

Summary

Egyptian government endeavors to build "Digital Egypt" and forges an Egyptian digital society that adopts and integrates technologies in almost every aspect of life. Therefore, Egypt seeks to promote the development of ICT infrastructure and improve digital services in government agencies and raise the quality and efficiency of services, by improving the working environment, providing support for the decision-making process and finding solutions to major issues in society.

The digital illiteracy is one of the most important challenges facing Egypt at the present time, and it is well known that there is no development sustained in the country without the presence of digital education for the community members. It will be a must to tackle this challenge and find a vital solution for the digital illiteracy in Egypt.

A brief definition of information technology literacy can be provided, which can be summarized in the possibility of operating and communicating with information technology devices such as computers, video, etc. And grasp and understand the rest of the formation of subsystems of systems or networks. Understand software documentation and how to use it. Recognize modern terminology related to digitization to obtain quality of work.

RCTWS developed its " Learning and Development Strategy " in 2015, using balanced score card approach, with four pillars one of which is addressing internal process; to develop training curriculum based on training needs analysis of career paths, to adopt with modern Learning Techniques and Technologies, to improve the enabling training environment, to assess training impact, to standardized all training; administrative and logistic processes, to adopt Distance Learning and Digital Literacy, and to mainstream gender.

RCTWS according to its strategy invest in the technological infrastructure, both software and hardware to improve learning environment and cope with rapid changes.

To address sustainability of digital literacy program, organizational chart was updated to include ICT directorate and IT unit and IS center.

RCTWS developed skills of its staff to cope with modern learning technology, and utilize MLS (Moodle Learning System), and develop Training Information bank to accumulate Learning Knowledge, Questions, and curriculum.

Organizational Chart



RCTWS Strategy pillars:



Internal Processes

- Curriculum development based on training needs analysis of career paths.
- Adopting with Modern Learning Techniques and Technologies.
- Enabling environment for the implementation of different program.
- Monitoring and Evaluation of the training impact.
- Standardization of all administrative and logistic processes.
- Gender Mainstream.
- Distance Learning and Digital Literacy.

To face the strategic challenge of digital illiteracy among governmental staff, RCTWS develop and customize its own distance learning and digital literacy programs, which proved its efficiency and effectiveness during the invasion of covid-19 pandemic.

Distance Learning and Digital Literacy Program Gant chart									
activities	2013	2014	2015	2016	2017	2018	2019	2020	2021
Strategy Development									
Strategy Implementation									
Establishing Infrastructure									
Staff Traiing	1			1					
Program (1)									
Program (2)									
Program (3)									
Program (4)									
Program (5)									

Illiteracy in Egypt is no longer the inability to read and write, but illiteracy is the digital illiteracy and the inability to keep pace with the developed world and modern technology and the localization of technology to keep pace with rapid changes and adapt with the chaotic environment.

In alignment with Egypt Vision 2030, and Egypt's digital transformation strategy, Regional Center for Training and Water Studies RCTWS, developed and customizes its own distance and digital literacy learning programs, according to its Learning and Development Strategy, which foreseen relevant to Egyptian government employees, to address challenges related to digital transformation.

All the modules are designed by Experts and professionals to address the Egyptian culture and the new digital governmental environment in Egypt, and to fill the learning gaps effectively and efficiently.

This strategy combats illiteracy of government's employees in the field of distance learning and digital transformation as in following programs



Program 1: Basics for utilizing video conferencing programs for learning

As a pre requisite for distance learning, training in video conferencing applications in PC and mobile must be provided intensively prior to the execution of the training course. These program main objectives are to prompt the urge of using the new technologies, and developing skills of using Learning features of applications like (Zoom, or WebEx, and WhatsApp), and to enhance communication before, during, and after course delivery.

Program 2: Basics for using Moodle platform

Moodle stands for (Modular Object- Oriented dynamic Learning Environment), as an open-source learning management system, RCTWS utilizes it along with program implementation process. Trainees whether in the headquarters or in the six branches allover Egypt have to get acquainted with the Moodle features prior to any training course whether distance, blended, or even physical training. Exclusively RCTWS Provided this program to all trainees since beginning of covid-19 pandemic.

Program 3: Basics of computer, Internet, and Windows Operation System

RCTWS developed the learning program "Basics of Computer, Internet, and Windows Operating System" to address the very basics competencies (knowledge, skills, attitude) of computer operation, internet navigation, Email creating, and data input and output. The program main objective is to be acquainted with Personal Computer and Mobile learning.

Windows-based computer including managing files and extracting ZIP files, and to be comfortable with using a web browser, e-mail, and a PDF reader such as Adobe Acrobat Reader...etc.

Program 4: Basics of MS-Office / ICDL

After conducting placement test and analyzing the result, basics of MS-Office are delivered as follows: -

- Training in Word editing and processing delivered within three weeks
- Training in Spreadsheets to perform calculations, display data, and Basic Mathematical skills, delivered within three weeks
- Power point presentation skills delivered within two weeks
- The main objective of the course is to be comfortable in dealing with word processing, tables, spreadsheet calculations, database spreadsheet, and power point presentation skills.

