Profiling of the basic skills & competences required by the national ICT labour markets in India

Desk and Field Research Report

SAL EDUCATION

Contents

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1   DESK RESEARCH

1.1   Introduction of ICT

Education is one of the main keys to economic development and improvements in human welfare. As global economic competition grows sharper, education becomes an important source of competitive advantage, closely linked to economic growth. In addition, education appears to be one of the key determinants of lifetime earnings. Thus, improving the quality of education is a critical issue, particularly at the time of educational expansion. The Information Communication Technologies (ICTs) can enhance the quality of education in several ways which included, increase in learner motivation and engagement, facilitating the acquisition of basic skills and by enhancing training of teachers (Haddad & Jurich, 2002).While ICT has impacted contemporary business and social practices globally, most educational systems around the world still engage in traditional teaching-learning practices that require learners to work individually, recall facts or perform isolated activities. ICT would play a pivotal role in reforming education and preparing students for the 21st century challenges, impacting the way learner's access knowledge, research, communicate and collaborate with others.

According to UNESCO (2002), ICT may be regarded as a combination of 'informatics technology' with other related technologies, specifically communication technology, which has become a global phenomenon of great importance and concern in all aspects of human endeavor, spanning across the gamut of activities from education; governance; business; labour; market; economics; productivity; trade; agriculture; domestic and international commerce to many more. Various types of ICT products and channels are available, and have been used for enhancement in delivery and learning outcomes in education. Development in information and communication technology has potential for rapid growth in employment, productivity and output. It is, therefore, important to ascertain the impact of ICT in economic development of the country. With India's ICT sector growing at a brisk pace and the Government taking several initiatives to gradually move to a digital economy, there is a great demand for more comprehensive data on ICT-enabled services from policymakers, researchers and international institutions. Thus, there is a need to undertake survey on ICT enabled services at regular intervals to develop and strengthen this database.

1.1.1   ICT-ENABLED SERVICES:

UNCTAD has defined ICT-enabled services as "services products delivered remotely over ICT networks". This has been used for the purpose of collection of information in the present survey. The following 10 categories of services are identified as potentially ICT-enabled services:
- Telecommunications
- Computer Services (including computer software)
- Sales and marketing services, not including trade and leasing services
- Information services
- Insurance services
- Financial services
- Management, administration and back office services
- Licensing services
- Engineering, related technical services and R&D
- Education and training services.

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Among the categories of potential ICT-enabled services, export of Computer services (including computer software) was the highest (63%) followed by Management, administration and back office services (14%) and engineering, related technical services and R&D (11 %). Contribution of Education and training services was the lowest among the potential ICT enabled services
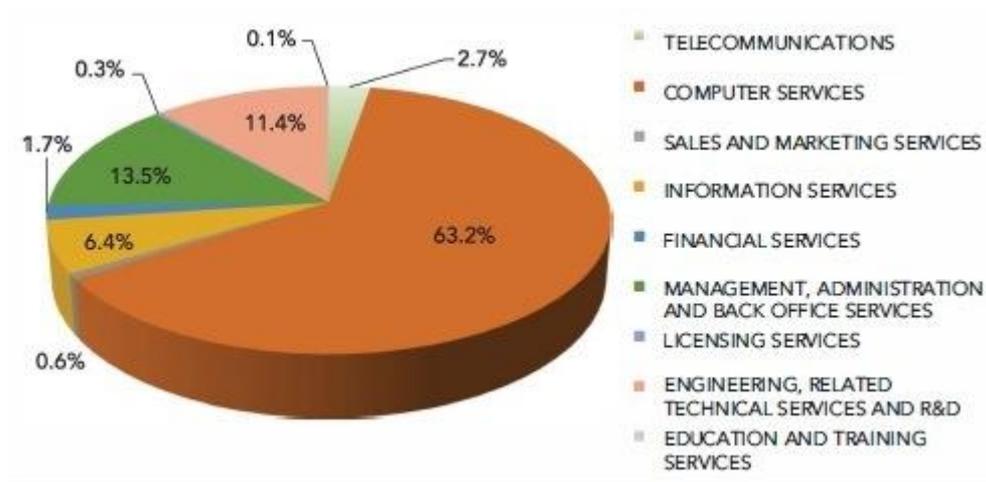

Figure 1. Potential of ICT enable services 2016- 17

1.2   Review on Skills, qualifications and employability:

A recent study (OECD, 2008) found that the average level of qualifications for immigrants was typically higher than that of the populations of destination countries (24% of migrants had tertiary education compared to an average of 19% for the native born). Though high levels of qualification should result in greater employability, a common finding is that migrant workers often do not find work commensurate with their level of qualifications. Dustmann and Preston (2012) note that immigrants in the UK and US tend to compete with native workers for jobs, which are not commensurate with their skill levels.

ICTs are increasingly being used to enhance the language and cultural skills of migrants, refugees and their families (see for example Collin and Karsenti, 2012; Fraga et al., 2011; Pearson, 2011; Redecker et al., 2010; Webb, 2006; and discussed in accompanying Report 2 [de Hoyos et al., 2012]). A qualitative study of seven ICT learning centers in England explored the experiences and perceptions of adults from ethnic minority backgrounds learning 'English for speakers of other languages' courses. The research found that socially excluded learners still experience some inequalities in accessing learning through technology, but that this form of learning promotes social inclusion as it provides a social space for learning (Webb, 2006).

A recent evaluation of a ten week programme using mobile phones to teach language learning with a Bangladeshi community in Greater London also had similar results. The study explored changes in language skills confidence and the contribution of this technology to digital and social inclusion (Pearson, 2011). Results showed that ICT confidence, access to employment, education and public services improved over the ten week period. It was also noted that those not on an ESOL (English for Speakers of Other Languages) course had enrolled on a course after the programme. Therefore, enhancing social and digital inclusion and supporting the development of employability skills. A literature review of evidence from North America and Europe on the potential of ICTs in linguistic integration of immigrants explored recent developments in online

linguistic integration tools (Collin and Karsenti, 2012). The review highlighted the growing potential of ICTs noting the variety of technology (including websites, platforms, portals, and pedagogies adopted. However, the evidence highlighted some of the limitations for social integration due to the lack of social integration.

The World Bank (2016) study on the use of ICTs for refugee education in the MENA region is designed to provide a clear and concise snapshot of the role ICT has recently played in the region. It also outlines the projects that, at the time of writing, were currently under preparation. Based on acknowledged limitations on the availability of evidence, the study describes itself as '[not] a comprehensive assessment but rather an attempt to promote dialogue and inform programs' (World Bank 2016: 1).

A vital contribution of ICT in the field of education is easy access to learning materials/ content. With the help of ICT, students can now browse through e-books, sample examination paper, previous year's paper etc. and collaborate with resource persons; mentors; experts; researchers; professionals and peers worldwide (Bottino, 2003 and Sharma, 2003). Since ICTs provide both students and teachers with many opportunities in adapting to learning and teaching according to individual needs, there is an urgency to respond to this technical innovation.

