ACME (2011) provide suggestions to the prospective employees to improve their mathematical skills. According to CBI, the companies and educational institutes should shake hands to solve this issue. The companies should provide educational institutes with "examples of how maths is used in the workplace and support teachers with practical examples of applied uses of maths". Similarly, according to ACME level of mathematics that is being taught is more important. Thus, the level of knowledge provide the employees with the "confidence and versatility to use mathematics in the many unfamiliar situations that occur at work".

According to the survey by CBI, employer's reported that the best qualification for the numeracy skills required at work is the General certificate for Secondary education (GCSE) with grades between A to C. GCSE was considered as good support for the evidence of numeracy skills. However in case of the students with the gap after leaving school and the gap between the start of University/ college education, the GCSE as an evidence for numeracy skills becomes questionable. Hence CBI suggests that "all young people should be expected to continue some form of maths or numeracy education after 16, whatever education or training route they pursue". In the CBI survey it was found that 18% of the employers provides remedial numeracy training to school leavers, graduates and its employees. It is believed that if the standards of teaching are improved in schools then there is reduced need for remedial training in the companies.

Beth Kelly (2015) has proposed a Workplace Numeracy Teaching Model in order to identify the skills needed to teach and learn numeracy relevant to the workplace. The axes represent a continuum of concepts, for example, the generic approach to skills development is at the opposite end of the axes to context driven skills and a particular mathematical product e.g. fraction calculation will be at the opposite end of the axes to a mathematical process of understanding, for example ratios and proportions, and its application to a variety of contexts.

Volume V Issue I ISSN 2349-8226

Figure IV: Possible Model of Analysis for Workplace Numeracy



This model can be adopted to Education and Workplace contexts where vertical axis represents the contexts of education and workplace, while the horizontal axis represents the function of learning from rote to problem solving. The model now offers a scenario to explore skills and knowledge, context and function. The model in this way may also be used to identify teaching and learning approaches in different contexts and which may be considered most appropriate for a particular numeracy skill. For example, it may be appropriate to learn the generic skills for fractions at school but learners may be more open to ideas developed in a workplace/problem solving context to reinforce learning. Thus teachers/ lecturers may move around the axes to adapt approaches to learning. The model can also be used to consider a change of approach may be appropriate for workplace learning too.

"When teaching mathematics is seen as a way of teaching people how to think," writes Joan Richards, "its implications spread throughout the curriculum and it has a place in every class" (2001).

The educators can find out various examples related to numeracy across the curriculum with the help of these three considerations:

1. Real Life Context 2. Mathematical Content Knowledge 3. Mathematical process These three considerations will help the educator to efer to a real life problem, which can be solved using numeracy knowledge by the help of any specific mathematical technique.

Thus learning of numeracy is a collaborative approach in order to explore the role of numeracy across disciplines and thus making students understand how the world is interconnected.

An Employability Skills Framework has been suggested by The North Lincolnshire. This framework will be of use to individuals, tutors and employers as well to discuss, measure and improve employability skills. This will be more useful for the educational institutes while developing their students for the future employment.

Figure V: Employability Skills Framework for Application of Numeracy

Volume V Issue I ISSN 2349-8226

Formative Assessment also comes as a rescue to provide the targeted teaching effectively. This is a method of assessment for learning, which includes four steps:

- Identification of goals, outcomes and criteria for achievement.
- Communication between teachers and students about a students' current knowledge and future directions
- Active involvement of students in their own learning
- Teachers responding to feedback by modifying teaching strategies (Karpinski & D'Agostino, 2013)

Apart from the different models to teach the numeracy skills, it is important that even the teachers, tutors or faculties should be equally competent to teach this skill. According to the members of the NATC project, Numeracy Audit Model can be beneficial for this purpose. The model comprises of three steps:

1. To collect information about the numeracy demands across the curriculum which will enable the school to make judgements about the extent to which numeracy requires action and where that action
2. To develop the skills of teachers to recognize numeracy demands in their classroom and their curriculum.
3. To extend teacher's knowledge of a range of strategies to develop students' numeracy.

This model will help the teachers to get updated with the applications of numeracy in their field and at workplace that will ultimately bridge the gap between the student's skills and the employer's requirement.

CONCLUSION

Thus, it can be concluded that with the growing need of Numeracy Skills amongst the prospective employees, it becomes important to create the employable graduates leveraged with all the required skill sets.

