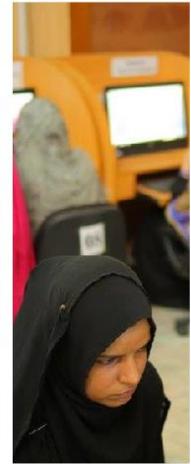




Universal  
Service Fund  
*Telecom for all*

# ICT Labs in Women Empowerment Centres

Joint project of PBM & USF



## AN IMPACT ANALYSIS



Impact Assessment Lead:  
**Usman Wadud, CO QAM, USFCo**

<https://usf.org.pk/aboutus/content/publications>  
[impactstudy@usf.org.pk](mailto:impactstudy@usf.org.pk)

*“There are two powers in the world; one is the sword and the other is the pen. There is a great competition and rivalry between the two. There is a third power stronger than both, that of the women.”*

Quaid-e-Azam Muhammad Ali Jinnah

# Contents

1. Acknowledgements.....	4
2. Executive Summary.....	5
3. Preface .....	6
4. Phases of the project .....	7
a. Memorandum of understanding (MoU) with Pakistan Bait ul Mal (PBM) .....	7
b. WEC Phase I .....	8
c. WEC Phase II .....	8
d. WEC Phase III .....	8
5. Methodology for Impact Analysis .....	9
a. Online survey of students and teachers .....	9
b. Data analysis .....	9
c. Field visits.....	9
d. Report .....	10
6. Impact of the project - students’ response.....	11
6.1 Why join the course? .....	11
6.2 Improvement in personality and life .....	13
6.3 Learning and enlightenment.....	15
6.4 Access to internet, PC and smart phone.....	17
6.5 Where is improvement required? .....	18
7. Impact of the project – teachers’ response.....	20
7.1 Educational qualifications .....	20
7.2 Are students benefitting from the course? .....	20
7.3 Main advantages of the program .....	21
7.4 Shortcomings of the program .....	22
8. Some takeaways from field surveys.....	25
9. Recommendations .....	26
9.1 Internet connectivity at the Centers.....	26
<b>Recommendation:</b> .....	26
9.2 Aligning offered courses with job market.....	26
<b>a. Enrichment of course contents:</b> .....	26

<b>b. Partnership with other organizations</b> .....	26
<b>Recommendation:</b> .....	26
9.3 Are more such centers required? .....	26
<b>Recommendation:</b> .....	27
9.4 Commercial / alternate power source at centers.....	27
<b>Recommendation:</b> .....	27
9.5 Rewarding outstanding students .....	27
<b>Recommendation for each academic session:</b> .....	27
9.6 Course accreditation .....	27
<b>Recommendation:</b> .....	27
9.7 Remote monitoring of PCs .....	27
<b>Recommendation:</b> .....	28
9.8 Interactive boards or projectors as teaching aids.....	28
<b>Recommendation:</b> .....	28
9.9 Teacher salaries .....	28
<b>Recommendation:</b> .....	28
10. Conclusions .....	29
References .....	31
Annexures .....	32

# 1. Acknowledgements

Performing an impact analysis is a tricky job. For one, choosing the right set of variables for the survey can be complicated; as can finding the right set of people for the job. The task at hand was to perform a detailed impact assessment of 100 computer labs set up in as many Women Empowerment Centers in all provinces of Pakistan. This entailed completing an online questionnaire by students and teachers. These questionnaires were painstakingly designed by a core survey team of USF employees. This was followed by a visit to 22 centers spread over the country. With a cultural mix of responses, extracting data for various variables turned out to be an enjoyable, albeit enervating effort. And yes, USFCo was lucky to have the right mix of people to be assigned the various aspects of the impact assessment exercise, which they negotiated in a professional manner. Whenever required, CEO USFCo provided his foresight and his advice proved invaluable to the team.

Field surveys were completed in 10 days with the help of 6 USF colleagues who travelled to centers located in diverse and, at times, remote areas. A colleague monitored their field efforts from Islamabad office and provided advice and guidance to ensure timely completion of the survey. PBM staff designated at the centers provided their full support to the survey team. The students and teachers were highly responsive, and their feedback helped in collating various aspects of data. The next step was compiling a report in text form.

Effective teamwork ensured timely completion of all deliverables. A set of presentations have been demonstrated in various forums. A presentation, visible to the world, is available on USF official website. Pakistan Bait ul Mal (PBM) extended their full support. This report is the result of continuous effort by all members of Impact Assessment team and is dedicated to their struggle. USFCo Team composition is given below:

## **Concept, data compilation & assessment**

Anjum Masood, Ahsan Mansoor, Habib Anwar, Tahira Malik

## **Field Surveys**

Faisal Habib, Taimour Malik, Imran Khan, Asma Afreen, Javed Iqbal, Tahira Malik

## **Infographics & advice on communication aspects**

Noshin Masud, Madeeha Masood

## **Video editing and field supervision**

Tahira Malik

From PBM, Mr. Aon Abbass, Managing Director and Mr. Arshad Malik, Director Projects along with PBM Provincial Directors, provided valuable help which made timely completion of the survey possible.

## 2. Executive Summary

Universal Service Fund was established by the Government of Pakistan (Ministry of Information Technology) to distribute the benefits of the telecom revolution across Pakistan. It is endeavoring to bridge the digital divide across various segments of the society. Pakistan Baitul Mal is a public sector organization that is working for the provision of social protection to the marginalized citizens of Pakistan.

Universal Service Fund, under its ICT for Girls Program, implemented a project for establishing Computer Labs at Women Empowerment Centers (WECs) operational under administrative control of Pakistan Baitul Mal (PBM). The aim of the project is to provide ICT and coding awareness to deserving women of Pakistan while helping them to harness the dividends of digital revolution, thus empowering them economically. The project was conceived and implemented during 2016-18. Under the project, 120 computer labs were established in three phases in facilities under the operations of PBM across Pakistan. The teachers of these centers have been trained by M/s Microsoft on Operating Systems, Coding and MS Office applications. The project has the capacity to train 10,000 students per year.

In order to measure the impact of the investment, USF in collaboration with PBM conducted an impact assessment study during the period December 2018-January 2019. The objective of the study was to gather information about various dimensions of impact created through this intervention. For this purpose, survey instruments were developed through a consultative process. The scope of the assessment study was confined to 100 computer labs that have been established in phase 1 & phase 2. A hybrid approach for data collection including online survey and face to face interviews of teachers and students was adopted. 2664 students and 73 teachers responded to the online survey. To elicit meaningful information and useful trends detailed analysis was performed on the collected data.

The study provided a deep insight about the project and how it is contributing toward enhancing digital literacy and empowering women of Pakistan. Few of the key results are given below<sup>1</sup>.

- 87% of the respondents lacked basic awareness of IT prior to joining the course.
- 76% of the respondents claimed that the course has improved their personality—in terms of their knowledge, confidence, and education.
- 89% of the respondents believe they can attribute their learning about IT, operating systems, and coding to the course.
- 93% of the respondents are of the view that course can lead to financial empowerment as it has enabled them to teach, perform a job, and free lancing.
- 84% of the respondents are confident that they can use the knowledge acquired through the course for performing a job, teaching, and coaching their communities.

---

<sup>1</sup> Infographic in Chapter 10

### 3. Preface

Women make up almost half the world’s population. Out of 7.68 billion people inhabiting the planet, 3.87 billion or 49.6% are female,<sup>[1]</sup> yet their contribution is hardly seen outside their homes. Governments all over the world have realized the importance of empowering womenfolk. Spearheading these is the United Nations Organization (UNO), which has vowed that women and girls everywhere must have equal rights and opportunities. UNO has come up with 17 Sustainable Development Goals (SDGs) to be pursued across its member countries. SDG 5 aims at achieving **“gender equality and empowering all women and girls.”** <sup>[2]</sup>

One of the intended outcomes of SDG 5 is that women should benefit from enabling technologies; in particular, information and communications technology, to promote their empowerment. <sup>[2]</sup>

Investing in women’s economic empowerment sets a direct path towards gender equality, poverty eradication and inclusive economic growth. <sup>[3]</sup> The fact that women make up for half the human population calls upon decision makers to come up with policies that tend to effectively enable womenfolk across the globe to become useful members of the civil fabric. Just going by the numbers game, a few logical questions arise. One that needs pondering most is that the potential contribution tied with these numbers necessitate provision of equal opportunities to women, which is not a giveaway but a requirement if the world is to become a better place.

