Council for Social Development

DIGITAL EMPOWERMENT OF CITIZENS THROUGH DIGITAL LITERACY TRAINING

Impact Assessment of the Digital Saksharta Abhiyan (DISHA)

CSC
e-Governance Services India Limited

Ministry of Electronics & Information Technology
Government of India

Digital India
Power To Empower

DIGITAL EMPOWERMENT OF CITIZENS THROUGH DIGITAL LITERACY TRAINING

Impact Assessment of the Digital Saksharta Abhiyan (DISHA)

Project Director
Poornima M

Advisor
Atul Sharma

Research Team
Ramandeep Kaur
Taarika Singh

COUNCIL FOR SOCIAL DEVELOPMENT
Sangha Rachna, 53, Lodhi Estate
New Delhi - 110003. India
www.csdindia.org

FOREWORD

The contemporary era of Information and Communication Technology (ICT) has been instrumental in transforming human lives in ways that one cannot possibly deny or overlook. The Government of India launched the 'Digital India' campaign for transforming India into a digitally empowered society and economy. One of the goals of this campaign is to empower those who are IT-illiterate so that they are competent enough to use IT and related applications for effectively participating in the democratic processes and enhancing their livelihood opportunities. In this context, the Ministry of Electronics and Information Technology has implemented the Digital Saksharta Abhiyan (DISHA) as a means of realising the vision of 'Digital India'.

The initiative of imparting mass IT literacy training was approved in March 2014 with the aim of providing digital literacy to 52.5 lakh Indians, including one in every eligible household in selected blocks of every State and Union Territory (UT) of the country. In the first phase, 10 lakh citizens have been trained under the National Digital Literacy Mission (NDLM) while the remaining 42.5 lakh people were trained in the second phase of DISHA. The mission was implemented by CSC e-Governance Services Limited, the Special Purpose Vehicle (SPV) of the Ministry of Communications and Information Technology, as the Programme Management Unit (PMU) of DISHA, along with the support of various partners and the active collaboration of the State governments and UT administrations.

The Council for Social Development (CSD) was chosen as the agency for assessing the impact of the training programme. The Impact assessment study undertaken by CSD was expected to highlight the overall outcome of the scheme and verify the extent to which the intended objectives have been met in making one person in every family digitally literate. Another objective was to make recommendations and offer pragmatic suggestions for helping improve the programme in its subsequent phases. CSD has done a commendable job in implementing the mandate of the study by identifying several good practices across states in India. This comprehensive National Report submitted by CSD provides a comprehensive assessment of the study and delineates its findings to facilitate more effective policy-making in addition to suggesting measures to the PMU for achieving further improvement in the future phases.

Dr. Dinesh Tyagi
CEO
CSC e-Governance Services India Ltd

ACKNOWLEDGEMENTS

The Council for Social Development (CSD) is pleased to submit this impact assessment report on the Digital Saksharta Abhiyan (DISHA). We believe that this report would be helpful in effecting further improvement in the programme. We also hope that this report would contribute in enhancing the achievements in the coming phases of the DISHA and help it attain the vision of digital India.

We would like to express our deepest appreciation to everyone who provided the opportunity and possibility to complete this report. Firstly, CSD would like to take this forum to express its gratitude and regard to CSC-e Governance Services India Limited for their critical role and valuable feedback throughout the duration of the project. Our appreciation is due to Hema Jain (CEO, CRUX Management Services, Hyderabad), Siroja Mehta (Manager, CRUX), and her team members for undertaking interviews with the beneficiaries and helping us complete the survey on time.

We also take this opportunity to express a deep sense of gratitude to Professor Muchkund Dubey, President CSD, and Professor Ashok Pankaj, Director CSD, for their cordial support and valuable guidance. Our special gratitude goes out to Professor Atul Sharma, Distinguished Professor, CSD, whose contribution and encouragement in finalising the report enabled us to bring out the report to its current form.

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Dr. Poornima M
Assistant Professor, CSD

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ACRONYMS

ACC	Appreciation of Computer Concepts
A & N Island	Andaman & Nicobar Islands
AIIMS	All India Institute of Medical Sciences
APL	Above Poverty Line
ASHA	Accredited Social Health Activist
BPL	Below Poverty Line
CEO	Chief Executive Officer
CSC	CSC- e Governance Services India Limited
CSD	Council for Social Development
CSR	Corporate Social Responsibility
DISHA	Digital Saksharta Abhiyan
ICT	Information and Communication Technology
IGNOU	Indira Gandhi National Open University
IRCTC	Indian Railway Catering and Tourism Corporation Limited
IT	Information Technology
LAN	Local Area Network
Ltd.	Limited
MeITY	Ministry of Electronics and Information Technology
MHRD	Ministry of Human Resource Development
NDLM	National Digital Literacy Mission
NGOs	Non-Governmental Organisations
NIELIT	National Institute of Electronics and Information Technology
No.	Number
NPIT	National Policy on Information and Technology
NR	No Response

NSS	National Sample Survey
NSDC	National Skill Development Corporation
PC	Personal Computer
PMU	Programme Management Unit
PPP	Public Private Partnership
Rs.	Rupees
RSETI	Rural Self Employment Training Institute
SC	Scheduled Caste
S. No.	Serial Number
SPV	Special Purpose Vehicle
ST	Scheduled Tribe
UN	United Nation
UPS	Uninterrupted Power Supply
UTs	Union Territories
VLEs	Village Level Entrepreneurs
WANs	Wide Area Networks

EXECUTIVE SUMMARY

BACKGROUND

As part of the Digital India Campaign, Digital Saksharta Abhiyan (DISHA) was launched in 2014. The programme was implemented by CSC e-Governance Services India Limited, the Special Purpose Vehicle of the Ministry of Electronics and Information Technology (MeITY). The target of DISHA was to train 42.5 lakh persons, including one person from each selected household from selected blocks in all the States and Union Territories (UTs). After the coverage of the targeted beneficiaries, the Council for Social Development (CSD) was entrusted with the task of evaluating the impact of the digital literacy training imparted under DISHA, and this study represents an all-India evaluation of the implementation and impact of the DISHA. The main objectives of this study are to:

- Examine the coverage of the targeted beneficiaries as per the criteria of selection adopted by DISHA;
- Assess the training module and its compatibility with the objectives of the programme;
- Explore the availability of the training infrastructure that the service providers, that is, training institutes, have access to;
- Analyse the impact of the training outcome on the beneficiaries; and
- Suggest measures for improving the implementation of the programme to guarantee its better outcomes.

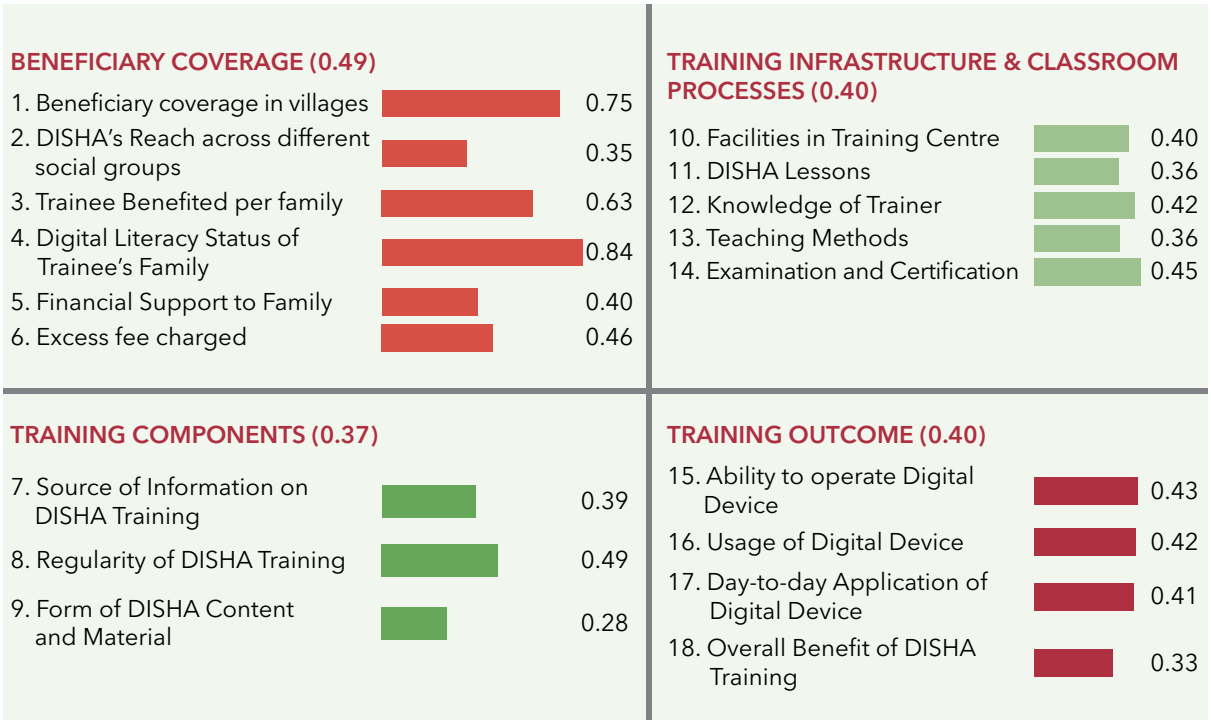
This study is based on a sample interview of 30,000 beneficiaries, out of which 28,633 responded to the questionnaire administered to them, selected from 27 States and 4 Union Territories (UTs) across the country. The number of beneficiaries selected from each State and UT was in proportion to the total number of beneficiaries in the selected State and UT. The study was conducted through telephonic interviews based on a structured and semi-structured questionnaires between the months of April 2017 and July 2017. The following sections discuss the key findings of the impact assessment undertaken.

OVERALL ASSESSMENT OF DISHA

The overall assessment of the programme indicates that the implementation of the DISHA training has been satisfactory in meeting the objectives of the programme, and that DISHA has had varying degrees of impact in different states and UTs, depending upon the interest shown by the training partners and training centres in implementing the same.

Figure 1 presents the composite values for various sub-indicators across different dimensions on a scale of 0 to 1 at the national level. It can be observed that the programme seems to have made a remarkable achievement in meeting the targeted beneficiaries under DISHA and the national average for this dimension

FIGURE 1: OVERALL ASSESSMENT OF DISHA – ALL INDIA (%)



Source: Computed by the authors.

Note: The values for sub-indicators comprise the composite index value obtained at the national level; the values in brackets for the dimensions represent the national averages for the respective dimensions.

is 0.49 in terms of the index value. After beneficiary coverage, the next in the ladder is the performance in terms of both the training outcome and training infrastructure and classroom processes, wherein the national average for both these dimensions is 0.40. For the dimension of the training component, the national average is 0.37.

In the dimension of beneficiary coverage, it can be noted that in about three of the indicators, viz., extending coverage in the villages, meeting the target of only one member per family, and targeting the non-IT literate family, the all-India performance is appreciable as most of the states and UTs have met the criteria in extending the reach to these groups. In this dimension, the states that have performed well include Nagaland, Mizoram, Arunachal Pradesh, and Chhattisgarh. The training centres in these states have played a crucial role in extending the reach of DISHA to the targeted beneficiaries.

Under the dimension of training component, the all-India performance seems to be good in two of the indicators when compared with the national average of 0.37. The regularity of DISHA training was reported by almost all states/UTs. Similarly, the outreach mechanism adopted at the national level was remarkable and the different measures taken by the training centres such as door-to-door campaigns, and advertisements helped in enrolling more beneficiaries into the DISHA programme. On the other hand, in terms of the DISHA content and material, the index value obtained at the national level is low. Since, most of the beneficiaries had access only to online content, they found it difficult to revise what they had learnt and were keen to obtain booklets on DISHA, which was hardly available. On the whole, the state-wise performance in this dimension has been good in the states of Karnataka, Delhi, Himachal Pradesh, and Gujarat, among the leading states, while relatively low performance was noticed

in the states of Jammu & Kashmir and Bihar, and the UT of Daman & Diu.

As regards the dimension of training infrastructure and classroom processes, the performance at the national level has been good in three of the indicators. In a substantial number of states, the training centres were able to conduct the examinations and certify the students in a prompt manner. In some of the states, the beneficiaries did not face much difficulty in taking the online examination or in receiving the certificates. However, in other states, the problem of the portal being slow was reported. In terms of facilities too, the training centres in most of the states were equipped with computers, Internet connectivity, and power back-up, among other things. Similarly, in all the states the trainees were found to be happy with the knowledge exhibited and imparted by the trainers. On the whole, the states that performed well with regard to this indicator include Andhra Pradesh, Madhya Pradesh, Tamil Nadu, and Telangana.

As far as the dimension of the training outcome is concerned, the all-India performance was found to be satisfactory in most of the states, as many trainees reported enhanced ability in operating digital devices post the training. About 60 per cent and 40 per cent of the beneficiaries reported enhanced ability in operating smartphones, and computers/laptops, respectively.

The trainees were found to be using digital devices for various purposes, including for accessing their emails; Internet browsing; accessing social media sites like Facebook and WhatsApp; painting; job searches; availing of government facilities; and playing games, among other things. A large number of respondents were, however, not able to use it because of the lack of availability of a digital device after the training period. On the whole, the trainees found the training to be very useful. While 38 per cent of them said that it helped increase their general awareness, 37 per cent averred that it augmented their ICT knowledge; and 34 per cent affirmed that it boosted their confidence levels. As regards the dimension of the training outcome, the performance seems to have been appreciable in the states of Madhya Pradesh, Andhra Pradesh, and Delhi, while the performance was relatively low in the states of Jammu & Kashmir, Sikkim, and Uttar Pradesh, among others.

In line with the analysis at the national level on the overall impact, the following section summarises the key highlights pertaining to the dimensions and indicators.

KEY FINDINGS OF THE STUDY

I. Beneficiary Coverage

This dimension includes the following indicators: DISHA target groups, number of trainees benefited per family, digital literacy status of the participating families, and the financial support offered to the trainees. The key findings with respect to this dimension are delineated below:

1. DISHA Target Group

- *Area:* It was observed that 76 per cent of the beneficiaries trained at the national level, resided in the rural parts of the country while only 24 per cent resided in urban India.
- *Gender:* At the national level, 47 per cent of beneficiaries were women while 53 per cent of them were men. While in Kerala a majority of the trainees (65 per cent) who enrolled for the programme were women, the scenario was the reverse in Haryana wherein a majority of the trainees were men (67 per cent).
- *Age:* The maximum participation for the training at the national level came from youngsters between the ages

of 14 and 25 years, with 89 per cent of the trainees belonging to this age bracket.

- Social Groups: In terms of social groups, a majority of the trainees belonged to the general category, followed by the Other Backward Classes (OBCs), Scheduled Classes (SCs) and Scheduled Tribes (STs). In terms of reaching out to the Below the Poverty Line (BPL) group, the DISHA programme has effectively achieved its target, as 63 per cent of the beneficiaries belonged to this category.
- Education: As regards the educational profile of the candidates, it was found that 35 per cent of the trainees of DISHA had completed senior secondary schooling (Class 12) while 22 per cent of the trainees had completed Class 10. In addition, 10 per cent of the trainees were graduates and 14 per cent of the beneficiaries held diplomas.

2. Digital Literary Status of Trainees Family

- At the national level, 59 per cent of the trainees belonged to families that did not have digital literacy status before availing of the training.
- About 34 per cent of the trained beneficiaries belonged to families with less than two digitally literate members across all the states and UTs. Some of these candidates were direct beneficiaries supported under CSR activity.

3. Trainees Benefitted per Family

- At the national level, 78 per cent of trainees stated that only one member from the family had attended the training while 22 per cent stated that more than one member from their family had availed of the IT training.

II. Training Components

The dimension of 'training components' covers the following indicators: the outreach mechanism of DISHA, regularity of training, and the form of teaching–learning material used in DISHA. The key findings of this dimension are as follows:

- About 41 per cent of the trainees learnt of the digital literacy training through friends, family, and relatives while 32 per cent of them learnt about the same through advertisements. Further, 12 per cent of the beneficiaries heard about the training programme through schools, while 4 per cent of them found out about the training through websites. Advertisements were the most popular outreach mechanism in Punjab whereas in Nagaland, 63 per cent of the trainees had heard about the training programme through friends and family.
- 61 per cent of the surveyed candidates reported of regularity of DISHA training, while 39 per cent stated of irregular training. Of the 39 per cent, some of them reported that they do not attend the training on a regular basis.
- At the national level 30 per cent of the trainees used both photocopied material and books that were provided as part of the teaching learning material. On the other hand, only 5 per cent of the trainees used audio-visual tools or e-books as part of the training. The use of audio-visual tools was popular in Karnataka while books were used by a majority of the trainees in Haryana and Karnataka. e-books were particularly popular in the national capital.

III. Training Infrastructure and Classroom Processes

The key indicators covered in this dimension include facilities available at the

training centre, DISHA lessons, knowledge of the trainers, teaching methods, and examination and certification. The findings are as follows:

- At the national level, 41 per cent and 30 per cent of the trainees were happy with the computer facilities and Internet connectivity made available at the training centres, respectively. Approximately 25 per cent of them were satisfied with the other facilities available such as scanners, web-cameras, printers and power back-up facility available at the centres.
- As per the design of the syllabi, the trainees were taught basic computer applications, use of smart phones, tablets, internet and online services.
- More than 60 per cent of the trainees were satisfied with the knowledge of the trainers. However, in a few states, the beneficiaries felt that the trainers lacked necessary knowledge and were unable to conduct the training programme effectively.
- The teaching methods comprised theory, practical, and audio-visual classes. The trainees were mostly happy with the methods of training. The training was imparted in English, Hindi, the local language, and sometimes a mix of English and Hindi, or English and the local language. While the use of audio-visual tools was most prominent in West Bengal, practical methods were adopted to the largest extent in Delhi.
- In most of the states, the trainees did not face any difficulty in receiving the certificates. However, in a number of states, a very large proportion of trainees faced difficulty in giving the online examination. The process of issuing certificates was delayed in some states.

IV. Training Outcome

The indicators covered under this dimension include the ability to operate digital devices, purpose of usage of the digital device, day-to-day application, and the overall outcome of DISHA training, which are discussed below:

- At the all-India level, 87 per cent of the trainees used digital devices for social communication and entertainment (such as access to popular social media sites like Facebook and WhatsApp). It was found that 38 per cent of the trainees used digital devices to check their email and for general Internet browsing. Around 17 per cent of the respondents used devices like mobiles and computers to look for jobs or to avail of government services while 41–43 per cent of the trainees used such devices for playing games and online shopping.
- At the all-India level, 65 per cent of the respondents were unable to use the digital devices as they had minimal access to the same, and were thus unable to judge the applicability of digital devices.
- About 20 per cent of the trainees reported using digital devices for school work and 9 per cent stated that they used them for official work.
- On the whole, the trainees found the training to be very useful. While 38 per cent of them said that it helped increase their general awareness, 37 per cent averred that it augmented their ICT knowledge, and 34 per cent affirmed that it boosted their confidence levels. A few of them also found the training to be useful in getting jobs, in securing promotions, and in enhancing their incomes.

RECOMMENDATIONS

While the overall analysis indicates that DISHA has been successful in meeting its objective, a few gaps have been identified in the process of implementation and monitoring. The following recommendations have been made on the basis of the findings of the impact assessment survey:

I. Beneficiary Coverage

- Indigenous and effective mechanisms need to be adopted to bridge the social divide in gaining access to digital literacy and ICT. Those belonging to the marginalised categories such as the SCs, STs and minorities should be mobilised to take part in such training programmes by creating an extensive support system that encourages such participation.
- While the programme was successful in providing financial support to the SCs and STs, vigilance is still required to ensure that the marginalised and needy sections are able to access the financial support offered.
- It has been observed that educated groups with high or higher secondary education, graduates, and diploma-holders are the chief beneficiaries of the programme. Thus, various measures could also be evolved in targeting the adults with limited or no literacy.

II. Training Component

- The outreach measures in a few states included advertising in local newspapers and radios, campaigns in slum areas, meetings with panchayat leaders and working population groups (for example, farmers' clubs, teachers, and *Anganwadi*/ASHA workers), and the use of mobile vans. These practices should also be adopted by the other states.
- Some of the trainees were not regular in attending the training. The attendance of trainees can be monitored to enhance the effectiveness of the programme.
- The DISHA content and material were delivered in different ways, with the most prominent among them being the usage of an e-book. The mode of delivery of training modules should be decided as per the needs of the beneficiaries belonging to diverse age and educational groups, and their socio-economic backgrounds. For instance, e-books were not accessible to all the categories of students.

III. Training Infrastructure and Classroom Processes

- In some of the states, the infrastructure and facilities available in the training centres were not up to the mark. Physical verification of the training centres would help in identifying equipped centres.
- An equal proportion of the beneficiaries were found to be unsatisfied with the ICT knowledge of the trainer. Hence, the programme needs to ensure that qualified trainers are recruited in providing the training.
- Field inferences have made it clear that the chief beneficiaries of the training programme were youngsters between the ages of 15 and 25. Thus, efforts should be made to customise and re-design the training programmes based on the learning and retaining capacities of its respondents to ensure optimum output and utilisation.
- Amongst the teaching methods adopted, greater stress should be laid on practical demonstrations rather than theory to help make learning

interactive while at the same time ensuring precision in implementation.

- Due to the prevalence of server and technical problems such as crowding on the portal, the examination was not conducted on time in some states. This indicates that the range of the bandwidth should be enhanced to prevent the portal from hanging due to multiple hits at a time. The examination can thus be conducted for different zones in different time slots.
- The examination should be conducted immediately after the training. There should be a minimum time gap between the closure of training and conduction of the examination.
- The process of issuing of certificates should be expedited.

IV. Training Outcome

- Some of the students were not able to use the digital devices due to lack of access to the digital device, especially after completion of their training. As a result, they also tend to forget their lessons. Hence, such students should be supported by follow-up sessions to improve and encourage better learning and thus ensure maximum benefits of the training.
- Less than 50 per cent of the respondents reported of increased general awareness, improved ICT knowledge and confidence levels in using digital devices. In order to maximise the benefits, innovative measures such as ICT quiz and games can be conducted for the trainees at frequent intervals.

1

INTRODUCTION

BACKGROUND

Information and Communications Technology (ICT) has been recognised as a powerful tool for improving the delivery of basic services. By enhancing local development opportunities, improving access to information on goods and services and encouraging skill development, Information Technology (IT) plays a critical role in improving the quality of lives and livelihood. Further, it enhances the system of management and administration that contributes to a more efficient form of governance, as a whole.

However, what is also significant is how the unequal access to information and communication technologies has led to a massive digital divide within and beyond countries. A digital divide can be defined as the gap between individuals, households, and geographical areas at different socio-economic levels with regard both to the opportunities they have for accessing information communication technology and for the use of the Internet for a wide variety of activities. Although India has been one of the emerging superpowers in IT, a number of economic, geographical, educational, and attitudinal factors have created a gap between people and communities who can make effective use of IT and those who cannot, leading to a sharp digital divide. In order to ensure optimal utilisation of digital technologies, confer its full benefit on society, and ensure overall human capital development, it is vital to bridge the digital divide by increasing the access of information technology to all citizens.

A number of central and state initiatives have been taken to fulfil this objective and ensure the accessibility and availability of information technology services to the common masses residing in diverse areas of this country.

The 'Digital Saksharta Abhiyan' (DISHA) was one such initiative that was implemented in 2014 with the objective of providing IT training to 42.5 lakh persons in every eligible household in selected blocks in each State/UT, wherein none of the members in the age group of 14 to 60 years were IT-literate. The programme was implemented to make individuals digitally literate and to increase their awareness regarding the benefits of information technology. The scheme has been implemented by CSC e-Governance Services India Limited, a Special Purpose Vehicle (SPV) with active collaboration from all the State Governments, UT Administrations, and other key stakeholders.

With the completion of the IT training to the targeted citizens, it is necessary to make an assessment of the impact of the training programme so as to identify its limitations and subsequently take corrective

measures, if required. The CSD thus carried out an Impact Assessment of the Digital Literacy Training imparted under DISHA. The evaluation of the training programme was carried out on the basis of a number of selected dimensions such as beneficiary coverage, training components, teaching infrastructure, training processes, and the overall outcome and relevant indicators under the same.

OBJECTIVE OF THE IMPACT ASSESSMENT STUDY

The main aim of this Impact Assessment Study is to assess the extent of digital literacy training imparted across the country. In this context, the objectives of the study are to:

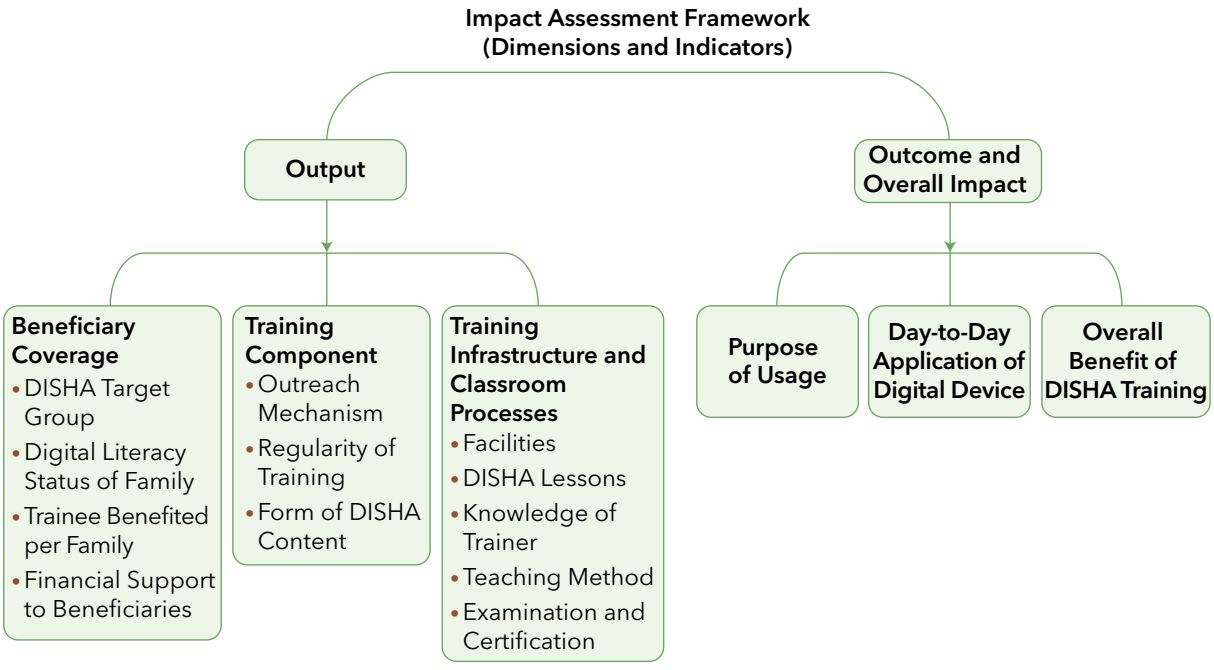
- Examine the coverage of the targeted beneficiaries as per the criteria of selection adopted by the DISHA;
- Assess the training module and its compatibility with the objectives of the programme;
- Explore the availability of the training infrastructure that the service providers, that is, training institutes, have access to;
- Analyse the impact of the training outcome on the beneficiaries; and
- Suggest measures for improving the implementation of the programme to guarantee its better outcomes.

Thus, the current report, in addition to evaluating the overall training programme, serves as a guide that showcases the performances of different states and UTs in equipping the citizens with ICT skills and offering insights for the future course of action.

METHODOLOGY

This study is based on the information and data supplied by CSC-SPV, a primary survey held with the trainees and training centres, and the review of existing documents with respect to the implementation of the DISHA. The step-by-step process, which entailed data collection, analysis and preparation of the report, has been elaborated below.

FIGURE 1.1: IMPACT ASSESSMENT FRAMEWORK FOR DISHA



Source: Prepared by the authors.

Impact Assessment Framework

An Impact Assessment Framework has been developed for an effective impact analysis, covering the relevant dimensions and indicators. The Impact Assessment Framework, which has been developed on the basis of the strategy adopted for implementation of DISHA is depicted in Figure 1.1.

Sampling and Sample Size

The sample needs to be of a sufficiently large size to ensure reasonable precision of the impact estimates but not too large to make the data collection unnecessarily costly. The research Division of the National Education Association has published the following formula for determining the sample size (Krejcie and Morgan, 1970):

$$s = X^2NP(1-P) \div d^2(N-1) + X^2P(1-P)$$

Where *s* is the required sample size, X^2 is the table value of chi-square for 1 degree of freedom at the desired confidence level (with 95 per cent confidence and a 5 per cent margin of error the value of which comes to be 1.96*1.96 = 3.8416), *N* is the population size, *P* is the population proportion (assumed to be 0.50 since this would provide the maximum sample size), *d* is the degree of accuracy expressed as a proportion (0.05).

If this formula is used, a sample size of 384 is adequate for a population of 42.5 lakhs. Another study states that a sample of 500 to 1000 clients may be adequate for assessing the impact of a state-wide project (IIM, 2000). Various studies also highlight that the sample size should be large enough to detect the programme effects of plausible size, so that the results can be confidently extrapolated to the entire population. Further, it is also stated that the size should permit an assessment of the programme impacts on key sub-groups of the target population.

Taking all these factors into account, this study proposed a sample size of 30,000, and the study applied the same state-wise break-up that has been applied by the DISHA programme in identifying the training targets in different states. Stratified random sampling was undertaken in all the states/UTs to examine whether adequate representation was given to various sub-groups of the target population. The survey was undertaken during the period April 2017 to July 2017, covering approximately 10,000 samples each month, adding to a total of 28,633 by the end of the study period. Interviews with training centres across the identified states/UTs were held in August 2017. The survey thus covered a total of 40 training centres in the selected states/UTs that exhibited high, medium, and low performances in implementing the training programme. This measure was thus helpful in capturing both the successful and poor practices adopted in implementing this programme.

Although the intention of this study was to cover a sample of 30,000 in all the states and UTs in which DISHA was implemented, due to a negligible number of trainees in the Andaman & Nicobar Islands, Dadra & Nagar Haveli, Goa, Lakshadweep and Meghalaya, these states/UTs were not covered in the survey. Similarly, a sample of 1948 was identified in the category A or the larger states. However, the target was equally divided between the recently divided states of Andhra Pradesh and Telangana.

Although a sample of 701 was initially targeted to be surveyed in the states of Arunachal Pradesh and Jammu & Kashmir, the sample sizes were subsequently reduced to 156 and 539, respectively, in these two states due to the lack of response from the trainees in these states. Thus, the total sample surveyed equalled 28,633 across 27 states and 4 Union Territories, the details of which are presented in Table 1.1.

TABLE 1.1: SAMPLE SIZE ACROSS STATES/UTS (NOS.)

S. No.	States/UTs	Target for Training	Sample
	Category A (11 States)		
1.	Andhra Pradesh#	1,25,000	974
2.	Bihar	2,50,000	1,948
3.	Gujarat	2,50,000	1,948
4.	Karnataka	2,50,000	1,948
5.	Madhya Pradesh	2,50,000	1,948
6.	Maharashtra	2,50,000	1,948
7.	Rajasthan	2,50,000	1,948
8.	Tamil Nadu	2,50,000	1,948
9.	Telangana#	1,25,000	974
10.	Uttar Pradesh	2,50,000	1,948
11.	West Bengal	2,50,000	1,948
	Category B (10 States/UTs)		
12.	Assam	90,000	700
13.	Chhattisgarh	90,000	701
14.	Delhi	90,000	701
15.	Haryana	90,000	701
16.	Jammu & Kashmir*	90,000	539
17.	Jharkhand	90,000	701
18.	Kerala	90,000	701
19.	Odisha	90,000	701
20.	Punjab	90,000	701
21.	Uttarakhand	90,000	701
	Category C (10 States/UTs)		
22.	Andaman & Nicobar$	30,000	--
23.	Arunachal Pradesh*	30,000	156
24.	Chandigarh	30,000	239
25.	Dadra & Nagar Haveli$	30,000	--
26.	Daman & Diu	30,000	239
27.	Goa$	30,000	--
28.	Himachal Pradesh	30,000	238
29.	Lakshadweep$	30,000	--
30.	Manipur	30,000	239
31.	Meghalaya$	30,000	--
32.	Mizoram	30,000	239
33.	Nagaland	30,000	239
34.	Puducherry	30,000	239
35.	Sikkim	30,000	239
36.	Tripura	30,000	239
	Total	**38,50,000**	**28,633**

Source: Survey, 2017.

Note: # In the recently divided states of Andhra Pradesh and Telangana, the sample of 1948 for the Category A states is equally divided.

* In Arunachal Pradesh and Jammu Kashmir, samples of 156 and 539 respondents, respectively, were surveyed, due to the lack of response from the targeted sample.

$ Due to a negligible number of trainees in these states, they were not covered under the survey.

Survey Method

Keeping in mind key factors such as the budget, time constraints, and quality of the survey, a telephonic survey was considered as the best method for eliciting information from the respondents of the training. Further, semi-structured interviews were also held with the training centres of the States, recording the top three performances and the bottom two performances.