The first step towards conducting the research study was preparation of the research design, which was framed with literature review and inputs from strategic meetings held with the policy makers, academicians and experts.

The Directorate General of Commercial Intelligence & Statistics (DGCIS) launched a pan India survey in July 2017 in technical collaboration with UNCTAD to collect and c o m p i l e disaggregated level information on India's exports of ICT-enabled services by partner country as well as mode of delivery of services.

The National Policy on Skill Development was approved by the Indian cabinet in February 2009 with the objective of creating a workforce that has improved skills, knowledge and internationally recognized qualifications that can result in gaining access to decent employment and enhancing India's competitiveness in the global labor market.

1.2.1   THE POLICY COVERS THE FOLLOWING AREAS OF SKILL DEVELOPMENT:

- Institution-based including ITIs, ICTs, vocational schools, technical schools, polytechnics and professional colleges
- Learning initiatives of different ministries and departments
- Formal and informal apprenticeships and other types of training by enterprises
- Training for self-employment or entrepreneurial development
- Adult learning and retraining of retired or retiring employees
- Informal training programs, including those by civil society organizations
- E-learning, web-based learning and distance learning
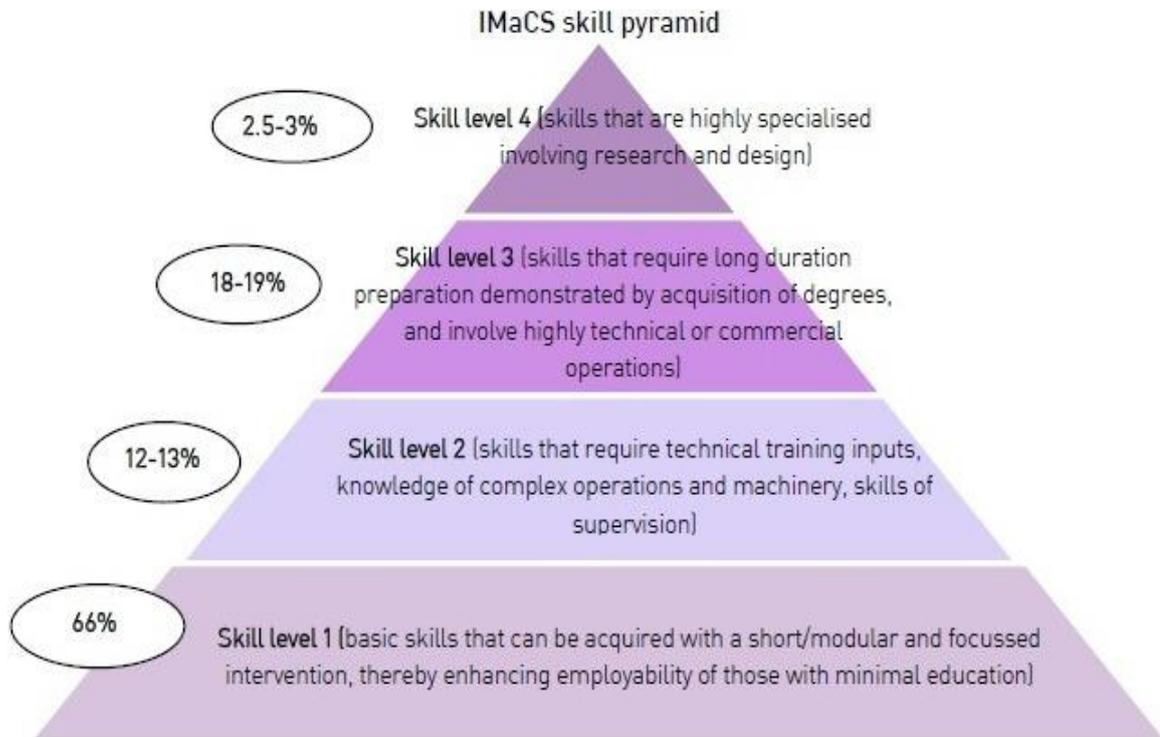
1.3   ICT Skill Requirements in the Sectors

Given that all the industries would require a varied profile of skill sets, the following section presents an overview of the skill requirements as derived from an IMaCS study of human resource requirements across different sectors. The skill pyramid, in summary, captures where the overall industry stands relatively in terms of skills (a function of activity, educational requirements and the amount of 'preparatory' time required to inculcate a specific skill).

IMaCS skill pyramid

- 2.5-3% — Skill level 4 (skills that are highly specialised involving research and design)
- 18-19% — Skill level 3 (skills that require long duration preparation demonstrated by acquisition of degrees, and involve highly technical or commercial operations)
- 12-13% — Skill level 2 (skills that require technical training inputs, knowledge of complex operations and machinery, skills of supervision)
- 66% — Skill level 1 (basic skills that can be acquired with a short/modular and focussed intervention, thereby enhancing employability of those with minimal education)

Source: IMaCS Study

Figure 2. Skill Pyramid

Reference: India Brand Equity Foundation ("IBEF") & ICRA Management Consulting Services Limited (IMaCS)

As can be observed, the lower portion of the pyramid, 'Skill level 1', has the highest incremental Requirement of human resources. It requires persons who are minimally educated, but can still handle simple and/or repetitive tasks (e.g., persons such as cutters, those engaged in polishing, etc). Such skills can also be attained in a lesser time duration as compared to engineering or ITI. Skill level 2 relates to areas where substantial skill building efforts would be needed (e.g., carpenters, electricians, welders, operators, plumbers) In the 10 sectors like Construction industry, Chemicals and pharmaceuticals, Construction materials and building hardware, Electronics and IT hardware industry, Food processing sector, Furniture and Furnishing industry, Gems and jewelry industry, Leather industry, organized retail, Textile and many, as millions of persons are required across various skill levels outlined.

Skills in demand in select sectors		
Sr No	sector	Key skill demand
1	Textiles and clothing	Power loom operators, apparel manufacturing, fashion design, QA, knitwear manufacturing, sewing machine operators

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2	Building and construction industry	Crane operators, electricians, welders, masons, plumbers, carpenters, painters, etc.
3	Auto and auto components	Auto OEMs, auto component manufacturers, drivers, sales, servicing, repair, financial services sales, insurers/ valuers
4	Organized retail	Shop floor executives, back-store operations, merchandising
5	Banking, financial services and insurance	Financial intermediaries (including direct selling agents), banking and insurance (including agents), NBFCs, mutual funds
6	Gems and jewellery	Jewellery fabrication, grading, faceting, polishing, cutting
7	IT and ITeS	IT–Software engineering, maintenance and application development, End-to-end solutions, infrastructure management, testing, etc. ITeS – BPO, KPO – Legal, medical, STM, analytics and research
8	Leather and leather goods	Tanning, cutting, clicking, stitching, lasting, finishing
9	Furniture and furnishings	Carpenters & operators engaged in stitching, sewing, stuffing
10	Electronics and IT hardware	Computers, telecom & consumer electronics; manufacturing, sales, servicing/after sales support of electronics goods; high-tech
11	Tourism and hospitality services	Front office staff, F&B services and kitchen and housekeeping staff, ticketing and sales, tour guides
12	Chemicals and pharmaceuticals	Industrial and chemical manufacturing attendants, process attendants, manufacturing assistants, lab attendants, equipment operators, sales personnel
13	Food processing sector	Operation of power machine, packaging, bakery, cold storage and transportation, ice-cream manufacturing, slaughtering,