The worldwide figures on ICT awareness are alarming; 4 billion people are without access to broadband facilities<sup>[4]</sup>, the digital divide is becoming wider by the day, newer technologies continue cropping up and the 4 billion remain out of their reach. ICT usage has a direct impact on a nation’s development. World Economic Forum has indicated that an increase in the digitization of a country by 10 percent leads to a 0.75 percent increase in GDP per capita, and a 1.02 percent drop in the unemployment rate.<sup>[5]</sup>

Women Empowerment Centers carry the potential to enable Pakistani women to enter the field of ICT, thereby qualifying them to contribute towards reducing the digital divide. Various collaborations have been established with leading ICT advocates, the most notable being Microsoft, Facebook and UN Women. USFCo is providing hardware and software capability to the 120 labs whereas PBM is providing laboratory infrastructure in addition to enrolling women students and providing teachers at these centers.



## 4. Phases of the project

The WEC program was designed in three phases. There are three major players; USFCo has provided the funding for the project, Pakistan Bait ul Mal has arranged space, infrastructure and teachers for these labs.



Finally, the vendor has deployed personal computers in the labs. A summarized history is given below:

### a. Memorandum of understanding (MoU) with Pakistan Bait ul Mal (PBM)

MoU with Pakistan Bait ul Mal was signed on 27 November 2015 for establishment of 120 computer labs in Women Empowerment Centers for poor and deprived Pakistani women. These centers were already providing basic vocational training to women in select fields but training on ICT related subjects were missing. The aim was to empower women in the field of ICT.

Three contracts were signed with vendors to provide personal computers and furniture for 20 students in each of these 120 labs. The various phases of WEC program have been summarized on the following page:

#### b. WEC Phase I

The contract for WEC-I was signed on 16 May 2016. The vendor, M/s CMC was assigned the task of establishing 50 computer centers throughout Pakistan. Implementation phase of the project is complete.

#### c. WEC Phase II

On the heels of WEC-I, the contract for WEC-II was signed on 9 June 2017. After a rigorous selection process, M/s Analytical Solutions was awarded the contract of establishing 50 computer labs spread in the four provinces of Pakistan. Implementation phase is complete.

#### d. WEC Phase III

The contract for WEC-III was signed on 24 October 2017. The vendor, M/s Analytical Solutions was assigned the task of establishing 20 computer labs in Women Empowerment Centers, spread in all four provinces. Implementation phase is complete. These 20 computer labs were not included in the survey as they had taken in fresh batches of students who had not completed their IT course at these centers.



In general, all 120 labs have 20 personal computers. Course contents were finalized by M/s Microsoft, who delivered an extensive training to teachers on Operating Systems, coding and MS Office applications. Thus equipped, the teachers were better placed to train girl students on various aspects of IT. Facebook also trained the master trainers on their landmark training “She Means Business”, a course designed around the central theme of empowering women.

Similarly, UN Women also chipped in with a training for master trainers designed to enable women to discover their inner potential and put it to use in their everyday life.

---

*“One child, one teacher, one book, one  
pen can change the world”*

Malala Yousafzai

---

## 5. Methodology for Impact Analysis

A core team for impact analysis was formed and the following four deliverables were assigned to them:

### a. Online survey of students and teachers

Online survey forms were designed and placed on USF server. WEC Centers were asked to contact their students who had completed their courses and give candid feedback on the survey questionnaire. More than 3000 student responses were received between 26 December 2018 and 7 January 2019. After taking out duplicate entries and cleaning data, the final count of student responses came to 2664. Similarly, 73 teachers responded to the questionnaire.

<i>Province</i>	<i>Total Centers</i>	<i>Centers that Responded</i>	<i>Students Response</i>	<i>Teachers Response</i>
Punjab	50	22	546	22
Sind	29	21	1,173	21
Khyber Pakhtunkhwa	24	19	746	19
Balochistan	16	10	161	10
Federal Capital	1	1	38	1
<b>Total</b>	<b>120</b>	<b>73</b>	<b>2664</b>	<b>73</b>

*Table 1: Online Survey results*

### b. Data analysis

The filled-up questionnaires had a world of information and analyzing this data posed a significant challenge. A team of officers were assigned to analyze this data and tabulate their responses in graphical format. This task was completed on 25 January 2019.

It should be noted that certain questions carried the option of multiple responses. The percentage of various replies to these questions has been calculated by taking the total responses as denominator.

### c. Field visits

Six USF colleagues were assigned the task of visiting 22 centers, spread across the 4 provinces, for field visit. Their aim was to get a hands on experience on the how these centers were operating and to assess the preparedness of the students and the benefits the course contents were imparting on them. These visits lasted from 20 January 2019 till 30 January

2019. In addition to verbal interviews with students and teachers, wherever students allowed short video interviews were recorded.

Sr. No.	Province	District	Date of visit
1	Sindh	Sukkur	21-Jan-19
2		Khairpur	21-Jan-19
3		Jacobabad	22-Jan-19
4		Larkana	22-Jan-19
5		Matiari	21-Jan-19
6		Mithi Tharparkar	22-Jan-19
7	Punjab	Sargodha	22-Jan-19
8		DG Khan	24-Jan-19
9		Khanewal	25-Jan-19
10		Mianwali	29-Jan-19
11		Bhakkar	30-Jan-19
12	Balochistan	Quetta I	24-Jan-19
13		Quetta II	27-Jan-19
14		Pishin	26-Jan-19
15		Khuzdar	25-Jan-19
16		Gwadar	22-Jan-19
17	Khyber Pakhtunkhwa	Nowshera	28-Jan-19
18		Charsadda	
19		Karak	23-Jan-19
20		Bannu	
21		Swat	24-Jan-19
22		Haripur	21-Jan-19

*Table 2: Women Empowerment Centers visited for Survey*

#### d. Report

The final task of the impact analysis was to prepare a report in graphical and text format. The graphical version was completed on 30 January 2019, whereas the textual report, encompassing all aspects of the impact analysis study, was completed on 15 February 2019. Owing to cultural restraints, video interviews of only those candidates were recorded whose cultural bounds allowed video exposure. Students in remote areas of Balochistan and Khyber Pakhtunkhwa opted not to be recorded.

## 6. Impact of the project - students' response

The impact analysis revolved around the questionnaire that was floated to teachers and students on 26 December 2018. Online responses were closed on 7 January 2019. The questionnaire was carefully designed to cover multiple aspects that could be interpreted into objective analysis.

*The questionnaire was carefully designed to cover multiple aspects that could be interpreted into objective analysis*



The questionnaire consisted of educational, socio-cultural, empowerment and human aspects for both teachers and students. They were helpful in providing a critical insight about the target audience and were instrumental in forming certain outcomes of the survey. Some of the sample responses are reproduced in graphical form followed by their assumed impact.

To make the questionnaires more meaningful, certain questions contained the option of choosing multiple answers. Other responses, in addition to active options, could also be chosen. Since responses for such questions exceeded the sample number of respondents, this feedback has been collated against the total number of responses in this report and percentage is calculated using the total number of responses as denominator. For result oriented outcome, the questions were designed to reflect pre-training knowledge juxtaposed with post training cognizance.

Some of the questions, along with their responses, are given in the following lines:

### 6.1 Why join the course?

Reason for joining the course (Click all that apply) \*

کورس میں شمولیت کی وجہ -

- Gain IT knowledge
- Personal improvement
- Job seeking
- Financial assistance by PBM
- Other...

Figure 1: Question asked in Online Survey

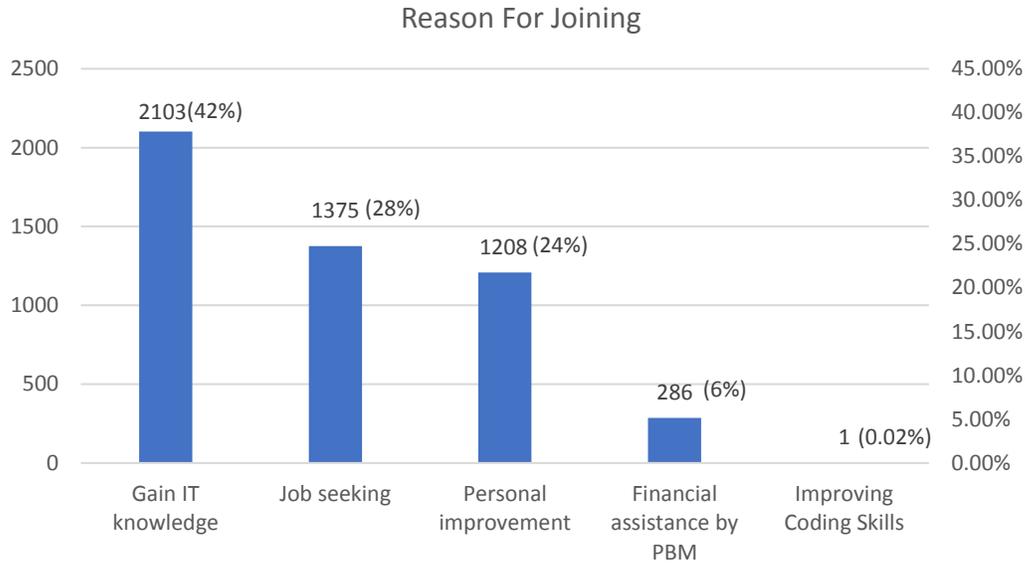


Figure 2: Students response on why they joined the course

The graph in figure 2 shows that majority of the students (42%) joined the course to gain IT knowledge. Job seeking and personal improvement appear to be motivating factors. A very small percentage of students joined to learn coding skills.