Designing of Survey Instruments

The survey instrument and the coding format for filling the data were designed on the basis of the Impact Assessment Framework developed. The Inverted Funnel technique was adopted for framing the structured questionnaire, wherein there was a set of close-ended questions in the beginning, followed by a few open-ended questions.

Pilot Test

The validity of the questionnaire and the applicability of data collection tools were tested through a telephonic pilot survey in the states of Assam, Delhi, Jammu & Kashmir, Rajasthan, and Telangana. Thereafter, the questionnaire was revised further to suit the requirements based on the feedback obtained from pilot calls.

Data for the DISHA Survey

The data set for the digital literacy survey was supplied to CSD by the CSC-SPV. The data set included basic personal details of the beneficiaries such as the name, phone numbers, Aadhaar numbers, and email addresses, in addition to details on the gender, religion, and educational qualification of the trainees. The data supplied was kept strictly confidential since it contained Aadhaar numbers. The data set was subsequently subjected to scrutiny which is depicted in Table 1.2.

The data was cleaned up before commencement of the survey process. Thus, out of the data set of 3,29,752 that was supplied, 20,210 potential respondents were removed due to inconsistencies. Table 1.3 gives a picture of the valid data set that was identified for the survey, after the cleaning process.

Out of the 3,09,542 valid mobile numbers, 1,26,376 were considered for the survey as there was repetition of the same numbers several times against different names. Since many of the trainees were students in the age group of 14 to 17 years, they did not have mobile phones and for such trainees who did not have mobile numbers, the contact details of the respective training centres were given against their names as a reference point. Hence, duplicate telephone numbers were removed from the data set.

Data Analysis

In order to measure the performances of states/UTs, a zone-wise distribution of different states has been presented here. A Process Index and an Outcome Index have been developed separately to assess the performance of the states with regard to these two aspects. The indicators covered under the Process Index include aspects such as the reach of digital literacy amongst diverse groups, different training components used, and the infrastructure available in the various training centres.

TABLE 1.2: CHECKLIST FOR DATA CLEANING

Duplicity in telephone numbers	√
Invalid Numbers (numbers more or less than 10 digits)	√

Source: Prepared by the authors.

TABLE 1.3: VALID DATA SET FOR DISHA SURVEY

S. No.	States/UTs	Total No. of Students	Total Invalid Nos.	Students with Valid Nos.	Total Duplicates	Valid Data Set for Survey
1.	Andhra Pradesh	4,695	18	4,677	2,875	1,802
2.	Arunachal Pradesh	203	10	193	24	169
3.	Assam	3,287	5	3,282	6	3,276
4.	Bihar	22,431	350	22,081	15,996	6,085
5.	Chandigarh	1657	2	1,655	1100	555
6.	Chhattisgarh	30,438	1,732	28,706	11,396	17,310
7.	Daman & Diu	111	0	111	11	100
8.	Delhi	1,702	3	1,699	283	1,416
9.	Gujarat	13,817	93	13,724	9,017	4,707
10.	Haryana	9,066	574	8,492	4,377	4,115
11.	Himachal Pradesh	522	2	520	106	414
12.	Jammu Kashmir	331	0	331	184	147
13.	Jharkhand	6,266	40	6,226	3,235	2,991
14.	Karnataka	20,490	4,442	16,048	9,773	6,275
15.	Kerala	1,229	6	1,223	112	1,111
16.	Madhya Pradesh	10,238	1,505	8,733	4,218	4,515
17.	Maharashtra	9,971	62	9,909	6,500	3,409
18.	Manipur	6,249	70	6,179	2,171	4,008
19.	Mizoram	2,116	16	2,100	1,508	592
20.	Nagaland	3,112	38	3,074	1,412	1,662
21.	Odisha	3,146	59	3,087	2,105	982
22.	Puducherry	791	6	785	145	640
23.	Punjab	2,638	10	2,628	866	1,762
24.	Rajasthan	8620	490	8,130	5,292	2,838
25.	Sikkim	3,101	56	3,045	2,545	500
26.	Tamil Nadu	6,320	3,136	3,184	1,115	2,069
27.	Telangana	5,679	388	5,291	3,199	2,092
28.	Tripura	8,046	57	7,989	5,855	2,134
29.	Uttar Pradesh	56,109	1,359	54,750	35,754	18,996
30.	Uttarakhand	3,567	38	3,529	2,904	625
31.	West Bengal	83,804	5,643	78,161	49,082	29,079
	All India	**3,29,752**	**20,210**	**3,09,542**	**1,83,166**	**1,26,376**

Source: Computed by the authors.

The indicators under the Outcome Index cover aspects like the ability of trainees to operate digital devices for different purposes, the day-to-day usage of digital devices, and the overall outcome of the training. An aggregate of the two indices was also prepared to determine the overall training outcome. Aggregates of the individual dimensions were made by according equal weights and by normalising the values between 0 and 1. Data analysis was done by using advanced excel, access

and SPSS. Statistical methods such as frequencies and percentages were also used to describe, summarise, and interpret the findings of the study.

STRUCTURE OF THE REPORT

The subsequent chapters of the report present the findings of the impact assessment carried out in the surveyed states and Union Territories. The report has been structured as follows:

Chapter 1 provides an introduction of the impact assessment study undertaken to assess the digital literacy training imparted under DISHA. Additionally, it delineates the methodology adopted in meeting the objectives of the study and in computing the Process Index and Outcome Index. It also presents a brief sketch of the states and Union Territories covered as part of the study.

Chapter 2 gives a snapshot of the contribution that ICT can make towards the development of a country and highlights the need for bridging the digital divide, by showcasing the National Sample Survey (NSS) 2015 data on the ability of citizens to operate computers for different purposes. Further, the chapter gives an overview on the DISHA programme implemented by the CSC-SPV.

Chapter 3 presents the findings of the survey on the beneficiaries covered, their state-wise distribution, the beneficiaries covered per family, and the digital literacy status of the beneficiary's family, and assesses the extent to which the target was met. The chapter also contains a brief discussion on the demographic and social background of the beneficiaries.

Chapter 4 evaluates the different components of the training such as its outreach mechanisms, the regularity of the training, and the form of the DISHA content and material.

Chapter 5 delineates the general infrastructure of the training centres in terms of the facilities available. It also evaluates the knowledge level of the trainers based on the perceptions of the trainees, and identifies the various teaching methods adopted to undertake the training. Lastly, the different mediums of instruction used during the training have been discussed in this chapter in addition to an analysis of the examination and certification process implemented under DISHA.

Chapter 6 discusses the overall impact of the digital literacy training on the beneficiaries. It analyses the extent to which the training has been productive in enhancing the knowledge and skills of the beneficiaries in the practical application of digital devices.

Chapter 7 concludes the study with an exploration of the impact of the DISHA programme on the beneficiaries. It presents a cross-country scenario of the overall effect of the training and highlights the states exhibiting good, moderate, and low performances, based on the Process and Outcome Indices computed. This chapter further summarises some of the key findings of the study and suggests some recommendations for the future implementation of similar interventions.

2

BRIDGING THE DIGITAL DIVIDE: DIGITAL EMPOWERMENT OF NON-IT LITERATE CITIZENS THROUGH DISHA[1]

BACKGROUND

History has witnessed two industrial revolutions associated with general purpose technology, the first driven by steam and the second by electricity. The third revolution, namely the Information Technology (IT) revolution, driven by computers and networks, is unfolding now (UNDP, 2015). For more than three decades now, Information and Communication Technology (ICT) or IT has been instrumental in transforming human lives in ways that one cannot possibly deny or overlook. The history of IT dates back to the landmark invention of the moveable typewriting machine by Guttenberg. Thereafter, this advanced technology found its way through other iconic creations, starting from the giant calculator to the Personal Computer (PC), finally making way for laptops, tablets, and smartphones. A major qualitative and quantitative leap occurred when PCs were connected to each other via Local Area Networks (LANs), and later on via Wide Area Networks (WANs) in the case of long-distance machines. During the mid-1970s, a computer was considered to be an extremely complex device that could be operated only by trained professionals. However, with the passage of time, the scenario is changing and different sections of society now have access to various kinds of digital devices, though this access is still not universal.

The digital boom revolutionised the lives of people in the developed countries by empowering them with increased access to information, government authorities and other services, and the creation of better livelihood opportunities, among many other advantages. However, critics argue that the other side of the coin of the 'digital boom' is the 'digital divide', which exists not only between the rich and the poor people, but also between the developed and developing nations.

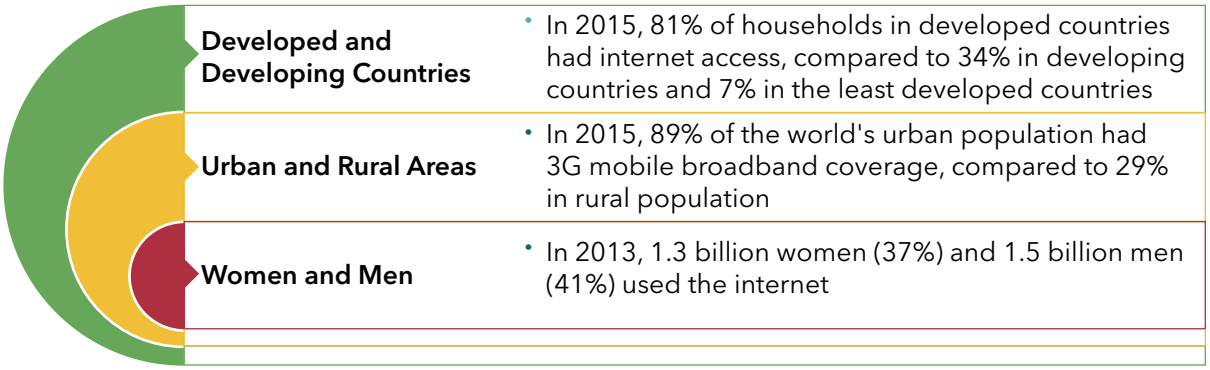
For instance, Figure 2.1 highlights the various forms of uneven accesses ranging from macro to micro aspects.

It is also argued that the digital divide is the outcome of not only the lack of availability of IT services but also the lack of access to technology and the inability to use it effectively, resulting from myriad economic, socio-political, institutional, as well as cultural factors. However, IT can be the harbinger of development by facilitating the right policies, and spreading digital literacy, which is necessary to universalise its benefits.

Imparting digital literacy is one of the many ways of removing the so-called digital

1 This chapter draws heavily from Chapter 2 of the *Digital Literacy Training to Non-IT Literate Citizens: Impact Assessment of the National Digital Literacy Mission (NDLM),* (CSD, 2016).

FIGURE 2.1: UNEVEN ACCESS TO THE DIGITAL REVOLUTION



Source: Prepared by the authors based on Human Development Report, 2015.

divide. It can help farmers stay updated on weather forecasts, and the latest fertilisers and farming techniques, while also enabling patients in remote areas to book their appointments with doctors online, instead of having to travel for long hours to book these appointments. School teachers can also download educational materials and lesson plans for their students (Atkinson and Castro, 2008). In fact, there are a number of examples in India as well as other countries indicating how the digital revolution has actually contributed in bringing about a positive change in the life of the common man.

In Ethiopia, farmers use mobile phones to check coffee prices while their Saudi Arabian counterparts use wireless technologies to carefully distribute scarce irrigated water for wheat cultivation. In some villages in Bangladesh, female entrepreneurs use their mobile phones to provide paid services to their neighbours (UNDP, 2015).

DIGITAL LITERACY

"Digital Literacy is the ability of individuals and communities to understand and use digital technologies for meaningful actions within life situations."

Source: www.ndlm.in

The 1999 project—Computer Access for Farmers of Madhya Pradesh—addressed some of the major concerns of the farmers, and also acted as a social justice mechanism by handling local level grievances and administrative matters through Internet connections. In 2001, the Gyandoot Soochnalaya scheme in the Dhar district of Madhya Pradesh aimed to build a low-cost rural Intranet facility by joining 20 village information kiosks. This enabled villagers in the district to access the Internet and share information, which helped in increasing the prices of the farmers' produce by 3–5 per cent, and saved them from having to pay commissions to middlemen. In 2008, computerised tea auctions and spot trading initiated by the Indian Tea Board allowed buyers to bid from anywhere in the world, with a view to ensuring more efficient services and fairer prices for the country's tea farmers. The online booking of railway tickets through the Indian Railway Catering and Tourism Corporation Limited (IRCTC) and online appointment at the All India Institute of Medical Sciences (AIIMS), now help save a lot of time and energy.

Thus, for people to realise the benefits of IT revolution, it is important to interlink digital literacy with the strong foundation of formal education (Figure 2.2), which can enhance the capability of citizens to optimally utilise digital technologies.

FIGURE 2.2: DIGITAL LITERACY AND FORMAL EDUCATION AS A CATALYST

Source: Prepared by the authors.

Understanding the importance of digital technology, in recent years, a number of inclusion projects have been undertaken in different developing countries to bridge the digital gap. In 1994, a long-term community-based development project was initiated in the small town of Siyabuswa in South Africa, which provided supplementary tuition on Saturdays to secondary school learners. In 2001, telecentre projects were started in the city of Sao Paulo in Brazil and community telecentres were installed by government agencies (but operated by community leaders) to provide free Internet access and digital literacy courses (Madon, et al., 2009). The interventions on digital literacy in India have been discussed in the forthcoming section.

INDIA: THE DIGITAL DISCOURSE

India serves as a hub for providing technically qualified people to the IT sector worldwide. Even though it continues to be on the lower brackets in most United Nations (UN) developmental indicators, India has managed to maintain a more than respectable position in the world-wide race for technologies ever since IT became a popular economic development catchphrase. However, as observed by Kapoor and Mathur (2016), in spite of the appreciation received for providing IT services, India has been criticised for the huge digital divide being faced by the country. One of the ways of bridging the digital divide is to make the citizens of the country competent by providing digital literacy and promoting awareness amongst the people on the usage of digital devices. This Impact Assessment Study of the DISHA being implemented by the Indian government is a step in that direction.

However, before going into the details of the programme, the need for developing such a programme as well as the various facets pertaining to digital literacy in the country have been highlighted through the following tables and figures based on the 2013-14 data from the National Sample Survey (NSS) (GoI, 2016). Table 2.1 delineates the current level of computer[2] skills among the Indian population, age-wise and gender-wise.

Table 2.1 clearly indicates the urgent need for implementing a digital literacy programme in the country. It shows that as far as the first age bracket (14-29 years), comprising the student group and the

2 NSS considers all digital devices such as desktops, laptops, notebooks, net-books, palmtops, and smartphones as computers.

TABLE 2.1: POPULATION (AGED 14 YEARS AND ABOVE) ABLE TO OPERATE A COMPUTER (%)

Gender	Age Group (Years)							
	Rural				Urban			
	14-29	30-45	46-60	>60	14-29	30-45	46-60	>60
Male	22.7	6.4	2.2	0.6	53.6	30.9	20.9	10.6
Female	13.5	1.9	0.5	0.1	43.8	17.3	8.7	2.8
Persons	18.3	4.1	1.4	0.3	48.9	24.3	14.8	6.8

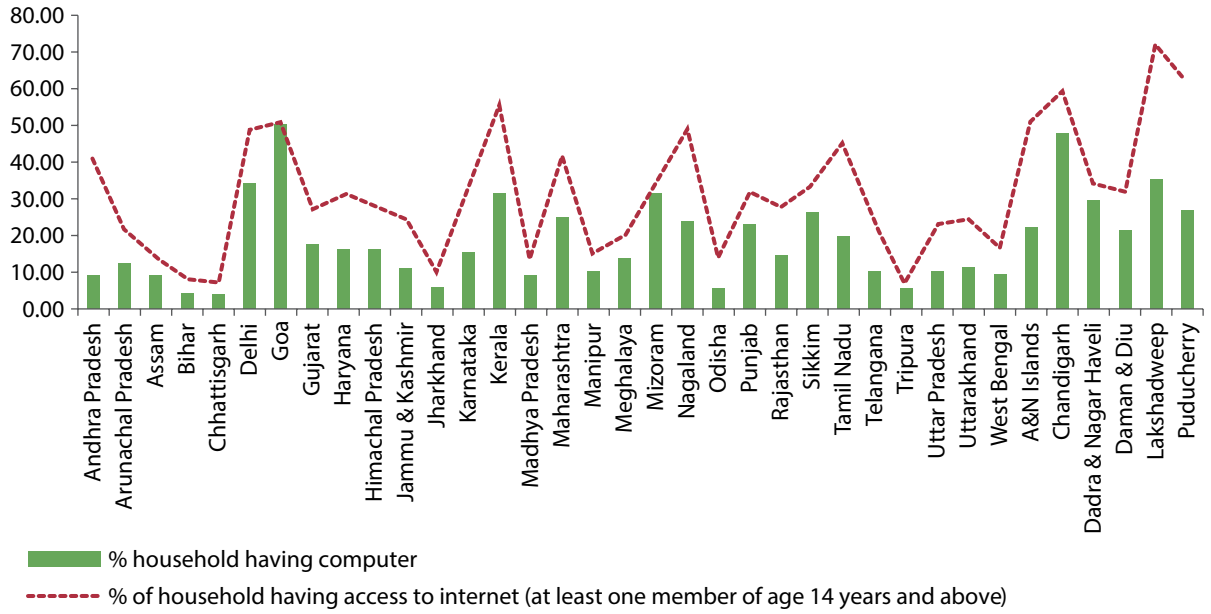
Source: NSS KI (Report No. 575(71/25.2) (2015), Key Indicators of Social Consumption in India: Education, Ministry of Statistics and Programme Implementation, Government of India.

TABLE 2.2: PURPOSE OF USAGE OF A COMPUTER (%) (2013-14)

S.No.	States/UTs	Ability to Operate a Computer (Percentage in the Population of a Particular Age Group)								Ability to Use a Computer for Various Uses (Percentage of Respondents Aged 14 Years and above)					
		Male				Female				Male			Female		
		Age Group (Years)				Age Group (Years)				Typing	Internet		Typing	Internet	
		14-29	30-45	45-60	60+	14-29	30-45	45-60	60+		Search	e-mails		Search	e-mails
1.	Andhra Pradesh	34	14	8	2	21	6	2	0	18	18	17	8	8	7
2.	Arunachal Pradesh	30	13	8	0	21	5	1	0	18	16	15	11	10	9
3.	Assam	21	7	9	2	16	3	2	2	11	10	10	7	6	5
4.	Bihar	16	4	2	2	8	1	0	0	7	8	7	29	3	3
5.	Chhattisgarh	14	5	4	2	9	3	1	0	7	7	6	4	3	3
6.	Delhi	57	42	29	34	54	27	20	19	44	45	44	34	33	33
7.	Goa	78	31	30	21	64	27	18	4	44	40	36	32	25	24
8.	Gujarat	41	19	11	4	27	8	4	0	23	21	20	13	10	9
9.	Haryana	42	16	7	8	30	10	4	1	23	23	20	15	13	11
10.	Himachal Pradesh	51	20	13	3	40	9	5	1	26	24	23	16	15	14
11.	Jammu & Kashmir	29	11	6	4	20	4	3	3	15	15	13	8	8	6
12.	Jharkhand	22	5	6	0	11	2	1	0	11	11	10	5	4	4
13.	Karnataka	41	19	9	2	30	10	3	2	22	21	19	14	12	11
14.	Kerala	81	34	16	6	74	25	9	2	37	35	33	30	25	22
15.	Madhya Pradesh	23	9	8	2	14	4	2	0	13	13	12	6	6	6
16.	Maharashtra	45	24	14	8	35	13	7	3	26	27	25	17	16	16
17.	Manipur	24	8	5	2	15	4	2	0	8	11	9	3	6	4
18.	Meghalaya	30	12	7	9	30	9	3	1	18	16	11	16	13	9
19.	Mizoram	49	32	20	5	43	25	16	2	31	23	19	26	19	15
20.	Nagaland	77	42	38	8	63	23	14	0	48	45	44	35	29	33
21.	Odisha	18	9	5	1	12	2	1	0	10	10	10	5	5	4
22.	Punjab	49	19	9	4	39	11	2	0	25	24	22	17	15	13
23.	Rajasthan	34	12	8	3	17	4	2	0	18	18	16	7	7	6
24.	Sikkim	37	25	12	1	38	16	6	0	26	26	26	23	23	23
25.	Tamil Nadu	53	23	9	5	46	11	4	1	26	25	23	18	16	15
26.	Telangana	39	20	6	6	25	6	3	0	22	22	21	11	10	10
27.	Tripura	13	5	5	1	7	2	1	0	7	6	6	3	3	2
28.	Uttar Pradesh	23	9	5	2	13	3	2	1	12	12	10	6	6	5
29.	Uttarakhand	40	18	6	1	21	7	1	0	21	22	21	10	10	10
30.	West Bengal	26	11	7	3	18	5	1	0	14	12	11	8	7	6
31.	A&N Islands	38	16	7	0	37	10	14	0	19	18	15	20	15	13
32.	Chandigarh	73	33	49	28	65	25	33	0	51	48	46	44	37	36
33.	Dadra & Nagar Haveli	27	32	28	0	27	15	14	0	28	28	28	19	17	17
34.	Daman & Diu	30	43	5	2	50	15	5	0	31	32	28	28	29	22
35.	Lakshadweep	65	47	30	17	57	22	3	0	47	45	44	28	26	24
36.	Puducherry	61	42	22	16	57	18	15	1	39	41	38	27	27	25
	All-India	**32**	**14**	**8**	**4**	**23**	**7**	**3**	**1**	**18**	**17**	**16**	**11**	**10**	**9**

Source: National Sample Survey (NSS), Report No. 575 (71/25.2/1) (2015), Government of India.

FIGURE 2.3: HOUSEHOLDS WITH ACCESS TO COMPUTERS AND INTERNET FACILITY (%) (2013-14)



Source: Prepared by the authors from NSSO data, Report No. 575 (71/25.2/1).

job-seeking age group, and the next two age brackets (30-45 and 46-60 years) comprising working professionals, are concerned, not even half the persons in the job-seeking age group in urban areas are able to operate a computer. The rural scenario is even worse. Similarly, the number of females who are able to operate a computer is much lower than that of their male counterparts in every age group. Table 2.2 provides a comprehensive picture of the need for digital literacy in the country by showing both the age-wise as well as gender-wise percentages of persons who are able to operate computers, and to use them for different applications such as typing in the 'Word' application, or using the Internet for locating the desired information and sending mails. Table 2.2 therefore, reveals primarily two things. Firstly, the percentages are significantly low (for example, only approximately 17 per cent of the male and 10 per cent of the female respondents in the age group of 14–29 years can use computers for typing and browsing purposes). Secondly, there are large regional (state-wise) disparities. Both these findings call for the urgent implementation of a national level digital literacy programme.

On the other hand, Figure 2.3 reveals the existing digital base for such a programme, in terms of access to computers and Internet facility. On an average, only 14 per cent of the Indian households possess computers and 27 per cent have access to Internet facilities. However, there are significant disparities among the states/UTs. For instance, states like Bihar, Chhattisgarh, Jharkhand, Odisha, and Tripura are far behind states/UTs like Goa, Chandigarh, and Delhi in terms of the number of households having computers. At the same time, in states like Andhra Pradesh and Tamil Nadu, as compared to other states, relatively comparatively fewer households possess computers though access to the Internet is quite high.

It was in this backdrop of diverse digital capabilities and the dire need to augment these capabilities that the National Digital Literacy Mission was launched in August 2014. Subsequent to the launch of NDLM and extension of the training to 10 lakh

citizens, Phase 2 of NDLM, that is, the Digital Saksharta Abhiyan (DISHA), was implemented to extend the coverage of IT literacy training to 42.5 lakh citizens. The forthcoming section of this chapter provides a brief overview of the DISHA training imparted across different parts of the country.

DIGITAL SAKSHARTA ABHIYAN (DISHA)

Gauging the importance of the usage of ICT for human development and the economy of the country, the National Policy on Information and Technology (NPIT), 2012, articulated the broad objective of digital literacy: making one person in every household of India e-literate in order to bridge the existing digital divide. In line with the objective of the National IT Policy, NDLM was launched in August 2014, with the aim of providing digital literacy to 10 lakh Indians, that is, one in every eligible household in the selected blocks of every state and UT in the country. While in the first phase, 10 lakh citizens have been trained under NDLM, the second phase of digital literacy under DISHA increased its coverage to 42.5 lakh people.

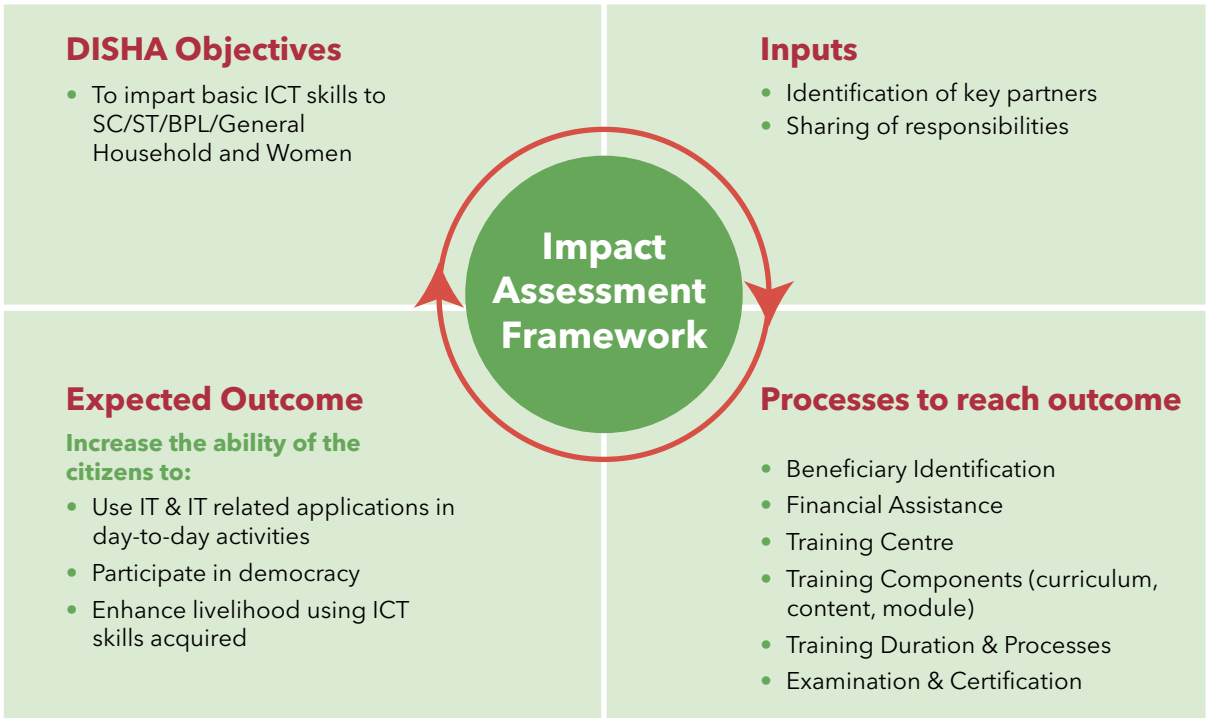
DISHA OBJECTIVES

The primary objective of the scheme is to enable the beneficiaries to use IT and IT-related applications for effectively participating in the democratic processes and enhancing their livelihood opportunities. The specific objectives of the scheme are to make IT-illiterate persons competent enough to operate digital devices like smartphones, tablets, and computers so that they can send and receive emails, and search for information on the Internet. The objective of DISHA and the processes adopted to reach the objective are briefly described in Figure 2.4.

TARGETED BENEFICIARIES

The targeted beneficiaries of DISHA were selected from households wherein no member in the age group of 14 to

FIGURE 2.4: PROCESS OF DISHA



Source: Prepared by the authors.

60 years is IT-literate. Moreover, adequate representation was given to women, persons belonging to the disadvantaged groups, that is, the Scheduled Castes (SCs) and Scheduled Tribes (STs), and Below the Poverty Line (BPL) households. The programme also focused on the Accredited Social Health Activist (ASHA) and *Anganwadi* workers and ration dealers.

IMPLEMENTING AGENCY

CSC e-Governance Services Limited, the Special Purpose Vehicle (SPV) of the Ministry of Electronics and Information Technology (MeITY), is the implementing agency for DISHA. The programme is being implemented with the active collaboration of all the state governments, UT administrations, and other key stakeholders.

COURSE

The course entitled, 'Appreciation of Computer Concepts (ACC)' was prescribed for the trainees of DISHA. The duration of the training course is a total of 20 hours, to be logged between a minimum of 10 days and a maximum of 30 days. The details of the content under this module are presented in Table 2.3.

The medium of instruction of the DISHA training was any one of the official languages of India. A nominal fee of Rs. 125 was to be paid by the candidates belonging to the 'General' category while the SC, ST, and BPL households were provided the training free of cost.

TABLE 2.3: DISHA COURSE MODULE

S. No.	Module Name	Learning Hours
1.	Introduction to Digital Devices	2
2.	Operating Digital Devices	4
3.	Introduction to the Internet	2
4.	Communications using the Internet	6
5.	Applications of Internet	6
Total		**20 hours**

Source: www.ndlm.in

MODE OF TRAINING

The physical delivery of IT literacy training was designed in the Public–Private Partnership (PPP) mode, with support from various partner agencies. Each partner agency was assigned a specific area of operation and target by the respective state government/UT administration in consultation with the CSC-SPV. The partners involved include:

- Common Service Centres (CSCs);
- National Institute of Electronics and Information Technology (NIELIT) Centres and their accredited centres;
- Non-Governmental Organisations (NGOs) involved in spreading IT literacy;
- Industry partners;
- Companies with Corporate Social Responsibility (CSR) provisions; and
- Others.

EXPECTED LEARNING OUTCOME

After attending the IT literacy training, it was expected that the trainees would be able to perform the following:

- Explain the basics of digital devices;
- Use digital devices for accessing, creating, managing and sharing information;
- Use the Internet to browse in an effective and responsible manner;

TABLE 2.4: STATES/UTs-WISE BREAK-UP OF THE TRAINING TARGETS

S. No.	States/UTs	Target	Category
1.	Andhra Pradesh*	1,25,000	A
2.	Telangana*	1,25,000	A
3.	Bihar	2,50,000	A
4.	Gujarat	2,50,000	A
5.	Karnataka	2,50,000	A
6.	Madhya Pradesh	2,50,000	A
7.	Maharashtra	2,50,000	A
8.	Rajasthan	2,50,000	A
9.	Tamil Nadu	2,50,000	A
10.	Uttar Pradesh	2,50,000	A
11.	West Bengal	2,50,000	A
12.	Assam	90,000	B
13.	Chhattisgarh	90,000	B
14.	Delhi	90,000	B
15.	Haryana	90,000	B
16.	Jammu & Kashmir	90,000	B
17.	Jharkhand	90,000	B
18.	Kerala	90,000	B
19.	Odisha	90,000	B
20.	Punjab	90,000	B
21.	Uttarakhand	90,000	B
22.	A & N Islands	30,000	C
23.	Arunachal Pradesh	30,000	C
24.	Chandigarh	30,000	C
25.	Dadra & Nagar Haveli	30,000	C
26.	Daman & Diu	30,000	C
27.	Goa	30,000	C
28.	Himachal Pradesh	30,000	C
29.	Lakshadweep	30,000	C
30.	Manipur	30,000	C
31.	Meghalaya	30,000	C
32.	Mizoram	30,000	C
33.	Nagaland	30,000	C
34.	Puducherry	30,000	C
35.	Sikkim	30,000	C
36.	Tripura	30,000	C
	Total	**38,50,000**	

Source: CSC-SPV.

Note: *The training target of 2,50,000 has been equally divided for Andhra Pradesh and Telangana.

- Use technology to communicate effectively; and
- Appreciate the role of digital technology in everyday life, in social life and at work.

ASSESSMENT AND CERTIFICATION

After completion of the training programme, the trained candidates of the programme undergo a term-end online examination at the training centre. The duration of the online examination is one hour and it covers 25 questions. Successful candidates are issued a digital version of the certificate on the spot. After formal verification of the course completion, the original certificate in hard copy is distributed to the successful candidates.

TRAINING TARGETS FOR DIFFERENT CATEGORIES OF STATES/UTs

In order to effectively implement the scheme across the country, the states and UTs were categorised into three broad categories (A, B and C), as large, medium, and small states, respectively, on the basis of their respective populations. The training targets of DISHA for various states and UTs are expounded in Table 2.4.

The subsequent chapters of the report present the findings and the analysis based on the interviews held with the beneficiaries, training partners, and training centres of DISHA.