Thus , parents, teachers and community has important role to play to contribute in the development of such skills. Parents should help their wards to gain confidence and motivation by introducing them to the world around and the use of number skills in various aspects of life. Talking and making fun of maths will create interest in them and reduce the phobia.

Teachers have a crucial role to play in this regard. They can act as a role model in front of students They can demonstrate different ways in which mathematics is used in day today's life and in class. Teachers should talk about their encounters with various enjoyable moments of life while they discovered fun with mathematics. They can assist students with various resources used for problem solving and logical reasoning. Charts, graphs, data interpretation should be included in the class to make them more numerate.

Community can act as bridge between the society, teachers and students. People from different background can come together at a platform to share their experience . Math Fairs can act as a good experience for everyone.

Volume V Issue I ISSN 2349-8226

Employers should come forward and tie up with the educational institutes to contribute in the numeracy development amongst future generation. They should give live demonstration of various applications of maths and numerical concepts to solve the workplace problems and in decision making.

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Volume V Issue I ISSN 2349-8226

Need and Importance of Skill Development in Formal Education

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Abstract

The aim of Education is complete human development. National policy 2016 on Higher Education is focusing on to make a key contribution to opening up and highlighting new paths to a better future for society.

Skill is a learned ability to do something well. More than 50% of India's population is below the age of 25 years. Soit is necessary to focus on youth of the country. According to Ministry of Skill Development and entrepreneurship, only 2.3% of the workforce in India has undergone formal skill training. The need of an hour is to inculcate the requisite skills, such as analytical thinking, communication skill, social skills, and presentation skills. Our youth must acquire all types of Skills like cognitive, non cognitive and technical skills. Skilled workforce can help to enhance the social and economic growth of the country.

Keywords

learned ability, cognitive, non cognitive skills, technical skills, economic growth.

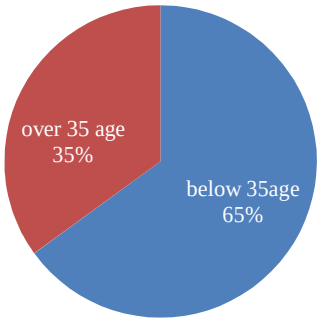
❖ Introduction

The aim of education is complete human development. Education not only provides knowledge and skills but also inculcate values. A Skill is a learned ability to do something well. National Policy 2016 on Higher Education is focusing on to make a key contribution to opening up and highlighting new paths to a better future for society and the individual. The ministry of skill development has set up the "Skill India" agenda and launched the National Skill Development Mission across India.

❖ Present scenario of Skill Development

Today India is one of the youngest nations in the world with more than 65 % of its population in the working age group. (below 35 years age.)

Population in working Age group



The Current Skill Development landscape of the country has its inherent deficiencies due to delink between the skills taught and industry requirements. India currently faces severe shortage of well trained skilled workers. According to Ministry of Skill Development and entrepreneurship only 2.3% of the workforce in India has undergone formal skill training.

On the other hand in other countries

96% in South Korea

80% in Japan

52% in USA

has acquired formal skill training. Therefore India must focus on upgrading skill training mechanism. In 1960 and 1970 South Korea planned and implemented skill development programmes as per necessities. This resulted in rapid development of South Korea.

❖ Present Academic Setting in Higher Education

In present academic setting, non cognitive skills are not being acquired by students. Although the curriculum is getting reviewed to better promote skills such as teamwork and communication, actual teaching and learning have not kept pace. Teachers are not appropriately trained to impart these new skills. Even today in present academic system rote-learning is common and teaching is geared only towards the examinations.

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Volume V Issue I ISSN 2349-8226

❖ Need of skill development in Higher Education

Higher Education Institutions have a key role in influencing society. Instilling the right skill and knowledge base can form the building blocks of our economy. It is essential to focus on the youth of the country. There is pressing need to address the problems associated with skill development in India. If youth are equipped with appropriate skills, they can effectivelycontribute to the development of the country.

Higher Education reforms under the 11thFive Year Plan focused on developing comprehensive skills based on recommendations of the National Knowledge Commission (NKC report 2009).