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		preservation techniques, disposal, drying/radiation, preparation of concentrates, manufacturing of edible oil
14	Healthcare	Doctors, nurses, technicians and paramedics
15	Media and entertainment	Directors, cinematographers, editors, script writers, artists, producers, sound designers/editors, animation – pre-production, animator, game developer, radio jockey
16	Transportation, logistics, warehousing and packaging	Truck drivers, loading supervisors, warehouse managers, pilots, aircraft maintenance, air traffic control, instructors, safety and security

Reference from: ICRA Management Consulting Services Limited (IMaCS Study)

1.4 Policy strategies for ICT education, training and skills development

During the 2016-2017 academic year, less than 30 per cent of undergraduate students in engineering and computer science were women. However, in the field of computer engineering women comprised 57 per cent of postgraduate students and 40 per cent of PhD candidates (AISHE, 2016-2017). Overall, the gender divide in enrolment rates was larger at INI than at other higher education institutions, although the INI reflected the aforementioned general trend of more women being enrolled in graduate studies than at the undergraduate level (AISHE, 2016-2017). At present, women comprise between 8–10 per cent of INI students at the undergraduate level, 20 per cent of master's level students and 30 per cent of PhD students. Fewer women than men pass the IIT entrance exam, and this may be due to the fact that preparing for this entrance exam is costly and intensive, and therefore women may be discouraged from doing so by societal and cultural pressures. Some interviews in the research mission also indicated that young women are not drawn to study STEM fields and the ICT related studies (research mission interview with IIT, Delhi). Given this gender imbalance, the government has intervened by introducing national quotas at IIT for women students of at least 14 per cent in the 2017-2018 academic year, with a planned increase of 3 per cent in subsequent years. Consequently, IIT Delhi has recently experienced a record enrolment rate of 16 per cent for women at the undergraduate level (research mission interview with IIT Delhi). However, not all universities have implemented similar measures.

1.4.1 GOVERNMENT POLICIES TO TACKLE SKILLS MISMATCH AND ENHANCE THE SKILLS OF ICT SPECIALISTS

During the period from 2010 – 2014, the National Skill Development Council in India established 38 Sector Skills Councils (SSCs) to prepare a future workforce training framework for leading growth sectors in the economy. During this process, SCCs conducted skills gap studies and asked industry what their skill requirements were. The SSCs also designed a competency framework, known as the NSQF, and created qualification packs that corresponded to national occupational standards in order to assess and certify workers for particular job roles.27 The qualification packs

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were validated by industry representatives and approved by the National Skills Qualification Committee. Each qualification pack is designed to establish competency levels, which theoretically make it possible to create competency-based training for all entry level jobs in the IT BPM industry.28 One difficulty currently faced by stakeholders is the lack of a framework for recognizing prior training in the high-skilled and digital ICT sector, and thus new methods for recognizing such training must be developed. Creating national competency assessment mechanisms for ICT and digital skills, in cooperation with the ICT industry, would be useful. Since large ICT companies play a role in providing certifications that are recognized within the industry, training certificates from well-established IT companies have become important for certifying technical skills obtained through continuous training. NASSCOM is currently building a «skilling for the future» roadmap that focuses on skilling and re-skilling 1.5 – 2 million entry level and junior staff within the next four to five years on next generation technology.

1.5 ICT skills as a transversal skill set in education to improve digital literacy among the population

Incorporating ICT education into school curricula has been part of India's educational policy since the 1970s, following the creation of the first National Policy on Education in 1968. In 2009, the government drafted a national policy for ICT in school education, which was revised in 2012. ICT in schools is primarily implemented through a government scheme, known as the Rashtriya Madhyamik Shiksha Abhiyan (RMSA). Two key components of the scheme are teacher interventions, including capacity enhancement measures for all those who teach ICT, and a national ICT award, which serves as an incentive for teachers. Furthermore, the use of ICT to improve educational access and quality is considered critical for India, as articulated in the 2016 National Policy on Education. MHRD has launched a programme called SWAYAM, or study webs of active learning for young aspiring minds, which is a web portal where Massive Open Online Courses (MOOC) on various subjects are available. Those MOOC are offered as a means of ensuring educational quality, promoting innovation, and reshaping and modernizing open distance learning.

1.5.1 STEPS TAKEN BY INDIA TO DEVELOP SKILLS IN WORKERS:

In 2002, the Indian government launched a project called Vidya Vahini to provide IT and IT-enabled education in 60,000 schools in India over three years.

Edusat was India's first dedicated education satellite launched in September, 2004 Edusat makes it possible to receive 'Direct to Home' quality broadcasts of educational programs using any television set with a low-cost receiver.

NCERT brought out the National Curriculum Framework (2005) recommending inclusion of ICT across the curriculum.