3

REACH OF DIGITAL LITERACY: BENEFICIARY COVERAGE UNDER DISHA

INTRODUCTION

The aim of DISHA was to train one person per family who previously held no skills on ICT. The intervention made its effort in reaching the non-IT literates across diverse groups, based on geographical location, gender, age, caste group, educational status, and ration card status, among other criteria. In terms of beneficiary coverage, as an overall analysis, it can be said that significant progress has been made in imparting the training as access to the training by various groups has indeed widened. This chapter thus discusses the access of different social groups to the digital literacy training. In addition to presenting a national and zonal picture of the beneficiaries covered, the chapter also discusses the family-wise coverage in terms of the digital literacy status of the households, the number of members who received training per family, and the financial support offered to the beneficiaries. This chapter also presents an overall analysis of the performances of various states and UTs under this dimension as a whole.

DEMOGRAPHIC AND SOCIAL PROFILE OF SAMPLE BENEFICIARIES

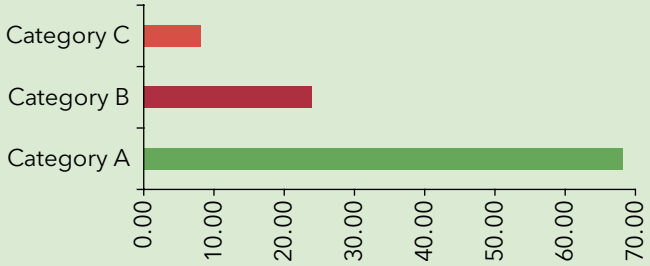
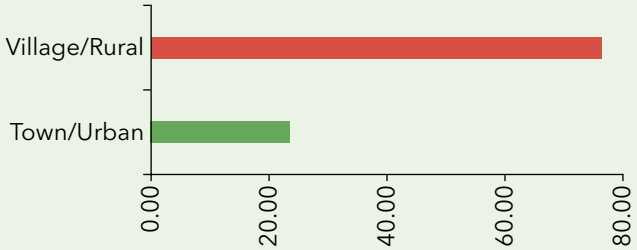
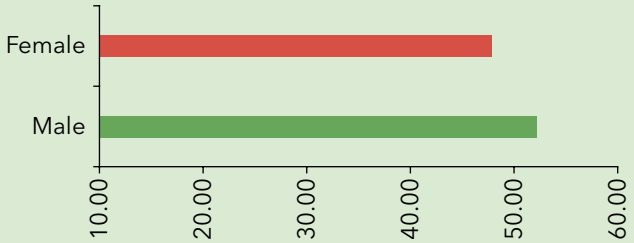
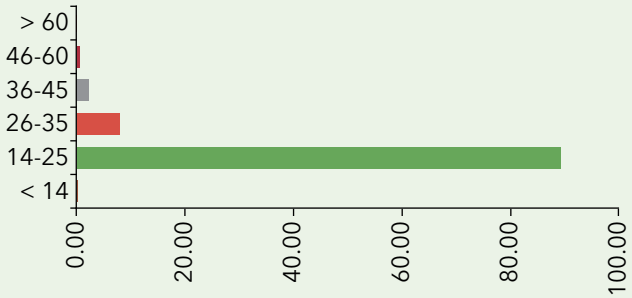
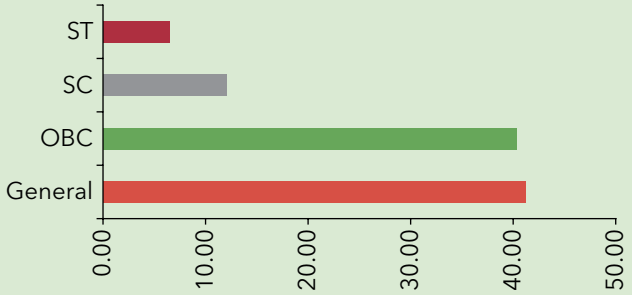
The sample selected for the study has been divided into three categories based on the population of respective states. Under DISHA, about three-fourths of the sample beneficiaries belong to the category A states, including Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal. Further, 24 per cent of the respondents are from the Category B states and most of the states belonging to this group are medium states in terms of population. Around 8 per cent of the respondents are from the Category C states and mostly small states and UTs fall under this category (Table 3.1). Thus, a total of 28,633 beneficiaries were interviewed from 27 states and 4 Union Territories.

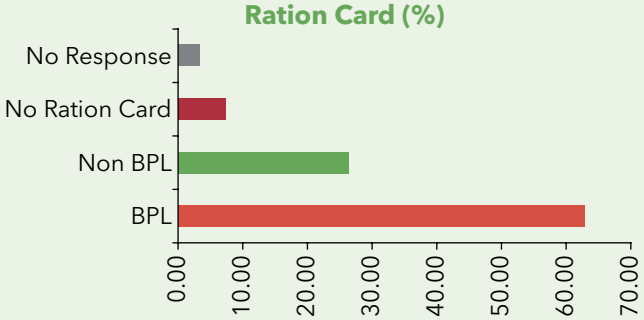
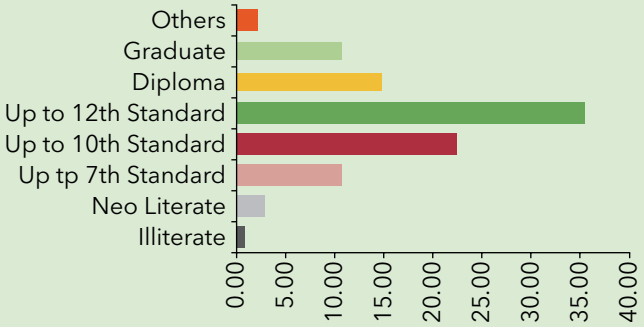
The beneficiary coverage in terms of the location reveals that 76 per cent of the beneficiaries who were trained at the national level resided in rural parts of the country while only 24 per cent resided in urban India. This remarkable progress could also have been the result of various initiatives such as Bharat Net under Digital India, that established high-speed digital highway in about 2,50,000 gram panchayats, which, in turn, enhanced digital connectivity to the remotest of areas.

The gender gap at the national level in imparting digital literacy has been considerably less, as 47 per cent of the total number of trainees across 31 states and Union Territories were women.

As far as the age-wise classification of the trainees is concerned, maximum participation (89 per cent) in the training

TABLE 3.1: DEMOGRAPHIC AND SOCIAL PROFILE OF THE SAMPLE BENEFICIARIES

Graphical Representation	Nos.	%
State Wise Coverage (%)		
	2306	8.05
	6847	23.91
	19479	68.03
Area Wise Distribution (%)		
	21867	76.35
	6771	23.65
Gender (%)		
	14951	74.78
	13681	52.22
Age (%)		
	1	0.01
	154	0.54
	642	2.24
	2262	7.90
	25540	89.20
	34	0.12
Caste (%)		
	1856	0.48
	3457	12.07
	11534	40.28
	11786	41.16

Graphical Representation	Nos.	%
Ration Card (%)		
	967	3.38
	2120	7.40
	7547	26.36
	17999	62.86
Education Status (%)		
	615	2.15
	3056	10.67
	4233	14.78
	10165	35.50
	6420	22.42
	3062	10.69
	824	2.88
	258	0.90

Source: Survey, 2017.

came from youngsters between the ages of 14 and 25 years, followed by candidates in the age group of 26 to 35 years. The expression of interest in digital literacy by the youngsters is a positive trend, especially in the rural areas, as it can help them gain access to new information and opportunities, and subsequently to gain mobility in their personal and professional lives.

As regards the coverage of DISHA across different social groups, it can be observed that a majority of the respondents were from the General and OBC categories, at 40 per cent each, followed by SC (12 per cent) and ST (6.5 per cent) candidates.

As far as the educational status of the beneficiaries is concerned, more than half of the beneficiaries belong to the category of high school or higher secondary education, and most them are still students in that age group who are pursuing that level of education. Some of the graduates and diploma holders also showed interest in the DISHA training.

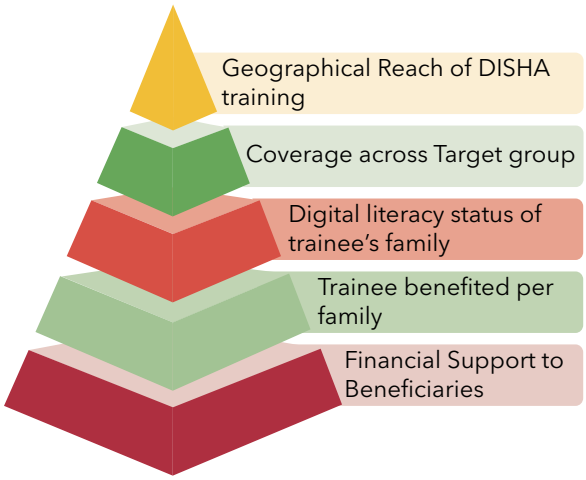
As regards its success in reaching out to BPL card-holders, the programme achieved its target in a significant manner, as more than 60 per cent of the candidates trained at the national level belong to the BPL category. While 26 per cent of the trainees belonged to the non-BPL group, about 10 per cent of the trainees did not possess a ration card.

Overall, the national scenario reveals that DISHA has been remarkably successful in reaching out to the intended beneficiaries, particularly the BPL card-holders and women trainees. In particular, the reach of DISHA training in the rural areas has been noteworthy. However, the SC/ST candidates was found to be lagging behind the General and OBC candidates in terms of participation in the programme, which calls for appropriate strategies for targeting these social groups in the next phase of the programme. With this brief discussion on the national scenario, the state-wise analysis is presented in the next section, highlighting both regional discrepancies as well as some good practices which can be replicated by the other states in the next phase for ensuring better outcomes.

GROUND REALITIES: DISHA COVERAGE AMONG DIVERSE GROUPS

This section discusses the findings of the impact assessment survey regarding the 'Coverage of DISHA among Diverse Groups' in accordance with the objectives established under the DISHA. The various aspects that have been discussed here include the geographical reach of DISHA training; coverage across target groups; digital literacy status of the trainee's family; and the number of trainees benefited per family (Figure 3.1).

FIGURE 3.1: DIMENSION OF BENEFICIARY COVERAGE ACROSS DIVERSE GROUPS



Source: Prepared by the authors.

(i) Geographical Reach of DISHA Training

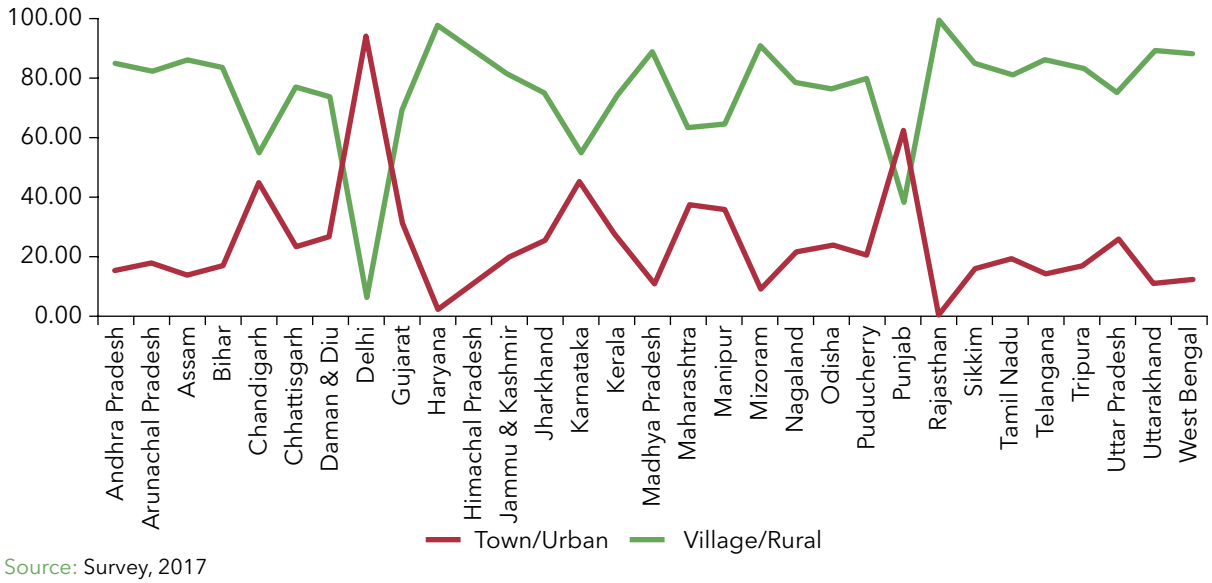
The DISHA programme had extended its coverage to the rural areas to a remarkable extent, which was revealed in the national scenario. At the state level too, it can be observed that in the states of Rajasthan, Mizoram, and Haryana, more than 90 per cent of the trainees belonged to rural households, with the maximum participation coming from Rajasthan.

In the national capital, trainees of the digital literacy training overwhelmingly belonged to urban households as compared to their rural counterparts, followed by Punjab and the Union territory of Chandigarh where 63 per cent and 54 per cent of the trainees belonged to urban backgrounds, respectively.

(ii) Coverage across Target group

DISHA Objective: "The target group of the training is non-IT literate and Illiterates in the age group of 14 to 60 years.... Reservation for SC/ST and BPL categories... Preference to women beneficiary of an eligible household..."

FIGURE 3.2: BENEFICIARY COVERAGE IN RURAL AND URBAN AREAS (%)



Source: Survey, 2017

The main aim of this programme was to extend the reach of DISHA training to the target beneficiaries, viz., the SCs, STs, BPL card-holders and women in the age group of 14 and 60 years. The programme also aimed at reaching the *Anganwadi* and ASHA workers. The following discussion presents a state-wise scenario under different zones, viz., the eastern, western, northern, southern, central and north-eastern zones, highlighting the performances of each zone in meeting the targets.

(a) Gender

One of the objectives of the DISHA programme was to extend preference to women beneficiaries from the eligible

TABLE 3.2: COVERAGE ACROSS TARGET GROUP: GENDER (%)

S. No.	States/UTs	Male	Female
	Eastern States		
1.	Bihar	62.99	37.01
2.	Jharkhand	60.77	39.23
3.	Odisha	52.64	47.36
4.	West Bengal	46.05	53.95
	Western States/UT		
5.	Daman & Diu	43.93	56.07
6.	Gujarat	64.01	35.99
7.	Maharashtra	54.98	45.02
	Northern States/UT		
8.	Chandigarh	47.28	52.72
9.	Delhi	55.06	44.94
10.	Haryana	67.62	32.38
11.	Himachal Pradesh	65.13	34.87
12.	Jammu & Kashmir	50.83	49.17
13.	Punjab	55.35	44.65
14.	Rajasthan	65.02	34.98
15.	Uttar Pradesh	61.65	38.35
16.	Uttarakhand	55.35	44.65
	Southern States/UT		
17.	Andhra Pradesh	40.55	59.45
18.	Karnataka	42.81	57.19
19.	Kerala	34.09	65.91
20.	Puducherry	46.03	53.97
21.	Tamil Nadu	28.44	71.56
22.	Telangana	43.33	56.67
	Central States		
23.	Chhattisgarh	49.50	50.50
24.	Madhya Pradesh	53.75	46.25
	North-Eastern States		
25.	Arunachal Pradesh	51.28	48.72
26.	Assam	57.92	42.08
27.	Manipur	45.19	54.81
28.	Mizoram	51.46	48.54
29.	Nagaland	37.66	62.34
30.	Sikkim	35.56	64.44
31.	Tripura	51.88	48.12
	All India	**52.22**	**47.78**

Source: Survey, 2017.

BOX 3.1: *ANGANWADI* AND ASHA WORKERS BENEFITED FROM DISHA TRAINING

In Anantapur district of Andhra Pradesh under DISHA more than 100 *Anganwadi* and ASHA workers have been trained in basic IT skill training. In order to encourage greater mobilisation of the ASHA/*Anganwadi* workers, special measures taken by the VLEs included awareness campaigns, visit to *Anganwadi* centres, garnered support of panchayat sarpanch and block education officers.

Source: Interview with VLEs, 2017.

household. The survey findings reveal state-wise variations in reaching this objective.

The states of Bihar, Gujarat, Rajasthan, and Jharkhand, which have low sex ratios of less than 40 per cent, exhibited little participation from women in the training programme. On an average, around 35 per cent of the trainees in these states were women, with the lowest female participation witnessed in Haryana wherein women constituted only 32 per cent of the total participants.

However, in the southern states of Kerala, Karnataka, Tamil Nadu, and Telangana, and in the eastern states of Sikkim, Nagaland, Andhra Pradesh, and Manipur, where the sex ratio is significantly higher than in the northern states, there was much higher participation among the women trainees. On an average, more than 65 per cent of the trainees in these states were women, with the female participation being the highest in Tamil Nadu where the male trainees constituted only 28 per cent of the total trainees. In most Union Territories including but not limited to Delhi, Chandigarh, and Puducherry, the participation of women was proportional to that of men as approximately 50 per cent of the trainees in these UTs were women. The UT of Daman & Diu witnessed the highest participation amongst the UTs, with 56 per cent of the women here having enrolled for the training.

(b) Caste

One of the objectives of the DISHA training programme is to provide adequate representation to the SC and ST candidates and to equip them with the necessary IT skills. However, this goal has been attained only in some states. Overall, in most of the states, the representation of General candidates was the highest, followed by that of the OBC candidates, and then of the SCs and the STs (Table 3.3).

The state-wise analysis shows that Haryana and Punjab account for the greatest percentage of SCs from the northern zone. From the north-east zone, the participants in Nagaland (91 per cent) accounted for the highest proportion of STs in the country, followed by Mizoram. The percentage of trainees belonging to the STs in other states across India was negligible with the exception of Arunachal Pradesh and Sikkim, with approximately 30 per cent of the trainees in these states being members of Scheduled Tribes.

As regards the southern zone, in Kerala, 89 per cent of the trainees who enrolled for the programme belonged to the OBCs. In Jammu & Kashmir, the representation of SCs and STs was particularly low as 86 per cent of trainees in the state belonged to the General category.

(c) BPL/Non-BPL Beneficiaries

Another aim of the DISHA training was to impart digital literacy amongst the BPL social groups. A zonal analysis shows that more than 60 per cent of the trainees in Bihar and Jharkhand from the eastern zone; Daman & Diu from the West; Puducherry, Tamil Nadu, and Telangana from the Southern zone; and Chhattisgarh from the Central zone have

TABLE 3.3: COVERAGE ACROSS TARGET GROUP: SOCIAL CATEGORY (%)

S. No.	States/UTs	General	OBC	SC	ST
	Eastern States				
1.	Bihar	30.13	58.16	9.96	1.75
2.	Jharkhand	25.53	62.34	6.70	5.42
3.	Odisha	37.23	38.94	9.99	13.84
4.	West Bengal	79.31	7.08	11.70	1.90
	Western States/UT				
5.	Daman & Diu	33.89	38.91	7.53	19.67
6.	Gujarat	47.79	40.81	5.60	5.80
7.	Maharashtra	43.74	36.45	9.09	10.73
	Northern States/UT				
8.	Chandigarh	86.19	4.18	9.62	0.00
9.	Delhi	79.74	12.98	7.13	0.14
10.	Haryana	42.08	13.98	43.37	0.57
11.	Himachal Pradesh	49.58	13.87	28.99	7.56
12.	Jammu & Kashmir	86.27	4.45	7.24	2.04
13.	Punjab	26.53	33.24	39.66	0.57
14.	Rajasthan	20.96	56.65	16.28	6.11
15.	Uttar Pradesh	26.08	55.80	17.51	0.62
16.	Uttarakhand	51.64	34.24	12.70	1.43
	Southern States/UT				
17.	Andhra Pradesh	43.84	43.74	10.47	1.95
18.	Karnataka	52.62	38.30	6.37	2.72
19.	Kerala	8.27	89.16	2.57	0.00
20.	Puducherry	71.97	22.59	5.44	0.00
21.	Tamil Nadu	40.40	44.40	14.94	0.26
22.	Telangana	31.72	58.01	7.39	2.87
	Central States				
23.	Chhattisgarh	30.10	46.50	10.41	12.98
24.	Madhya Pradesh	20.74	60.16	14.12	4.98
	North-Eastern States				
25.	Arunachal Pradesh	64.10	4.49	0.00	31.41
26.	Assam	54.78	22.54	8.27	14.41
27.	Manipur	33.89	3.77	7.11	55.23
28.	Mizoram	4.60	0.00	10.46	84.94
29.	Nagaland	7.53	1.26	0.00	91.21
30.	Sikkim	66.53	0.42	0.84	32.22
31.	Tripura	40.59	33.05	14.23	12.13
	All India	**41.16**	**40.28**	**12.07**	**6.48**

Source: Survey, 2017.

TABLE 3.4: COVERAGE OF TARGET BENEFICIARIES: BPL/NON-BPL (%)

S. No.	States/UTs	BPL	Non BPL	No Ration Card	No Response
			Eastern States		
1.	Bihar	63.45	22.54	11.86	2.16
2.	Jharkhand	67.62	27.25	3.42	1.71
3.	Odisha	48.07	35.66	14.98	1.28
4.	West Bengal	56.98	28.29	13.14	1.59
			Western States/UT		
5.	Daman & Diu	68.62	24.27	2.93	4.18
6.	Gujarat	57.44	29.21	11.40	1.95
7.	Maharashtra	67.71	24.54	2.00	5.75
			Northern States/UT		
8.	Chandigarh	67.78	27.20	4.18	0.84
9.	Delhi	35.66	42.80	13.69	7.85
10.	Haryana	66.33	26.96	5.71	1.00
11.	Himachal Pradesh	68.07	23.11	4.20	4.62
12.	Jammu & Kashmir	84.04	10.95	4.08	0.93
13.	Punjab	63.48	26.96	5.56	3.99
14.	Rajasthan	65.79	26.30	5.08	2.82
15.	Uttar Pradesh	69.20	27.72	1.49	1.59
16.	Uttarakhand	68.33	23.25	6.13	2.28
			Southern States/UT		
17.	Andhra Pradesh	57.91	35.93	4.41	1.75
18.	Karnataka	35.01	38.19	21.82	4.98
19.	Kerala	48.36	47.08	3.85	0.71
20.	Puducherry	77.41	14.23	6.69	1.67
21.	Tamil Nadu	70.02	20.12	5.54	4.31
22.	Telangana	76.69	18.48	4.52	0.31
			Central States		
23.	Chhattisgarh	79.46	18.12	0.86	1.57
24.	Madhya Pradesh	59.29	24.90	4.31	11.50
			North-Eastern States		
25.	Arunachal Pradesh	67.95	26.92	3.85	1.28
26.	Assam	84.88	6.99	3.14	4.99
27.	Manipur	64.44	30.13	3.77	1.67
28.	Mizoram	77.41	11.30	9.62	1.67
29.	Nagaland	89.12	7.11	2.93	0.84
30.	Sikkim	76.15	20.50	2.09	1.26
31.	Tripura	69.87	17.15	9.62	3.35
All India		**62.86**	**26.36**	**7.40**	**3.38**

Source: Survey, 2017

BOX 3.2: MEASURES ADOPTED TO IDENTIFY THE TARGET BENEFICIARIES

In order to ensure that the training was being properly received by the targeted beneficiaries, effective monitoring measures were implemented by the training centres. These included but were not limited to:

- Door to door verification using Aadhaar card;
- Involving gram panchayats in identification;
- Interviews with students to know the digital literacy status;
- Verification of ration card to cross check the number of members benefited per family;
- Engagement of marketing professionals to identify the target groups;
- Administration of declaration forms and application forms to candidates;
- Campaign in the SC/ST colonies to increase the enrolment of people belonging to these groups; and
- Implementation of flexible time slots to manage the needs of homemakers and working women.

Source: Interview with VLEs, 2017.

attained this target. With the exception of Delhi and Karnataka, all the other states met the targeted adequate number of beneficiaries holding BPL ration cards. Notably, the state of Karnataka had also substantially covered people with no ration card, which is a significant achievement.

The north-eastern states too met this target as more than 60 per cent of the trainees in this zone fell under the BPL category. In Delhi and Karnataka, a majority of the beneficiaries either belonged to the Above the Poverty Line (APL) category or they did not possess a ration card. Further, 11 per cent of the trainees in Madhya Pradesh preferred to remain silent on their ration card status.

The number of non-BPL card-holders, who received the DISHA training, was the highest in Kerala, followed by Delhi, as in both the states, the number of trainees crossed 40 per cent of the total. On the whole, as a zonal analysis, in terms of reaching the BPL category, the performance of different zones has been satisfactory.

(d) Age

The target age group of this programme is 14 to 60 years, and the state scenario, like the national picture, reveals a similar trend, as in almost all the states, young people in the age group of 14 to 25 were the chief beneficiaries (Table 3.5).

More than 90 per cent of the trainees belonged to this age bracket in almost all the zones, that is, in the states of Jharkhand, Himachal Pradesh, Tamil Nadu, Madhya Pradesh, Manipur and Tripura from the eastern, northern, southern, central, and north-eastern zones, respectively. Further, the states and UTs of Daman & Diu, Jammu & Kashmir, Karnataka, Mizoram, Nagaland, Odisha, Puducherry, Sikkim, Uttar Pradesh, and West Bengal had an equal proportion of trainees belonging to similar age brackets enrolling for the programme.

Trainees between the ages of 26 to 35 years were the next major beneficiaries of the training. The state where the proportion of trainees in this age group was particularly high was Andhra Pradesh, followed by Manipur, Himachal Pradesh, Rajasthan, and Tripura. The proportions of participants from the non-target group—children below the age of 14 years, and people above the age of 60 years, were negligible in all the states/UTs.

TABLE 3.5: COVERAGE OF BENEFICIARIES: AGE (YEARS) (%)

S. No.	States/UTs	< 14	14 - 25	26 - 35	36 - 45	46 - 60	> 60
	Eastern States						
1.	Bihar	0.00	92.51	5.60	1.80	0.10	0.00
2.	Jharkhand	0.14	78.89	18.97	1.71	0.29	0.00
3.	Odisha	0.00	100.00	0.00	0.00	0.00	0.00
4.	West Bengal	0.00	100.00	0.00	0.00	0.00	0.00
	Western States/UT						
5.	Daman & Diu	0.00	100.00	0.00	0.00	0.00	0.00
6.	Gujarat	0.00	99.95	0.05	0.00	0.00	0.00
7.	Maharashtra	0.00	90.14	9.86	0.00	0.00	0.00
	Northern States/UT						
8.	Chandigarh	0.00	94.56	5.44	0.00	0.00	0.00
9.	Delhi	0.71	96.15	2.43	0.57	0.14	0.00
10.	Haryana	0.00	83.74	16.12	0.00	0.14	0.00
11.	Himachal Pradesh	0.00	73.53	22.27	4.20	0.00	0.00
12.	Jammu & Kashmir	0.00	100.00	0.00	0.00	0.00	0.00
13.	Punjab	0.00	98.29	1.71	0.00	0.00	0.00
14.	Rajasthan	0.26	66.31	21.11	8.78	3.54	0.00
15.	Uttar Pradesh	0.00	100.00	0.00	0.00	0.00	0.00
16.	Uttarakhand	0.29	99.71	0.00	0.00	0.00	0.00
	Southern States/UT						
17.	Andhra Pradesh	0.41	64.17	26.69	8.21	0.51	0.00
18.	Karnataka	0.00	100.00	0.00	0.00	0.00	0.00
19.	Kerala	0.00	99.86	0.14	0.00	0.00	0.00
20.	Puducherry	0.00	100.00	0.00	0.00	0.00	0.00
21.	Tamil Nadu	0.00	79.57	15.50	4.31	0.62	0.00
22.	Telangana	0.51	89.73	8.62	1.13	0.00	0.00
	Central States						
23.	Chhattisgarh	0.00	99.86	0.14	0.00	0.00	0.00
24.	Madhya Pradesh	0.62	67.35	18.12	10.78	3.08	0.05
	North-Eastern States						
25.	Arunachal Pradesh	0.00	99.36	0.64	0.00	0.00	0.00
26.	Assam	0.00	82.45	14.27	3.28	0.00	0.00
27.	Manipur	0.00	75.31	24.27	0.42	0.00	0.00
28.	Mizoram	0.00	100.00	0.00	0.00	0.00	0.00
29.	Nagaland	0.00	100.00	0.00	0.00	0.00	0.00
30.	Sikkim	0.00	100.00	0.00	0.00	0.00	0.00
31.	Tripura	0.00	78.66	20.08	0.42	0.84	0.00
	All India	**0.12**	**89.20**	**7.90**	**2.24**	**0.54**	**0.00**

Source: Survey, 2017.

(iii) Digital Literacy Status of Trainee's Family

DISHA Objective: "All the households where none of the persons in the age group of 14 to 60 years is IT-literate would become eligible …"

The objective of DISHA was to provide digital literacy to a family, where no member had previously been introduced to information technology and was digitally illiterate. According to the survey findings, the aim was met successfully in most of the states/UTs. Table 3.6 shows that more than

TABLE 3.6: BENEFICIARIES REPORTING ON THEIR FAMILY'S STATUS OF DIGITAL LITERACY (%)

S. No.	States/UTs	None	Less than 2 Members	2 to 4 Members	More than 4 Members
	Eastern States				
1.	Bihar	52.05	44.30	1.39	2.26
2.	Jharkhand	70.33	28.10	1.57	0.00
3.	Odisha	58.06	27.53	0.43	13.98
4.	West Bengal	52.82	42.71	2.26	2.21
	Western States/UT				
5.	Daman & Diu	84.94	13.39	1.67	0.00
6.	Gujarat	42.30	54.11	3.29	0.31
7.	Maharashtra	68.43	30.34	0.46	0.77
	Northern States/UT				
8.	Chandigarh	53.56	35.15	10.04	1.26
9.	Delhi	18.83	77.89	2.14	1.14
10.	Haryana	75.89	15.26	8.84	0.00
11.	Himachal Pradesh	54.20	44.96	0.00	0.84
12.	Jammu & Kashmir	77.92	17.44	0.74	3.90
13.	Punjab	57.92	38.52	1.57	2.00
14.	Rajasthan	50.23	39.60	8.99	1.18
15.	Uttar Pradesh	92.04	7.49	0.41	0.05
16.	Uttarakhand	74.47	23.25	1.85	0.43
	Southern States/UT				
17.	Andhra Pradesh	53.59	39.63	5.44	1.33
18.	Karnataka	64.73	33.37	1.54	0.36
19.	Kerala	53.78	40.09	5.71	0.43
20.	Puducherry	90.79	6.28	2.51	0.42
21.	Tamil Nadu	56.98	33.06	7.75	1.95
22.	Telangana	47.02	41.27	10.68	1.03
	Central States				
23.	Chhattisgarh	70.33	26.96	1.85	0.86
24.	Madhya Pradesh	30.65	32.96	9.70	11.76
	North-Eastern States				
25.	Arunachal Pradesh	80.77	16.03	3.21	0.00
26.	Assam	60.34	24.68	4.85	10.13
27.	Manipur	80.75	14.64	0.42	4.18
28.	Mizoram	69.04	30.13	0.84	0.00
29.	Nagaland	88.28	10.46	1.26	0.00
30.	Sikkim	71.13	26.78	2.09	0.00
31.	Tripura	66.95	25.10	6.28	1.67
	All India	**58.76**	**33.92**	**3.93**	**2.35**

Source: Survey, 2017.

70 per cent of the participants from each zone, particularly in the states and UTs of Jharkhand, Daman & Diu, Haryana, Jammu & Kashmir, Uttar Pradesh, Uttarakhand, Puducherry, Arunachal Pradesh, Manipur, Nagaland, and Sikkim stated that their families did not have digital literacy status before availing of the training. At the all-India level, 34 per cent of the trained beneficiaries came from families with less than two IT-literate members.

A majority of the north-eastern states have attained this objective of making one member per family IT-literate wherein no other family member is IT-literate. However, it came to light that families with members already having knowledge of IT have also benefited from the DISHA training, though their proportion is minimal. The survey revealed that families with more than two digitally literate members had also benefited from this training, and that their proportion was about 10 per cent in Chandigarh and Telangana. Some of them were direct beneficiaries (that is, beneficiaries, who enrol directly on the website and give the examination without undergoing training from training centres) or the beneficiaries trained under CSR activity.