*I didn't know much about computers till I joined this course. Now I know what I can do with the help of computers*

**Ms. Asma Kanwal, ex- student WEC DG Khan**

This finding corresponds to another response from the students wherein it transpires that 87% of the students had no prior exposure to computers and were first time users.

### Familiarity with IT before joining Women Empowerment Center

مرکز میں شمولیت سے پہلے آئی ٹی کے ساتھ واقفیت

- Used for the first Time
- Beginner level
- Advance level

Figure 2: Question asked in online survey

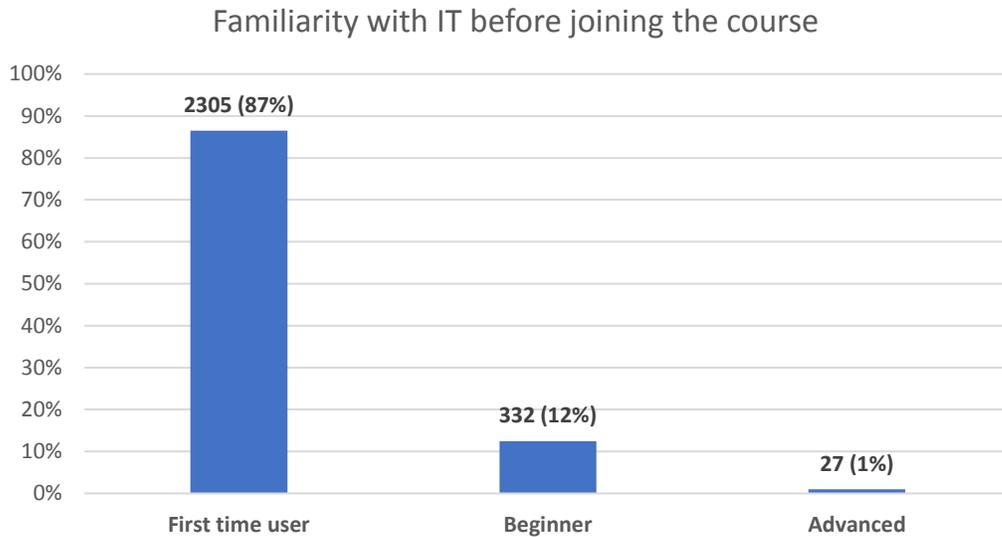


Figure 3: Students response on Familiarity with IT

*Majority of the students are first time users*

These statistics are appalling, and point to the direction that much more needs to be done to educate the women folk of Pakistan on various aspects of IT.

It appears that 120 computer labs can go some way in familiarizing our women with IT, but in order for it to gain momentum and become a recognizable force, more such centers need to be established.

---

*After the course, I started teaching the Quran online to students.*

**Ms. Halima Sadia (ex-student, WEC Islamabad)**

*She currently has three online students in Italy and plans to increase this number*

---

## 6.2 Improvement in personality and life

The majority of interviewed students were purdah observers and preferred to be interviewed in their purdah outfit. However, their body language and attitude exuded confidence and showed that they were ready to face the world and take challenges head on. In face to face interviews, most students confided that prior to joining the course, they were not as confident as they are now. The exposure they have experienced during the course has had a positive impact and has boosted their confidence levels.

*Majority of interviewed students who were purdah observers exuded confidence and showed they were ready to face the world*

How has this course helped you in improving your personality/life? (Click all that apply) \*  
 اس کورس نے آپ کی شخصیت / زندگی کو بہتر بنانے میں کس طرح مدد کی ہے؟

- Access to information
- Education/ E-learning
- Confidence
- Business
- Improve quality of life
- Other...

Figure 4: Question asked in Online survey

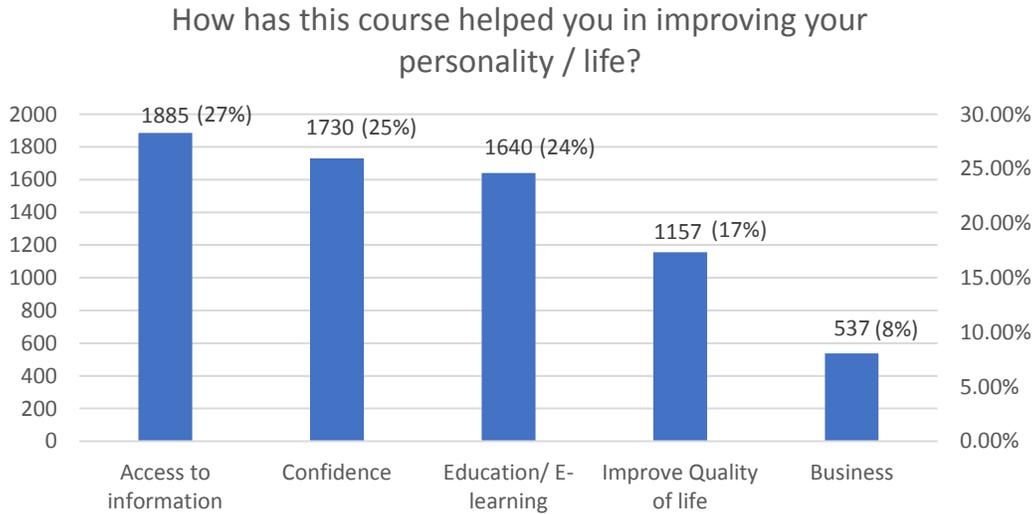


Figure 5: Students Perception about improvement in personality and life

The majority of students believe that with access to information technology, they feel more confident as they have greater exposure to the world through e-learning. 17% students are

---

*The biggest advantage is that I gained confidence, which I was lacking before the course. I now have a job with which I can support my family.*

**Ms. Rimsha Safdar (ex-student, WEC Sargodha)**

---

certain that this course has improved the quality of their lives, whereas 8% think that this course would help them in their business endeavors.

### 6.3 Learning and enlightenment

The student response on the survey points towards the efficacy of the course. There appears to be no second opinion about the fact that this course has helped them improve their learning in a multitude of ways. In going with the knowledge base that most students possessed at the time of starting the course, 28% students have admitted that they have learnt IT skills. A refreshing aspect is that 17% of the students say that they have learnt coding skills. Even if these skills are basic, the fact that an ample number of candidates are taking to coding skills is an encouraging fact. Databases, another important aspect of IT, have also found a popular niche with students and 9% of them know more about databases.

*28% students admitted that they have learnt IT skills through the project*

Which aspects of course have you studied here? (Click all that apply) \*

آپ نے یہاں کس طرز کے کورس کا مطالعہ کیا ہے / کر رہے ہیں؟

- Basic IT
- MS-Office
- Programming languages
- Operating System
- Databases
- Other...