Program 5: Digital transformation Programs

The main objective of this program is to develop competencies related how to communicate effectively with social media, search engines, outlook, and Google drive features. The courses are as follows: -

- Training in Digital transformation within two weeks
- Training in Digital Marketing within two weeks
- Training in electronic documentation within one week
- This training program address the competencies gaps in the Egyptian governmental environment related to distance communication in a professional way, utilizing tools of social media, Google drive features, outlook and MS-office. In addition to competencies related to electronic documentations.

RCTWS assure high Learning Quality by:

- Developing a balanced Learning and development Strategy based on Balanced Score Card approach.
- Assessing training needs by collecting and analyzing real data for five years for employees within the Ministry of Water Resources and Irrigation
- Setting SMART objectives
- Customizing courses to focus and address directly the learning gaps.
- Designing and Conducting Placement test electronically with Moodle
- Classification of trainees at similar educational levels
- Design a flexible and customized course to each group
- Using a holistic evaluation approach
- Applying evaluation feedback
- Carrying out Impact assessment

Learning quality can be identified by assessing Learning efficiency, effectiveness, relevance, pertinence, Impact, innovation, sustainability and gender equality, which we will elaborate hereinafter.

Efficiency and Effectiveness

Learning Efficiency is the optimum use of time, money, and efforts in learning process, and Learning Effectiveness is how you are focus on addressing learning gaps to improve the performance.

Literacy program within RCTWS Designed to be very flexible to address each trainee by:

- Conducting a well prepared placement test
- Classifying trainees according to their learning gaps into groups of similar needs

- Divided programs into modules
- Focusing on Practical training in computer labs not theoretical one.
- Simplifying training content
- Using modern learning techniques
- Enjoy while learning
- Learning by doing
- Improving learning environment
- Conducting final test to identify the learning progress

Relevance and Pertinence

The training curriculum is designed and customized to suit Egyptian culture and, and learning gaps, starting from the very beginning, and focus on changing attitude of dealing with modern technology.

RCTWS's Literacy Program is too much focus on distance learning, e-communications, utilizing modern technologies in a smart way, digital marketing, and electronic documentation, so it is much relevant to:

- Egyptian government orientation to "Digital Egypt"
- Ministry of Water resources and Irrigation 2030 Strategy, specially the forth pillar of preparing the working environment
- RCTWS Balanced Strategy which focus on utilizing modern technologies in learning
- UNESCO Prizes related to Distance Learning and Digital Literacy

Impact

Measuring the impact of digital literacy has become tangible and has a lot of evidence and proofs, for example, but not limited to:

- Impact can be proved by coping with covid-19 pandemic (during the peak of the pandemic RCTWS provided training for about 1000 trainee online), despite of the prime minster decree to abandon training budget for all governmental training centers
- Digitization of water requirement process using mobile application in the water sector.
- Digitalization of some contracting processes within the water sector and state institutions.
- Digitalization of collecting fines of water violations.
- Digitalization of water level and water quantities by mobile application, in the water sector.
- Digitalization of all training processes before, during, and after the training implementation.
- Digitalization of all money transactions processes in water sector and in all-state institutions, and all cash transactions were prohibited.

- The ongoing process pursued of digitalization of RCTWS experimental labs, starting with (concrete and material lab).
- The Ministry of Water Resources and Irrigation MWRI supported By RCTWS adopted electronic tests for selecting potential leaders.

Creativity

Creativity can be proved by coping with covid-19 pandemic (during the peak of the pandemic RCTWS provided training for about 1000 trainee online), despite of the prime minster decree to abandon training budget for all governmental training centers.

Adapting with rapid changes, coping with the strategic challenges, increasing pace of implementation of the training courses with high quality, and finding solution to emerging problem are all proves of creativity.

Sustainability

Sustainability of this program is assured by:

- RCTWS Learning and development strategy which focus on Utilization of technologies in learning
- The well-Established ICT infrastructure (Networks, servers, Wi-Fi, PCs, Information Center, Moodle platform, internet accessibility anytime anywhere...etc.)
- The improvement in organizational chart to cope with changes ie.
 - Establishing of IT unit
 - Establishing of IS unit
 - Establishing of ICT and M&E general directorate
- Utilizing Moodle platform in Learning
- Establishment of Information Bank i.e. Digital bank for Questions

Gender equality

Believing in the vital work of women in public awareness in the field of water, RCTWS gives great interest to gender issues. Many actions were done in this concern such as Participation of school students in RCTWS training programs to develop their awareness of water challenges of the importance of rationalization in water use.

Noteworthy, increase in the number of female trainees and trainers in the last five years on both national and regional levels as follow:

- The percentage of female trainees increased from 35% to 45%.
- The percentage of female trainers increased from 15% to 25%.

- Design to increase awareness of public in the field of water and gender issues.
- Hosting activities for women, children and marginalized women in the field of water rationalization.

Digital references:

1-Website: https://rctws.org/ 2-Facebook https://www.facebook.com/rctws.org 3-YouTube https://youtu.be/bBuFxO1znvQ https://youtu.be/1MQXtjeJoMY