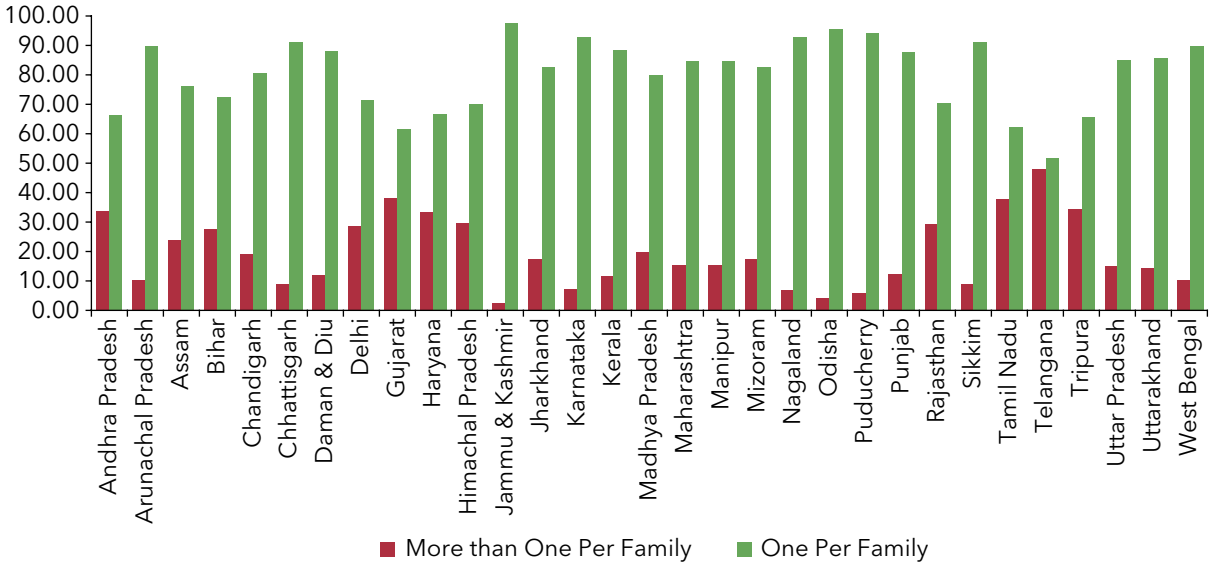
(iv) Trainee Benefiting per Family

DISHA Objective: "All the households where none of the person in the age group of 14 to 60 years are IT literate would become eligible….Of the eligible household, one person would be selected for the training…"

Figure 3.3 indicates that a majority of the states and UTs revealed that only one family member had enrolled for the training programme. However, more than 30 per cent of the trainees in the three southern states of Andhra Pradesh, Tamil Nadu and Telangana stated that more members from their family had availed the IT training. The corresponding proportion is the same for the northern state of Haryana. In the western zone, it was only in Gujarat that 38 per cent of the respondents reported having more than one member who attended the DISHA programme. Again, as stated earlier, in almost all the states, there were both direct entries and entries trained under CSR activities. Hence in such families, the norm of one per family was not met.

Similarly, it also came to light that in some joint families, people who simultaneously

FIGURE 3.3: TRAINEE BENEFITED PER FAMILY (%)



Source: Survey, 2017.

had 2–3 ration cards for their nuclear family were also considered for the training and in such families too, there were more than one member who had attended the DISHA training.

(v) Financial Support to Beneficiaries

DISHA Objective: "For SC/ST/BPL Households, no training fee payable and for General candidates, course fee of Rs.125 applicable"

Although the objective of DISHA was to provide free training to the SC/ST and BPL candidates, the ground reality reveals that in most of the states, almost all the candidates were either provided free training or collected fees, irrespective of their caste category. The following section presents the findings from the field, with respect to the financial support offered to the beneficiaries.

a. Financial Support to the Beneficiaries: SC/ST Category

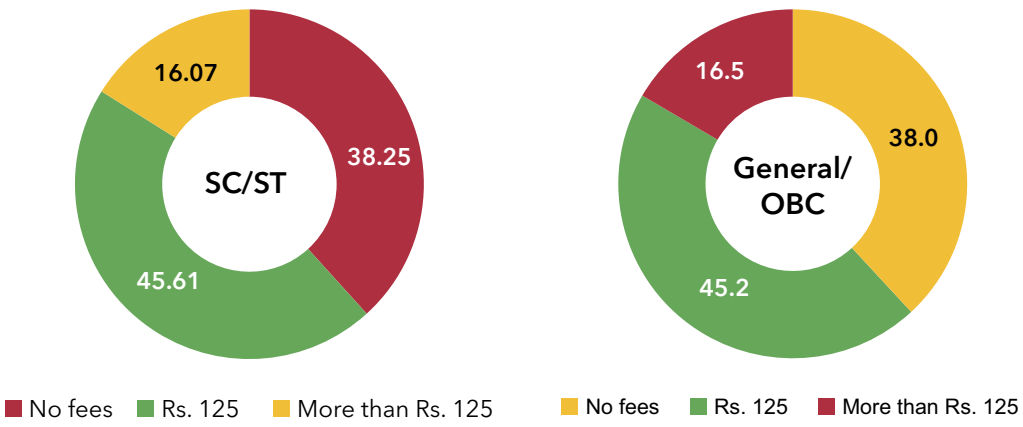
Figure 3.4 shows that, at the national level 38 per cent of the SC/ST candidates received free training and 45.6 per cent had paid a fee of Rs. 125 each, while 16 per cent paid more than the stipulated fee, to receive the training. A similar scenario is also visible with regard to the OBC and general candidates.

In the Eastern Zone, that is, in the states of Bihar, Jharkhand, Odisha and West Bengal, less than 40 per cent of the trainees in both the SC/ST and General/OBC categories received free training while close to 30 per cent of the trainees in Bihar paid more than the stipulated fees.

In the Western Zone, while 67 per cent of the SC and ST trainees received free training in Gujarat, 30 per cent of the trainees belonging to the same category had to pay more than the stipulated amount in Daman & Diu. More or less, the same situation was observed for the General and OBC candidates.

In the northern zone, with the exception of Haryana, and where 75 per cent of the beneficiaries received free training, the corresponding proportion was less than 20 per cent in Delhi, Himachal Pradesh, Jammu & Kashmir, Uttar Pradesh, and Uttarakhand. More than 20 per cent of the beneficiaries in Punjab, Uttarakhand, Jammu & Kashmir, and Himachal Pradesh paid more than the stipulated amount for the training. While 75 per cent of the trainees in Himachal Pradesh received free training, more than 50 per cent of the trainees in Delhi, Jammu & Kashmir, Uttarakhand, and

FIGURE 3.4: FINANCIAL SUPPORT TO SC/ST AND GENERAL/OBC CANDIDATES: ALL INDIA (%)



Source: Survey, 2017.

TABLE 3.7: BENEFICIARIES REPORTING ABOUT FREESHIPS AND FEES PAID (%)

S. No.	States/UTs	General/OBC			SCs/STs		
		No fees	Rs. 125	More than Rs. 125	No fees	Rs. 125	More than Rs. 125
Eastern Zone							
1.	Bihar	37.85	31.69	30.47	32.89	32.89	34.21
2.	Jharkhand	29.55	51.14	19.32	23.53	57.65	18.82
3.	Odisha	32.40	46.07	21.54	28.14	48.50	23.35
4.	West Bengal	33.87	40.64	25.49	29.81	42.64	27.55
Western Zone							
5.	Daman & Diu	28.74	41.38	29.89	26.15	43.08	30.77
6.	Gujarat	61.99	23.41	14.60	67.12	19.82	13.06
7.	Maharashtra	21.57	66.52	11.91	25.65	61.92	12.44
Northern Zone							
8.	Chandigarh	35.19	43.06	21.76	21.74	52.17	26.09
9.	Delhi	13.23	80.92	5.85	13.73	74.51	11.76
10.	Haryana	75.32	13.74	10.94	74.68	12.66	12.66
11.	Himachal Pradesh	23.84	52.32	23.84	22.99	59.77	17.24
12.	Jammu & Kashmir	8.18	67.69	24.13	4.00	72.00	24.00
13.	Punjab	22.91	53.70	23.39	31.91	46.81	21.28
14.	Rajasthan	49.77	36.07	14.16	48.85	40.14	11.01
15.	Uttar Pradesh	17.37	70.41	12.23	23.23	64.31	12.46
16.	Uttarakhand	12.29	66.45	21.26	14.14	57.58	28.28
Southern Zone							
17.	Andhra Pradesh	69.52	17.23	13.25	50.41	30.58	19.01
18.	Karnataka	14.06	69.23	16.71	24.86	67.23	7.91
19.	Kerala	14.49	58.86	26.65	33.33	50.00	16.67
20.	Puducherry	8.41	69.91	21.68	0.00	92.31	7.69
21.	Tamil Nadu	59.32	34.38	6.30	60.14	36.15	3.72
22.	Telangana	71.40	16.82	11.78	70.00	18.00	12.00
Central Zone							
23.	Chhattisgarh	13.04	67.41	19.55	15.85	66.46	17.68
24.	Madhya Pradesh	68.08	23.29	5.84	58.06	31.72	9.14
North-Eastern States							
25.	Arunachal Pradesh	6.54	91.59	1.87	12.24	83.67	4.08
26.	Assam	43.73	32.84	23.43	52.20	32.08	15.72
27.	Manipur	20.00	52.22	27.78	12.75	67.11	20.13
28.	Mizoram	9.09	72.73	18.18	10.96	71.49	17.54
29.	Nagaland	28.57	33.33	38.10	44.04	31.65	24.31
30.	Sikkim	22.50	55.00	22.50	20.25	65.82	13.92
31.	Tripura	52.84	37.50	9.66	58.73	33.33	7.94
All India		**38.04**	**45.24**	**16.53**	**38.25**	**45.61**	**16.07**

Source: Survey, 2017.

Uttar Pradesh paid the stipulated fees. More than 25 per cent of the SC/ST trainees in Uttarakhand and Chandigarh paid more than the stipulated fees for the training.

In the southern zone, about 60 per cent of the trainees in Andhra Pradesh, Tamil Nadu, and Telangana received free training while more than 70 per cent of the trainees belonging to the same category in Karnataka and Puducherry paid the stipulated fees.

As regards the central zone, in Madhya Pradesh, 68 per cent of the General/ OBC trainees received free training while in Chhattisgarh, the same proportion of trainees paid fees for the training. While 58 per cent of the SC/ST trainees in Madhya Pradesh received free training, 66 per cent of the trainees in Chhattisgarh belonging to Schedules Castes and Tribes paid fees for the training.

Lastly, for the north-eastern zone, while more than 40 per cent of the General/OBC trainees in Tripura and Assam received free training, the corresponding proportion was less than 30 per cent in the remaining states of Arunachal Pradesh, Manipur, Mizoram, Nagaland and Sikkim. Further, 39 per cent of the General/OBC trainees in Nagaland paid more than the stipulated fees for the training. Less than 20 per cent of the trainees belonging to the SC/ST category in Arunachal Pradesh, Manipur, Mizoram, and Sikkim received free training while more than 50 per cent of the SC/ST trainees in Assam and Tripura received free training. More than 20 per cent of the trainees belonging to the same category in Manipur and Nagaland paid more than the stipulated fees for the training.

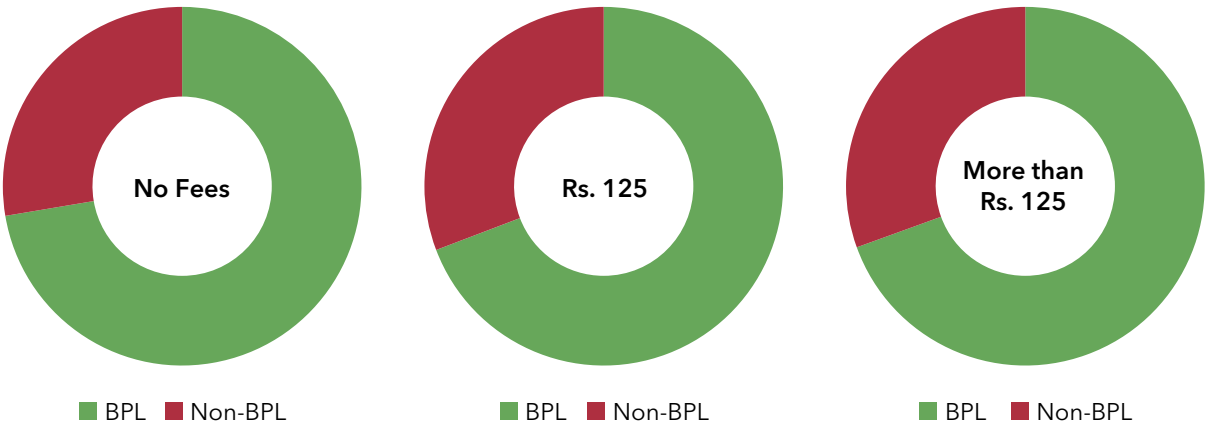
b. Financial Support to the Beneficiaries: BPL and Non-BPL Category

The DISHA programme also intended to give financial support to members of the BPL category and an analysis was done to assess the level of financial support received by the BPL card-holders. On the whole, 38 per cent of the beneficiaries reported not paying any fees, while 45 per cent reported paying a fee of Rs.125, and a small proportion, that is, 16 per cent of the respondents reported paying a fee above Rs. 125. Among the 38 per cent of the candidates who benefited from freeships, 72 per cent and 28 per cent belonged to the BPL and non-BPL categories, respectively. Similarly, among the 45 per cent of candidates who reported paying the stipulated fee of Rs.125, 69 per cent and 31 per cent belonged to the BPL and non-BPL categories, respectively. As stated earlier, only 16 per cent of the candidates reported paying excess fee above the stipulated amount, out of which 70 per cent belonged to the BPL category and the rest to the non-BPL category.

The state-wise analysis indicates that in the eastern zone, a larger proportion of BPL trainees reported receiving free training in comparison to the non-BPL category, and this proportion was very high in Jharkhand (80 per cent), followed by West Bengal and Bihar. Similarly, among the candidates who reported paying a fee of Rs. 125 each, a higher number of BPL candidates paid the fixed amount for training, with this proportion being 75 per cent and 66 per cent in Bihar and Jharkhand, respectively. It was also found that 78 per cent of the trainees in Bihar belonging to the BPL category paid more than Rs. 125 each as fees.

In the western zone, 75.6 per cent of the BPL trainees in Daman & Diu reported receiving free training whereas 76 per cent of the trainees belonging to the BPL category in Maharashtra paid Rs. 125 for the training while 64 per cent of the trainees in the same category received free training in Maharashtra. More than 70 per cent of the BPL trainees reported paying more than the stipulated fees of Rs. 125 in Gujarat, Maharashtra, and Daman & Diu.

FIGURE 3.5: FINANCIAL SUPPORT TO THE BPL AND NON-BPL BENEFICIARIES: ALL INDIA (%)



Source: Survey, 2017.

In the northern zone, more than 60 per cent of the beneficiaries holding a BPL ration card in all the states except in the UT of Chandigarh received free training. The corresponding proportions were 86.6 per cent in Jammu & Kashmir, and 75.5 per cent in Rajasthan where as 57 per cent of the beneficiaries in Delhi holding non-BPL ration cards paid fees for the training while a majority of the beneficiaries belonging to the BPL category paid fees in most of the states. Close to 70 per cent of the trainees belonging to the non-BPL category paid more than Rs. 125 as fees for the training in the national capital territory of Delhi.

In the southern zone, more than 80 per cent of the BPL beneficiaries in Puducherry and Telangana claimed to have received free training. Similarly, in the fee paying category too, a majority of the beneficiaries, that is, more than 80 per cent, in Tamil Nadu and Puducherry belonged to the BPL category. Again, a major proportion of the BPL beneficiaries in the states/UT of Tamil Nadu, Telangana, and Puducherry reported paying more than the stipulated fees. It may be observed that in Karnataka, a majority of the respondents who reported paying Rs. 125 or more as fees belonged to the non-BPL category.

In the central zone, more than 80 per cent of the beneficiaries holding a BPL ration card received free training while in Madhya Pradesh, 65 per cent of the trainees in the non-BPL category paid fees for the training. Close to 40 per cent of the trainees holding non-BPL ration cards in Madhya Pradesh paid more than the stipulated fees for the training.

Lastly, in the north-eastern zone, more than 80 per cent of the beneficiaries in the BPL category in Assam, Nagaland, and Mizoram received free training. Close to 30 per cent of the trainees in Arunachal Pradesh and Manipur belonging to the non-BPL category paid fees for the training while more than 90 per cent of the beneficiaries holding BPL ration cards paid the same fees in Assam and Nagaland. Around 40 per cent of the beneficiaries in Manipur belonging to the non-BPL category paid more than the stipulated fees for the training.

On the whole, it may be noticed that free training was provided to the General and OBC categories as well as the non-BPL households too. The training centres cited various reasons for in extending freeships to different categories. Firstly, some of the General and OBC candidates who received free training belonged to the BPL categories, and in the same way, some of the participants in the non-BPL categories belonged to the SC/ST communities. Secondly, some of the families belonging to the General and OBC

TABLE 3.8: BPL AND NON-BPL BENEFICIARIES REPORTING ABOUT FREESHIPS AND FEES PAID (%)

S. No.	States/UTs	No fees		Rs. 125		More than Rs. 125	
		BPL	Non-BPL	BPL	Non-BPL	BPL	Non-BPL
Eastern Zone							
1.	Bihar	68.56	31.44	75.38	24.62	78.60	21.40
2.	Jharkhand	80.21	19.79	66.08	33.92	71.76	28.24
3.	Odisha	51.50	48.50	58.36	41.64	62.99	37.01
4.	West Bengal	69.30	30.70	64.39	35.61	67.44	32.56
Western Zone							
5.	Daman & Diu	74.58	25.42	70.83	29.17	77.61	22.39
6.	Gujarat	68.27	31.73	58.18	41.82	70.13	29.87
7.	Maharashtra	64.19	35.81	76.02	23.98	74.89	25.11
Northern Zone							
8.	Chandigarh	58.44	41.56	75.25	24.75	83.67	16.33
9.	Delhi	67.07	32.93	42.15	57.85	31.82	68.18
10.	Haryana	71.49	28.51	64.29	35.71	76.39	23.61
11.	Himachal Pradesh	69.39	30.61	79.83	20.17	67.35	32.65
12.	Jammu & Kashmir	86.84	13.16	88.86	11.14	87.90	12.10
13.	Punjab	62.66	37.34	73.77	26.23	70.39	29.61
14.	Rajasthan	75.54	24.46	72.60	27.40	52.94	47.06
15.	Uttar Pradesh	63.19	36.81	74.29	25.71	67.24	32.76
16.	Uttarakhand	61.04	38.96	78.67	21.33	69.93	30.07
Southern Zone							
17.	Andhra Pradesh	64.30	35.70	57.74	42.26	54.33	45.67
18.	Karnataka	57.14	42.86	47.84	52.16	39.44	60.56
19.	Kerala	57.43	42.57	48.35	51.65	52.00	48.00
20.	Puducherry	88.24	11.76	87.18	12.82	73.91	26.09
21.	Tamil Nadu	72.75	27.25	85.02	14.98	83.00	17.00
22.	Telangana	84.18	15.82	67.79	32.21	75.93	24.07
Central Zone							
23.	Chhattisgarh	74.47	25.53	81.60	18.40	85.94	14.06
24.	Madhya Pradesh	82.45	17.55	34.32	65.68	61.33	38.67
North-Eastern States							
25.	Arunachal Pradesh	69.23	30.77	70.99	29.01	100.00	0.00
26.	Assam	89.12	10.88	98.58	1.42	89.93	10.07
27.	Manipur	69.44	30.56	70.80	29.20	60.38	39.62
28.	Mizoram	80.00	20.00	89.68	10.32	81.08	18.92
29.	Nagaland	89.00	11.00	95.95	4.05	94.64	5.36
30.	Sikkim	67.35	32.65	81.16	18.84	84.09	15.91
31.	Tripura	76.72	23.28	85.33	14.67	82.35	17.65
All India		**72.35**	**27.65**	**69.21**	**30.79**	**69.47**	**30.53**

Source: Survey, 2017.

categories came from very poor financial backgrounds, due to which free training was extended to them as well.

OVERALL SCENARIO OF BENEFICIARY COVERAGE

Overall, as regards the dimension of 'beneficiary coverage', it can be stated that the states and UTs have performed moderately, as most of the states fall in the category of either good or moderate performers. In particular, the reach of the programme to the rural areas and to women trainees has been remarkable. In the same manner, as regards targeting of families with no digital literacy status and extending the training to only one member per family, the DISHA programme has made a significant achievement. Further, it may also be noted that any programme of this nature needs to take stringent measures in meeting the target of adequate coverage of participants in the SC and ST categories. The socio-cultural context of the joint family makes it difficult to evaluate whether one person or more than one person can be trained in an eligible family. With respect to financial support too, it may be noticed that irrespective of the caste category, financial support was provided to various caste groups and at the same time, the stipulated fees was also collected from various caste groups.

In order to assess the overall performance with regard to this dimension, a composite index has been constructed to determine the achievement levels of the individual states/UTs, and at the national level, the value obtained for this dimension is 0.49. The states have been grouped into three categories, of 'good', 'moderate' and 'low', on the basis of their performance.

Figure 3.6 indicates that states such as Nagaland, Mizoram, Arunachal Pradesh, and Chhattisgarh fall in the good performing category in terms of reaching the targeted beneficiaries, whereas the poor performing states include Delhi, Chandigarh, and Gujarat, among others. Some of the states that fall in the moderate performing category include Maharashtra, Telangana, and Madhya Pradesh.

DISHA has thus been moderately successful in meeting its planned objectives under the Digital Literacy Training, as the programme has managed to extend its reach to trainees of different ages, castes, and social groups. The representation of these social indicators was seen to vary with demographic patterns, accessibility, and the general social milieu of different states and UTs, which has already been discussed in this chapter.

FIGURE 3.6: RANKING OF STATES/UTs BASED ON OVERALL PERFORMANCE: COVERAGE OF BENEFICIARIES (%)

States/UTs	Targeted Beneficiary Coverage
Nagaland	0.70
Mizoram	0.67
Arunachal Pradesh	0.57
Chhattisgarh	0.56
Tamil Nadu	0.54
Sikkim	0.54
Puducherry	0.54
Jammu & Kashmir	0.52
Tripura	0.52
Haryana	0.51
Uttar Pradesh	0.51
Manipur	0.51
Daman & Diu	0.50
Jharkhand	0.50
Assam	0.50
Rajasthan	0.50
Telangana	0.50
Maharashtra	0.49
Madhya Pradesh	0.49
Punjab	0.48
Himachal Pradesh	0.47
Uttarakhand	0.46
Andhra Pradesh	0.45
Kerala	0.45
West Bengal	0.44
Karnataka	0.42
Odisha	0.40
Bihar	0.40
Gujarat	0.39
Chandigarh	0.35
Delhi	0.32
National Average	**0.49**

Source: Computed by the authors.

Notes: The cumulative index for this dimension includes the indicators of the coverage in rural areas, target group of DISHA, digital literacy status of the trainee's family, the number of trainees benefiting per family, and the financial support to SCs/STs and the BPL and non-BPL categories.

- Good Performing States/UTs
- Moderate Performing States/UTs
- Low Performing States/UTs

4

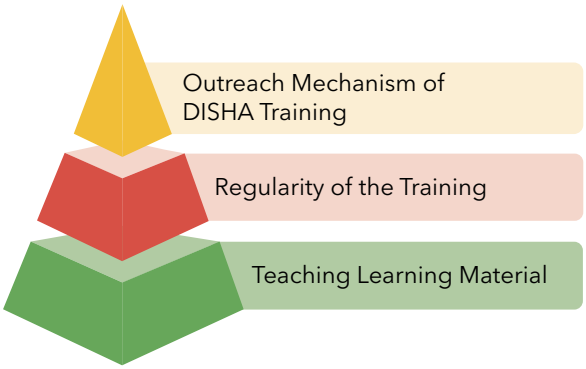
TRAINING COMPONENTS

INTRODUCTION

The components of a training programme cover critical aspects on the supply side, viz., the training design, curriculum, and training infrastructure, which are very important for the successful implementation of a training programme. A training programme should be designed in such a way that it embraces the multiple approaches of teaching, learning, and even mobilising the intended target so that the objective of a mission is accomplished. To that effect, this chapter analyses the training components of DISHA that contribute to setting the platform for its implementation.

While the forthcoming chapter discusses the component of training infrastructure, this chapter makes a detailed assessment of the training components, which covers indicators such as the outreach mechanism of DISHA training, regularity of the training, and the form of the Teaching and Learning Material (TLM) under DISHA, which has been depicted in Figure 4.1. The national scenario with respect to the various indicators of this dimension indicates that the training centres had given attention to the critical aspects, which is visible from the responses of the beneficiaries, as covered in this chapter.

FIGURE 4.1: DIMENSION OF TRAINING COMPONENTS



Source: Prepared by the authors.

GROUND REALITIES: TRAINING COMPONENTS

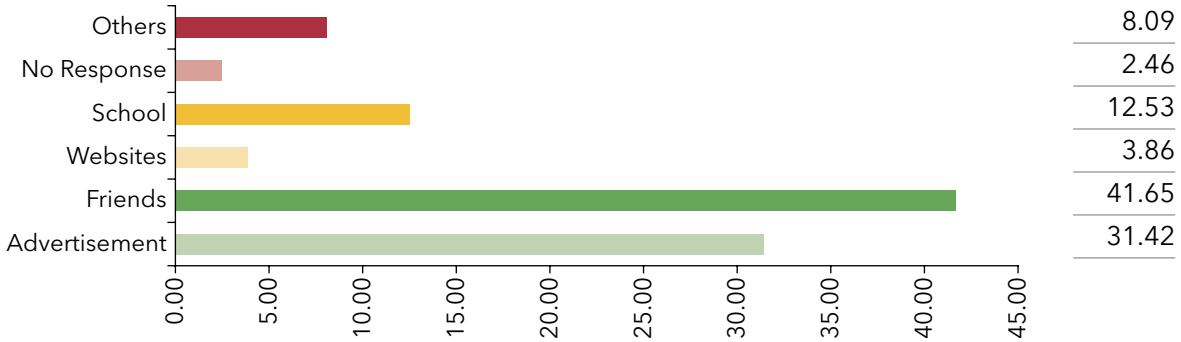
(i) Outreach Mechanism of DISHA Training

DISHA outreach mechanism: major influencing factor - friends, advertisement and schools.

At the national level, with respect to the sources of information on training, word of mouth marketing via friends and family, and advertisements were the two most common media for spreading awareness for the digital literacy training. It was observed that 73 per cent of the respondents learnt of the digital literacy training through these media. Next to these sources, schools were another major source through which the beneficiaries got to know about the DISHA training.

In terms of the state-wise scenario, it may be observed that across most states,

FIGURE 4.2: SOURCES OF INFORMATION ON DISHA TRAINING: ALL INDIA (%)



Source: Survey, 2017

40–50 per cent of the beneficiaries learnt of the training programme through their immediate family, relatives and friends. More than half were influenced by their friends in the northern and southern zones, wherein Tamil Nadu tops the list wherein 60 per cent of the trainees learnt of the programme via word of mouth, primarily from friends. In the north-eastern states of Nagaland and Manipur too, friends comprised the major source of information, as reported by 63 per cent and 50 per cent of the respondents, respectively. However, there were mixed responses in the northern states, as in half the states/UTs, advertisements comprised the major source while in others, friends were the major source of information on DISHA training. It may be noticed that while in Delhi, advertisements were the major source of information, only 15 per cent of the beneficiaries in the national capital had heard of the training through friends and family. Again a substantial proportion of the trainees in Delhi reported learning about the training through the programme website. More than 40 per cent of the beneficiaries in Kerala, West Bengal, and Uttar Pradesh enrolled in the programme became aware of such training being imparted through advertisements in newspapers on billboards and other publicity vehicles.

In the northern zone, Jammu & Kashmir, Punjab, and Uttarakhand, and in the north-eastern state of Manipur, only one per cent of the trainees learnt of the training through online portals. Schools played a role in spreading awareness about the digital literacy programme. In the north-eastern states of Arunachal Pradesh and Sikkim, and the northern state of Himachal Pradesh, around 30 per cent of the respondents had heard of the training via schools. The corresponding percentage for the same was, however, low in Kerala.

BOX 4.1: INNOVATIVE OUTREACH MECHANISM

Andhra Pradesh

- Innovative means were adopted to mobilise participation via Nukkad Nataks (a form of role-playing) and social media (such as Facebook).

Madhya Pradesh

- Special efforts were made by the VLE's in spreading awareness about DISHA through mobile vans in remote regions.

Uttar Pradesh

- Training Camps were organised in remote corners of the state to encourage participation from members of Scheduled Castes and Scheduled Tribes in particular.

Source: Interview with VLEs, 2017.

TABLE 4.1: SOURCES OF INFORMATION ON DISHA TRAINING (%)

S. No.	States/UTs	Advertisement	Friends	Websites	School	No Response	Others
Eastern States							
1.	Bihar	28.90	29.67	3.64	12.11	0.00	25.67
2.	Jharkhand	33.95	34.95	3.57	9.56	0.00	17.97
3.	Odisha	37.80	46.50	3.28	9.42	0.00	3.00
4.	West Bengal	41.79	46.10	3.29	6.11	0.00	2.72
Western States/UT							
5.	Daman & Diu	44.35	43.10	3.35	7.11	0.00	2.09
6.	Gujarat	24.69	49.38	2.10	16.38	0.00	7.44
7.	Maharashtra	41.22	35.32	4.98	16.07	0.00	2.41
Northern States/UT							
8.	Chandigarh	13.81	33.47	3.35	20.08	0.00	29.29
9.	Delhi	50.78	15.26	24.11	9.56	0.00	0.29
10.	Haryana	52.64	31.67	3.14	7.99	0.00	4.56
11.	Himachal Pradesh	17.65	50.00	4.20	27.73	0.42	0.00
12.	Jammu & Kashmir	32.84	39.52	1.11	11.13	0.00	15.40
13.	Punjab	54.21	38.23	1.28	3.42	0.00	2.85
14.	Rajasthan	11.56	26.19	2.57	10.32	30.10	19.26
15.	Uttar Pradesh	46.10	32.70	2.77	15.71	0.00	2.72
16.	Uttarakhand	36.80	39.37	1.85	16.41	0.00	5.56
Southern States/UT							
17.	Andhra Pradesh	22.07	56.06	5.34	13.55	0.00	2.98
18.	Karnataka	28.39	47.64	4.62	16.99	0.05	2.31
19.	Kerala	44.65	47.08	3.14	1.85	0.00	3.28
20.	Puducherry	26.78	57.32	2.09	10.88	0.00	2.93
21.	Tamil Nadu	15.14	61.14	3.70	11.86	0.21	7.96
22.	Telangana	23.61	49.38	4.41	18.07	0.00	4.52
Central States							
23.	Chhattisgarh	36.52	39.94	3.85	16.55	0.00	3.14
24.	Madhya Pradesh	27.57	44.25	3.29	6.37	4.83	13.71
North-Eastern States							
25.	Arunachal Pradesh	23.72	40.38	3.21	29.49	0.00	3.21
26.	Assam	25.25	45.65	2.85	16.98	0.00	9.27
27.	Manipur	30.96	49.79	1.67	12.55	0.00	5.02
28.	Mizoram	23.85	44.77	3.35	24.27	0.00	3.77
29.	Nagaland	23.85	63.60	2.93	4.60	0.00	5.02
30.	Sikkim	25.10	39.75	3.35	29.29	0.00	2.51
31.	Tripura	26.36	34.31	3.35	10.04	7.11	18.83
All India		**31.42**	**41.65**	**3.86**	**12.53**	**2.46**	**8.09**

Source: Survey, 2017.

The response of the beneficiaries on the sources of information is more or less similar in both the central and southern states, where friends were the major source followed by advertisements. The proportion of other sources was around 25 per cent in Chandigarh and Bihar. The other sources through which the trainees got to know of the training included door-to-door canvassing, campaigns and other public workshops organised by the CSCs.

The study also showed that the success of registration had a significant connection with the outreach measures taken by the training centres and the training partners to spread information about the DISHA training. Wherever the training centres had played a proactive role in promoting the programme and spreading the message of free training in schools, there was a higher rate of registration for the programme.

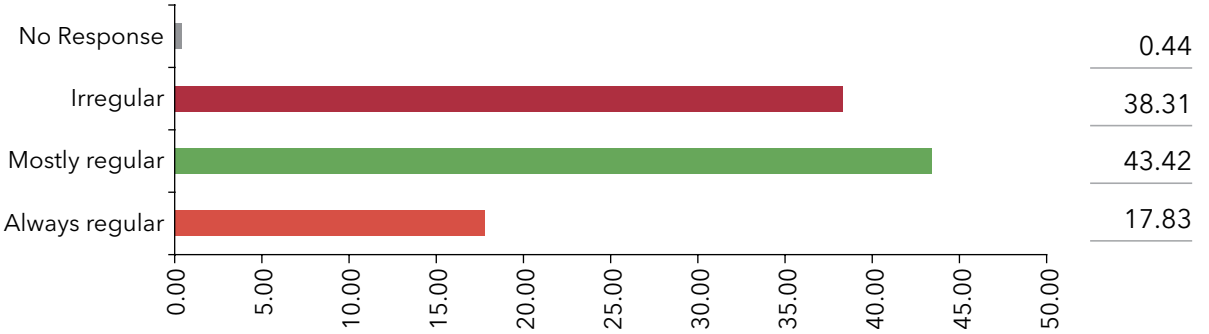
(ii) Regularity of the Training Programme

For the training to be productive and effectual, it needs to be undertaken at regular intervals and in a timely fashion. In terms of regularity of the DISHA training, there seems to be mixed response from the beneficiaries. At the national level, while 60 per cent of the trainees attested the regularity of the training sessions, 38 per cent of the respondents reported irregularity of the training (Figure 4.3). Some of the latter beneficiaries stated that they themselves were not regular in attending the training sessions, and in certain cases, the trainers were not present in the class. Similarly, direct candidates, who got enrolled for the programme from the DISHA website did not respond to the question on regularity of training, as they acquired training by studying the self-learning materials, and then directly wrote the online examination.