Figure 6: Question asked in Online Survey

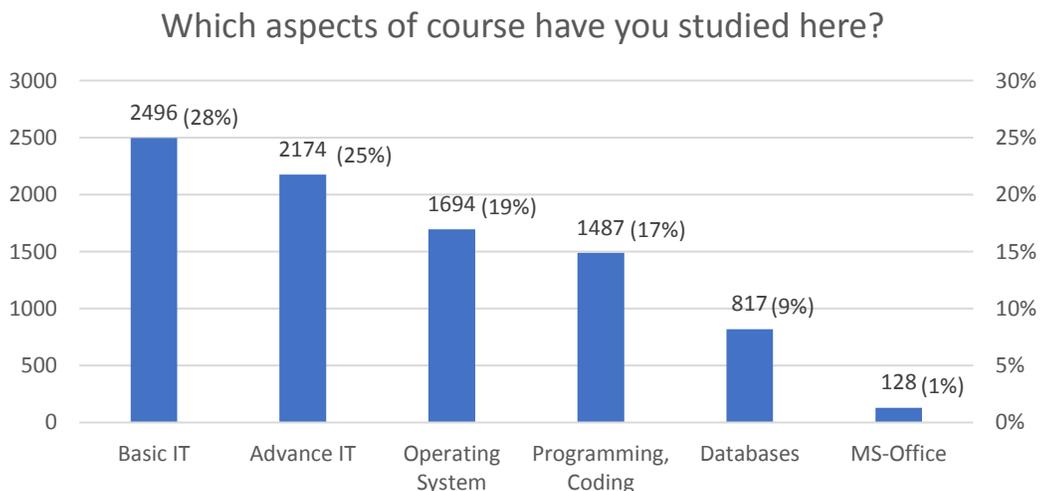


Figure 7: Students response on Aspects of IT studied in the center

The WEC program takes into account the poor financial status of families and is aimed at

---

*Here, I have learned basic and advanced computer techniques. After the completion of course, I have started a job as an IT teacher. This course has helped me a lot in grooming my personality.*

**Ms. Rafia Sohail, ex-student WEC Haripur**

---

providing financial empowerment and independence to their female members by training them on ICT related technologies. A question on the survey asked participants how they planned to use their newly gained knowledge.

آپ نے اس علم سے استفادہ (Click all apply) کیسے کیا کرتے ہیں؟  
اٹھانے کے لئے کیا حکمت عملی کی ہے؟

- Performing job
- Entrepreneur
- Teaching
- Coaching community
- Freelancing
- None

Figure 8: Question asked in online survey

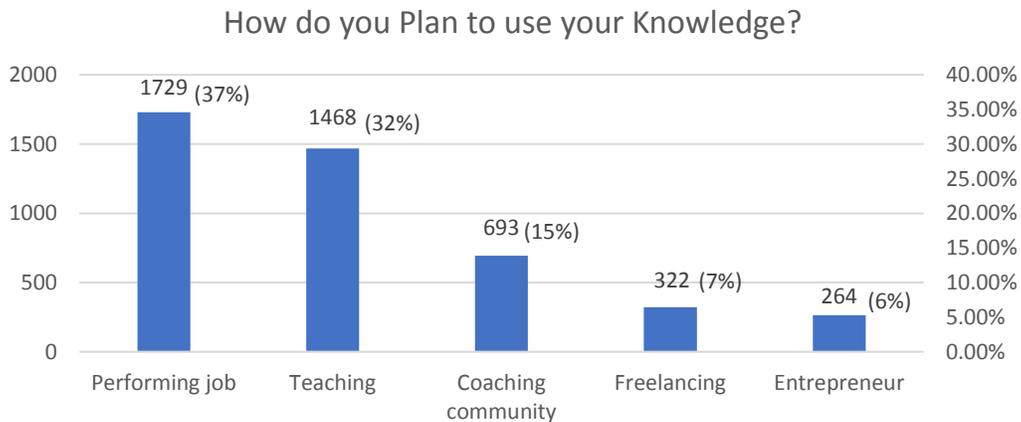


Figure 9: Students response on How do they Plan to use IT knowledge

It came as no surprise that most of the students planned to use their newly gained knowledge in finding a job. Teaching also appears high on the agenda, followed by coaching the community, freelancing and entrepreneurship. All these options are centered around finding a means of sustenance and financial independence.

*Finding jobs is the top most priority*

#### 6.4 Access to internet, PC and smart phone

Access to technology and tools enabling its various aspects are of prime importance for any application to flourish. A question on the survey questionnaire was designed to cover this aspect and it read as:

Do you have a Computer/Smartphone at home? \* کیا آپ کے پاس گھر میں  
کمپیوٹر / اسمارٹ فون ہے؟

Yes

No

Figure 10: Question asked in online Survey

The response to the question is graphically represented as follows:

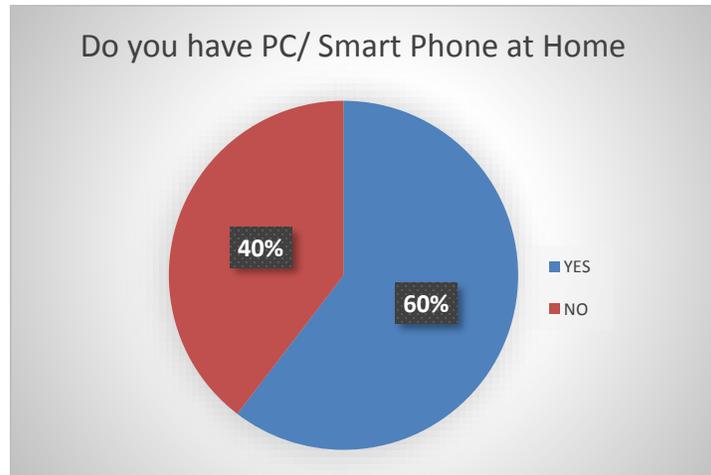


Figure 11: Student response on PC or smart phone availability at home

60% of respondents either have a PC or a smart phone available at home. This is encouraging and is suggestive of the penetration of IT enabling gadgets in our social fabric. However, the next question to students asked them if they had internet connectivity at home to which the response was dismal, as only 27% of the students replied in the affirmative.

Do you have internet connectivity at home? کیا آپ کے پاس گھر میں انٹرنیٹ ہے؟ \*

Yes

No

Figure 12: Question asked in online survey

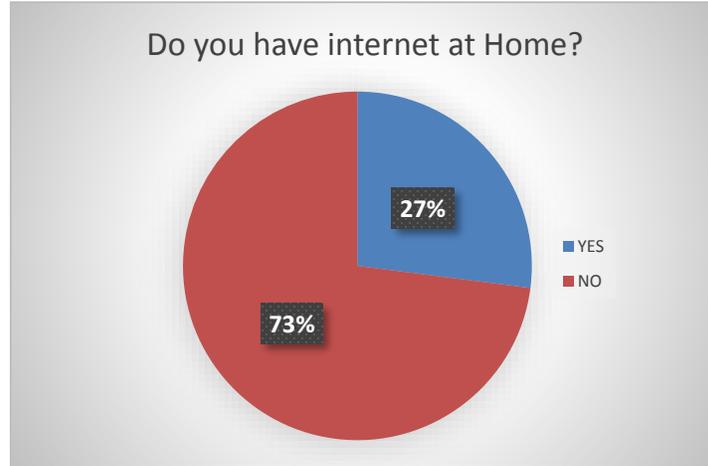


Figure 13: Student Response on Internet availability at home

Considering the fact that 264 respondents (refer to Figure 9) are in favor of entrepreneurship, absence of internet in some of the areas or its non-affordability may be a bottleneck for these respondents in meeting their goal. Business startups all over the world tend to concentrate their efforts on internet to begin and sustain their business ventures.

### 6.5 Where is improvement required?

Improvement is an ongoing process. The survey was particular in asking respondents about areas where the WEC program needed improvement.

What aspects of the program do you want to improve? (Click all that apply) آپ کے خیال میں پروگرام کے کن پہلوؤں کو بہتر بنایا جا سکتا ہے؟ \*

Basic computer knowledge

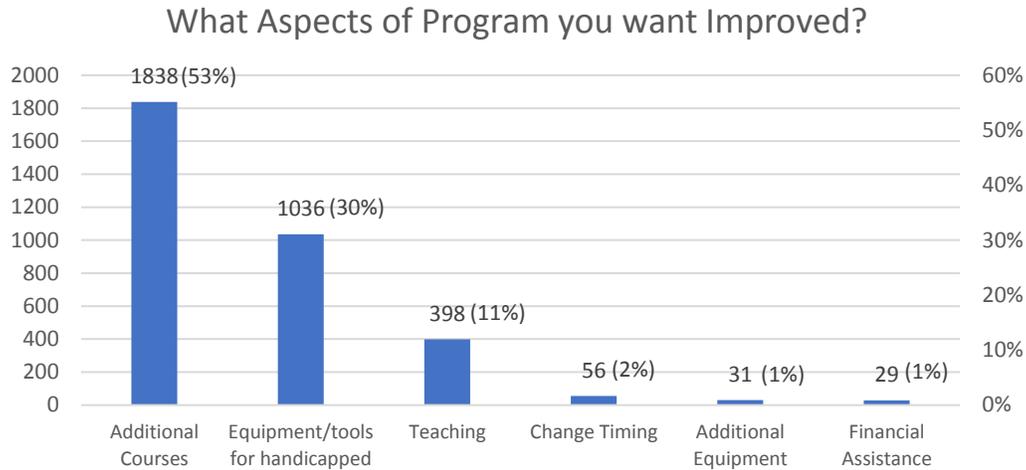
Coding

Equipment/tools for handicapped

Teaching

Other...