Various Scheme launched by Government of India to improve the skills in young workers:
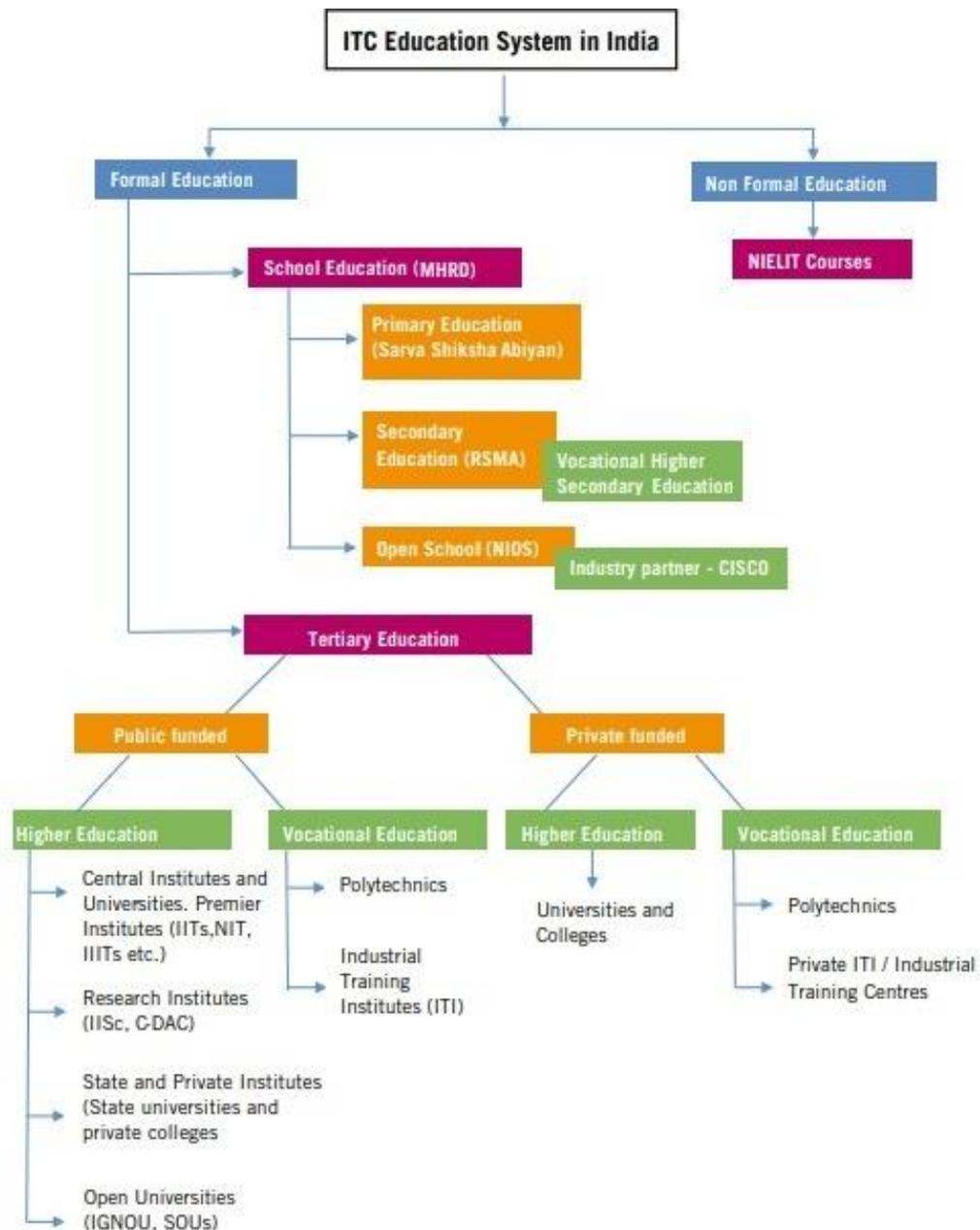- Pradhan Mantri Kaushal vikas yojana
- Skill Development Initiative
- Capacity Building and Technical Assistant Scheme
- Entrepreneurship Development Program by various Industries
- National Urban Livelihood mission
- Support to Training and Employment Program for Women
- Craftsman training scheme

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ICT Education Frame work India

ITC Education System in India

Reference : National centre for Education & Economy , India, 2019

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The **ICT@School** scheme launched in 2004, aims at catalyzing the process of infusion of Information and Communication Technology in schools to enhance productivity, efficiencies and an equitable access to education to all. This study has worked to deepen the understanding that, with appropriate infrastructure support in schools, ICT can provide important tools and resources to help improve teaching practices and student learning outcomes.

The study was conducted between August 2011 and May 2012 to deepen the understanding of access and usage of ICT by teachers and students in rural and urban schools in the states of Gujarat, Delhi, Kerala, Maharashtra, Tamil Nadu and Puducherry. The study was designed to address the following objectives:

1. To study the actual access and usage of ICT by teachers and students in secondary schools.

2. To compare the ICT usage by teachers and students in rural and urban areas.

3. To study the factors affecting ICT access and usage by teachers and students.

4. To provide suggestions and recommendations regarding optimal usage of ICT by teachers and students.

Tool used

Teachers and students were interviewed using close-ended multiple choice questionnaires to collect quantitative data.

Student Questionnaire

The student questionnaire for students covers major areas like students's perspective of ICT, ,infrastructure in school, knowledge of ICT, creative use of ICT its benefits and challenges. Each area includes several questions. The student questionnaire also consists of the profile of the students.

Teacher Questionnaire

The teacher questionnaire consists of questions related to 13 broad themes. It also includes categorization of school by management, their educational qualification, classes and subjects taught by them, infrastructure available etc. The tool also includes questions related to the use of technology including creative use and procedure followed by them, their knowledge and competency level. Each theme has many questions to collect deeper understanding and use of ICT from the teachers.

Principal Questionnaire

This questionnaire consists of 46 questions. These questions are related to the profile of the school, availability of infrastructure, use of ICT by teachers in different subject areas and students. Pilot testing of the questionnaires provided crucial input for restructuring the questionnaire, particularly the length and language used in questions.

Process of Data Collection

For collecting the data of students, teachers and principals, a team of 24 Research Facilitators (RF) was trained on all facets of the program for handling data collection. Since this research was designed to target different geographical locations, orienting the Research Facilitators (RF) on conducting the study on ground was a key factor.
The orientation for the Research Facilitators was conducted in two phases. Phase I was primarily a video conference with all the state based Research Facilitators to share their thoughts and views on research tools that were sent to them before the discussions. The feedback was incorporated in the final questionnaire.
Phase II of the Research Facilitators orientation took place on site in face to face mode. The Research Lead Team visited all the locations and accompanied Research Facilitators for data

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collection to a few schools so as to keep in touch with the ground realities. Since the emphasis was on gathering quality responses also from respondents. The Research Facilitators were grouped together in small numbers of two to three at a time and were explained the scope and purpose of the study at length as well as the context of the questionnaire. Structured interviews, based on the questionnaire, were conducted with the principals of schools.

1.6 Impact of ICT on teaching and learning

Teachers were of the view that ICT enhances teaching and learning if the technology is used effectively. The benefits of ICT, as articulated by the teachers are as follows:
1. Using ICT means that information can be obtained almost instantly. The worldwide web, for example, contains a vast amount of easily accessible information. Such information can provide learners with different viewpoints and a wider understanding of issues.

2. ICT helps the teachers to customize teaching materials to suit the needs and ability levels of their students.

3. It acts as an incentive for students to learn. The technology can be effective in engaging them in their schoolwork.

4. ICT helps to make learning more interesting. It helps in increasing levels of interest, for example through the use of color, animation and sound. It also facilitates multi-sensory learning through multimedia presentations, animation and video.

5. ICT helps students to work at their own pace and level. ICT contributes to the development of a personalized or step-by-step learning scheme. It provides opportunities for students to learn in different ways.

6. ICT facilitates student-centered learning and can encourage students to take responsibility for their own learning.

7. ICT helps teachers and students to improve how they present information. It facilitates creative presentation of materials and encourages students to take pride in their work.

8. ICT captures student attention for significant time span. The visual impact facilitated by ICT, for example, captures their attention and helps them to retain information.

9. Effective use of ICT puts the teacher in a facilitative rather than a teaching role.

10. The use of ICT increases students' understanding of concepts and helps consolidate learning. In general, it makes learning more memorable.