Figure 4.4 presents a cross-state scenario on the regularity of training. More than 40 per cent of the respondents in almost all the states reported regularity of the training programme. In most of the northern and southern states, more than 70 per cent of the respondents reported attending regular training sessions. However, irregularity of training was reported in both the central states of Chhattisgarh and Madhya Pradesh.

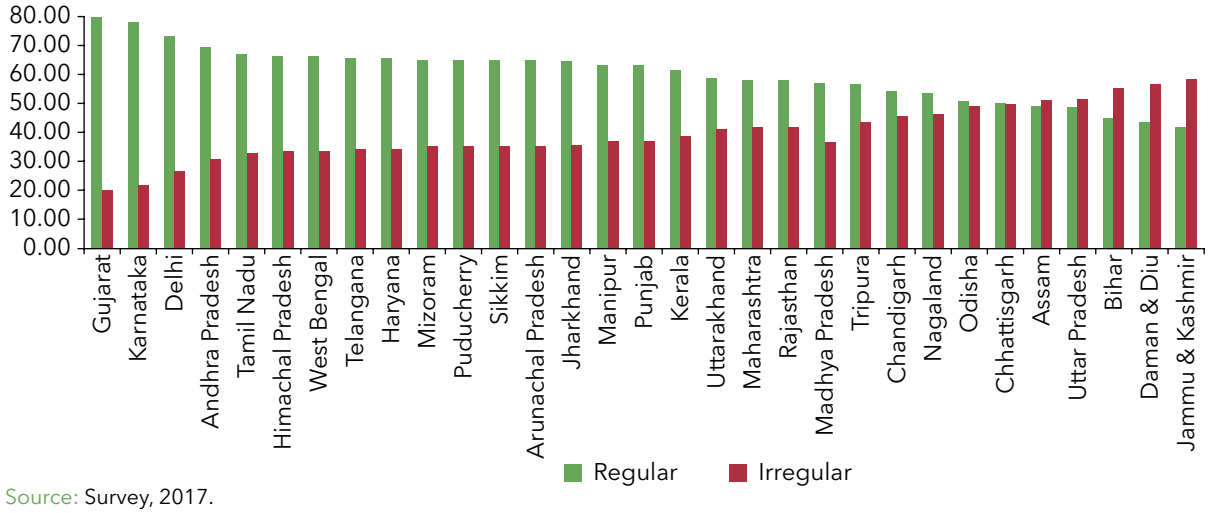
The training was particularly irregular in the states of Bihar and Jammu & Kashmir and the UT of Daman & Diu, wherein a majority of the respondents claimed that the training was irregular, which can be attributed to various reasons, as discussed earlier. Some of the students who reported that the training was irregular in these states said that they themselves were responsible for the irregularity as they did not attend the training on a regular basis. Some others mentioned that they had directly enrolled for the programme through the website and learnt the lessons themselves without attending the training sessions. It was also observed that the hilly areas and conflict zones faced

FIGURE 4.3: RESPONSES OF THE BENEFICIARIES ON REGULARITY OF THE TRAINING: ALL INDIA (%)



Source: Survey, 2017.

FIGURE 4.4: REGULARITY OF THE TRAINING PROGRAMME (%)



Source: Survey, 2017.

the problem of irregularity of training more than the other regions, because of their difficult-to-reach locations. Regions with frequent power cuts also faced problems in conducting regular training sessions.

(iii) Form of the Teaching and Learning Material under DISHA

As far as the Teaching and Learning Material (TLM) is concerned, at the national level, the most commonly available TLM was the photocopy of the material, followed by books. The usage of e-books and audio-video material was also available but at a marginal level.

DISHA aimed to provide its beneficiaries training tools such as audio visual material, books, e-books, and photocopied material to help them become digitally literate. There is no commonality in terms of the TLM provided by the centres across the country. It was found that only a small number of training centres use e-books and audio-video tools to impart the training. Further, the training centres followed different standards in terms of the training material used, and the length of the courses, among other things. The survey also reveals that books and photocopies of the course material were used in classrooms for teaching the fundamentals of computers. The survey and interaction with the training centres indicated that the provision of written material in book form was not a part of DISHA training. However, the training centres made photocopies of the key lessons and distributed them among the students. Similarly, books of other programmes such as the course on computers taught by the National Skill Development Corporation (NSDC) were also given to the students to enhance their understanding of the lessons.

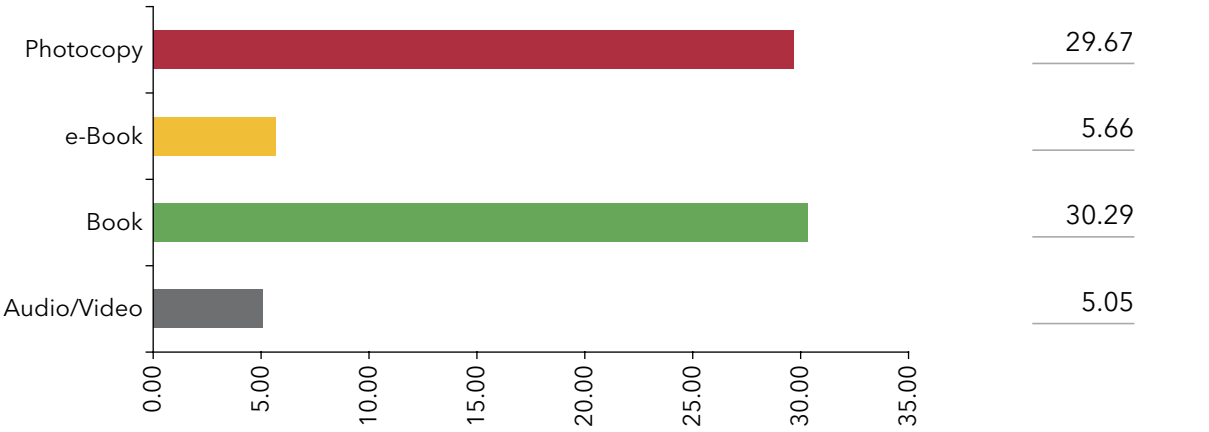
In the eastern states, books and photocopies seemed seem to be most preferred mode for teaching the DISHA content, and 32 per cent of the respondents in Bihar reported using booklets to learn the lessons. A similar scenario was also observed in the western states, as 37 per cent of the students in Maharashtra and 35 per cent in Gujarat reported using photocopied material and books, respectively. In the northern states, photocopies were the most used TLM, and 66.8 per cent of the respondents in Delhi and 55.9 per cent in Himachal Pradesh stated receiving the photocopied materials distributed by the training centre. Similarly, 45.8 per cent and 42.9 per cent of the respondents in Haryana and Himachal Pradesh, respectively, mentioned that booklets were distributed by the training centres. In Delhi, 34 per cent of the respondents reported using e-books, while the usage of audio-video tools was cited by a lower proportion

TABLE 4.2: RESPONSES OF THE BENEFICIARIES ON FORM OF THE TEACHING AND LEARNING MATERIAL (TLM) UNDER DISHA - MULTIPLE RESPONSES (%)

S. No.	States/UTs	Audio-Video Mode	Booklets	e-Book	Photocopied Material
	Eastern States				
1.	Bihar	3.03	32.70	3.80	24.74
2.	Jharkhand	1.85	24.11	1.85	16.55
3.	Odisha	1.14	26.25	1.14	26.11
4.	West Bengal	1.85	24.23	2.05	23.20
	Western States/UT				
5.	Daman & Diu	8.37	21.76	4.18	15.06
6.	Gujarat	2.93	35.22	2.36	24.23
7.	Maharashtra	3.13	30.08	2.57	37.53
	Northern States/UT				
8.	Chandigarh	2.09	41.42	2.09	43.93
9.	Delhi	7.56	15.55	34.09	66.76
10.	Haryana	2.14	45.79	1.85	45.36
11.	Himachal Pradesh	2.10	42.86	17.23	55.88
12.	Jammu & Kashmir	0.56	18.18	4.45	13.36
13.	Punjab	4.85	16.55	7.70	22.25
14.	Rajasthan	2.77	38.42	11.45	39.55
15.	Uttar Pradesh	1.85	22.69	2.21	11.04
16.	Uttarakhand	2.00	12.70	2.00	16.98
	Southern States/UT				
17.	Andhra Pradesh	4.00	41.68	4.31	36.55
18.	Karnataka	17.20	45.64	10.78	29.26
19.	Kerala	1.57	16.83	2.00	23.82
20.	Puducherry	1.67	21.76	2.09	43.93
21.	Tamil Nadu	23.82	22.02	15.61	29.21
22.	Telangana	2.57	24.54	1.85	43.12
	Central States				
23.	Chhattisgarh	1.71	25.39	1.85	16.12
24.	Madhya Pradesh	2.46	42.76	3.85	41.43
	North-Eastern States				
25.	Arunachal Pradesh	1.92	22.44	1.92	24.36
26.	Assam	2.28	34.38	1.57	26.82
27.	Manipur	0.00	25.52	5.02	18.41
28.	Mizoram	2.09	35.15	2.09	43.93
29.	Nagaland	1.67	19.67	1.67	19.25
30.	Sikkim	1.67	25.94	1.67	27.62
31.	Tripura	1.67	37.24	1.26	30.54
	All India	**5.05**	**30.29**	**5.66**	**29.67**

Source: Survey, 2017.

FIGURE 4.5: RESPONSES OF THE BENEFICIARIES ON THE TEACHING- LEARNING MATERIAL UNDER DISHA: ALL INDIA (%)



Source: Survey, 2017.

of students in the northern states. Delhi is the only state with the highest incidence of e-book usage, while 17 per cent of the respondents in Himachal Pradesh, 15 per cent in Tamil Nadu, and 11 per cent in Rajasthan also reported using e-books for learning the DISHA content. However, the percentage of beneficiaries using e-books was comparatively much lower in almost all the other states. In particular, in the north-eastern, central, and eastern zones, a very small proportion of respondents cited the usage of e-books as learning material.

In the southern zone too, books were the most popular form of TLM used, followed by photocopies of the study material. In Karnataka and Andhra Pradesh, around 40 per cent of the respondents stated using books, while 43 per cent of the respondents in Puducherry and Telangana reported receiving photocopied material from the training centre. The usage of audio–video mode as a tool of TLM was reported by 23 per cent and 17 per cent of the respondents in Tamil Nadu and Karnataka, respectively.

On the whole, the key point to be observed here is that though e-books were provided by the training centres, the students were not able to access them due to the non-availability of computers and Internet facilities at home. With the distribution of photocopies, it was thus easier for them to revise the material, when required.

OVERALL SCENARIO WITH REGARD TO THE TRAINING COMPONENT

The composite index for this dimension thus covers indicators such as the outreach mechanism of DISHA training, regularity of training, and the form of TLM used as part of DISHA. At the national level, the index value for this dimension is 0.37, and states such as Maharashtra, West Bengal, and Madhya Pradesh have obtained a value that is equal to the national average.

Figure 4.6 shows that about 9 and 11 states are in the best-performing and moderate-performing categories, respectively, while the rest fall in the low-performing category. States such as Karnataka, Delhi, and Himachal Pradesh top the list and these states have performed well in terms of establishing the basic requirements that are required for providing the training. The better- performing states mostly belong to the southern or the northern zone, while only Mizoram from the north-eastern region occupies a position in the best performing category. Poor performance is visible in the states of Jammu & Kashmir, Bihar, and Uttar Pradesh, and the UT of Daman & Diu, among others, where it is critical to check the means adopted by the training centres in providing the DISHA training.

From the above discussion, it can be inferred that the training infrastructure under DISHA

FIGURE 4.6: RANKING OF STATES/UTs BASED ON OVERALL PERFORMANCE: TRAINING COMPONENT

States	Training Component
Karnataka	0.65
Delhi	0.65
Himachal Pradesh	0.57
Gujarat	0.53
Tamil Nadu	0.52
Andhra Pradesh	0.50
Haryana	0.48
Mizoram	0.45
Telangana	0.43
Sikkim	0.40
Puducherry	0.40
Arunachal Pradesh	0.39
Maharashtra	0.38
West Bengal	0.38
Madhya Pradesh	0.38
Punjab	0.36
Manipur	0.35
Chandigarh	0.35
Rajasthan	0.35
Jharkhand	0.33
Tripura	0.32
Kerala	0.31
Assam	0.28
Uttarakhand	0.28
Odisha	0.27
Chhattisgarh	0.25
Nagaland	0.25
Uttar Pradesh	0.23
Bihar	0.22
Daman & Diu	0.22
Jammu & Kashmir	0.13
National Average	**0.37**

Source: Computed by the authors.

Notes: The cumulative index for this dimension includes the indicators of outreach mechanism of DISHA, regularity of training, and the form of TLM used under DISHA.

- Good Performing States/UTs
- Moderate Performing States/UTs
- Low Performing States/UTs

in some of the states/UTs needs to be re-evaluated so as to ensure that the training is effective and has the desired impact. The intervals at which training is being conducted also need to be monitored. The learning materials stipulated for the training should also be made more easily available and should be widely distributed in order to enable the trainees to acquire optimal training under the programme. Lastly, the outreach mechanisms adopted to mobilise student participation should be widened to encourage diverse enrolment for the training.

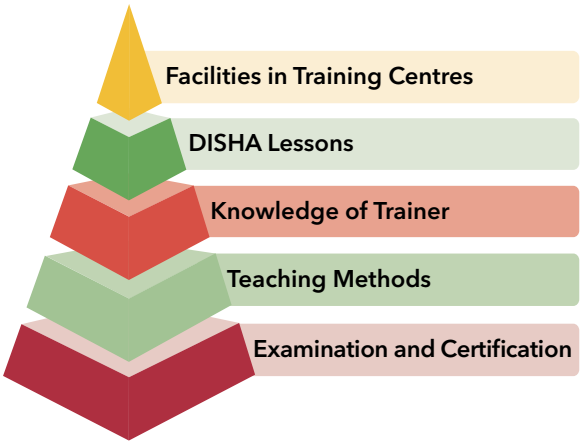
5

TRAINING INFRASTRUCTURE AND CLASSROOM PROCESSES

INTRODUCTION

The infrastructure and facilities available at the training centres play a critical role in determining the quality of the training imparted. The impact assessment thus evaluated different aspects of the training such as the facilities available at the centres; knowledge of the trainer; teaching methods adopted for the training; and the types of lessons taught. The following sections enumerate the findings of the impact assessment with regard to these indicators, and the various indicators that fall under this dimension have been depicted in Figure 5.1.

FIGURE 5.1: DIMENSION OF TRAINING INFRASTRUCTURE AND CLASSROOM PROCESSES



Source: Prepared by the authors.

(i) Facilities in the Training Centres

Training centres were the most resourceful in the southern states of Andhra Pradesh, Tamil Nadu and Telangana.

The availability of adequate and appropriate physical facilities is important for the success of in any digital training programme. DISHA aimed to impart ICT training from such training centres that were equipped with a variety of facilities such as computers, good Internet connectivity, power back-up, webcams, printers, and scanners. However, the quality of training centres with respect to the facilities offered by them varied across different states and UTs. At the national level, 40 per cent of the respondents were happy with the computers available at their respective training centres while 30 per cent of them were happy with the quality of the Internet connection available. On an average, 25 per cent of the respondents were happy with the printers, webcams, and scanners made available to the trainees and with the power back-up facilities available at their respective centres.

A facilities matrix was constructed in order to translate the micro level responses received from the states at the macro level, wherein the respondents were asked whether the facilities were good, average, or low in their respective training centres. The national averages for all the facilities were calculated separately, against the

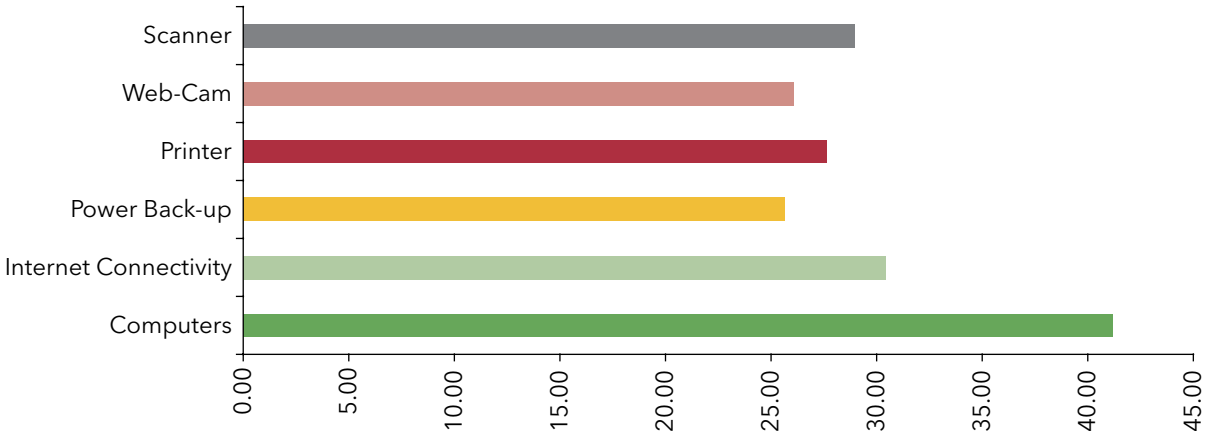
TABLE 5.1: RESPONSES OF THE BENEFICIARIES ON THE TRAINING INFRASTRUCTURE – MULTIPLE RESPONSES (%)

S. No.	States/UTs	Computers	Internet Connectivity	Power Back-up	Printer	Web-Cam	Scanner
	Eastern States						
1.	Bihar	39.27	31.83	32.29	31.62	31.93	32.44
2.	Jharkhand	30.39	33.67	31.81	39.37	40.23	36.80
3.	Odisha	31.10	24.96	23.54	25.82	25.68	25.82
4.	West Bengal	33.68	16.17	19.35	14.89	17.51	19.30
	Western States/UT						
5.	Daman & Diu	17.57	7.53	4.18	7.11	4.60	5.86
6.	Gujarat	71.61	28.18	29.93	25.67	28.44	28.18
7.	Maharashtra	34.60	32.24	35.01	22.07	21.92	21.87
	Northern States/UT						
8.	Chandigarh	48.12	29.71	30.13	35.98	22.59	22.18
9.	Delhi	67.90	56.63	8.42	8.27	7.99	8.13
10.	Haryana	57.63	46.79	14.84	45.93	45.79	46.08
11.	Himachal Pradesh	40.76	13.03	17.65	32.77	26.89	12.18
12.	Jammu & Kashmir	16.33	9.09	9.09	9.09	8.53	8.53
13.	Punjab	33.81	26.25	24.68	19.40	18.26	15.83
14.	Rajasthan	38.06	21.26	19.47	37.08	26.66	44.27
15.	Uttar Pradesh	10.73	11.50	9.19	8.62	13.24	8.88
16.	Uttarakhand	28.25	12.70	7.13	5.99	2.57	4.85
	Southern States/UT						
17.	Andhra Pradesh	72.79	54.93	46.61	48.87	51.13	50.62
18.	Karnataka	18.58	40.45	21.77	19.40	21.77	36.19
19.	Kerala	35.81	17.97	2.14	8.84	6.56	6.42
20.	Puducherry	23.01	10.04	10.88	8.79	7.11	4.18
21.	Tamil Nadu	68.53	54.88	55.44	56.42	40.09	50.00
22.	Telangana	75.26	54.00	46.82	50.72	48.77	48.56
	Central States						
23.	Chhattisgarh	12.27	9.70	24.54	3.99	10.27	13.12
24.	Madhya Pradesh	54.16	45.84	32.60	50.31	42.61	47.18
	North-Eastern States						
25.	Arunachal Pradesh	26.28	12.82	8.33	14.10	12.18	10.26
26.	Assam	52.78	33.52	24.82	33.10	38.80	38.80
27.	Manipur	19.25	9.21	16.32	22.18	23.43	24.27
28.	Mizoram	7.95	11.30	10.04	12.13	12.13	12.13
29.	Nagaland	31.80	5.02	3.35	3.77	4.18	5.86
30.	Sikkim	4.60	4.18	2.09	3.35	1.67	6.69
31.	Tripura	43.93	12.55	18.41	17.99	18.41	17.99
	All India	**41.15**	**30.43**	**25.65**	**27.61**	**26.05**	**28.93**

Good
Moderate
Low

Source: Survey, 2017.

FIGURE 5.2: SATISFACTION LEVELS AMONG THE BENEFICIARIES ABOUT THE TRAINING FACILITIES - ALL INDIA (%)



Source: Survey, 2017.

'good', 'moderate', and 'low' indicators, on the basis of these responses. The responses were rated 'good' if they were above 10 per cent of the national average, 'moderate' if they were within a range of 10 per cent above or below the national average, and 'low' if they were more than 10 per cent below the national average.

The state-wise analysis shows that the facilities available at the training centres, in a majority of the states were below average. However, the training centres were found to be better equipped in the southern states of Andhra Pradesh, Tamil Nadu, and Telangana. The training centres in the north-eastern states were not equipped with most of the facilities ranging from moderate to low conditions. However, in Assam, the respondents were found to be happy with the facilities, as they had good access to computers, and Internet connectivity, among other facilities. On the other hand, Internet connectivity was poor in the hilly areas of the other north-eastern states.

Among the northern and central zones, the facilities were found to be good in Haryana, Chandigarh, and Madhya Pradesh. In Delhi, the respondents were happy with the basic facilities such as computers and Internet connectivity, while in Rajasthan, the trainees were happier with the secondary facilities as compared to the basic ones. A similar scenario was observed in the eastern state of Bihar.

Surprisingly, the training centres in the states of Kerala and West Bengal offered below average facilities, and similar was the scenario in the states of Jammu & Kashmir, Uttar Pradesh, and Uttarakhand, and the UTs of Daman & Diu and Puducherry, which need immediate attention.

(ii) DISHA Lessons

DISHA lessons have been taught precisely in most of the southern states and in some of the northern states.

The course designed for DISHA was Appreciation of Computer Concepts (ACC), which intended to generate awareness among the students about the different purposes served by digital devices and to equip them with the knowledge of basic computer applications. These include but are not limited to teaching the trainees how to use the Internet, access information about government schemes online, and operate digital devices such as mobile phones, and tablets, among other devices. Thus, them a in objective of DISHA was to train the students in the day-to-day usage of digital devices, and accordingly they were taught various aspects of computer applications.

TABLE 5.2: RESPONSES OF THE BENEFICIARIES ON THE LESSONS TAUGHT UNDER DISHA: MULTIPLE RESPONSES (%)

S. No.	States/UTs	Basic Computer Application	Smartphone usage for Internet browsing	Use of Tablets for Internet browsing	Use of Internet	Accessing Government Services online
	Eastern States					
1.	Bihar	65.40	57.75	45.28	45.02	45.07
2.	Jharkhand	60.49	74.61	27.39	19.26	30.53
3.	Odisha	35.95	36.09	15.98	20.97	17.69
4.	West Bengal	30.03	38.71	8.37	14.63	14.17
	Western States/UT					
5.	Daman & Diu	26.36	48.95	11.72	12.55	11.72
6.	Gujarat	55.08	55.08	43.69	44.56	43.33
7.	Maharashtra	38.96	43.74	16.17	19.15	19.10
	Northern States/UT					
8.	Chandigarh	58.16	64.85	22.18	17.99	22.18
9.	Delhi	53.92	94.15	14.55	36.80	36.09
10.	Haryana	56.35	56.06	46.93	46.93	47.22
11.	Himachal Pradesh	53.78	50.84	16.81	28.57	31.51
12.	Jammu & Kashmir	25.60	26.72	5.19	16.33	6.68
13.	Punjab	43.08	65.62	20.68	17.26	26.68
14.	Rajasthan	73.09	65.95	34.51	20.39	4.31
15.	Uttar Pradesh	28.18	44.30	12.32	10.68	11.81
16.	Uttarakhand	13.27	30.53	8.99	8.70	13.98
	Southern States/UT					
17.	Andhra Pradesh	83.16	81.31	72.07	70.94	59.65
18.	Karnataka	59.39	48.46	36.50	29.57	19.87
19.	Kerala	42.80	46.65	12.27	11.27	10.13
20.	Puducherry	17.99	33.05	5.02	5.44	5.44
21.	Tamil Nadu	67.61	52.41	62.99	68.63	54.06
22.	Telangana	81.52	78.03	66.74	57.08	36.04
	Central States					
23.	Chhattisgarh	18.54	25.68	8.27	9.56	9.99
24.	Madhya Pradesh	80.65	76.23	73.72	83.83	47.38
	North-Eastern States					
25.	Arunachal Pradesh	24.36	18.59	10.90	10.26	7.69
26.	Assam	53.50	63.05	17.12	22.82	11.55
27.	Manipur	25.10	42.68	15.48	4.18	7.95
28.	Mizoram	7.53	33.89	5.02	5.44	5.86
29.	Nagaland	21.76	51.88	12.55	7.53	5.02
30.	Sikkim	24.27	44.35	6.28	6.69	16.32
31.	Tripura	31.38	43.93	24.27	29.71	17.99
	All India	**51.59**	**54.37**	**32.78**	**33.33**	**27.07**

Good
Moderate
Low

Source: Survey, 2017.

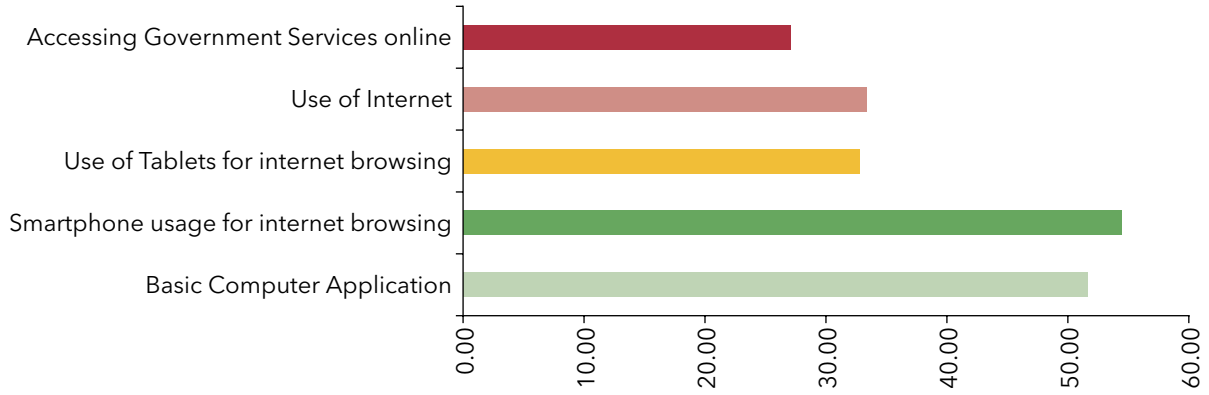
The overall analysis revealed that more than 52 per cent of the respondents reported learning about basic computer applications and the usage of the smartphones for Internet browsing. Around 30 per cent of the trainees also reported acquiring lessons on the usage of tablets, use of the Internet, and the ways to access government services online. The trainees across the country found the lessons on smartphone application very useful due to the increased usage of smartphones and Internet penetration amidst people, with the availability of free data packages offered by various service providers.

A matrix, similar to the analysis on training infrastructure has been designed for the DISHA lessons too. The state-wise analysis highlights that the lessons designed under DISHA have been taught precisely in most of the southern states and in some of the northern states.

In Andhra Pradesh, Madhya Pradesh, and Telangana, a majority of the respondents seemed happy with the lessons taught and found them to be good. In contrast, in almost all the north-eastern states, the eastern states of Odisha and West Bengal, and the northern states of Uttar Pradesh and Uttarakhand, the satisfaction levels of trainees with regard to the content taught to them were low. A similar response was also obtained in the southern states/UTs of Kerala and Puducherry. Since the state government of Kerala is already in the process of implementing 'Vision 2020' and the Akshaya project (PTI, 2015), as part of its efforts to make the state a digitally empowered society by opening the doors of digital literacy to at least one member per family, the training centres of Kerala might not have been in a position to satisfy the trainees in terms of its content. On the other hand, the case of West Bengal with low satisfaction level of the trainees can be attributed to the general position taken by the state, which had many other areas of priority and the state was a late starter in IT sector (West Bengal Policy on Information and Communication Technology, 2012). The responses of the beneficiaries regarding the lessons of computer application were moderate in Delhi, Haryana, Himachal Pradesh, and Gujarat. On the other hand, in the states of Bihar and Jharkhand, the trainees were found to be happy with almost all the content that was taught to them.

On the whole, a satisfactory response can be found on the different lessons taught under DISHA. Some of the trainees also outlined the need for initiation of advanced training courses in digital literacy that would enable them to find concomitant jobs.

FIGURE 5.3: DISHA LESSONS IMPARTED: ALL INDIA (%)



Source: Survey, 2017.

(iii) Knowledge of the Trainer

Trainers constitute the soul of any training programme. Therefore, the training centres needs to set their own standards regarding the qualifications of the trainers for each course to make it successful. The analysis of DISHA took into consideration the perception of the trainees on the trainers and their levels of knowledge and awareness of information technology.

At the national level, 42 per cent of the respondents were found to be happy with the knowledge of their trainers and stated that the latter had good knowledge on the basics of computer application and usage of digital devices.

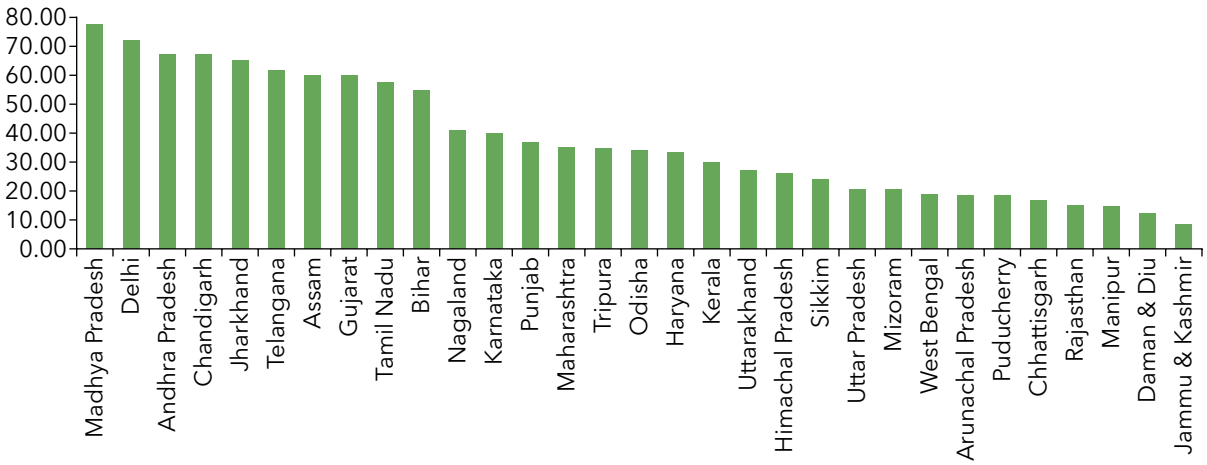
More than 60 per cent of the trainees in Madhya Pradesh, Delhi, Andhra Pradesh, Chandigarh, Jharkhand, and Telangana were pleased with the trainers, and the fact that there was at least one representation in this category from almost all the zones. About 77 per cent of the trainees in Madhya Pradesh felt that the trainers possessed the requisite knowledge. The satisfaction levels on the knowledge of the trainer were, however, found to be low in the states/UTs of Jammu & Kashmir, Daman & Diu, Manipur, and Rajasthan, among others.

(iv) Teaching Methods

In addition to the facilities made available at the training centres and the knowledge level of the trainers, the teaching methods adopted also help in assessing the impact of the digital literacy training under DISHA. The survey findings reveal that a combination of theory and practical methods were adopted to conduct the training. It included hands-on training on digital devices and the use of audio–video tools such as projectors and short films. The respondents were asked to rank the most preferred teaching methods in their training centre in descending order. At the national level, the most popular teaching method was the theory class (63 per cent), followed by practical sessions (18 per cent), a mix of different methods (11 per cent), and the audio–video session (8 per cent).

A zonal analysis shows that in all the states except two from the southern zone, viz., Andhra Pradesh and Telangana, for more than 50 per cent of the total respondents, theory classes constituted the most popular method of teaching used in the training centres. While in Puducherry, 80 per cent of the respondents attested theory classes as the most preferred method, in the northern state of Delhi, the respondents

FIGURE 5.4: TRAINEES' ASSESSMENT OF THE TRAINERS' KNOWLEDGE (%)



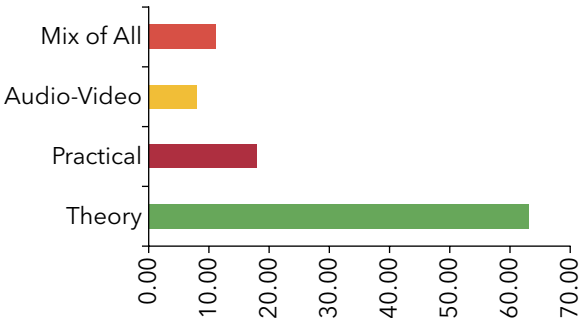
Source: Survey, 2017.