Figure 14: Question asked in Online Survey



*Figure 15: Student response on Program aspects requiring improvement*

57% responses indicated that additional courses are required. This request reverberated during face to face interviews with candidates.

---

*I am grateful that this lab has been established in our city, Khuzdar. I would request that this lab continues working so that my sisters, who are not allowed to study in coeducation institutes, can benefit from this institute.*

**Ms. Alia Khaliq, ex-student WEC Khuzdar**

---

27% responses point towards requirement of additional equipment in the labs. This was further broken down into availability of interactive monitors and projectors as teaching aids.

## 7. Impact of the project – teachers’ response

Feedback from teachers was also solicited about the program. Like students, an online questionnaire was sent to them. 73 teachers responded and their responses have been captured in trailing text and graphs.

### 7.1 Educational qualifications

It came as a pleasant surprise that the majority of teachers (47%) are post graduates. 33% teachers possess a bachelor’s degree, whereas 20% hold a diploma in IT related fields. These teachers have been hired by PBM and deputed in these centers.

What level of education have you achieved? \*

- Graduate
- Post Graduate
- IT Diploma
- Other...

Figure 16: Question asked to Teachers in Online Survey

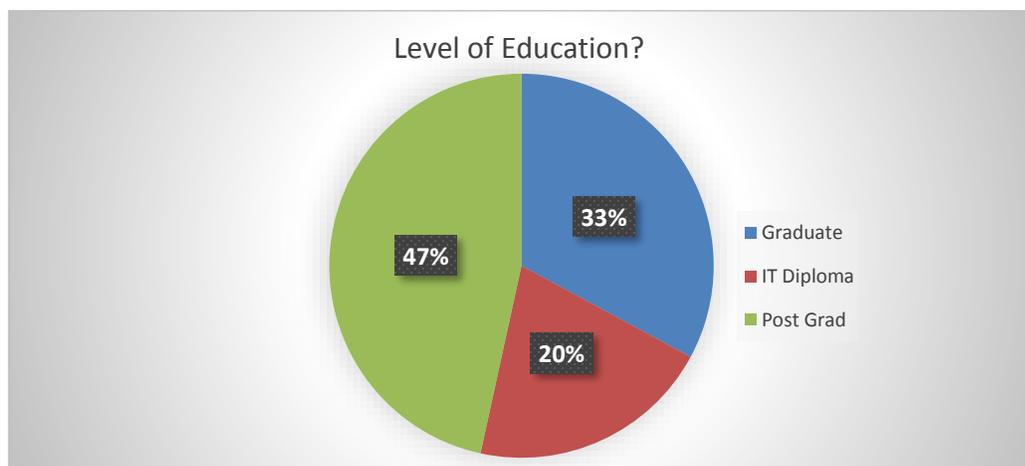


Figure 17: Response of Teachers on Educational qualification

### 7.2 Are students benefitting from the course?

In response to a question whether students are benefitting from this course, 73% teachers responded that this course is imparting immense benefits to the students.

How much are students benefiting from the syllabus? \*

- Immensely
- Partially
- Not benefiting at all

Figure 18: question asked to Teachers in Online Survey

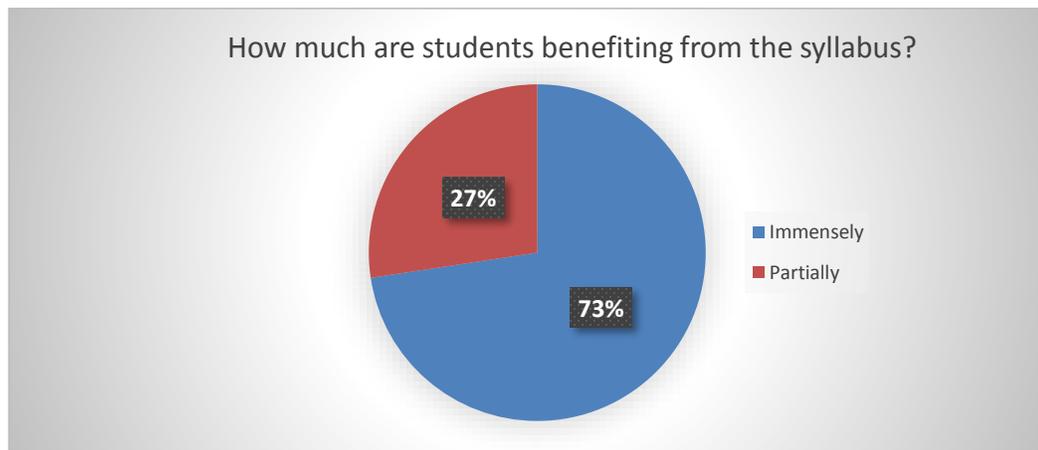


Figure 19: Teachers response on Benefits to Students

This appears to be a resounding endorsement about the efficacy of the course as 73% teachers are of the view that the course is of immense benefit to the students. 27% of the teachers responded that the course is imparting partial benefits to the students.

### 7.3 Main advantages of the program

Any program that does not have a potential target of benefits to its recipients is devoid of meaning. Teacher response to the main advantages of the course is represented below.

What are the main advantages of this program? (Click all that apply) \*

- Enabler to get a job
- improving IT based knowledge
- Usage of Internet and email
- Interaction through social media
- Other...

Figure 20: Questions asked to Teachers in Online Survey

The graphical representation of teachers' responses to this question takes the following form:

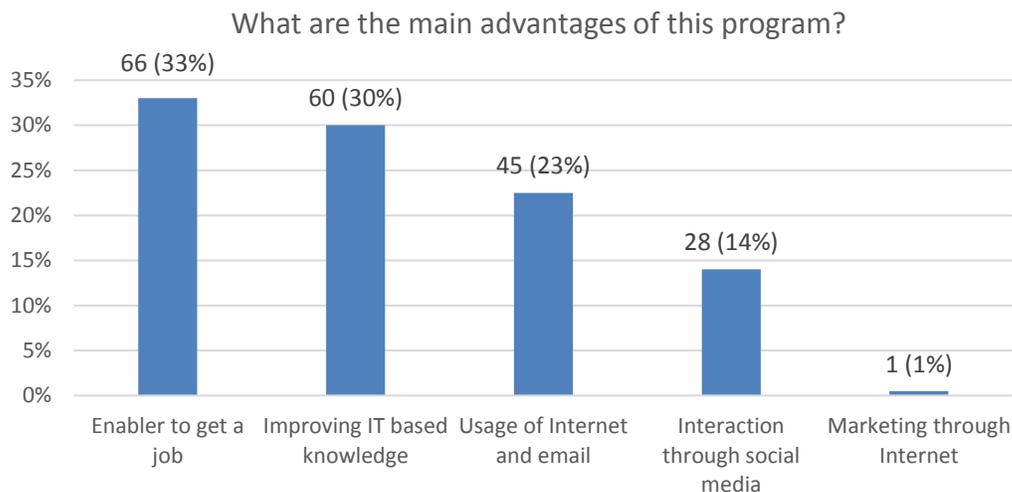


Figure 21: Teachers Response on Advantages of the program

33% responses point to the fact that this program is an enabler for finding jobs. 30% responses present the viewpoint that it has resulted in improvement of IT based knowledge, whereas remaining responses advocate use of internet, email and social media as the main advantages. This response matches the students' response on a similar question (figure 9), where majority of the students believe that this course would help them in finding jobs.

#### 7.4 Shortcomings of the program

In their response to shortcomings of the program, the majority of the teacher responses conveyed that the course content needs enrichment. This response corresponds to students' response on a similar question (see figure 15), wherein 57% of the student responses suggest that a more enriched syllabus can further improve this program.

*36% teachers suggested that additional IT equipment should be added in the labs*

36% teacher responses suggest that additional IT equipment should be added in the labs whereas 15% responses recommend improvement in lab environment. The need of a projector as a teaching aid and additional power backup has also been suggested as improvement to the lab.

In another related question, teachers were asked to identify areas that they would want to change in the current syllabus. 90% responses propose inclusion of more advanced level courses.