However improvement in terms of following points in Higher Education is insignificant-

i. Quality of Higher Education
ii. Skill Shortages
iii. Unemployable graduates
iv. Growth of Higher Education Institutions and enrollment rates
v. Shortage of competent faculty and deficient infrastructure
vi. Employability is a very important aspect of Higher Education system. Because of skill shortage ,unemployable graduates still prevail at large. The need of an hour is to take serious consideration of the career paths to inculcate the requisite skills such as analytical thinking communication skill, social skills, presentation skills, working in team and information technology. There is a need to understand the skill sets which are required by various industries among their workforce and create a curriculum which can inculcate the same in the students.

❖ Importance of skill Development (SD)

Skilled workforce provide the backbone for economic development of the country.During the next 20 years the labour force in the industrialized world is expected to decline by 4%while in India it will increase by 32%, India being a very large country, needs to equip its workforce with employable skills and knowledge. We need to develop 20thcentury skills and 21stcentury skills as well. Recently only 20%graduates are found employable by the industry. Students qualifying from Higher Education institutions lack skills required by the industry. To bridge the gap it is important to tie up with various industries while designing curriculums according to their requirements. Graduates trained with widely applicable skills will allow them to enter in any industry and gain success through hard work.

❖ Types of Skills required

Today's societies rapidly become more diversified demographically, politically, socially and economically.Our youth face multifaceted challenges so these societal demands imply for the key skills that an individual need to acquire. A balanced development of many dimensions of human personality i.e. physical, intellectual, moral, emotional, social and spiritual is the key to true higher education.Our youth must acquire many types of skills like, Hard Skills and Soft skills. Life skills are the basic learning need for all young people in present scenario. It helps individual to live their life more meaningfully. So life skills are "living skills or the

Volume V Issue I ISSN 2349-8226

abilities for adaptive and positive behavior that enable individuals to deal effectively with demand and challenges of everyday life".**(WHO).**"We want that education by which character is formed, strength is increased, intellect is expanded and by which one can stand on one's own feet" Vivekanand.

Hard Skills

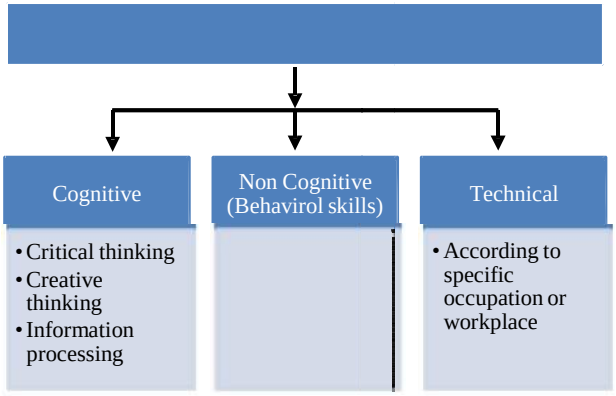
Skills related to designing, manufacturing, medical skills etc. can be taken care of by specialized institutions like Engineering, medical, education training institutions.

Soft Skills

Soft skills are personal attributes that enhance an individual's interactions, job performance and career prospects. According to recent surveys, soft skills are far more important than technical "SKILLS" to reach the top of career ladder. There are wide range of 21st century soft skills like critical thinking, problem solving reasoning ,research skills, creativity, curiosity, imagination, innovation, planning, self discipline and oral, written communication ,leadership, teamwork, collaboration, co-operation and social justice.

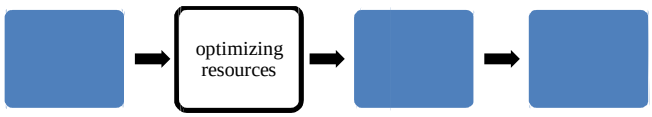
Skills are broadly divided in three categories which are required to develop among students.

In the current scenario, employers look at academics not only as achievements but also for three key types of skills like, cognitive, non cognitive and technical skills.



❖ Skill development and economic Growth

Skill development and economic growth of a country are very closely related



Volume V Issue I ISSN 2349-8226

Measures to Take

Some measures can be taken in Higher Educationlike

1) To empower the working population, it is essential to restructure academic courses to ensure their relevance in the industry.

2) It is essential to form effective linkages with employers.

3) Research to formulate suitable skill development framework.

4) Faculty training is very important, which can be given to meet new generation demands.

5) Our Higher Educationsystem has to necessarily change for enhancing the quality of all factors.

❖ Conclusion

Education ideally must prepare students to face the challenges of life. In order to overcome the challenges, education needs to be liked intimately with different skills. So, skilled workforce can be provided to different fields or to industries which will help to enhance the social and economic development of the country.

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