11. Effective use of ICT, especially in individual, pair and group work with computers, can lead to improved classroom discipline and better management of learning.

12. Teachers also emphasized some of the negative effects that ICT can have if it is not deployed effectively. Some of these are outlined below:
a. Students can become frustrated with ICT hardware and software in schools which develop regular technical problems. This can discourage them from using computers in their schools.

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1.7   Recommendations:

Development in information and communication technology has potential for rapid growth in employment, productivity and output. Measuring the impact of ICT is therefore critical to better understanding of the role of ICT in economic development of the country. With India's ICT sector growing at a brisk pace and the Government keen to hasten India's movement to a digital economy, there is a great demand for more comprehensive data on ICT enabled services from policymakers, researchers and international institutions. There is therefore a need to undertake survey on ICT enabled services at regular intervals to develop this critical database.

1.8   References:

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2 FIELD RESEARCH

2.1 Introduction:

The emergence of information and communication technologies (ICT) has transformed today's economy through the diffusion of new tools. Personal computers and the internet improve how modern society interacts, learns and earns a living. However, there are multiple disparities associated with ICT deployment and access. Little research in ICT access for migrant populations exists because differences in language, culture and other factors make migrant workers and their youth a particularly difficult population to study.

2.2 ICT for Young migrants & Refugees:

The term "migrant" describes an individual moving from the country of birth to another country for settlement. Migrants usually seek work and residential rehabilitation.

Refugees are referred to the individuals who have been forced to leave their country, with this being the main difference between them and migrants. As aforementioned, refugees are the individuals who cross the borders illegally, in contrast to other types of migrants.

According to Daniels (2002) ICTs have become within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. To get easy job Basic ICT skill is the Must requirement in young Migrants and Refugees. Digital inclusion seeks to bring the benefits of information and communication technologies (ICT) to vulnerable populations such as low-income families, residents of rural communities, seniors, disabled citizens, at-risk youth, immigrants, refugees.

In the modern migration crisis, a mobile phone is usually the only way for refugees to stay connected with what they have left behind and what they are forced to face. During their journey, many refugees use the applications of their smartphones as navigation for their journey. Besides the communication with their relatives, ICTs give them the opportunity to be informed of the difficulties that are constantly emerging on the streets that followed the migratory flow. The growth of the internet and the progress in Information and Communication Tool has an impact on the migration all over the world. In the past, the role of ICTs was replaced by the press.

2.2.1 ICT FOR REFUGEES:

A foreign place, an unfamiliar language and strange culture are enough to make the process of inclusion of the refugees more difficult. People who work in the cultural field believe that culture helps refugees in uncomplicated and painless resettlement.

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Refugees' skills to use technology has become one of the main factors of effective social integration. Internet and computers are used to find out the information they want for the local society.

Communication is another aspect that technology enables, facilitating regular contact with friends, families but also with smugglers and people that help refugees during the migration. It is being reported that refugees keep diaries with photos and videos to send them to their loved ones, or even they use the live streaming and live channels to participate digitally in wedding ceremonies

2.2.2 ICT AND MIGRATION:

The initial step is how the potential refugees will cross the borders illegally. According to this research, there are two distinct ways for refugees to find smugglers. It has been recorded that in some cases, refugees of a younger age that are skilled in the use of computers and of the English language, are responsible for the guidance of the group through the use of a mobile device.

ICT can help the refugees to establish contacts with representatives of their country and provides new opportunities, support and advice in term of social adaption. ICT can help the refugees to establish contacts with representatives of their country and provides new opportunities, support and advice in term of social adaption.

2.2.3 RESEARCH FINDINGS AND DISCUSSION:

Migrant youth miss school when their families move from one work site to another, causing them to fall behind in the achievement.

Educational Continuity	Instruction Time	School Engagement	Language Development	Health
Family support	Resident	ICT Skill	Practicing	

Areas Concern for Young Migrants

2.3   Scope of Field Research Report:

This field Research report focus on the outcome of the interviews and online questionnaires for "ICT Skill and its Competences required by Young Migrants and Refugees in ICT Labour Market"

This report is a summary of various interviews conducted by online mode with persons of different sectors and organizations. Online questionnaires were also sent to different employees of the organizations on the same topic. It shows the importance of some basic ICT skills in the ICT labour market, and how these skills could help in the integration of refugees. It also highlights

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challenges faced by young migrants and refugees, their psychosocial and economic situation and how ICT trainer helps them in the acquisition of those basic skills. What kind of opportunities there are and what skills are required from migrants/refuges is investigated.

2.4 Research Methodology

2.4.1 GOOGLE FORM FOR SURVEY

- Google form was prepared with some standard questionaries' and circulated among the ICT Faculty, trainer and Company HR.

https://docs.google.com/forms/d/1dGheu1a4-244Fy7WET3o5ZF5SY10HWqV8QV2MnHxUWY/edit?ts=5eda0022

2.4.2 ONLINE INTERVIEWS:

- Conducted interviews with Officers, NGOs and Trainings faculty who are working with ICT sector. Interview of ICT trainer were also conducted who provides training to students, young migrants and refugees. Interviews with HR and Director of Employment Agencies was Conducted. Meeting was conducted by online platform like WhatsApp call, Audio calling, Skype, Zoom etc…
- As per suggestion in INTEGRA research protocol main target peoples are Representative of ICT market, Employment Agencies and ICT Training Providers.
- Questionnaires used for the Interviews are as per mentioned in points 4.1, 4.2, 4.3.

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2.5   Research Findings:

2.5.1 RESEARCH FINDINGS BY SURVEY THROUGH GOOGLE FORM:

As per mentioned google form link a google form with ICT questionaries' was sent to different employees which are in the field of ICT or relevant to general ICT market. Survey conducted with ICT labor market which includes the responses of ICT Stake holders and ICT Training Provider. Total response of this survey is mentioned with graph in this report.