TABLE 5.3: RANKING BY BENEFICIARIES ON THE TEACHING METHODS UNDER DISHA (%)

S. No.	States/UTs	Theory	Practical	Audio-Video	Mix of All
Eastern States/UT					
1.	Bihar	60.57	13.96	10.37	15.09
2.	Jharkhand	57.49	18.97	12.41	11.13
3.	Odisha	65.48	16.55	9.27	8.70
4.	West Bengal	60.27	17.20	17.86	4.67
Western States/UT					
5.	Daman & Diu	74.06	13.39	5.02	7.53
6.	Gujarat	54.11	22.23	7.19	16.48
7.	Maharashtra	66.48	10.78	6.88	15.86
Northern States/UT					
8.	Chandigarh	64.02	9.21	4.60	22.18
9.	Delhi	49.07	45.36	0.71	4.85
10.	Haryana	56.78	32.67	3.85	6.70
11.	Himachal Pradesh	69.33	21.43	5.04	4.20
12.	Jammu & Kashmir	75.14	13.36	5.38	6.12
13.	Punjab	69.61	10.98	9.56	9.84
14.	Rajasthan	71.29	22.96	3.44	2.31
15.	Uttar Pradesh	72.90	12.32	9.86	4.93
16.	Uttarakhand	77.32	8.27	9.27	5.14
Southern States/UT					
17.	Andhra Pradesh	44.05	29.16	12.63	14.17
18.	Karnataka	66.79	18.53	5.39	9.29
19.	Kerala	55.21	23.40	9.84	11.55
20.	Puducherry	79.92	5.44	5.86	8.79
21.	Tamil Nadu	59.50	11.91	7.24	21.36
22.	Telangana	47.74	25.15	9.45	17.66
Central States					
23.	Chhattisgarh	76.89	9.70	4.99	8.42
24.	Madhya Pradesh	62.63	14.84	4.52	16.99
North-Eastern States					
25.	Arunachal Pradesh	73.72	7.05	12.18	7.05
26.	Assam	62.77	33.10	1.00	3.14
27.	Manipur	62.76	21.34	7.95	7.95
28.	Mizoram	71.55	15.48	5.86	7.11
29.	Nagaland	75.73	12.97	4.18	7.11
30.	Sikkim	55.23	11.30	11.72	21.76
31.	Tripura	53.56	12.13	12.13	22.18
All India		**63.05**	**17.88**	**7.88**	**11.12**

Source: Survey, 2017.

FIGURE 5.5: RANKING BY BENEFICIARIES ON THE MOST PREFERRED TEACHING METHODS: ALL INDIA (%)



Source: Survey, 2017.

gave equal weightage to both theory and practical sessions. Even in Telangana and Andhra Pradesh, which recorded the lowest proportion of respondents among all the states giving preference to theory classes, the percentages of trainees endorsing this method of training were still significant. A substantial proportion of the respondents in Assam and Haryana also rated 'practical sessions' next to theory classes. The corresponding proportions were particularly low in Puducherry and Arunachal Pradesh.

The rating for audio-visual tools amongst different states within all the identified zones was minimal in comparison. It was quite noticeable that the usage of audio–video tools was of less or negligible significance in all the northern states and central zones, and about 18 per cent of the trainees in West Bengal in the eastern zone rated the audio-video mode as the preferred method. In Chandigarh, Tripura, and Tamil Nadu, around 20 per cent of the respondents rated a 'mix of all methods' as a preferred method of teaching.

(v) Language of Instruction

In a multi-lingual country like India, which is characterised by the existence of many vernacular languages, the issue of language becomes very critical, and this is also applicable for a training programme in different states. Under the DISHA programme, the training was conducted in Hindi, English, and regional/local languages. In many states, a mix of two languages was used depending on who the beneficiaries were.

At the national level, 20 per cent of the beneficiaries confirmed that the training was conducted in Hindi, 56 per cent of the trainees attested that the training was conducted in regional/local languages, while only 7 per cent stated that training was conducted in English. In addition, 17 per cent of the respondents indicated that a mix of two languages was used for the training.

The language Hindi as a medium of instruction was used overwhelmingly in Uttar Pradesh, Delhi, and other northern states. In the eastern states and southern states, regional/local languages constituted the most preferred medium of instruction for the purpose of the training. There was minimal use of English as a medium across all the states. Less than 10 per cent of the beneficiaries across all the 31 states and UTs claimed that training was undertaken in English. A mix of two mediums was used in Telangana, Gujarat, Rajasthan, and Jharkhand, as reported by more than 30 per cent of the respondents.

(vi) Examination and Certification

As part of the training, the beneficiaries were required to write an examination testing their knowledge and what they had learnt during the training. Subsequently, they are also slated to receive a certificate attesting completion of the training by them. The field inferences and telephonic interviews conducted highlight the response of the beneficiaries on the difficulties faced by them in taking the online examination. Most of the respondents in almost all the states reported facing difficulties in taking online examinations, as they were not used to such a

TABLE 5.4: RESPONSES OF THE BENEFICIARIES ON THE LANGUAGE OF INSTRUCTIONS (%)

S. No.	States/UTs	Hindi	Local Language	English	Mix of Two Languages
Eastern States					
1.	Bihar	23.36	64.68	1.80	10.16
2.	Jharkhand	15.26	32.24	15.98	36.52
3.	Odisha	0.14	74.47	11.13	14.26
4.	West Bengal	1.13	79.00	9.39	10.48
Western States/UT					
5.	Daman & Diu	0.00	85.36	7.95	6.69
6.	Gujarat	4.77	55.49	8.01	31.73
7.	Maharashtra	12.78	60.01	10.52	16.69
Northern States/UT					
8.	Chandigarh	7.95	64.02	5.86	22.17
9.	Delhi	92.30	0.14	1.28	6.28
10.	Haryana	17.40	61.06	6.42	15.12
11.	Himachal Pradesh	7.98	75.63	9.66	6.73
12.	Jammu & Kashmir	0.74	81.45	0.93	16.88
13.	Punjab	14.98	66.05	1.14	17.83
14.	Rajasthan	22.91	38.62	1.90	36.57
15.	Uttar Pradesh	83.47	11.29	3.23	2.01
16.	Uttarakhand	12.13	60.06	12.84	14.97
Southern States/UT					
17.	Andhra Pradesh	0.72	67.25	14.27	17.76
18.	Karnataka	9.80	79.88	3.39	6.93
19.	Kerala	1.00	63.20	20.68	15.12
20.	Puducherry	0.00	80.75	10.88	8.37
21.	Tamil Nadu	0.56	86.45	5.49	7.5
22.	Telangana	0.92	43.43	11.29	44.36
Central States					
23.	Chhattisgarh	28.82	58.20	6.70	6.28
24.	Madhya Pradesh	64.32	0.92	10.52	24.24
North-Eastern States					
25.	Arunachal Pradesh	0.64	80.77	11.54	7.05
26.	Assam	0.14	94.58	1.57	3.71
27.	Manipur	0.00	71.13	3.77	25.1
28.	Mizoram	0.00	82.43	10.88	6.69
29.	Nagaland	0.00	81.17	4.18	14.65
30.	Sikkim	0.00	82.01	10.88	7.11
31.	Tripura	1.67	60.25	10.88	27.2
All India		**19.86**	**56.33**	**7.17**	**16.64**

Source: Survey, 2017.

system of examinations. Further, the students also reported that the online portal was too slow due to which the duration of exam was extended beyond the stipulated time. Such difficulties were reported by a higher proportion of the beneficiaries in states/UTs such as Daman & Diu, Puducherry, and Nagaland. In contrast, a comparatively lower proportion of respondents reported facing difficulties in taking online examinations in states such as Himachal Pradesh, Punjab, Tamil Nadu, and Madhya Pradesh. Some of the respondents also highlighted family-related constraints for not being able to take their examinations.

In terms of certification, some of the respondents stated that they had received the certificates either in print form or in provisional online form on time and the proportion of such respondents was comparatively high in the states of Maharashtra, Tamil Nadu, Haryana, Chhattisgarh, and Andhra Pradesh. On the other hand, the corresponding proportions of beneficiaries were low in the states of Jammu & Kashmir, Nagaland, and Punjab, among others.

The highest percentage of trainees who were awarded the certificate in its original form was found in Delhi. Meanwhile, 35 per cent of the beneficiaries in Odisha, Haryana, and Andhra Pradesh also received provisional certificates though the proportion of such beneficiaries was lower in all the other states and UTs.

OVERALL SCENARIO OF TRAINING INFRASTRUCTURE AND CLASSROOM PROCESSES

The findings regarding the above-mentioned indicators under this particular dimension have been combined together to arrive at a composite index. Overall, the composite index for this dimension, covering the indicators of facilities in the training centre, DISHA lessons, knowledge levels of the trainers, teaching methods used, and examination and certification, shows an index value of 0.40.

Figure 5.6 indicates that states such as Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Telangana, and Delhi have performed well in this dimension, while states such as Karnataka, Himachal Pradesh, Odisha, and Tripura fall in the moderate performing category. The states of Jammu & Kashmir and Arunachal Pradesh, and the UTs of Puducherry and Daman & Diu are found to exhibit low performance. The training centres in these states are found be poorly equipped with the primary facilities such as the availability of computers and other digital devices, and Internet connectivity.

In terms of attesting the knowledge levels of the trainers or the teaching methods used in the centres, almost all the best-performing states in this dimension seem to have received a positive feedback from the trainees on these indicators. On the other hand, the response rate for these indicators was low in the north-eastern states.

Overall, it is evident that 12 states in this dimension have performed well, a majority of which are the category A and B states whereas most of the low-performing states fall in category C. While most of the beneficiaries are happy with the knowledge levels of the trainers and the lessons taught under DISHA, some of the respondents also requested for an advanced digital literacy programme. Further, it was pointed out that attention needs to be given to the creation of additional facilities in the training centres, as some of them were equipped with obsolete equipment. In addition, the system of online examination and certification needs to be re-assessed.

FIGURE 5.6: RANKING OF STATES/UTs BASED ON THE OVERALL PERFORMANCE: TRAINING INFRASTRUCTURE AND CLASSROOM PROCESSES

States	Training Infrastructure & Classroom Processes
Andhra Pradesh	0.80
Madhya Pradesh	0.77
Tamil Nadu	0.75
Telangana	0.75
Delhi	0.60
Gujarat	0.59
Jharkhand	0.56
Haryana	0.56
Chandigarh	0.55
Bihar	0.54
Assam	0.51
Maharashtra	0.44
Karnataka	0.42
Himachal Pradesh	0.39
Odisha	0.38
Tripura	0.38
Punjab	0.35
Rajasthan	0.34
Kerala	0.33
Uttar Pradesh	0.24
Chhattisgarh	0.24
Manipur	0.24
Sikkim	0.23
West Bengal	0.23
Nagaland	0.20
Uttarakhand	0.19
Mizoram	0.19
Daman & Diu	0.18
Puducherry	0.17
Arunachal Pradesh	0.16
Jammu & Kashmir	0.09
National Average	**0.40**

Source: Computed by the authors.

Notes: The cumulative index for this dimension includes the indicators of facilities available in the training centre, teaching methods used, knowledge levels of the trainers, and examination and certification.

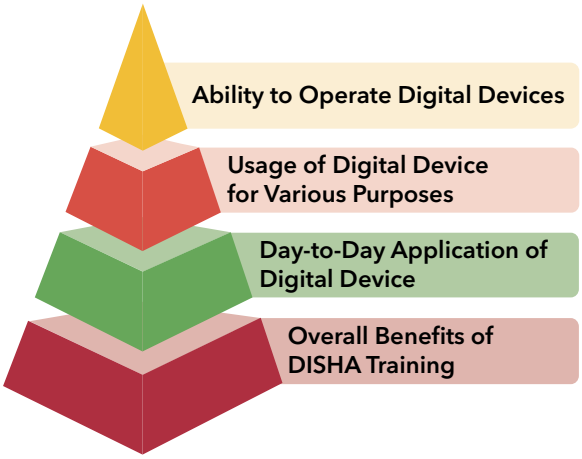
- Good Performing States/UTs
- Moderate Performing States/UTs
- Low Performing States/UTs

6

TRAINING OUTCOME

The purpose of this Impact Assessment Study was to determine the overall outcome of the DISHA training for the beneficiaries. In this context, this chapter analyses the impact of the digital literacy training in terms of the ability of the beneficiaries to operate digital devices and use information technology for different purposes post training. It also explores the application of the training in the day-to-day lives of the trainees post the programme. Finally, it highlights the overall impact of the programme in terms of improving the lives of the trainees. Figure 6.1 depicts the various indicators assessed in this chapter.

FIGURE 6.1: INDICATORS UNDER THE DIMENSION OF TRAINING OUTCOME



Source: Prepared by the authors.

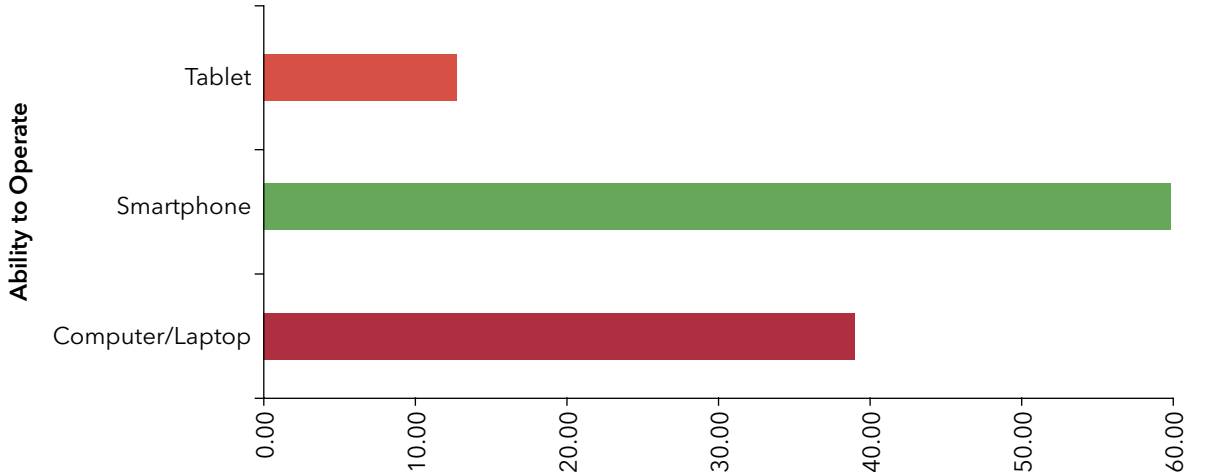
(i) Ability to Operate Digital Devices

The main intention of the digital literacy training was to make the trainees digitally literate to enable them to operate digital devices effectively. It can be said that the training was successful in achieving this objective, as a majority of the respondents reported improved ability in using digital devices.

At the national level, about 60 per cent of the respondents reported their ability to operate smartphones, which is a significant outcome in view of the on-going smartphone revolution that has made smartphones an extremely handy and useful device for a large number of people. Next to the smartphone, computers and laptops were the other digital devices used by 40 per cent of the respondents. About 12.8 per cent of the respondents also reported operating tablets.

At the state level too, a higher proportion of beneficiaries reported operating smartphones the most, with this proportion being high in the southern zone, followed by the northern and eastern zones. In comparison to the other zones, a lower proportion of beneficiaries in the north-eastern zone operated smartphones, but their proportion still fell in the range of 50–60 per cent. In the southern states

FIGURE 6.2: ABILITY TO OPERATE DIGITAL DEVICES: ALL INDIA (%)



Source: Survey, 2017.

of Telangana and Andhra Pradesh, 91 per cent and 87 per cent of the respondents, respectively, reported using smartphones the most. In the northern zone, the beneficiaries in Rajasthan and Chandigarh were found to be operating the smartphones in a large number, whereas the least usage of the same was observed in Himachal Pradesh (12 per cent). In the eastern zone, Jharkhand was ranked the topmost in the usage of smartphones, while in Bihar, 44 per cent of the beneficiaries reported using them. In the western zone, the highest incidence of smartphone usage was found in Gujarat. In the central zone, a large number of respondents in Madhya Pradesh were found to be using smartphones. In the north-east, the highest usage was reported in Assam (62 per cent), and the least usage was reported in Nagaland (48.9 per cent).

As far as the usage of computers or laptops is concerned, the scenario is more or less the same in most of the zones. In particular, both the highest and lowest usage is observed in the northern zone, in Delhi and Jammu & Kashmir, respectively. Except for Chandigarh, Delhi, and Haryana, the proportion of respondents operating computers in the northern zone was less than 40 per cent. In the eastern zone, computers were mostly operated in Jharkhand, as reported by 65 per cent of the respondents, while the least usage was seen in Odisha (30.5 per cent). In the western zone, 40.5 per cent of the respondents reported operating computers, while the corresponding proportion in Daman & Diu was 20 per cent. In the southern zone, the incidence of usage of computers was 56 per cent in Karnataka and only 23 per cent in Puducherry. In the central zone, on the other hand, the highest incidence of usage of computers/laptops was witnessed in Madhya Pradesh and the lowest in Chhattisgarh. In the north-eastern zone, 43 per cent of the respondents operated computers, while the corresponding figures were as low as 23 per cent and 15 per cent in Manipur and Mizoram, respectively.

Some of the beneficiaries were also found to be using tablets though this proportion was low in almost all the states in all zones. The state exhibiting the highest usage of tablets was Haryana (38 per cent) and that reporting the least usage was Rajasthan (1.4 per cent), with both states belonging to the northern zone. In Delhi too, about 26 per cent of the respondents cited the usage of tablets. In the eastern zone, the highest and least usage was reported from Bihar and West Bengal, respectively.

TABLE 6.1: RESPONSES OF THE BENEFICIARIES ON THEIR ABILITY TO OPERATE DIGITAL DEVICES – MULTIPLE RESPONSES (%)

S. No.	States/UTs	Ability to Operate		
		Computer/Laptop	Smartphone	Tablet
Eastern States				
1.	Bihar	35.78	44.82	23.67
2.	Jharkhand	65.19	83.17	9.99
3.	Odisha	30.53	61.91	8.99
4.	West Bengal	31.57	52.21	3.80
Western States/UT				
5.	Daman & Diu	20.08	49.79	9.21
6.	Gujarat	40.55	74.49	17.20
7.	Maharashtra	22.28	34.96	8.32
Northern States/UT				
8.	Chandigarh	53.97	72.38	22.18
9.	Delhi	74.32	44.94	26.82
10.	Haryana	48.22	48.64	38.80
11.	Himachal Pradesh	29.83	12.61	17.23
12.	Jammu & Kashmir	11.87	4.64	4.45
13.	Punjab	38.37	81.31	13.69
14.	Rajasthan	28.97	77.71	1.44
15.	Uttar Pradesh	18.89	33.47	8.83
16.	Uttarakhand	24.96	29.24	2.14
Southern States/UT				
17.	Andhra Pradesh	53.29	87.47	17.97
18.	Karnataka	56.65	64.71	11.15
19.	Kerala	47.93	67.19	13.27
20.	Puducherry	23.85	53.97	5.86
21.	Tamil Nadu	48.97	79.62	19.97
22.	Telangana	47.23	91.68	19.30
Central States				
23.	Chhattisgarh	20.26	29.10	4.28
24.	Madhya Pradesh	62.01	84.91	14.53
North-Eastern States				
25.	Arunachal Pradesh	25.00	62.18	7.05
26.	Assam	43.37	56.35	8.84
27.	Manipur	23.01	51.46	17.57
28.	Mizoram	15.48	60.25	5.86
29.	Nagaland	27.20	48.95	12.13
30.	Sikkim	25.10	53.97	6.28
31.	Tripura	35.15	61.51	8.37
All India		**39.04**	**59.89**	**12.78**

Source: Survey, 2017.

In the western zone, 17 per cent and 8 per cent of the respondents in Gujarat and Maharashtra, respectively, reported using tablets. In the southern zone, the highest usage of tablets was recorded in Tamil Nadu, Telangana, and Andhra Pradesh, and the least usage in Puducherry. In the central zone, the highest and lowest usages were observed in Madhya Pradesh and Chhattisgarh, respectively. In the north-east, 17 per cent of the respondents in Manipur and 6 per cent in Sikkim operated tablets.

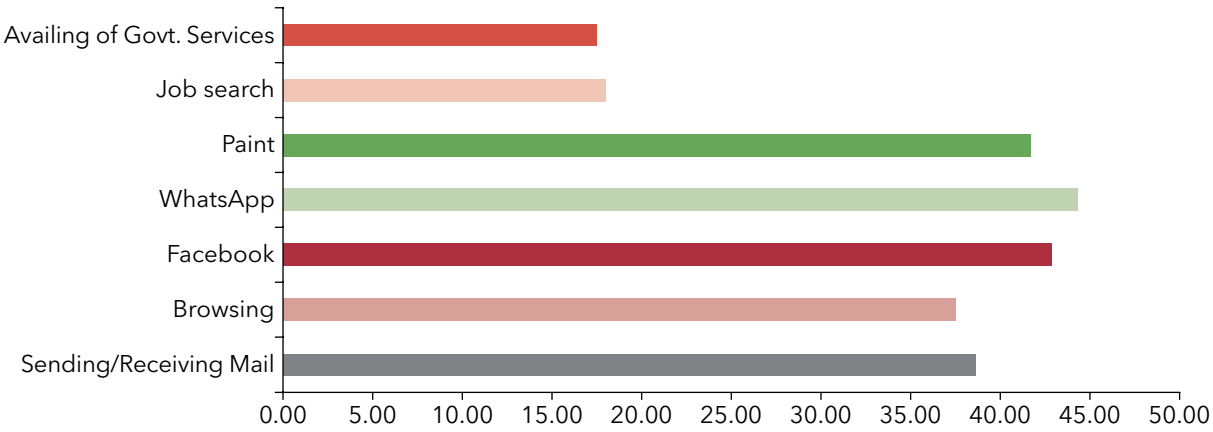
(ii) Purposes of Using Digital Devices

Digital literacy training can be considered a success only if the beneficiaries of the training are able to use digital devices effectively. Hence, the respondents were questioned about the different purposes for which they use the digital devices such as computers, smartphones, and tablets. According to the survey findings, while some trainees benefited greatly from the training and became technologically savvy after being able to effectively operate computers, mobile phones, and tablets, others found the training to be less advantageous. The respondents also noted that post the training, they were able to use the above-mentioned devices for a variety of purposes such as accessing social media sites like WhatsApp and Facebook, browsing the Internet, playing games and shopping online.

At the all-India level, a higher proportion of the trainees used digital devices for accessing social media sites like Facebook (42.8 per cent) and WhatsApp (44 per cent) for social communication and entertainment. About 38 per cent of the trainees reported the usage of digital devices to check their email and for general Internet browsing. Only 17–18 per cent of the respondents used mobiles, and computers to look for jobs or search government services. Interestingly, about 43 per cent of the trainees used such devices for entertainment such as playing games. Since a majority of the trainees were students, they did not feel the need to look for jobs or access government services. Many of the respondents also reported using digital devices for shopping and exhibited an awareness of various online shopping sites such as Amazon and Flipkart.

A zonal analysis of the eastern zone reveals that in Jharkhand, more than 60 per cent of the beneficiaries used digital devices for accessing social media and for entertainment purposes such as playing games (Table 6.2). Only 6 per cent of the respon-

FIGURE 6.3: PURPOSE OF USAGE OF DIGITAL DEVICES: ALL INDIA (%)



Source: Survey, 2017.

TABLE 6.2: RESPONSES OF BENEFICIARIES ON PURPOSE OF USAGE OF DIGITAL DEVICES (%) - MULTIPLE ANSWER QUESTIONS

S. No.	States/UTs	Sending/ Receiving Mail	Browsing	Facebook	Whats App	Paint	Job search	Availing of Govt. Services	Playing Games
Eastern States/UT									
1.	Bihar	42.40	42.45	46.25	46.10	40.35	13.96	14.78	55.29
2.	Jharkhand	51.78	52.64	72.04	66.90	63.48	6.28	21.83	61.20
3.	Odisha	10.84	10.84	16.41	39.94	53.50	22.82	22.25	61.91
4.	West Bengal	24.13	22.48	25.67	26.28	23.67	19.25	19.20	23.72
Western States/UT									
5.	Daman & Diu	32.64	32.64	44.77	54.39	32.64	15.06	13.81	61.92
6.	Gujarat	67.81	67.81	69.51	53.85	52.82	11.60	18.22	61.76
7.	Maharashtra	41.94	41.84	41.07	41.07	40.81	10.83	6.98	10.88
Northern States/UT									
8.	Chandigarh	41.00	41.00	31.38	31.38	23.85	33.05	22.18	38.91
9.	Delhi	46.08	45.22	55.92	37.38	56.92	47.93	25.53	69.33
10.	Haryana	51.36	51.50	56.49	56.78	56.92	11.84	11.84	58.35
11.	Himachal Pradesh	24.37	25.21	38.24	28.99	45.80	23.95	31.93	55.04
12.	Jammu & Kashmir	9.28	5.94	15.58	24.49	11.50	4.27	1.86	32.28
13.	Punjab	38.37	31.81	41.65	51.36	38.52	11.13	11.55	28.82
14.	Rajasthan	43.35	48.43	45.87	44.63	51.57	30.30	38.73	53.21
15.	Uttar Pradesh	17.86	16.68	17.09	17.86	19.66	16.94	5.39	10.88
16.	Uttarakhand	26.82	8.56	30.53	30.53	30.67	11.27	7.42	11.13
Southern States/UT									
17.	Andhra Pradesh	65.09	66.32	68.48	64.27	64.78	38.60	29.06	62.42
18.	Karnataka	40.66	38.91	45.89	43.94	43.12	12.11	11.65	52.05
19.	Kerala	30.39	28.53	37.38	55.78	31.24	15.12	13.69	41.94
20.	Puducherry	18.83	17.57	24.27	43.51	35.56	19.25	17.57	21.34
21.	Tamil Nadu	47.18	44.82	37.63	61.55	57.29	15.04	24.59	57.91
22.	Telangana	24.64	27.41	66.84	62.42	65.40	18.89	23.20	59.65
Central States									
23.	Chhattisgarh	16.98	15.41	32.95	33.10	32.52	9.42	2.57	18.69
24.	Madhya Pradesh	58.98	55.49	57.14	60.83	36.19	30.39	29.26	60.42
North-Eastern States									
25.	Arunachal Pradesh	9.62	5.77	11.54	11.54	14.10	3.21	1.92	21.15
26.	Assam	38.37	38.09	54.35	54.35	50.07	31.95	21.83	57.63
27.	Manipur	25.94	26.36	20.92	27.20	23.43	2.93	2.09	20.92
28.	Mizoram	10.88	10.88	10.88	10.88	13.81	2.93	2.09	20.92
29.	Nagaland	11.30	7.95	32.22	32.22	28.03	1.67	1.67	20.50
30.	Sikkim	7.11	4.18	6.69	6.69	14.23	3.35	1.67	20.92
31.	Tripura	11.72	10.88	11.72	11.72	13.81	2.93	1.26	20.92
All India		**38.57**	**37.50**	**42.81**	**44.27**	**41.64**	**17.95**	**17.48**	**43.50**

Source: Survey, 2017.

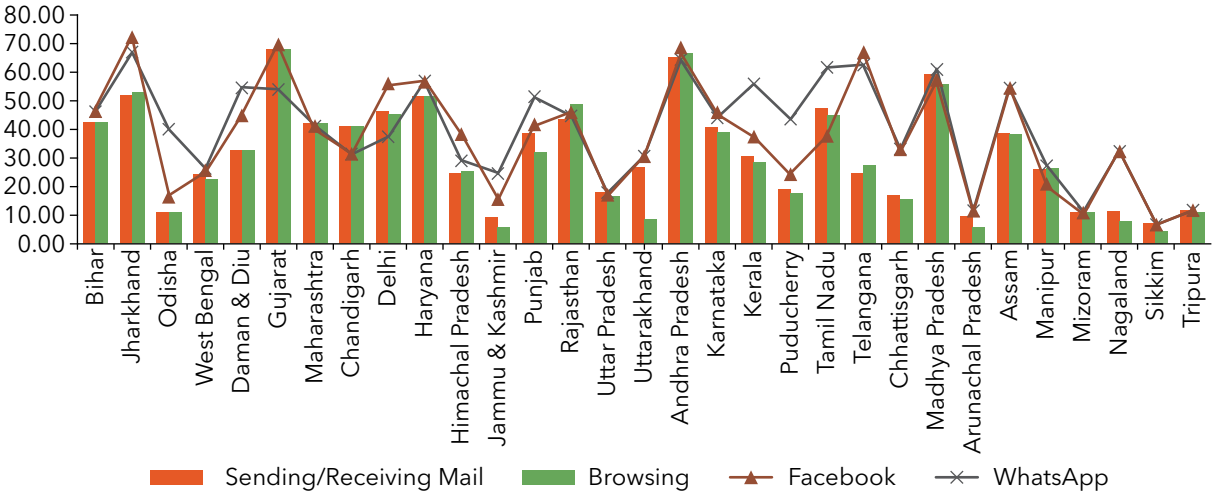
dents in Jharkhand used digital devices for searching for jobs, while 22 per cent in Odisha, the highest in the eastern zone, used devices to search for jobs.

The proportion of trainees who used digital devices to search for government schemes was minimal amongst the western states as well. Less than 19 per cent of the respondents in Daman & Diu, Gujarat, and Maharashtra used mobiles or computers to avail of government services such as booking of railway tickets, and applying for Pan Card, Aadhaar Card. However, more than 60 per cent of the trainees in Gujarat reported using computers and mobile phones for checking mail and for general Internet browsing purposes, whereas 40–41 per cent of the respondents in Maharashtra used digital devices for accessing social media sites and for browsing the internet and e-mail. Only ten per cent of the respondents here used digital devices for entertainment purposes.

An analysis of the northern zone shows some positive results. In the national capital, 48 per cent of the trainees used digital devices to search for jobs, while 45–46 per cent of them used it to browse the Internet and access e-mails. Around 30 per cent of the respondents in Chandigarh and Rajasthan also used mobiles, computers and other devices for job searches while the corresponding proportion was particularly low in the states of Jammu & Kashmir, Uttarakhand, and Haryana. As regards the use of these devices for accessing government services, the proportion of trainees was low in almost all states except Rajasthan and Himachal Pradesh. More than 40 per cent of the trainees in Haryana, Punjab, and Rajasthan used digital devices for accessing social media sites like Facebook and WhatsApp.

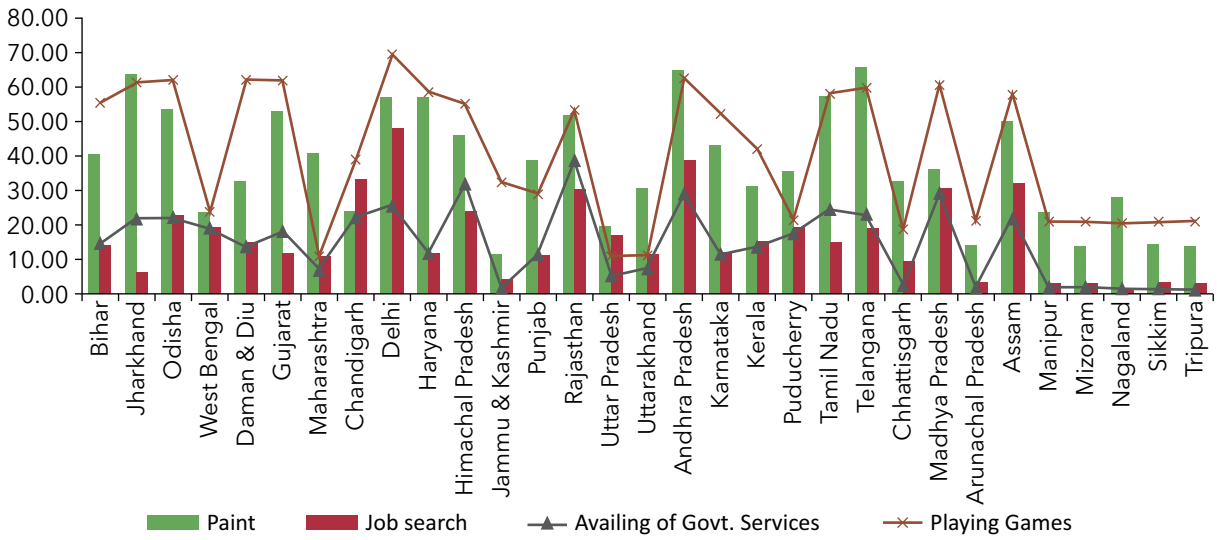
The performance of the southern states was comparable to the others as a similar proportion of the beneficiaries in these states used digital devices for different purposes. More than 60 per cent of the beneficiaries in Andhra Pradesh used digital devices for browsing the Internet, checking their mails, accessing social media sites, and for entertainment. With the exception of Andhra Pradesh and Telangana, less than 20 per cent of the trainees in the southern zone used digital devices to search for jobs or access government services. Only 20 per cent of the trainees in Puducherry used digital devices for entertainment purposes while the corresponding

FIGURE 6.4: APPLICATION OF DIGITAL TRAINING: USAGE OF e-MAIL, BROWSING, FACEBOOK AND WHATSAPP (%)



Source: Survey, 2017.