- What are the main shortcomings of this program? (Click all that apply) \*
- Course content
  - IT equipment in Lab
  - Lab environment
  - Other...

Figure 22: Question asked to Teachers in Online survey

The response can be seen below:

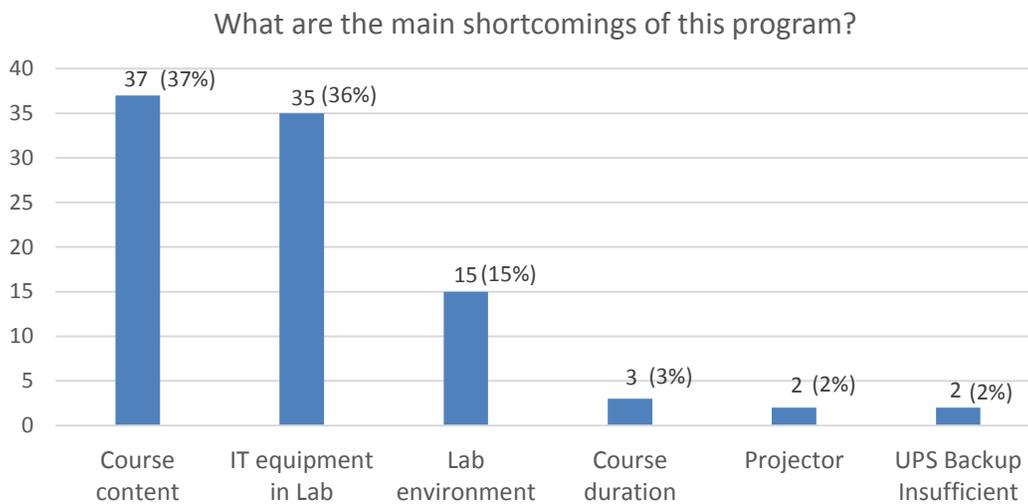


Figure 23: Teacher Response on main shortcomings of the program

*Recognition of the course by an approved Government authority appears to be a popular demand among students*

The questionnaire put up an additional question to the teachers regarding any change they would suggest to the current WEC syllabus. The majority of teachers wanted an addition of more advanced content to the syllabus. One teacher forwarded a suggestion that found widespread acceptance among students during field interviews. The suggestion raised the matter of recognition of this course by an approved government body in the shape of a certificate.

What would you want to change or add to the current syllabus taught at WECs? (Click all that apply) \*

- More content should be added
- Advance level lectures on same content should be added
- Other...

Figure 24: Question asked to teacher in Online survey

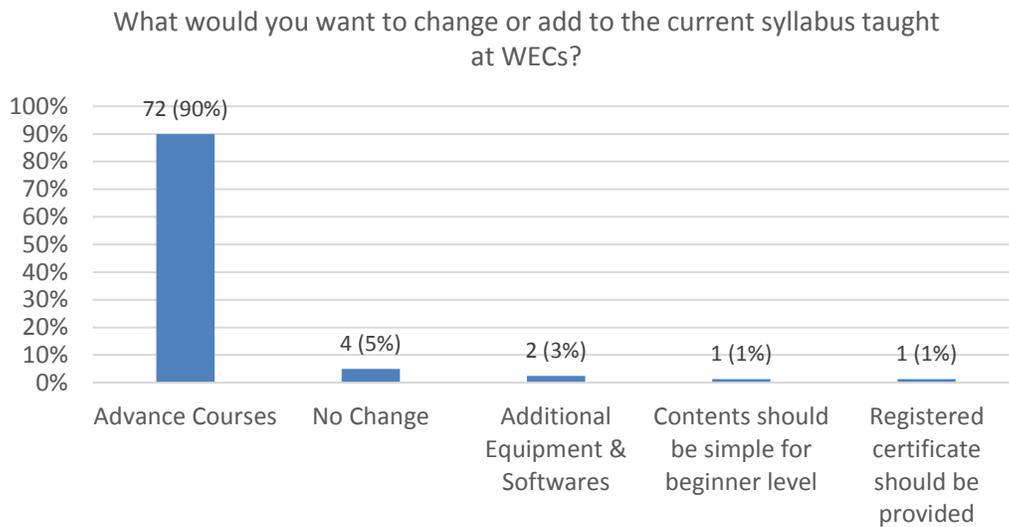


Figure 25: Teacher Response on Suggestion about change in syllabus

## 8. Some takeaways from field surveys

As mentioned in Chapter 3, field surveys were held from 20 January till 30 January 2019. The survey results were a surprise mix of various attributes. Some of its prominent outcomes can be summed up in the following lines:

- Students are hungry for more knowledge.
- The option of attending the course is need driven as most students want this newly acquired IT knowledge to help them find jobs.
- The course has made a positive impact on the students and has equipped them with knowledge and confidence to face the world.
- Some students have exhibited the spirit of entrepreneurship and have taken up online teaching of the Quran or opened tuition centers at home.
- More and enriched course contents have been recommended by both students and teachers.
- Internet connectivity in some centers is slow and should be rectified.
- Course certification from an accredited Government institution can help students in their job quests.
- Addition of specialized equipment for physically challenged people can help differently able segment of our society.
- Teaching aids such as interactive boards or projectors should be added in the labs.
- Students need to be motivated to perform. One computer can be awarded to the best student of each center on course completion.
- Counter measures are required in areas prone to extensive load shedding and low voltage.
- Sustainable projects are the way to go as quick fixes often prove perishable.

The takeaways are encouraging. For a nascent project, these outcomes can define certain priorities that can result in elevated living conditions for women and their families. These can help in setting a direction towards effective women empowerment.

## 9. Recommendations

### 9.1 Internet connectivity at the Centers

In the 120 centers, 20 PCs have been installed in each lab. These have a UPS backup available for at least 30 minutes in case of commercial power outage. Moreover, 20 computer tables and as many chairs have been provided. Broadband connectivity, a responsibility of PBM, is part of the package. This is to enable students to learn and explore IT and internet as tools. The centers are fully equipped and well maintained. However, broadband connection speeds in some labs appears to be slow. Since internet connections are mostly on DSL, line faults may be responsible for degraded connectivity.

**Recommendation:**

PBM needs to look this up and follow it up with internet service provider.

### 9.2 Aligning offered courses with job market

**a. Enrichment of course contents:**

The main course contents for master trainers (teachers) have been designed by Microsoft and they cover basic and advance level aspects of Windows OS, MS office, Internet and email. In addition, coding, databases and sketching have been covered in the course contents. Moreover, UN Women and Facebook also imparted training sessions to the master trainers which were focused on women empowerment using IT.

During the impact study, most students were of the strong opinion that more details should be added to the course contents.

**b. Partnership with other organizations**

One area of that needs to be included in the course contents is freelancing as this is where job market can be explored and can lead to entrepreneurship and other self-incited endeavors leading to financial sustenance and job creation. This was further explored, and a meeting was held with officers from IGNITE, a USFCo sister department, who have a section specializing in online freelancing endeavor by the brand name of DIGI Skills. The CEO of IGNITE took to this suggestion genially and appeared to be all for it.

**Recommendation:**

USFCo has discussed relevant parts of the survey with PBM and has strongly proposed an enrichment in course contents. PBM has been receptive to the suggestion. A formal request and follow-up by USFCo is required to get the course contents revised. Similarly, a formal request needs to be sent to IGNITE to allow WEC students to join the course online after it has been made part of the syllabus.

### 9.3 Are more such centers required?

The current student turnout capacity at WEC centers is 10,000 students a year. For a start, this looks like a healthy figure. However, in the longer run, more centers would be required.

Womenfolk in Pakistan are not very enlightened and more of these initiatives should be implemented so that a greater percentage of women may benefit from them.

**Recommendation:**

It is a foregone conclusion that women need to be empowered in order to make them useful and contributing citizens. USFCo should explore partnerships with various departments that would lead to memoranda of understanding for establishing more centers for women empowerment.

#### 9.4 Commercial / alternate power source at centers

Due to ongoing energy crisis in the country, especially in suburban and rural areas, load shedding can last for hours on end, hence the UPS provided at the WEC centers cannot effectively charge the batteries.

**Recommendation:**

Generators of required specifications are needed at these centers to ensure continuous operation of personal computers along with 2 fans and as many energy savers in each lab.

#### 9.5 Rewarding outstanding students

Some of the students are outstanding and although it is not financially viable to reward each deserving student on merit, some sort of reward and recognition mechanism needs to be put in place for outstanding students.