Image 1: Graph of Respondents of online Research
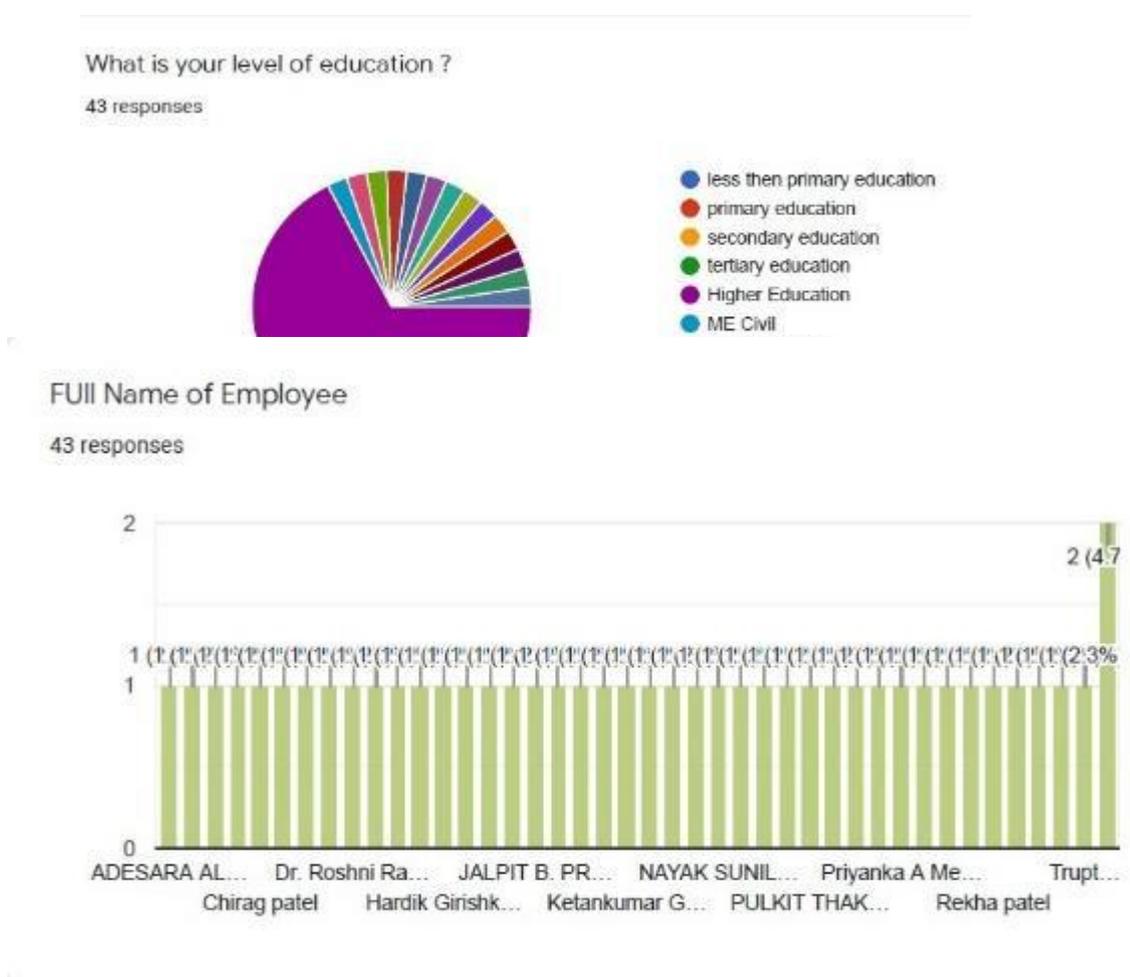
Co-funded by the Erasmus+ Programme of the European Union

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Image 2: Level of Education

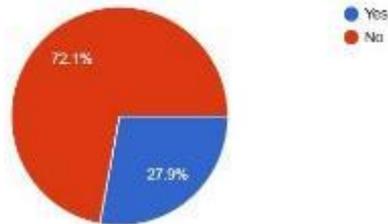have you attended any ICT Related Training?

43 responses

- Yes
- No

72.1%
27.9%

Image 3: training attended related to ICT

Are there any refugees among your target group/beneficiaries?

43 responses
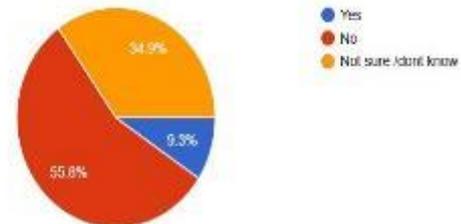
- Yes
- No
- Not sure /dont know

34.9%
9.3%
55.8%

Image 4: Known with refugees

ICT Survey_SAL Education Campus_INTEGRA_Profiling of the basic skills & competences required by the national ICT la

Please identify specific barriers faced by young migrants, refugees in education
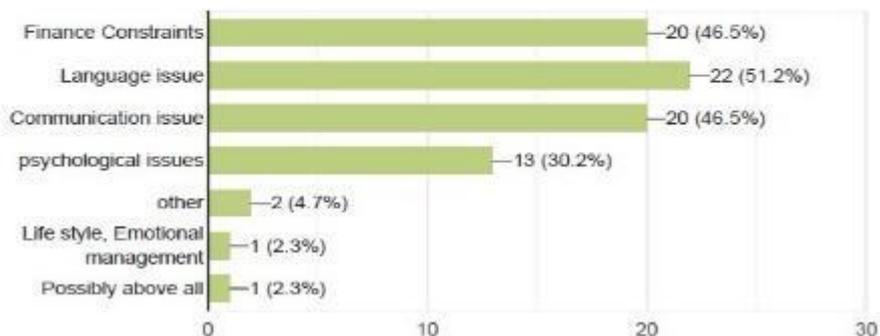
43 responses

Barrier	Value
Finance Constraints	20 (46.5%)
Language issue	22 (51.2%)
Communication issue	20 (46.5%)
psychological issues	13 (30.2%)
other	2 (4.7%)
Life style, Emotional management	1 (2.3%)
Possibly above all	1 (2.3%)

Image 5: Barriers with the Refugees

Rate your Self from 1(Very Poor) to 5(Excellent Knowledge). I can Use The Internet for communication, sharing, managing digital identity and also collaborating through digital technologies.

43 responses

- 1
- 2
- 3
- 4
- 5

30.2%
41.9%
23.3%

Image 6: Self-skill in field of ICT

Rate your Self from 1(Very Poor) to 5(Excellent Knowledge). I can Use The Internet for development of digital content, editing in contents, also providing licence and copy rights to the content.
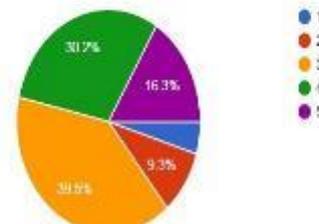
43 responses

- 1
- 2
- 3
- 4
- 5

30.2%
16.3%
9.3%
39.5%

Image 7: Skill in Digital Content creation

18

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2.5.2 RESEARCH FINDINGS FROM THE PERSONAL INTERVIEWS:

2.5.2.1.1 Summary of the key findings through the Interviews of ICT experts and representatives of the ICT market

> **Questionnaires for ICT market**

Annex 6: Questionnaire for Interviews and focus groups in each country with recognised experts and representatives of the ICT market.

1. Briefly describe the nature and the type of services provided by your organization.

2. Briefly present the main target groups/beneficiaries of your organisation and, also whether there are migrants/refugees among your target group/beneficiaries.

3. Briefly describe in your view the main challenges faced by migrants & refugees wishing to build their capacities/ knowledge on ICT skills both in terms of professional and psychosocial context.

4. In your view, are there any particular skills, or tasks, related to ICT competences, in which migrants/refugees need to improve on in order to be integrated in the labour market more effectively?

5. Briefly describe in your view the main challenges faced by migrants/refugees wishing to enter to the labour market.

6. Share with us your experience if the staff of your organisation is properly trained/ qualified for providing training to refugees.