FIGURE 6.5: APPLICATION OF DIGITAL TRAINING: PAINT, JOB SEARCH, AVAILING OF GOVERNMENT SERVICES, PLAYING GAMES (%)



Source: Survey, 2017.

proportion was significantly high in Andhra Pradesh. Less than 20 per cent of the trainees in all the southern states with the exception of Andhra Pradesh used mobiles, laptops, and tablets for job searches. In central India, however, the states of Chhattisgarh and Madhya Pradesh exhibited contrasting performances. While more than 50 per cent of the trainees in Madhya Pradesh used digital devices for Internet browsing, less than 30 per cent of the respondents in Chhattisgarh used the devices to check emails and access social media sites.

Lastly, in the north-eastern zone, the survey findings reveal negligible use of digital devices for accessing government services or searching for jobs in all states except Assam. Similarly, 20 per cent of the trainees in all the states except Assam used digital devices for entertainment purposes whereas 32 per cent of the trainees in Nagaland used digital devices for accessing social media sites but the corresponding proportion was particularly low in Sikkim.

As can be inferred from the above discussion, the extent of use of digital devices varied amongst most states and the purposes they served also differed with different states. The overall analysis, however, indicates that the southern zone emerged as the best performing zone based on the relative percentage of trainees using digital devices for a variety of purposes in this zone.

(iii) Day-to-day Application of Digital Devices

The impact assessment study also attempts to analyse and understand the day-to-day applications of digital devices by the trainees on the basis of their requirements. The survey results reveal that the usage of digital devices varies from their use for college/school work to office work, among other applications. Some of the trainees, however, claimed that they were unable to use the digital devices at all as they lacked access to any such device.

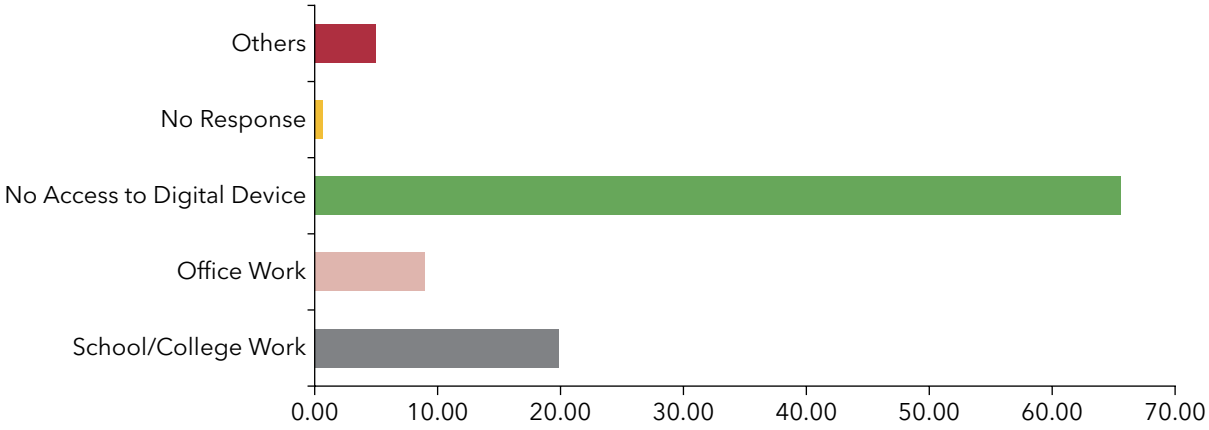
At the all-India level, 65.6 per cent of the respondents were unable to report the applicability of digital devices as they lacked access to the latter at home whereas 20 per cent of the trainees applied the digital literacy acquired by them during the training to use various devices for completing school projects and assignments. The proportion of trainees applying their digital literacy

TABLE 6.3: RESPONSES OF BENEFICIARIES ON DAY-TO-DAY APPLICATIONS OF DIGITAL DEVICES (%)

S. No.	States/UTs	School/ College work	Office Work	Not Able to Use	No Response	Others
Eastern States/UT						
1.	Bihar	18.07	8.16	62.73	0.00	11.04
2.	Jharkhand	14.69	11.98	69.76	0.00	3.57
3.	Odisha	23.40	13.41	54.49	0.00	8.70
4.	West Bengal	26.59	6.21	63.60	0.00	3.59
Western States/UT						
5.	Daman & Diu	13.39	7.95	74.48	0.00	4.18
6.	Gujarat	25.21	10.73	60.06	0.00	4.00
7.	Maharashtra	17.25	10.78	69.87	0.00	2.10
Northern States/UT						
8.	Chandigarh	17.57	5.02	68.20	0.00	9.21
9.	Delhi	26.39	6.28	66.05	0.00	1.28
10.	Haryana	22.54	4.28	63.34	0.43	9.42
11.	Himachal Pradesh	25.63	6.72	57.98	0.42	9.24
12.	Jammu & Kashmir	9.83	7.05	80.89	0.00	2.23
13.	Punjab	14.84	6.42	72.90	0.00	5.85
14.	Rajasthan	17.46	5.65	71.75	0.00	5.14
15.	Uttar Pradesh	8.68	8.37	81.16	0.00	1.80
16.	Uttarakhand	17.26	8.84	70.90	0.00	3.00
Southern States/UT						
17.	Andhra Pradesh	25.87	8.01	60.16	0.00	5.95
18.	Karnataka	19.20	16.43	63.50	0.00	0.87
19.	Kerala	30.24	12.13	52.50	0.00	5.14
20.	Puducherry	30.96	8.79	56.49	0.00	3.77
21.	Tamil Nadu	18.02	5.54	70.33	0.05	6.06
22.	Telangana	18.58	5.75	67.86	0.00	7.80
Central States						
23.	Chhattisgarh	16.83	6.42	74.47	0.00	2.28
24.	Madhya Pradesh	26.33	15.09	42.97	9.19	6.42
North-Eastern States						
25	Arunachal Pradesh	15.38	6.41	72.44	0.00	5.77
26.	Assam	18.12	6.99	65.76	0.00	9.13
27.	Manipur	15.06	6.28	69.87	0.00	8.79
28.	Mizoram	33.47	6.69	55.65	0.00	4.18
29.	Nagaland	11.72	2.93	82.43	0.00	2.93
30.	Sikkim	9.62	6.69	80.75	0.00	2.93
31.	Tripura	27.62	9.62	53.97	0.00	8.79
All India		**19.87**	**8.94**	**65.59**	**0.64**	**4.97**

Source: Survey, 2017.

FIGURE 6.6: DAY-TO-DAY APPLICATION OF DIGITAL DEVICES: ALL INDIA (%)



Source: Survey, 2017.

for school work is, however, significantly low given the fact that the largest number of beneficiaries of the training programme comprised young adults in the age group of 14–25 years. Further, 9 per cent of the trainees were also found to be using digital devices on a day-to-day basis for official purposes.

A zonal analysis of the results reveals that in the eastern zone, more than 50 per cent of the respondents in all states were unable to apply digital literacy for using digital devices as they lacked access to the same. In addition, 26 per cent of the trainees in West Bengal and 23 per cent in Odisha applied digital literacy for using digital devices to complete school work.

Similarly, in the western zone too, more than 60 per cent of the respondents had no access to digital devices, and only 10 per cent of the trainees in Gujarat and Maharashtra applied digital literacy and technology for official purposes and office work. The proportion was the same for all states in the northern zone. Around 70 per cent of the beneficiaries in all the states of the northern zone (except Himachal Pradesh) exhibited limited applicability of digital literacy due to their minimal access to computers, laptops, tablets and other devices. Less than 25 per cent of trainees in the northern states applied digital literacy for completing school projects and assignments.

On an average, 60 per cent of the beneficiaries in the southern states had no access to digital devices, which resulted in minimal use of these devises among the trainees. While 30 per cent of the respondents in Kerala and Puducherry applied digital literacy for completing school work, a contrasting scenario was witnessed in central India. In Chhattisgarh, 74 per cent of the respondents had no access to digital devices and were unable to apply their knowledge of digital literacy, while in Madhya Pradesh, 47 per cent of the respondents had applied their digital literacy knowledge to complete office or school work or for other purposes. More than 80 per cent of the trainees in Nagaland and Sikkim were unable to use the digital knowledge acquired by them in their day-to-day applications while 28 per cent and 33 per cent of the trainees in Tripura and Mizoram, respectively, applied digital literacy for school work, and overall less than 10 per cent of the trainees in all the north-eastern states taken together did so.

(iv) Overall Benefits of DISHA Training

This section analyses the overall benefits derived by the beneficiaries from the digital literacy training. The analysis is based on the awareness, knowledge,

and confidence level of the trainees after undergoing the training, which was also the primary aim of this training. However, it was found that the training was also able to yield other unintended benefits, which were not planned as its targets. Hence, the assessment covers the additional benefits derived too, which included: finding a job, receiving promotions, increased income, and the ability to teach others about digital literacy.

At the all-India level, on an average, 37 per cent of the trainees affirmed an enhancement in their knowledge, awareness, and confidence levels after acquisition of the training. While 19 per cent of the respondents revealed that they were able to teach others about digital devices and how to use and access information technology, about 3 to 5 per cent of the respondents at the national level reported finding new jobs, receiving promotions at work, or getting monetary perks.

At the zonal level too, the analysis highlights the different kinds of benefits derived, of which some of them are the intended benefits, while the others such as securing a new job, increase in income, getting a promotion, or the ability to teach are additional benefits of the programme, which are discussed in detail below.

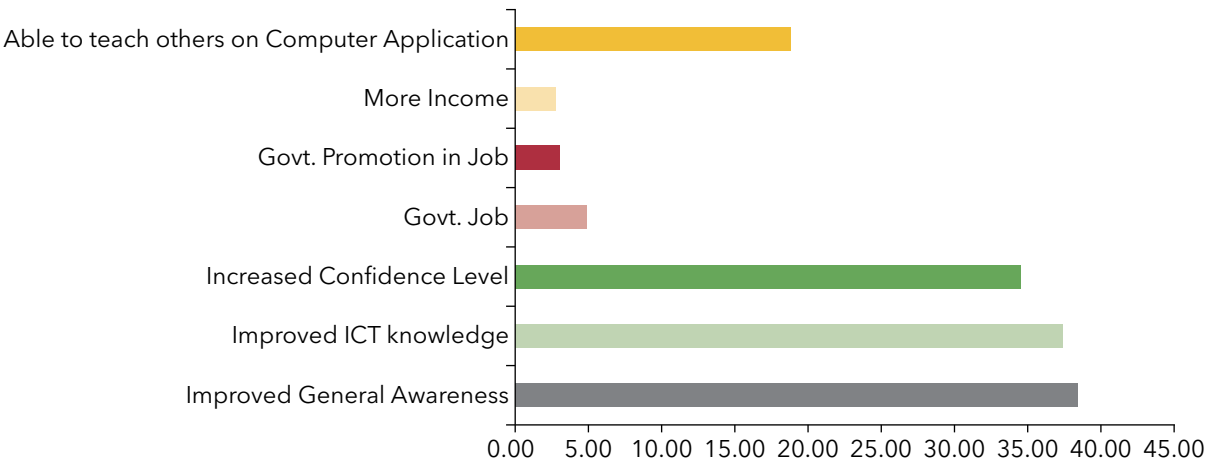
a. Overall Benefits

In the north-eastern zone, 35 per cent of the trainees in Nagaland stated that they had become more aware and acquired more knowledge, and were thus more confident after participating in the training programme. Around 20 per cent of the trainees in Sikkim shared similar sentiments regarding the impact of the training.

In central India, more than 50 per cent of the trainees in Madhya Pradesh felt that their level of awareness and knowledge of digital literacy had increased after their enrolment in the training.

In the southern zone, more than 75 per cent of the trainees in Telangana and Andhra Pradesh confirmed that they had become more aware of the usage of information technology post the training. More than 60 per cent of the trainees in these two states also perceived an expansion in their knowledge base after completion of the training. In the eastern zone, Jharkhand was the best performing state in terms of the increase in awareness, knowledge and confidence levels of the trainees after the training, as noted by more than 60 per cent of the respondents. The corresponding proportion of respondents was, however, as low as 20 per cent in West Bengal.

FIGURE 6.7: OVERALL BENEFIT OF DISHA TRAINING: ALL INDIA (%)



Source: Survey, 2017.

TABLE 6.4: RESPONSES OF BENEFICIARIES ON THE OVERALL BENEFITS OF THE DISHA TRAINING (%)

S. No.	States/UTs	Intended Benefits			Additional Benefits			
		Improved General Awareness	Improved ICT knowledge	Increased Confidence Level	Govt. Job	Govt. Promotion in Job	More Income	Able to Teach Computer Applications to Others
Eastern States/UT								
1.	Bihar	49.59	48.72	51.80	11.65	7.91	4.36	18.02
2.	Jharkhand	60.20	63.77	69.90	6.99	2.00	1.28	25.96
3.	Odisha	39.51	39.51	36.80	8.70	4.42	6.85	24.96
4.	West Bengal	22.74	20.53	22.23	8.26	9.24	6.21	24.69
Western States/UT								
5.	Daman & Diu	19.25	19.25	19.25	2.93	2.93	2.51	11.30
6.	Gujarat	55.75	55.70	55.29	4.88	1.44	1.08	17.86
7.	Maharashtra	32.24	29.72	36.76	0.77	0.67	1.59	14.68
Northern States/UT								
8.	Chandigarh	28.87	32.22	33.89	9.21	1.67	0.84	5.02
9.	Delhi	46.08	47.36	45.36	2.14	5.85	6.85	14.98
10.	Haryana	29.10	28.67	26.11	3.14	2.28	3.85	21.68
11.	Himachal Pradesh	44.96	42.02	39.50	3.78	2.94	2.52	13.87
12.	Jammu & Kashmir	11.87	12.06	16.70	1.67	0.37	1.11	7.79
13.	Punjab	25.82	27.53	22.11	3.28	4.56	3.71	14.69
14.	Rajasthan	31.74	46.48	40.16	2.21	0.21	2.31	19.41
15.	Uttar Pradesh	14.01	13.86	18.48	2.93	2.21	1.95	17.66
16	Uttarakhand	19.54	19.54	23.82	2.28	1.28	1.43	16.12
Southern States/UT								
17.	Andhra Pradesh	76.49	64.99	61.70	7.39	2.16	5.13	28.03
18.	Karnataka	36.70	27.21	29.11	2.10	1.13	0.62	24.23
19.	Kerala	28.39	32.95	22.82	4.42	1.43	3.14	27.25
20.	Puducherry	29.29	22.18	25.94	3.77	0.84	0.84	11.72
21.	Tamil Nadu	48.10	47.64	32.29	2.46	3.64	2.00	10.16
22.	Telangana	80.49	61.29	6.88	6.98	3.80	3.49	9.96
Central States								
23.	Chhattisgarh	11.84	11.27	10.84	2.00	1.14	1.43	11.27
24.	Madhya Pradesh	56.72	57.19	47.59	5.75	1.90	2.62	38.66
North-Eastern States								
25.	Arunachal Pradesh	22.44	17.31	17.95	2.56	1.28	1.28	12.18
26.	Assam	28.82	28.82	28.82	19.69	8.99	3.28	3.00
27.	Manipur	19.25	19.67	25.10	3.77	0.84	0.84	11.72
28.	Mizoram	17.15	10.88	18.83	2.51	0.84	0.84	4.60
29.	Nagaland	35.56	33.89	35.15	1.67	5.44	2.51	13.81
30.	Sikkim	10.04	13.39	17.57	2.51	0.42	0.84	7.11
31.	Tripura	29.29	22.18	25.94	4.18	0.84	0.84	12.13
All India		**38.36**	**37.36**	**34.47**	**4.90**	**3.07**	**2.75**	**18.79**

Source: Survey, 2017.

In the western zone, the UT of Daman & Diu lagged far behind the other states and UTs in the region, as only 20 per cent of the beneficiaries here claimed that they had become more confident and digitally aware after acquiring the training. In the northern zone, more than 45 per cent of the beneficiaries in Delhi attested to becoming more confident, knowledgeable, and aware of information technology as an outcome of the training.

b. Additional Benefits

Although the proportion of trainees who reported deriving additional benefits than those aimed at the initiation of the programme is comparatively less, this outcome of the training is still noteworthy, as these additional benefits have contributed to enhancement in livelihoods for some of the trainees. The survey also indicates that less than 5 per cent of the trainees in all

BOX 6.1: OVERALL OUTCOME OF THE TRAINING PROGRAMME

Increased Knowledge and Confidence

Khamar Tej in Andhra Pradesh comes from an economically deprived household with her father working as a coolie and her mother as a home-maker.

The training not only helped Khamar acquire a new skill set but also made her more confident, which led her to secure a job as a typist in the local MLA's office.

Now earning around 5000 rupees a month, she has been able to contribute significantly to the household income after having attended the DISHA training.

Livelihood Enhancement

Reshma Banu of Andhra Pradesh was forced to drop out of school early due to her family's financial constraints as both her parents worked as agricultural labourers.

Reshma decided to enrol herself for the training provided by DISHA as she felt that acquiring a new skill set might enhance her capability to contribute to the household income.

Today, Reshma earns Rs. 7000 per month and has subsequently been able to help improve the standards of her family.

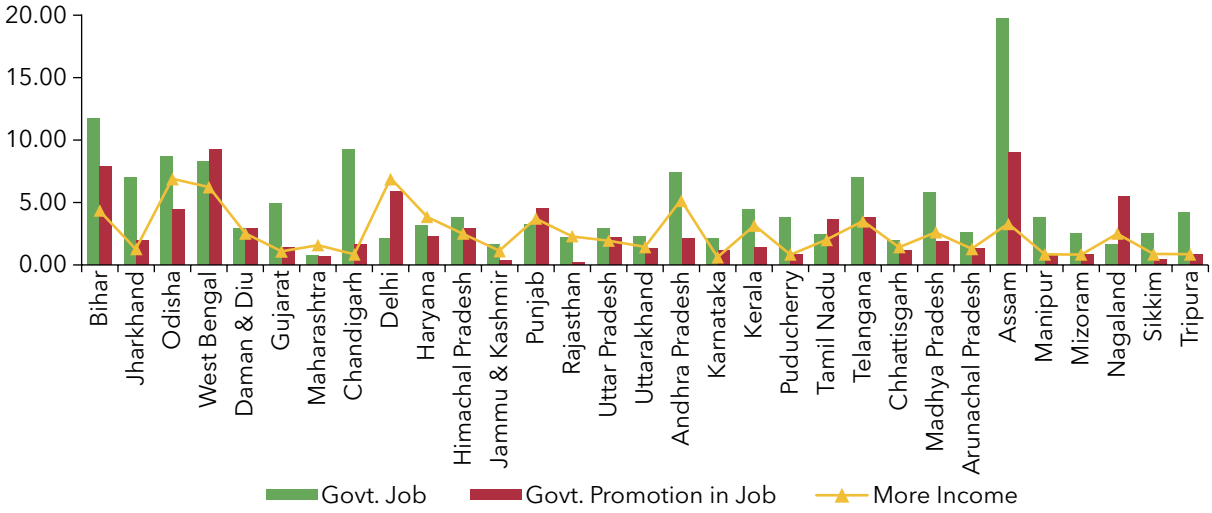
Overall Benefits

Fifty-year old Nakshatra from Ananthapur district, Andhra Pradesh, is an *Aanganwadi* worker who often worked out of cyber cafes, incurring an expenditure of 300-500 rupees a month.

Nakshatra believes that the training not only helped her hone her IT skills, but also learn the additional benefits of Internet technology (browsing the Internet, use it for mailing purposes) and computer applications such as MS Word, Excel, etc. She presently works on her own tab which she believes allows her to complete her work faster with lesser expenditure.

Source: Interview with VLEs, 2017.

FIGURE 6.8: ADDITIONAL BENEFITS OF DISHA TRAINING (%)



Source: Survey, 2017.

states of the north-eastern zone with the exception of Assam (20 per cent) were able to receive a promotion (or a pay raise) or find a job after having undertaken the training. Around 15 per cent of the respondents in this region asserted that they had become confident enough to teach others about digital technology after having enrolled for the programme. In the central zone, 38 per cent of the trainees in Madhya Pradesh felt that they were now sufficiently equipped to teach others about digital literacy after having finished the training.

Likewise, in the northern, southern, western and eastern zone too, around 10 per cent of the trainees were able to find a job or receive a pay hike or promotion after having completed the digital literacy training. Less than 5 per cent of the beneficiaries in Daman & Diu in the western zone reported being able to find a job or receive a pay rise as a product of the training, and 15 per cent of the respondents in Delhi felt that their increased knowledge base would help them teach others while less than 5 per cent were able to find a job.

OVERALL SCENARIO OF TRAINING OUTCOME

The composite index was made for this dimension too, to determine the overall impact of this programme and to assess the performance of different states in this dimension. At the national level, the index value of this dimension is 0.40. As highlighted in the previous chapters, the states have been grouped into three, based on the index value obtained by them, as good, moderate, and low performing states.

Figure 6.9 shows that about 13 states fall in the best performing category, 6 states in the moderate performing category, and another 12 in the low performing category. The performance at the national level seems to be remarkable as more than half the states have crossed the national average.

States such as Madhya Pradesh, Andhra Pradesh, Delhi, and Gujarat fall in the good performing category, as most of the training centres in these states were able to train the beneficiaries in using digital devices for various purposes. In addition to enabling them to operate the digital devices, the programme offered various benefits to the trainees, as reported by them. Some of the states/UTs such as Chandigarh, Rajasthan, Himachal Pradesh, and West Bengal were found to be performing moderately well. On the other hand, states such as Jammu & Kashmir, Sikkim, and Uttar Pradesh exhibited low performance,

FIGURE 6.9: RANKING OF STATES/UTs BASED ON THE OVERALL PERFORMANCE: TRAINING OUTCOME (%)

States/UTs	Training Outcome
Madhya Pradesh	0.73
Andhra Pradesh	0.70
Delhi	0.60
Gujarat	0.59
Jharkhand	0.58
Kerala	0.52
Telangana	0.51
Bihar	0.51
Haryana	0.50
Odisha	0.49
Karnataka	0.48
Assam	0.48
Tamil Nadu	0.48
Chandigarh	0.44
Rajasthan	0.42
Himachal Pradesh	0.41
West Bengal	0.41
Punjab	0.39
Puducherry	0.37
Maharashtra	0.33
Tripura	0.33
Daman & Diu	0.31
Mizoram	0.26
Manipur	0.26
Uttarakhand	0.24
Nagaland	0.22
Arunachal Pradesh	0.20
Chhattisgarh	0.19
Uttar Pradesh	0.18
Sikkim	0.12
Jammu & Kashmir	0.08
National Average	**0.40**

Source: Computed by the authors.

Notes: The cumulative index for this dimension include the indicators of digital device purposes, day-to-day application of digital device and overall benefits of DISHA training to beneficiaries.

- Good Performing States/UTs
- Moderate Performing States/UTs
- Low Performing States/UTs

as the programme could not reap the intended benefits to the extent planned. The responses of the beneficiaries in these states indicate that most of them did not have access to any kind of digital devices, due to which they were not confident enough to operate these devices.

On the whole, it can be stated that no state or UT was constantly at the top or bottom with regard to all the indicators. Some of the states/UTs performed better in implementing the designed formats of the programme while others showed efficiency in installing the required logistics for providing the training. Despite the low level of their performance in terms of training component and infrastructure, several states were able to ensure a better impact on the overall outcome, like Kerala. It was also observed that innovative measures initiated by different states contributed to a strong overall impact on the beneficiaries and the example for this is the state of Andhra Pradesh.

Overall, the performances of various states with regard to most of the indicators were good. However, gaps were identified in certain areas and corrective measures on those aspects will help in enhancing the work to be undertaken in the next phase of the DISHA, as discussed in the concluding chapter.

7

CONCLUSION AND RECOMMENDATIONS

INTRODUCTION

The preceding chapters have analysed the various aspects of DISHA training provided to citizens across the country, viz. the chief beneficiaries of the training programme, the components of training, the training outreach mechanism, regularity of training, the content of the training, facilities available at the training centre, and the lessons taught, as also the outcome of the DISHA training. The chapters have outlined the impact of the intervention across the states and UTs, in varying degrees in different states. Even within the same states/UTs, the performance of the states was good, moderate, or low with respect to the different indicators.

This chapter presents both a national picture and a cross-country scenario about the overall effect of the training. This chapter highlights the achievements and gaps in the implementation and outcome of the training programme on the basis of the process and outcome indices computed in this assessment. It also provides suggestions and recommendations for improving outcomes in the next phase of the digital literacy training.

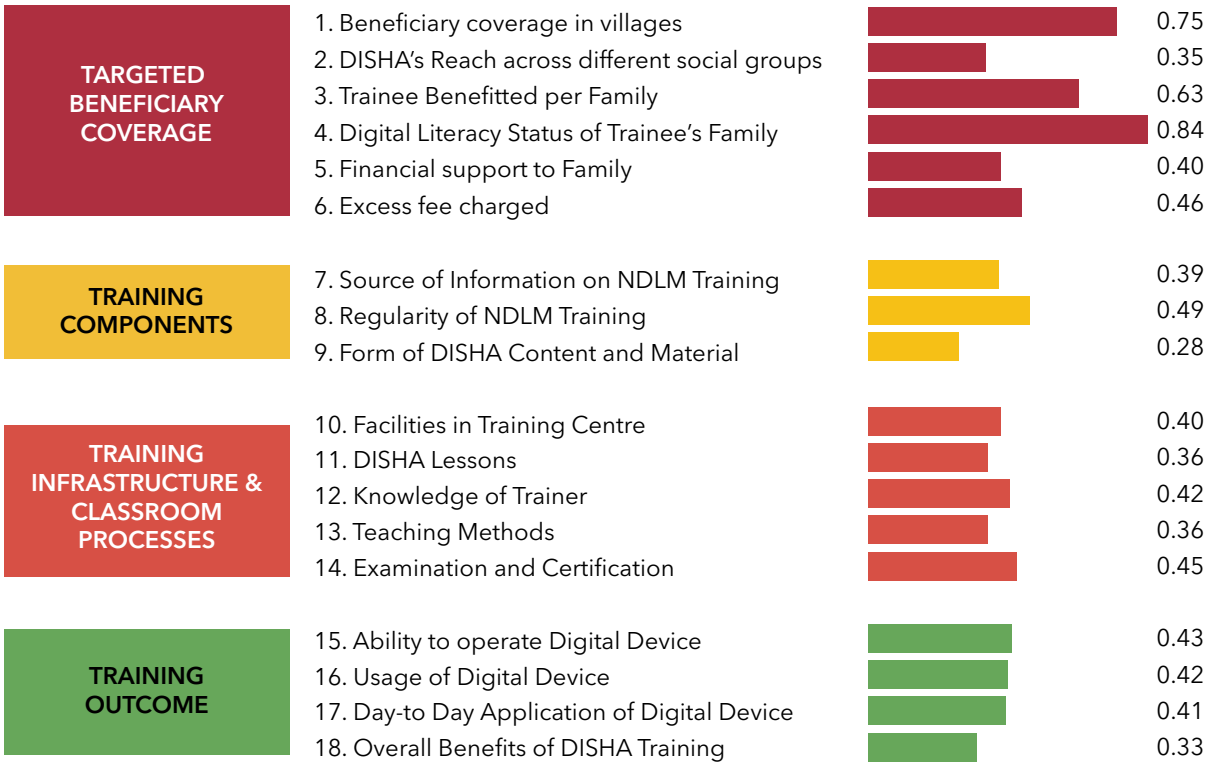
OVERALL IMPACT OF DISHA TRAINING

The study found positive impacts of the DISHA training in varying degrees in different states/UTs. The composite index was computed for the identified dimensions and the performance of each state varied from 'good', 'moderate' to 'low' in terms of the different indicators, which was discussed in the previous chapters. Figure 7.1 presents a picture of the overall assessment of DISHA at the national level.

The performance of DISHA seems to be good in the dimension of 'beneficiary coverage'. The programme had achieved its intended targets for most of the indicators in this dimension. In particular, the programme has done remarkably well in targeting a family with no digital literacy status, extending the coverage of the programme to the rural areas, and in providing training to only one person per family. On the other hand, the performance is quite low in terms of extending the reach of this training to diverse social groups. While the programme has extended the training to almost an equal number of women and, in fact, to a higher number of BPL card-holders, it lags behind the intended targets in terms of extending digital literacy to the SCs and STs. Similarly, it was also observed that financial support was availed of by both the general and OBC candidates.

As far as the dimension of the training component is concerned, the overall performance is moderate. In particular, the programme was successful in providing regular training classes as reported by a

FIGURE 7.1: OVERALL ASSESSMENT OF DISHA: ALL INDIA (%)



Source: Computed by authors.

larger proportion of beneficiaries. Further, the training centres were moderately successful at the national level in spreading the message about the conduct of DISHA training. Of the various sources, the most powerful sources in almost all the states constituted 'advertisements' and 'friends'. However, at the national level, the satisfaction level of the beneficiaries on the DISHA content and material was below average. While the preference of the students was mostly for booklets that would help them in future revision of the content, the format mostly used in the training centres was that of e-books, to which most of the trainees had minimum access.

As regards the dimension of the training infrastructure and classroom processes, average performance was visible in almost all the indicators. On the basis of the response of the beneficiaries, it can be stated that at the national level, the training centres were moderately equipped with the required infrastructure, including computers, Internet connectivity, and power back-up. The performance of the training centres was also average in terms of the timely conduction of examinations and distribution of certificates to the trainees. While half of the trainees affirmed that the trainers had good knowledge of information technology, some of the candidates felt that the knowledge levels of the trainers were moderate. In terms of DISHA lessons and the teaching methods, though some of the candidates were happy with the lessons taught and the teaching methods, most of them were interested in advanced courses on digital literacy, such as photoshop, web designing, and other programmes. In the same manner, most of the candidates preferred more of practical classes, while in practice most of the centres provided theory classes the most.

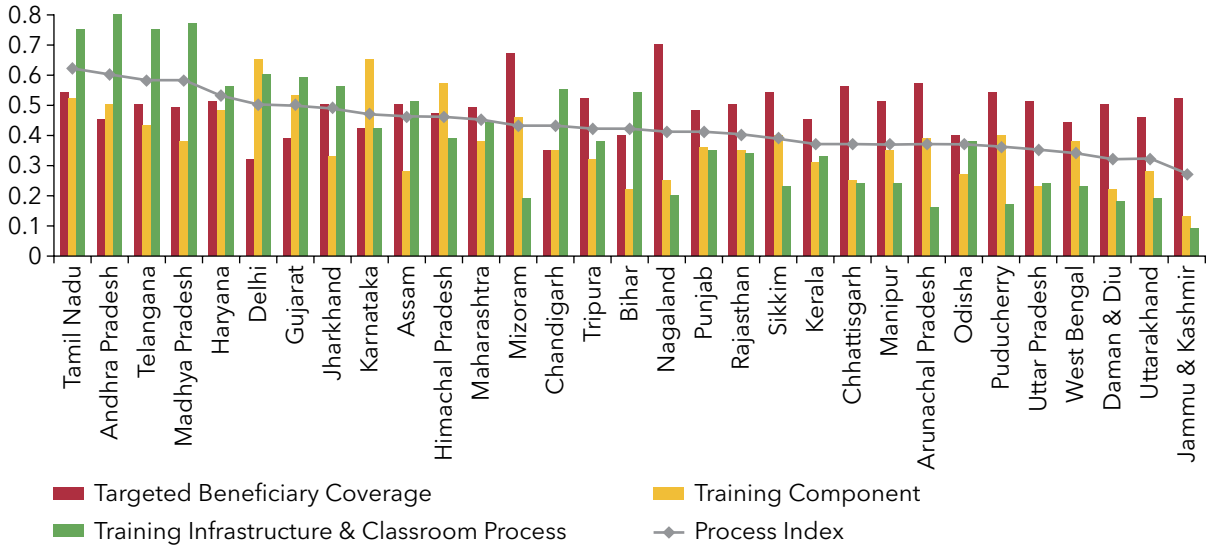
As regards the dimension of the training outcome, in the case of almost all the

indicators, the programme had crossed the national average, which indicates that the programme was successful in achieving the intended outcome. Around 60 per cent of the beneficiaries at the national level were able to operate smartphones and 40 per cent were able to operate computers or laptops. The beneficiaries who were operating the digital devices were using them for various purposes such as checking mails, accessing social media sites like WhatsApp and Facebook, accessing government jobs, playing games, and searching for jobs, of which the maximum usage was observed for accessing social media sites. In terms of the day-to-day usage of digital devices, a majority of the trainees were not able to use them because they lacked access to these devices at home. Among those who use these devices, most of them did so for school assignments and projects, while some of the beneficiaries used them for official purposes. The overall benefit of DISHA training was that a substantial proportion of the beneficiaries reported increased confidence levels, and improved ICT knowledge and general awareness, while some others also reported deriving additional benefits such as finding new jobs, or getting promotions and raise in incomes.