**Recommendation for each academic session:**

- a. The top student should be given a reward in the form of a laptop and a certificate of merit.
- b. The next three top students should be awarded a certificate of merit.
- c. A certificate of merit should be awarded to the student who presents the most creative idea relevant to the course curriculum.

#### 9.6 Course accreditation

Even though the students at WECs are anxious to learn about IT and to apply their knowledge in seeking out avenues to improve their lives, they feel that recognition of the IT course in the shape of a certificate from a Government body would help them in finding jobs or getting themselves recognized. At present, the Government of Balochistan has recognized this program for students who have completed their training from WECs in Balochistan and is providing an accreditation from TEVTA (Technical Education and Vocational Training Authority).

**Recommendation:**

PBM should actively pursue all provincial governments to recognize the course taught in WECs in line with their recognition policies.

#### 9.7 Remote monitoring of PCs

As of today, there are more than 2000 personal computers deployed in computer labs throughout Pakistan. As a monitoring mechanism, USFCo ensures that a sample number of these centers is visited each year. Still these visits do not guarantee that PCs and allied equipment are present in the labs as due to theft or mischief, PCs can go missing.

**Recommendation:**

A basic online monitoring mechanism should be developed, whereby PCs in each lab should be visible to a central computer or server (in Islamabad) through one or more internet protocols. In order to ensure that privacy of teachers and students is not breached, the monitoring mechanism should not go beyond observing power up and shut down status of each computer.

### 9.8 Interactive boards or projectors as teaching aids

Some teachers have complained that without an interactive teaching aid, they are facing difficulty in reaching out to each student in a class.

**Recommendation:**

Teaching aids such as a projector or an interactive whiteboard can help in making the course contents reach out to all students. It is recommended that one smart board per lab be procured.

### 9.9 Teacher salaries

Salaries given to WEC teachers are insufficient and unable to lure good teachers into the WEC fold. A good teacher can inspire scores of students to make lasting impressions on the society. Teacher motivation is essential and one way to do this is to give them good salaries.

**Recommendation:**

Teacher salaries should be fixed according to market trends.

## 10. Conclusions

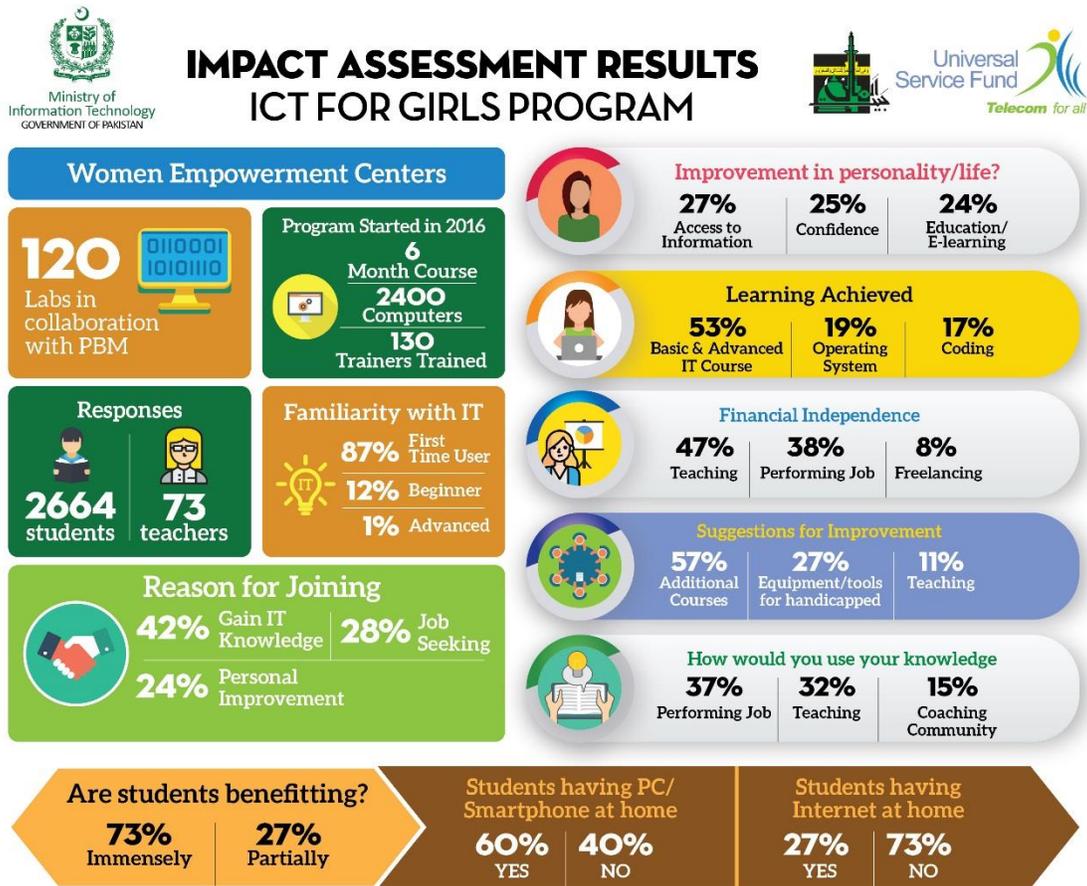


Figure 27: Impact assessment at a glance

A successful program delves deep into acknowledging and remedying problems in a sustainable manner. The WEC program has been successful in identifying the lack of IT awareness among women and has established 120 computer labs, equipped with personal computers, ancillary equipment and teaching staff. The foundation has thus been laid. The second important aspect is a monitoring mechanism, which is an ongoing process and much needs to be done if success curves are to be maintained. Chapter 9 of this report recommends some solutions that will be helpful for sustainability of this program.

Innovation is important to success. The current syllabus is mainly targeted at an audience that knows very little about IT. With the newly gained knowledge, several students have found jobs which mainly revolve around the teaching profession. Some students have made it to small setups as receptionists or data punch operators. This is a humble beginning, concordant with the initial goals of the project. However, it needs to

*PBM needs to develop strategic plans with long term, outcome-oriented goals and short-term objectives with a periodic reporting mechanism. Measuring outcome can be difficult due to host of reasons, but a baseline needs to be defined.*

be acknowledged that with time, fresher and more demanding course contents would have to be introduced to equip these students with a knowledge base that would take them places.

Teachers are essential to the sustainable success of the program. The current salary given to teaching faculty in these centers is insufficient. Their salary slabs need to be made comparable to the market and more qualified IT teachers need to be taken on board. Steps should also be taken to encourage teachers from universities to visit these centers occasionally to share their experiences and to guide students on the latest trends in IT.

*Establishment of computer labs in Women Empowerment Centers is a small, first step in an arduous journey, which requires a transformation in cultural norms and thinking.*

PBM needs to develop strategic plans with long term, outcome oriented goals and short-term objectives with a periodic reporting mechanism. Measuring outcomes can be difficult<sup>[6]</sup> due to a host of reasons, but a baseline still needs to be defined. Unless outcome measurement is performed periodically (say, every 6 months), there would be little or no visibility on how these centers are performing.

Women's role in any social setup cannot be underestimated. They are the pillars on which societies are built. With changing times, a family is no longer dependent on the male bread earner but looks up to its women for financial contribution. Women empowerment is thus crucial to the societal fabric. Information Technology and internet have transformed lives all over the world and in most cases, women have been the driving force to bring about this transformation. As Pakistanis, are we ready to embrace this change? For our rural and suburban milieu, it is a paradigm shift, but unless this shift is recognized and steps are taken to absorb it, our progress as a nation would not be substantial.

Establishment of computer labs in Women Empowerment Centers is a small, first step in an arduous journey, which requires a transformation in cultural norms and thinking. One of the major outcomes of this study is that ICT awareness has found a favorable niche among our womenfolk. This effort should be encouraged by creating more such centers so that the process of change continues to gain momentum and does not dim out.