7. Share with us your view if the staff of your organisation would be interested in further building its capacities on providing training and education to migrants/refugees.

8. Is there any emerging good/ best practice in the area of initiatives for the integration of migrants/refugees in the labour market?

We conducted six (6) Interviews with Local ICT market Representatives. By conducting the telephonic interviews with Representatives of the ICT Market we found that they all are mostly focused on Microsoft office basic tools. Any young migrant or refugee needs some basic MS skills in order to find an easy job in ICT market. Good communication skills are also required. They are also required to be able to make some arrangements like meetings, calling and maintain the various documentation of company.

As per the opinions of the ICT representatives, in upcoming years the ICT field will become very advanced due to the improvement in new technologies day by day. ICT is now come up with Automation and Artificial Intelligence. So, if any Refugee or Young Migrant wants to work in ICT field they must have to improve their skill as per new technologies.

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Young migrants and refugees should able to use the internet browsing and communicate with clients in local language.

2.5.2.1.2 Summary of the key findings through the Interviews of representatives of employment agencies.

> ### ➤ Questionnaires for Employment Agencies.

Annex 7: Questionnaire for Interviews with representatives of employment agencies.

1. Briefly describe in your view the main challenges faced by migrants/refugees wishing to build their capacities/ knowledge on ICT skills.

2. In your view, are there any particular skills, or tasks, related to ICT competences, in which refugees/migrants need to improve on in order to be integrated in the labour market more effectively?

3. Briefly describe in your view the main challenges faced by migrants/refugees wishing to enter to the labour market both in terms of professional and psychosocial context.

4. Share with us your experience if the staff of your organisation is properly trained/ qualified for providing training to migrants/refugees.

5. Share with us your view if the staff of your organisation would be interested in further building its capacities on providing training and education to migrants/refugees.

6. Is there any emerging good/ best practice in the area of initiatives for the integration of migrants/refugees in the labour market?

By conducting the telephonic interviews with **four** employment agencies they talked about the good communication skills, good knowledge of the local language and English that migrants/refugees must require. While hiring any migrants or refugees they are also put impact on CCC certification course. If any migrants or refugees can do this CCC (course on computer concept) course than he or she can learn all basic skills required in ICT. This CCC course covers the introduction of computer, basic operating systems, MS word, MS power points, MS excel, internet browsing, communication & Collaboration.

According to the Representatives of Employment Agencies migrants and refugees are facing the economic and residence-related problems also. Sometimes they also ask for both a residential place and a job. They feel like that they might be criticized by local people so they are not able to share their views or suggestions in any cases. During the aforementioned phases, refugees have to face many challenges regarding technology.

Employment agencies also talked about how they are handling the migrants or refugees of their local region during their initial setting time at another place of residence. They support migrants overcoming their challenges.

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They also said that in their organization some staff quarters were given to migrants for residential purpose. And during the holidays or free time their trainers train their Young children's with new technology and try to provide them basic Education also

Image 8: Screenshot of Interview

Co-funded by the Erasmus+ Programme of the European Union

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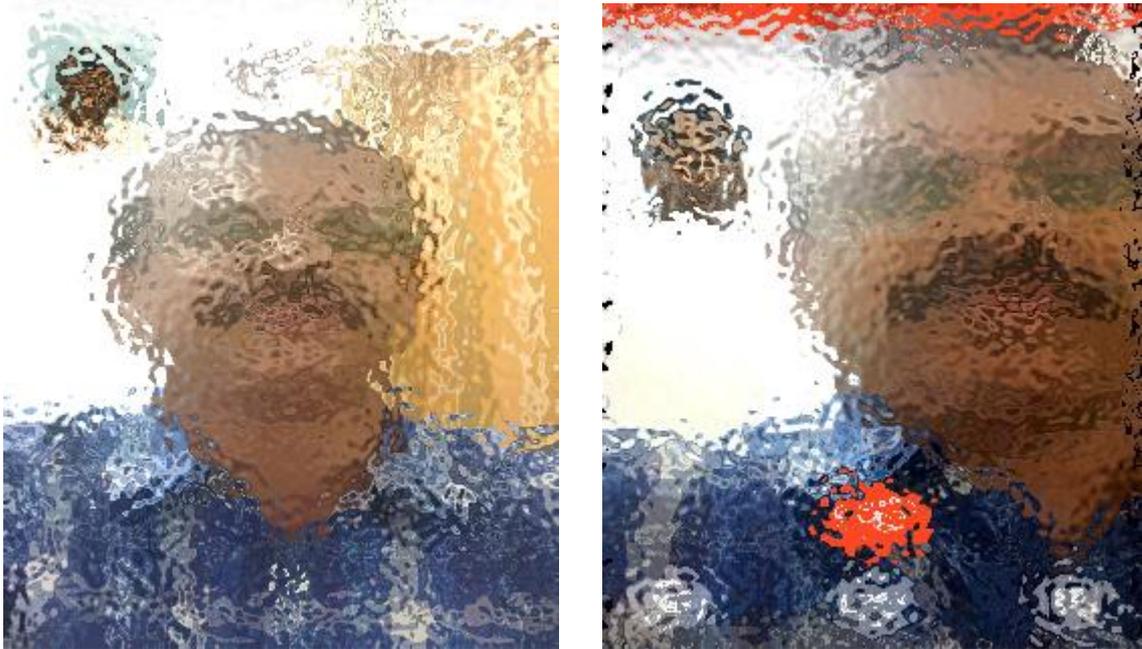
Image 9: Screenshot of Interview

2.5.2.1.3 Summary of the key findings through the Interviews of representatives of ICT Training Provider.

➢ **Questionnaires for ICT Training Providers**

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1. Briefly describe the nature and the type of services provided by your organization.

2. Briefly present the main target groups/beneficiaries of your organisation and, also whether there are migrants/refugees among your target group/beneficiaries.

3. Share with us your experience about the prior knowledge and skillset of migrants/refugees in the ICT field.

4. Briefly describe in your view the main challenges faced by migrants/refugees wishing to build their capacities/ knowledge on ICT skills both in terms of professional and psychosocial context.

5. In your view, are there any particular skills, or tasks, related to ICT competences, in which migrants/refugees need to improve on in order to be integrated in the labour market more effectively?

6. Share with us your experience if the staff of your organisation is properly trained/ qualified for providing training to migrants/refugees.

7. Share with us your view if the staff of your organisation would be interested in further building its capacities on providing training and education to migrants/refugees.

8. Briefly describe the main challenges faced by the staff of your organisation for providing education to migrants/refugees.

We conducted **Four** (4) Interviews with targeted ICT Training providers. All the staff who are working as a trainer in companies are well prepared and having good experience of how to behave with young migrants and refugees. All the trainers have also taken a training for psychosocial behavior, teaching & learning, mental health etc.