STATE PERFORMANCES AS PER THE PROCESS AND OUTCOME INDEX

In order to examine the achievements and the gaps in the performance of the states, the assessment produced two types of indices, viz. the Process Index and the Outcome Index. The Process Index is a composite index of the dimensions of beneficiary coverage, training components, and the training infrastructure and classroom processes, which constitute the inputs that go into the implementation of the programme. On the other hand, the Outcome Index is a composite index of the indicators under the training outcome, which include the ability to operate digital devices, purpose of usage of digital devices, day-to-day application of digital devices, and the benefits accruing to the trainees from the DISHA training. This index presents a picture of the overall outcome of the training in terms of equipping the beneficiaries with the knowledge and ability to use digital devices for various purposes. A comparative analysis of the Process Index and Outcome Index presents a picture of the achievements and gaps of the different states, as depicted in Table 7.1 and Figure 7.3.

FIGURE 7.2: STATE PERFORMANCES IN THE PROCESS INDEX (%)



Source: Prepared by the authors.

TABLE 7.1: SNAPSHOT OF THE PROCESS INDEX AND OUTCOME INDEX- A CROSS-STATE COMPARISON (%)

S. No.	States/UTs	DISHA PROCESS INDEX					OUTCOME INDEX		
		Targeted Beneficiary Coverage	Training Components	Training Infrastructure & Classroom Process	Process Index	Rank	States/UTs	Outcome Index	Rank
1	Tamil Nadu	0.54	0.52	0.75	0.62	1	Madhya Pradesh	0.73	1
2	Andhra Pradesh	0.45	0.50	0.80	0.60	2	Andhra Pradesh	0.70	2
3	Telangana	0.50	0.43	0.75	0.58	3	Delhi	0.60	3
4	Madhya Pradesh	0.49	0.38	0.77	0.58	4	Gujarat	0.59	4
5	Haryana	0.51	0.48	0.56	0.53	5	Jharkhand	0.58	5
6	Delhi	0.32	0.65	0.60	0.50	6	Kerala	0.52	6
7	Gujarat	0.39	0.53	0.59	0.50	7	Telangana	0.51	7
8	Jharkhand	0.50	0.33	0.56	0.49	8	Bihar	0.51	8
9	Karnataka	0.42	0.65	0.42	0.47	9	Haryana	0.50	9
10	Assam	0.50	0.28	0.51	0.46	10	Odisha	0.49	10
11	Himachal Pradesh	0.47	0.57	0.39	0.46	11	Karnataka	0.48	11
12	Maharashtra	0.49	0.38	0.44	0.45	12	Assam	0.48	12
13	Mizoram	0.67	0.46	0.19	0.43	13	Tamil Nadu	0.48	13
14	Chandigarh	0.35	0.35	0.55	0.43	14	Chandigarh	0.44	14
15	Tripura	0.52	0.32	0.38	0.42	15	Rajasthan	0.42	15
16	Bihar	0.40	0.22	0.54	0.42	16	Himachal Pradesh	0.41	16
17	Nagaland	0.70	0.25	0.20	0.41	17	West Bengal	0.41	17
18	Punjab	0.48	0.36	0.35	0.41	18	Punjab	0.39	18
19	Rajasthan	0.50	0.35	0.34	0.40	19	Puducherry	0.37	19
20	Sikkim	0.54	0.40	0.23	0.39	20	Maharashtra	0.33	20
21	Kerala	0.45	0.31	0.33	0.37	21	Tripura	0.33	21
22	Chhattisgarh	0.56	0.25	0.24	0.37	22	Daman & Diu	0.31	22
23	Manipur	0.51	0.35	0.24	0.37	23	Mizoram	0.26	23
24	Arunachal Pradesh	0.57	0.39	0.16	0.37	24	Manipur	0.26	24
25	Odisha	0.40	0.27	0.38	0.37	25	Uttarakhand	0.24	25
26	Puducherry	0.54	0.40	0.17	0.36	26	Nagaland	0.22	26
27	Uttar Pradesh	0.51	0.23	0.24	0.35	27	Arunachal Pradesh	0.20	27
28	West Bengal	0.44	0.38	0.23	0.34	28	Chhattisgarh	0.19	28
29	Daman & Diu	0.50	0.22	0.18	0.32	29	Uttar Pradesh	0.18	29
30	Uttarakhand	0.46	0.28	0.19	0.32	30	Sikkim	0.12	30
31	Jammu & Kashmir	0.52	0.13	0.09	0.27	31	Jammu & Kashmir	0.08	31

Source: Survey, 2017.

Table 7.1 and Figure 7.2 show that the performance of states varied from one indicator to the other in terms of implementation under the Process Index. For instance, it can be observed that states such as Nagaland, Mizoram, Chhattisgarh, and Tamil Nadu have performed well in extending the coverage of the DISHA training to the targeted beneficiaries. However, the performance of the same states varied with regard to the indicators of the training component and infrastructure. It can be observed that almost all the states were able to extend the coverage to the targeted beneficiaries. On the other hand, the training centres in states and UTs such as Jammu & Kashmir, Uttarakhand, Daman & Diu, and Uttar Pradesh, and in some of the north-eastern states such as Nagaland and Arunachal Pradesh, which who had done good work in reaching the beneficiaries, could not take care of the other processes completely. For instance, it can be seen that the training centres in Bihar, and Jammu & Kashmir exhibited low performance in conducting regular training programmes or in spreading the message of the programme to the target audience. Again, it may be noted that the facilities in the training centres and measures adopted by the training centres in delivering the lessons or following appropriate teaching methods in the states of Jammu & Kashmir, Mizoram, and Arunachal Pradesh, were moderate.

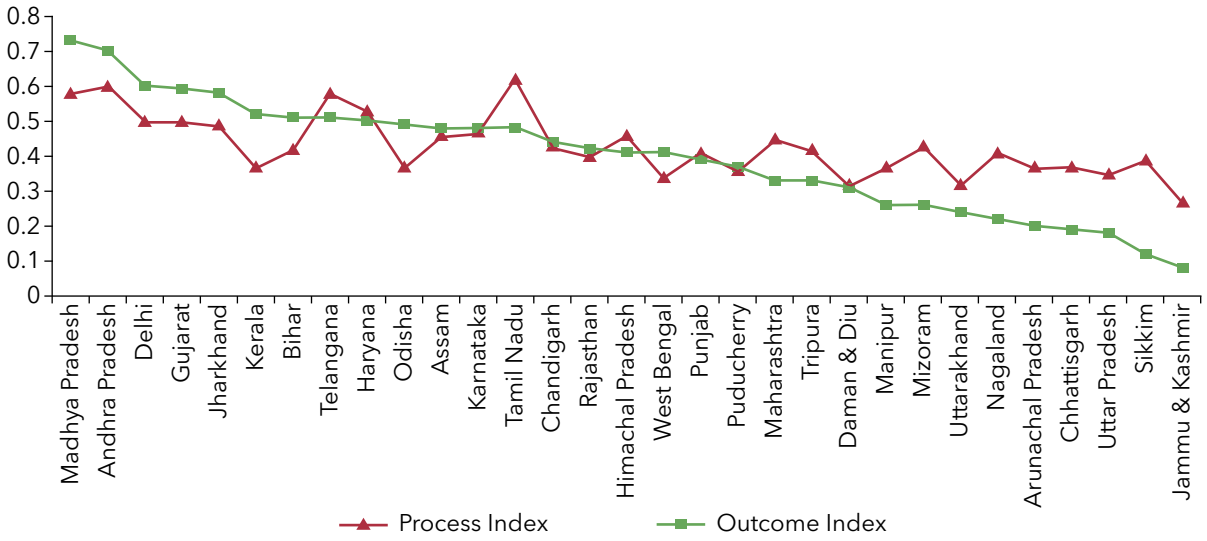
The top three states recording good performance in terms of the innovative training components used for spreading information on the DISHA training are Delhi, Karnataka, and Himachal Pradesh Further, in these states, regular training was organised by the centres and the form of delivery of the DISHA content was in accordance with the preference of the trainees. States such as Andhra Pradesh, Madhya Pradesh, Tamil Nadu, and Telangana have performed well in terms of meeting the required infrastructure and classroom processes. In these states, the training centres were found to having proper facilities and a large number of respondents in these states reported having been taught the different lessons framed in this course.

The Process Index, which was computed on the basis of the performance of the states with regard to these dimensions, depicts the overall performance of the states in establishing the required processes needed for the successful implementation of DISHA. Overall, states such as Tamil Nadu, Andhra Pradesh, Telangana, and Madhya Pradesh have performed well in providing the required inputs for the programme. Since the processes in these states were in place, this contributed to half the success in reaching the objective of empowering the citizens with digital literacy. The states and UTs that were not systematic in organising the requisite processes, included Jammu & Kashmir, Uttarakhand, Daman & Diu, West Bengal, and Uttar Pradesh.

Thus, a comparison of the Process Index and Outcome Index, as outlined in Figure 7.3, reveals a close linkage between the processes and outcomes in most of the states. This implies that in most of the states, where the basic structures and processes needed for implementation were clearly in place, a highly appreciable outcome was achieved in terms of making the citizens digitally literate. For instance, it can be observed that in Madhya Pradesh, Andhra Pradesh, and Delhi, where the required inputs had been supplied by the training centres, the outcome is also good, wherein a higher number of beneficiaries were able to operate different kinds of digital devices such as smartphones and computers for various purposes such as checking mails, browsing social media sites, playing games, and accessing government services, among other things.

Similarly, the states exhibiting poor performance with regard to the Process

FIGURE 7.3: COMPARISON OF THE PROCESS INDEX AND THE OUTCOME INDEX (%)



Source: Prepared by the authors.

Index such as Jammu & Kashmir, Sikkim, and Uttar Pradesh have not fared well in the Outcome Index too. Wherever the processes were moderately met, the performance of the states in terms of reaching the outcomes was less than average. However, there are certain exceptions to this. For instance, in Kerala, Odisha, and West Bengal, though the processes are less than average, the performance of the trainees is more than average. Similarly, in Tamil Nadu, Telangana, Himachal Pradesh, and Maharashtra, it can be observed that the structures and processes are properly in place, yet the performance of these states in meeting the outcome is a bit low, as compared to the measures established.

From the analysis, it is clear that it is mostly the states in Categories B and C that have not performed well in establishing the required processes. Hence, if measures are taken to strengthen the processes in these states, the required outcomes will be reached. In Kerala, West Bengal, and Odisha, measures are needed to strengthen the processes, while these states have already recorded good performances in reaching the outcomes. In contrast, in Tamil Nadu, Telangana, and Maharashtra, a careful reflection is needed to bridge the gaps in processes, as in spite of putting staunch measures in place in terms of the processes, the outcomes achieved are quite average.

KEY FINDINGS OF THE STUDY

I. Beneficiary Coverage

This dimension includes the following indicators: DISHA target groups, trainees benefited per family, digital literacy status of the families, and the financial support offered to the trainees. The key findings with respect to this dimension are delineated below.

(i) DISHA Target Group

- *Area:* It was found that 76 per cent of the beneficiaries trained at the national level resided in rural parts of the country while only 24 per cent resided in urban India.
- *Gender:* At the national level, 47 per cent of the beneficiaries were women while 53 per cent of them were men. While in Kerala, a majority of the trainees (65 per cent) who enrolled for the programme were women, the scenario was the reverse in Haryana

as a majority of the trainees here were men (67 per cent).

- *Age:* The maximum participation for the training at the national level came from youngsters in the age group of 14–25 years, as 89 per cent of the trainees belonged to this age bracket.
- *Social Groups:* In terms of social groups, a majority of the trainees belonged to the General category, followed by the OBCs, SCs, and STs. In terms of reaching out to the BPL group, the DISHA programme has effectively achieved its target, as 63 per cent of the beneficiaries belonged to this category.
- *Education:* An estimated 35 per cent of the trainees enrolled in the DISHA programme had completed senior secondary schooling (Class 12) while 22 per cent of the trainees had completed Class 10. Further, 10 per cent of the trainees were graduates and 14 per cent of them held diplomas.

(ii) Digital Literary Status of Trainees Family

- At the national level, 59 per cent of the trainees belonged to families that did not have digital literacy status before availing of the training.
- An estimated 34 per cent of the trained beneficiaries belonged to families with less than two digitally literate members across all the states and UTs. Some of these candidates were direct beneficiaries supported under CSR activity.

(iii) Trainees Benefited per Family

- At the national level, 78 per cent of the trainees stated that only one member from the family had attended the training while 22 per cent stated that more than one member from their family had availed of the IT training.

II. Training Components

The dimension of training component covers the following indicators: the outreach mechanism of DISHA, regularity of training, and the form of TLM used in DISHA. The key findings of this dimension are as follows:

- About 41 per cent of the trainees learnt of the digital literacy training through friends, family and relatives, 32 per cent through advertisements, 12 per cent through schools, and 4 per cent through websites. Advertisements were the most popular outreach mechanism in Punjab while 63 per cent of the trainees in Nagaland had heard about the training programme through friends and family.
- It was found that 61 per cent of the surveyed candidates reported regularity in the conduction of the DISHA training, whereas 39 per cent reported the incidence of irregularity in training. Among this 39 per cent, some of them also reported that they do not attend the training on a regular basis.
- At the national level, 30 per cent of the trainees used both photocopied material and books that were provided as part of the TLM. Only 5 per cent of the trainees, on the other hand, used audio-visual tools or e-books as part of the training. The use of audio-visual tools was popular in Karnataka while books were used by a majority of the trainees in Haryana and Karnataka. e-Books were particularly popular in the national capital.

III. Training Infrastructure and Classroom Processes

The key indicators covered in this dimension include facilities available at the

training centre, DISHA lessons, knowledge of the trainers, teaching methods used, and examination and certification procedures. The concomitant findings are delineated below:

- At the national level, 41 per cent and 30 per cent of the trainees were happy with the computer facilities and Internet connectivity made available at the training centres, respectively. Approximately 25 per cent of them were satisfied with other facilities such as scanners, web-cameras, printers or power back-up facility available at the centres.
- As per the design of the syllabi, the trainees were taught about basic computer applications, use of smartphones, Internet browsing, and the use of tablets, and Internet and online services.
- More than 60 per cent of the trainees were satisfied with the knowledge levels of the trainers. However, in a few states, the beneficiaries felt that the trainers lacked the necessary knowledge and were unable to conduct the training programme effectively.
- The teaching methods consisted of theory, practicals, and audio-visual classes. The trainees were mostly happy with the methods of training. The training was imparted in English, Hindi, the local language, and sometimes in a mix of English and Hindi, or English and the local language. While audio-visual tools were most prominent in West Bengal, practical methods were adopted to the largest extent in Delhi.
- In most of the states, the trainees did not face any difficulty in receiving the certificates. However, in a number of states, a very large proportion of trainees faced difficulty in taking the online examination. The process of issuing certificates was delayed in some states.

IV. Training Outcome

The indicators covered under this dimension include the ability to operate digital devices, purpose of usage of digital devices, their day-to-day application, and the overall outcome of DISHA training, which are discussed below:

- At the all-India level, 87 per cent of the trainees used digital devices for social communication and entertainment through accessing social media sites like Facebook and WhatsApp. While 38 per cent of the trainees used digital devices to check their email and for general Internet browsing, around 17 per cent of the respondents used devices like mobiles, and computers to look for jobs or avail of government services while 41-43 per cent of the trainees used such devices for playing games and online shopping.
- At the all-India level, 65 per cent of the respondents were unable to use digital devices as they had minimal access to the same, and were thus unable to report on the applicability of digital devices.
- An estimated 20 per cent of the trainees reported using digital devices for school work and 9 per cent cited their use for official work.
- On the whole, the trainees found the training to be very useful. While 38 per cent of them said that it had helped increase their general awareness, 37 per cent averred that it augmented their ICT knowledge; and 34 per cent affirmed that it boosted their confidence levels. A few of them also found the training to be useful in getting jobs, in securing promotions, and in enhancing their incomes.

RECOMMENDATIONS

Overall, the national and state level performances with regard to most of the indicators were good. However, gaps were identified in certain areas and corrective measures on those aspects will help in better implementation of the next phase of DISHA. Following are the key recommendations and suggestions made on the various components:

(i) Beneficiary Coverage

- Indigenous and effective mechanisms need to be adopted to bridge the social divide in gaining access to digital literacy and ICT. The marginalised categories such as the SCs, STs, and minorities should be mobilised to participate in such training programmes by creating an extensive support system that encourages such participation.
- While the programme was successful in providing financial support to SCs and STs, vigilance is required to ensure that the financial support accrues to the needy sections.
- Educated groups with high or higher secondary education, graduates, and diploma holders are the chief beneficiaries of the programme. Measures could also be evolved for targeting adults with limited or no literacy.

(ii) Training Components

- The outreach measures in a few states included advertising in local newspapers and radios, campaigns in slum areas, meetings with panchayat leaders and working population groups (for example, farmers' clubs, teachers, and *Anganwadi*/ASHA workers), and the use of mobile vans. These practices should also be adopted by the other states.
- Some of the trainees were not regular in attending the training. The attendance of trainees can be monitored to enhance the effectiveness of the programme.
- The DISHA content and material were delivered in different ways, with the most prominent being e-books. The mode of delivery of training modules should be decided as per the needs of the beneficiaries belonging to diverse age and educational groups, and their respective backgrounds. For instance, e-books were not accessible to all categories of students.

(iii) Training Infrastructure and Classroom Processes

- In some of the states, the infrastructure and facilities available in the training centres were not up to the mark. Physical verification of training centres would thus help in identifying equipped centres.
- An equal proportion of the beneficiaries were found to be unsatisfied with the ICT knowledge levels of the trainers. Hence, there is a need to ensure that qualified trainers are recruited in providing the training during the programme.
- Field inferences have made it clear that the chief beneficiaries of the training programme were youngsters between the ages of 15 to 25 years. Thus, efforts should be made to customise and re-design the training programmes based on the learning and retaining capacities of its respondents in this age group to ensure optimum output and utilisation.
- Amongst the teaching methods adopted, greater stress should be laid on practical demonstrations rather than theory lessons to help make learning interactive while at

the same time ensuring precision in implementation.

- Due to the prevalence of server and technical problems such as crowding on the portal, the examination was not conducted on time in some states. This indicates that the range of the bandwidth should be enhanced to prevent the portal from hanging due to multiple hits at a time. The examination can thus be conducted for different zones in different time slots.
- The examination should be conducted immediately after the training. There should be a minimum time gap between the closure of training and conduction of the examination.
- The process of issuing of certificates should be expedited.

(iv) Training Outcome

- Some of the students were not able to use digital devices even after acquiring the knowledge to do so due to lack of access to these devices, especially after completion of their training. As a result, they also tend forget their lessons. Hence, such students should be supported by follow-up sessions to improve and encourage better learning and thus ensure maximum benefits for them from the training.
- Less than 50 per cent of the respondents reported increased general awareness, improved ICT knowledge and confidence levels in applying digital devices. In order to maximise the benefits, innovative measures such as the conduction of an ICT quiz and games can be taken for the trainees at frequent intervals.

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ANNEXURES

Annex-1: DISHA Survey Interview Schedule for Trainees

INSTRUCTIONS

1. Please read carefully the following notes as well as note(s) against each question.
2. Please tick (√) the appropriate box against each question/information sought, unless mentioned otherwise. Tick (√) indicates 'Yes' (means positive selection). Please make multiple selections, if needed. If a box is not ticked, it will be treated as 'No' filled in that box.
3. The respective codes for each response have been mentioned within the relevant section. Where the respondents have other answers apart from the given choice, the answer can be elaborated under 'others' under 'code 9'.
4. Please give explanatory notes/ observations wherever required.
5. In the course of conversation with the respondents, special aspects that can be covered under 'case study' can be highlighted.
6. The information sought in this exercise is for research and survey purpose only.
7. Section I is a qualifying question to initiate the survey. Please assess and proceed further.

QUALIFYING CRITERIA

Particulars	Response
Have you attended the computer course under DISHA project? (If yes, proceed further)	

Section I: General Information

S. No.	Questions	Responses
1.	What is the type of your locality?	
	Town/Urban (1)	
	Village/Rural (2)	
2.	What is your age?	
3.	What type of ration card do you have?	
	BPL (1)	
	Non-BPL(2)	
	No ration Card (3)	
	No Response(4)	
4.	What is your educational qualification?	
	Illiterate (1)	
	Neo-literate (2)	
	Up to 7th standard (3)	
	Up to 10th standard (4)	
	Up to 12th standard (5)	
	Diploma (6)	
	Graduation (7)	
	Other (9)	
5.	How many members in your family are digitally literate?	
	None (1)	
	Less than 2 members (2)	
	2 to 4 members (3)	
	5 to 6 members (4)	
	More than 6 members (5)	
6.	How did you learn about and get registered in the DISHA programme?	
	Advertisements (1)	
	Friends (2)	
	Websites (3)	
	School (4)	
	Others (9)	
7.	Do other members of your family attend this training programme? Yes (1), No (2)	
8.	When did you enrol in this course? (MM/YYYY)	
9.	When did you appear for thefinal examination? (MM/YYYY)	
10.	Was there a gap in giving the exam? If yes, mention reason(s) No (1), Yes (9) _____	

S. No.	Questions	Responses
11.	Mode in which you have received your certificate?	
	Provisional Online/Print version (1)	
	Certificate in original (2)	
	Not received in any form (3)	
12.	How much fee did you pay for the course?	
	No fees (1)	
	Rs. 125 (2)	
	More than Rs. 125 (3)	
13.	How much fee did you pay for receiving the certificate?	
	No fees (1)	
	Rs. 100 (2)	
	More than Rs. 100 (3)	

Section II: Satisfaction in Training

S. No.	Questions	Responses		
1.	Did you have your classes on a regular basis?			
	Always regular (1)			
	Mostly regular (2)			
	Irregular (3)			
2.	What is your opinion on the basic IT facilities in the training centre?	**GOOD (1)**	**AVERAGE (2)**	**BAD (3)**
a.	Computers			
b.	Internet Connectivity			
c.	Power back-up			
d.	Printer			
e.	Web-Cam			
f.	Scanner			
3.	What was taught in the class?			
a.	Basic computer applications (Yes-1, No-2)			
b.	Use of mobile/smartphones for internet browsing (Yes-1, No-2)			
c.	Use of tablets for Internet browsing (Yes-1, No-2)			
d.	Use of the Internet (Yes-1, No-2)			
e.	Accessing online government service (Yes-1, No-2)			
f.	Others (9) _____			
4.	In what all ways was the course material under DISHA supplied?			
a.	Through projectors/audio-video mode (Yes-1, No-2)			

S. No.	Questions	Responses		
b.	Booklet (Yes-1, No-2)			
c.	e-Content of book (Yes-1, No-2)			
d.	Photocopies of study materials (Yes-1, No-2)			
e.	Others (Yes-1, No-2)			
5.	Did the training material meet the needs of differently abled students in your class? If yes, what are they?			
a.	Touch-based training content (Yes-1, No-2)			
b.	Application-based training content (Yes-1, No-2)			
c.	Others (Yes-1, No-2)			
6.	What is your opinion on the knowledge of your trainer?	**GOOD (1)**	**AVERAGE (2)**	**BAD (3)**
7.	Rank the teaching methods that were used in your centre	**Rank from 1 to 4**		
	More of theory			
	More of practical by using devices			
	More of audio-visual/projectors			
	Mix of all			
8.	What is the language of instruction in class?			
	Hindi (1)			
	Local language (2)			
	English (3)			
	Mix of all (4)			
9.	Did you face difficulty in taking the online examination?	Yes (1)	No (2)	
	If yes, give reasons			

Section III: Training Outcome

S. No.	Questions	Responses		
1.	Which device can you operate effectively after the DISHA training?	**GOOD (1)**	**AVERAGE (2)**	**BAD (3)**
a.	Computer/laptop			
b.	Tablet			
c.	Mobile/smartphone			
d.	Others			
2.	For what purpose do you use the digital device?			
a.	Sending/receiving mail (Yes-1, No-2)			
b.	Search the Internet for information (Yes-1, No-2)			
c.	Accessing Facebook/Twitter (Yes-1, No-2)			
d.	Painting (Yes-1, No-2)			
e.	Searching for jobs (Yes-1, No-2)			

S. No.	Questions	Responses
f.	Availing of Government services (for example, Aadhaar card, booking of tickets,etc.) (Yes-1, No-2)	
g.	Playing games (Yes-1, No-2)	
h.	Others (Yes-1, No-2)	
3.	Did you get any award or incentive for good performance?	
a.	Monetary incentive (Yes-1, No-2)	
b.	Laptop (Yes-1, No-2)	
c.	Tablet (Yes-1, No-2)	
d.	Smartphone (Yes-1, No-2)	
e.	Free next level training (Yes-1, No-2)	
f.	Any other_____	
4.	In what ways is the training helpful in day-to-day activities?	
	Doing school/college work (1)	
	Doing office work (2)	
	Not able to use/No access to digital devices (3)	
	Other (9)	
5.	What is the overall benefit of the DISHA training?	
a.	Improved mygeneral awareness (Yes-1, No-2)	
b.	Improved my ICT knowledge (Yes-1, No-2)	
c.	Increased my confidence level (Yes-1, No-2	
d.	Got a job (Yes-1, No-2)	
e.	Got promotion in my job (Yes-1, No-2)	
f.	Got more income (Yes-1, No-2)	
g.	Able to teach others computer applications (Yes-1, No-2)	
h.	Others (Yes-1, No-2)	
6.	What are your suggestions on the infrastructure, course material, exam pattern, course duration, trainers, etc. of the DISHA training/course? (kindly provide answer to this section)	

Annex-2: Impact Assessment of DISHA: Empirical Assessment 2017 Questionnaire Codes

Sections	Questions	Excel Sheet Title	Code
Qualifying	Have you attended the computer course under the DISHA project?	TRAINING_ ATTENDED	Yes - 1, No - 2
Section I	**General Information**	**General Information**	
1.	What is the type of your locality?	AREA	Town/Urban =1, Village/Rural = 2
2.	What is your age?	AGE	
3.	What type of ration card do you have?	RATION	BPL = 1, Non - BPL = 2, No Ration card = 3, No Response = 4
4.	What is your educational qualification?	EDU	illiterate = 1, Neo literate = 2, up to 7th standard = 3, up to 10th standard = 4, up to 12th standard = 5, diploma = 6, graduation = 7, other = 9
5.	How many members in your family are digitally literate?	DIG_LIT	None = 1, Less than 2 members = 2, 2 to 4 members = 3, 5 to 6 members = 4, more than 6 members = 5
6.	How did you get registered in the DISHA programme?	REGN	Advertisement = 1, friends = 2, websites = 3, school = 4, others = 9
7.	Do other members of your family attend this training programme?	FAM_NDLM/DISHA	yes = 1, No = 2
8.	When did you enrol in this course?	ENROL	MM/YYYY
9.	When did you appear for the final examination?	EXAM_YR	MM/YYYY
10.	Was there a gap in giving the exam? If yes, mention reason(s).	GAP_EXM	No = 1, Yes = 9
11.	Mode in which you have received your certificate?	CERT_MODE	Provisional online/print version = 1, Certificate in original = 2, Did not receive in any form = 3
12.	How much fee did you pay for the course?	FEE	No fees = 1, Rs. 125 = 2, More than Rs. 125 = 3
13.	How much fee did you pay for receiving certificate?	CERT_FEE	No fees = 1, Rs. 100 = 2, More than Rs. 100 = 3
Section II	**Satisfaction in Training**	**Satisfaction in Training**	
1.	Did you have your classes on a regular basis?	REGULAR_CLASS	Always Regular = 1, Mostly Regular = 2, Irregular = 3
2.	What is your opinion on the basic IT facilities in the training centre?	FACILITIES	
a.	Computers	COMP	Good = 1, Average = 2, Bad = 3
b.	Internet Connectivity	INTER_CONN	Good = 1, Average = 2, Bad = 3

Sections	Questions	Excel Sheet Title	Code
c.	Power Back-Up	PWR	Good = 1, Average = 2, Bad = 3
d.	Printer	PRNT	Good = 1, Average = 2, Bad = 3
e.	Web-Cam	CAM	Good = 1, Average = 2, Bad = 3
f.	Scanner	SCAN	Good = 1, Average = 2, Bad = 3
3.	What was taught in class?	LESSON	
a.	Basic computer application	BCA	Yes = 1, No = 2
b.	Use of mobile/Smart phones for Internet browsing	MOB	Yes = 1, No = 2
c.	Use of tablet for Internet browsing	TAB	Yes = 1, No = 2
d.	Use of Internet	INTR	Yes = 1, No = 2
e.	Accessing online government service	Gov_SERV	Yes = 1, No = 2
f.	Others	OTHR	9____
4.	In what all ways was the course material under DISHA supplied?	CRSE_MAT	
a.	Through projectors/audio-video mode	AUD_VID	Yes = 1, No = 2
b.	Booklet	BOOK	Yes = 1, No = 2
c.	e-Content of book	e-BOOK	Yes = 1, No = 2
d.	Photocopies of study materials	PHTOCPY	Yes = 1, No = 2
e.	Others	OTHER	9_____
5.	Did the training material meet the needs of differently abled students in your class? If yes what are they?	DIFF_ABLED	
a.	Touch-based training content	TCH_BSD	Yes = 1, No = 2
b.	Application-based training content	APP_BSD	Yes = 1, No = 2
c.	Others (specify)_____		
6.	What is your opinion on the knowledge of your trainer?	TRAINER	Good = 1, Average = 2, Bad = 3
7.	Rank in order the teaching methods that were used the most (theory, practical, audio-video, mix of all)	METHOD	Rating – 1 to 4, based on most used teaching method in class
8.	What is the language of instruction in class?	LANG	Hindi = 1, Local language = 2, English = 3, Mix = 4
9.	Did you face difficulty in taking the online examination? If yes, give reasons	DIFF_EXM	No = 1, Yes = 9_____
Section III	**Training Outcome**	**Training Outcome**	
1.	Which device can you operate effectively after the DISHA training?	DEV_USE	
a.	Computer/laptop	COMP	Good = 1, Average = 2, Bad = 3
b.	Tablet	TAB	Good = 1, Average = 2, Bad = 3
c.	Mobile/smartphone	PHONE	Good = 1, Average = 2, Bad = 3
d.	Others	OTHR	Good = 1, Average = 2, Bad = 3

Sections	Questions	Excel Sheet Title	Code
2.	For what purpose do you use the digital device?	PURPOSE	
a.	Sending/receiving mail	MAIL	Yes = 1, No = 2
b.	Search the Internet for information	BRWSE	Yes = 1, No = 2
c.	Accessing Facebook/Twitter	FB	Yes = 1, No = 2
d.	Painting	PAINT	Yes = 1, No = 2
e.	Searching for jobs	JOB	Yes = 1, No = 2
f.	Availing government services (for example, Aadhaar card, booking tickets,etc.)	GOV_SERV	Yes = 1, No = 2
g.	Playing games	GAME	Yes = 1, No = 2
h.	Others	OTHR	9_____
3.	Did you get any award or incentive for good performance?	AWD_PERF	
a.	Monetary incentive	MONEY	Yes = 1, No = 2
b.	Laptop	LAPPY	Yes = 1, No = 2
c.	Tablet	TAB	Yes = 1, No = 2
d.	Smartphone	SPHONE	Yes = 1, No = 2
e.	Free next level training	NXT_TRNG	Yes = 1, No = 2
f.	Any other (specify)_____		
4.	In what ways is the training helpful in day-to-day activities?	DAY2DAY	School/college work = 1, office work = 2, not able to use = 3, others = 9
5.	What is the overall benefit of the DISHA training?	BENEFIT	
a.	Improved mygeneral awareness	AWARE	Yes = 1, No = 2
b.	Improved my ICT knowledge	KNOWLGE	Yes = 1, No = 2
c.	Increased my confidence level	CONFID	Yes = 1, No = 2
d.	Govt a job	JOB	Yes = 1, No = 2
e.	Govt promotion in my job	PROMO	Yes = 1, No = 2
f.	Govt more income	INCME	Yes = 1, No = 2
g.	Able to teach others computer applications	TEACH	Yes = 1, No = 2
h.	Others	OTHR	9_____
6	What are your suggestions on the infrastructure, course material, exam pattern, course duration, next level of training, trainers, etc. of the DISHA training/course?		

Council for Social Development
Sangha Rachna, 53, Lodhi Estate, New Delhi - 110003. India
Tel.: 91-11-24615383, 24692655, 24611700, 24618660
Fax No. 24616061
E-mail: csdnd@del2.vsnl.net.in | Website: www.csdindia.org