## References

- [1] World Population.  
Available from: < <https://countrymeters.info/en/World> >. [14 February 2019].
- [2] About the Sustainable Development Goals.  
Available from: < <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> >. [14 February 2019].
- [3] Economic Empowerment  
Available from: < <http://www.unwomen.org/en/what-we-do/economic-empowerment> > [14 February 2019]
- [4] Internet Usage Statistics; The Internet Big Picture; World Internet Users and 2018 Population Stats  
Available from: < <https://www.internetworldstats.com/stats.htm>. [30 June 2018].
- [5] Impact of Information and Communication Technology Infrastructure on Economic Growth: An Empirical Assessment for the EU Countries: Available from:< <https://www.mdpi.com/2071-1050/10/10/3750/pdf> >. [19 February 2019].
- [6] 4 ways to measure success in the public sector. Available from: <https://fcw.com/articles/2006/09/04/4-ways-to-measure-success-in-the-public-sector.aspx> >. [15 February 2019]

## Annexures

### A. Questionnaire for students

#### Personal Information

1. Name نام \* \_\_\_\_\_

2. WEC Address ادارہ کا پتہ : \_\_\_\_\_

3. District ضلع : \_\_\_\_\_

4. Province صوبہ Mark only one oval.

- Punjab
- Khyber Pakhtun Khwa
- Sind
- Balochistan
- Islamabad Capital Territory

5. Email Address \_\_\_\_\_

6. Joining Date \_\_\_\_\_

7. Graduating Date \_\_\_\_\_

8. Are you currently enrolled in this center? Mark only one oval. کیا آپ اس وقت اس ادارہ میں زیر تعلیم ہیں؟

Yes

No

9. Education تعلیم \* Mark only one oval.

- No education
- Middle
- Matric
- Inter (F.A/ F.Sc/ ICS/ I.com /DAE)
- Graduation (B.A/BSc /BCOM)
- Post graduate
- Other:

10. Familiarity with IT before joining Women empowerment Center Mark only one oval.

مرکز میں شمولیت سے پہلے آئی ٹی سے واقفیت

- Used for the first Time
- Beginner level
- Advance level

11. Main source of income of family? (Click all that apply) خاندان کا ذریعہ معاش؟

- Agriculture
- Govt. employee
- Private employee
- Business Daily wages
- Other:

12. Reason for joining the course (Click all that apply) کورس میں شمولیت کی وجہ؟

- Gain IT knowledge
- Personal improvement
- Job seeking
- Financial assistance by PBM

13. Would you recommend the course to others? Mark only one oval.  
کیا آپ دوسروں کو اس کورس کی سفارش کریں گے؟

Yes

No

#### Education and Personal Development

14. Which aspects of course have you studied here? (Click all that apply)  
آپ نے یہاں کس طرز کے کورس کا مطالعہ کیا ہے/ کر رہے ہیں؟

Basic IT

MS-Office

Programming languages

Operating System

Databases

Other:

15. How has this course helped you in improving your personality/life? (Click all that apply)  
اس کورس نے آپ کی شخصیت / زندگی کو بہتر بنانے میں کس طرح مدد کی ہے؟

Access to information/ Education E-learning

Confidence

Business

Improve quality of life

Other:

16. How do you plan to use your knowledge? (Click all that apply).  
آپ نے اس علم سے استفادہ اٹھانے کے کیا حکمت عملی کی ہے؟

Performing job

Entrepreneur

Teaching

Coaching community

Freelancing

None

17. What aspects of the program do you want to improve? (Click all that apply)

آپ کے خیال میں پروگرام کے کن پہلوؤں کو بہتر بنایا جا سکتا ہے؟

- Basic computer knowledge
- Coding
- `Equipment/tools for handicapped
- Teaching
- Other:

18. What aspect of the course do you like best? (Click all that apply)

کورس کا کونسا پہلو آپ کو سب سے زیادہ پسند ہے؟

- Coding
- Word Processing
- Presentations
- Spreadsheets
- Teacher-Student interaction
- Other:

### **Socio economic aspects**

19. Were you earning anything before joining this course? Mark only one oval.

کیا آپ اس کورس میں شرکت کرنے سے پہلے کچھ کماتے تھے؟

- Yes
- No

20. What sort of financial independence do you think you can attain from this course? (Click all that apply).

معاشی طور پر مستحکم ہونے کے لیے یہ کورس آپ کے لیے کتنا مددگار ثابت ہوگا؟

- Performing Job
- Entrepreneurship
- Teaching
- Coaching
- Freelancing
- Already generating income
- Other

21 How has this course empowered you to advise and guide your community on the use of Technology for improving their lives? (Click all that apply) کیا اس کورس نے آپکو اس قابل بنا دیا ہے کہ آپ اپنے حلقہ احباب کی رہنمائی کر سکیں کہ وہ کیسے اس کی مدد سے اپنی زندگی بہتر بنا سکتے ہیں؟

I have gained enough skillset to train others

Counselling my community on the use of IT

Other:

22. Who will you prefer to educate on these techniques? (Click all that apply).

آپ یہ کورس کس کو پڑھانا پسند کریں گے؟

Family

Friends

Community

None

23. Has this training equipped you with enough knowledge to acquire a job or become a professional? Mark only one oval. کیا یہ تربیت آپ کو ملازمت حاصل کرنے یا پیشہ ور بننے کے لئے مددگار ثابت ہوگی؟

Yes

No

### Technology (Hardware & Software) section

24. Do you think more IT equipment or software should be added to the lab? Mark only one oval کیا آپ کو لگتا ہے کہ لیبارٹری میں مزید آئی ٹی کا سامان یا سافٹ ویئر شامل کیا جانا چاہیے؟

Yes

No

25. Do you think there should be changes to the current syllabus? Mark only one oval. کیا آپ کو لگتا ہے کہ موجودہ نصاب میں تبدیلی لانی چاہئے؟

Yes

No

26. Do you have a Computer/Smartphone at home? Mark only one oval. کیا آپ کے پاس گھر میں کمپیوٹر / اسمارٹ فون ہے؟

Yes

No

27. Do you have internet connectivity at home? Mark only one oval. \* کیا آپ کے پاس گھر میں انٹرنیٹ ہے؟

Yes

No

28. Does this center have internet connectivity Mark only one oval. سینٹر میں انٹرنیٹ ہے؟

Yes

No

29. How many hours do you spend in the lab on daily basis? Mark only one oval.

روزانہ کی بنیاد پر لیبارٹری میں آپ کتنے گھنٹے گزارتے ہیں؟

1-3 hours

4-6 hours

More than 6 hours

## B. Questionnaire for teachers

### Personal Information

1. Name of Instructor \_\_\_\_\_

2. District \_\_\_\_\_

3. Province Mark only one oval.

- Punjab
- Khyber Pakhtunkhwa
- Sindh
- Balochistan
- Islamabad

4. Email Address \_\_\_\_\_

5. Joining Date \_\_\_\_\_

6. What level of education have you achieved? \* Mark only one oval.

- Graduate
- Post Graduate
- IT Diploma
- Other:

7. What is your training profile in IT? Mark only one oval.

- Basic level (word processing, presentations, spreadsheets)
- Intermediate level (HTML, web design, basic app development)
- Advance level (Java, C++, Python)

8. Have you been trained by? (Click all that apply) .

- Microsoft
- Facebook
- U.N Women
- None
- Other:

9. Are you satisfied with the course contents? Mark only one oval.

- Yes
- To Some extent
- Not Satisfied

10. Which modules of the course are you teaching here? (Click all that apply).

- Basic IT Knowledge
- MS Office
- Programming Languages
- Operating System
- Databases
- Other:

#### **Program Feedback**

11. How much are students benefiting from the syllabus? Mark only one oval.

- Immensely
- Partially
- Not benefiting at all

12. Which computer aids do you use for teaching? (Click all that apply) .

- Powerpoint
- Word
- Excel
- Not using computer aids
- Other:

13. How responsive do you find your students? Mark only one oval.

- Highly responsive
- Moderately responsive
- Not responsive

14. What are the main advantages of this program? (Click all that apply).

- Enabler to get a job
- improving IT based knowledge
- Usage of Internet and email
- Interaction through social media
- Other:

15. What are the main shortcomings of this program? Check all that apply.

- Course content
- IT equipment in Lab
- Lab environment
- Other

16. What would you want to change or add to the current syllabus taught at WECs? (Click all that apply)

- More content should be added
- Advance level lectures on same content should be added
- Other

17. Are six months enough to cover the entire curriculum taught at WECs? Mark only one oval.

- Yes
- No

18. How many students have graduated from this center in past 12 months? Mark only one oval.

- Don't know
- < 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- 91 - 100
- > 100

19. How many graduated students have started earning through business or jobs in past 12 months?

Mark only one oval.

- Don't know
- < 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21- 25
- 26 - 30
- 31 - 35
- 36 - 40
- 41- 45
- 46- 50

20. What would be the three things you would want to bring into the program for improvement?

---

21. How can youth benefit from this course? Please give your valuable feedback:

---

22. General Comments

---

---

---

---

---