They have also taken a training for how to prepare various training content for young migrants and refugees. Also developed various worksheet for exercise after training which is very helpful for improve their skills in various trainings.

At first, they provide trainings to young migrants for communication skills. Then they focus on basic commands and tools required to use any computer or smart phone. Main challenges faced by young migrants and refugees are mostly related to their economic and financial problems. They also face communication skills shortcomings, lack of familiarity with technology, a different mindset, belief, and culture.

For the further improvement of their skills, trainers are also focusing on new trainings in content creation for skill enhancement of young migrants and refugees. Trainers are finding new areas in which specific skills of migrants and refugees should need to be improved. They prepare worksheets based on psychosocial condition and mental situation of each person so by doing this work they can improve their wellbeing and target the trainings more efficiently.

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Staff face difficulties guiding them with local language so they use the symbolic language to teach them various skills. Color coding, drawings, papers, charts, videos are used to make them aware about various training objectives in an easy way.
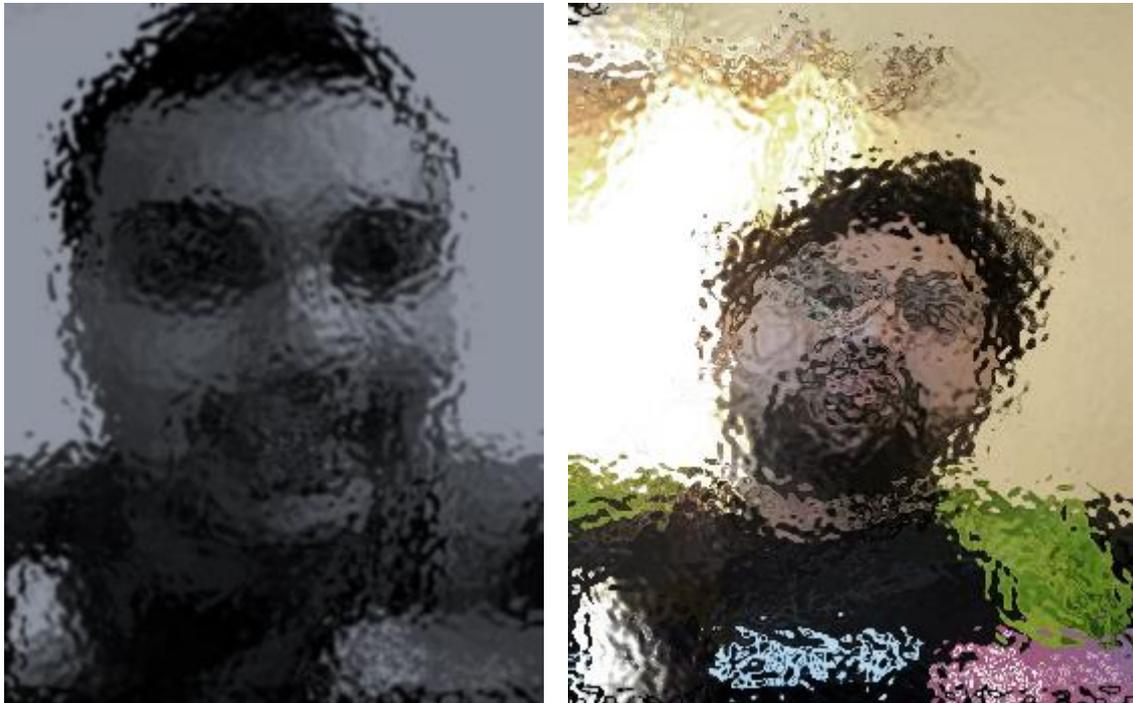

Image 10: Screenshot of Interview

2.6 Challenges faced by Migrants/ Refugees while developing capacity on ICT Skills:

(Various answers received by online google form survey & personal interviews)

- Migrant youth face risks compounded by their age, gender, migration status, and cultural identity.
- The international human and labour rights normative framework applies to all migrants regardless of status, including adolescents and youth.
- Gender equality must be considered in policy and practice affecting young women migrants.
- Certain health risks are elevated for youth migrants, and further heightened by other risks associated with migration.
- Environmental change, both sudden and gradual, directly and indirectly influences the propensity to migrate
- Not much as I thrive to learn something new that sounds exciting. May be sometimes not having an access to the required resources would have been a challenge.
- Changing roles and norms, Explore related content, Sustainability and scale, Funding
- Communication problem, awareness and language barrier

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- Mutual understanding, understanding and adoption of new culture.
- Lack of software guidance, inadequate computer in the classroom, low speed internet unavailability of latest ICT equipment, lack of expert technical staff, poor administrative support.
- Lack of motivation from both teacher and student side to use ICT, lack of proper training skills.
- People are facing problem with new technology, because day by day new technology will come so, proper training will not be provided to employees.
- Challenges of Community, infrastructure, time management also faced by Migrants and Refugees.

2.7   Effects of youth migration

Positive effects:

+ Migration can provide youth with work opportunities not available in their places of origin. The exit of jobseekers may ease domestic pressures linked to excess labour supply.

+ Migration may empower young women and reinforce equitable gender norms.

+ Migration for reasons related to education or employment can allow girls to avoid marriage at a young age.

+ The inflow of remittances may contribute to economic growth and poverty reduction in countries of origin and may also stimulate investment in human capital.

+ Diasporas can be a source of technology transfer, investments and venture capital for countries of origin.

+ Diasporas frequently assist in emergency relief in their countries of origin.

+ The physical or 'virtual' return of skilled workers translates into increases in local human capital, skills transfer and foreign network connections.

Negative effects:

Migration often results in the loss of highly skilled workers and a reduction in the quality of essential services.

- Economic growth and productivity decline with reductions in the stock of high-skilled labour. - In places of origin, returns on public investments in education are lower. The absence of parents may increase the vulnerability of youth left behind, and adolescents commonly experience difficulties in their social relations and will isolate themselves in small peer groups who are in a like situation.

- Youth left behind by their parents commonly experience increased demands as they must assume responsibilities previously assumed by their parents. This can lead to declines in academic performance and exit from school altogether.

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- Remittances coupled with limited parental supervision may be linked to a higher probability of risky behavior among youth left behind.

- Migration may expose youth—especially young women—to higher risks of abuse, discrimination and exploitation

Source: Extrapolated from online consultations and based in part on information obtained from De la Garza, (2010); Temin and others (2013); United Nations (2004).

2.8   Conclusion

Summary of the key findings through the interviews with ICT stakeholders:

The results provided by both the quantitative and qualitative analysis of the field research as well as the literature review highlighted the challenges and specific skills that are required by the labour market. All the employment agencies, ICT training providers agreed that some basic ICT skill and understanding of local language is very important for young migrants and refugees.

Report also shows that ICT trainers, NGOs, Employment agencies are all working on solving the challenges that migrants and refugees face and are supporting them to settle down in a new culture. They are also updating their skills and contents as per the basic needs of migrants and refugees in the local market.

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