

Digital Citizenship - A Pathway for Digital Skilling through 21st Century Learning Design

Akanksha Saini¹, Tanvir Singh²

IIT Bombay Spoken Tutorial, Ministry of Education, Government of India

¹akanksha88@iitb.ac.in, ²tanvir_singh@iitb.ac.in

Abstract:

In today's world, every click leaves an impact on society. It can create massive turbulence as it has the power to do so. It comes with pros and cons; the only concern is what skill can be taught for effective use of that particular click. The Skill which can be used for this purpose is Digital Citizenship. It is the need of an hour to interact meaningfully on social media platforms or simply online. This paper reflects the deep study of various guiding principles supporting Digital Citizenship, which is a pathway for Digital Skilling through 21st Century Learning Design.

Keywords: Digital Citizenship, 21st Century Learning Design, Digital Skilling

I. INTRODUCTION

21st Century Skills are the learning skills that are required to create a future workforce, which is commonly known as Fourth Industrial Revolution. Those skills are learning skills which include Critical Thinking, Creativity & Innovation, Communication & Collaboration; Literacy Skills which include Information literacy, Media literacy and Technology literacy and Life skills which has Flexibility & Adaptability, Leadership & Responsibility, Initiative & Self-Direction, Productivity & Accountability and Social & Cross-Cultural Interaction [1,2]. This is the reason, it is high time for the transition to switch our existing teaching-learning process and inculcate required approaches so as to create 21st Century Skills among the students & educators too [3]. Thus, it is the only way to achieve the goal of quality education. Further, Digital Citizenship which is a set of guiding principles to direct people interacting online safely, wisely and appropriately will play a vital role.

II. DIGITAL CITIZENSHIP

Digital Citizenship is a positive approach to:

- Establish a good community using the technology
- Maximise the reach to the masses through numerous ways of media
- Engage with people of different thoughts online, that too with respect.
- Examine if sources are authentic use the correct information

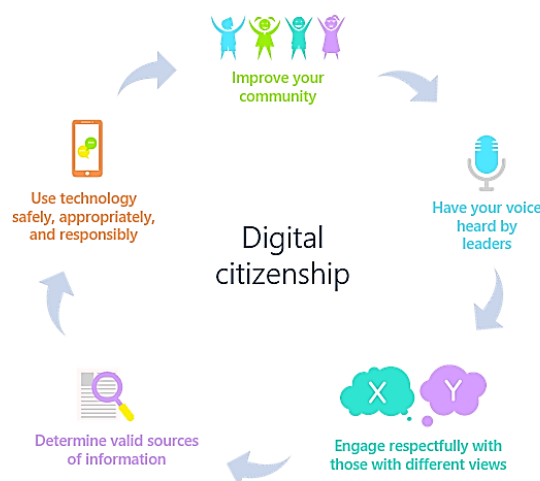


Fig.1: Definition of Digital Citizenship

As Jennifer Fleming says, "Teaching in the Internet age means we must teach tomorrow's skills today" (The Yale Tribune | Teaching Tomorrow's Skills Today), so it becomes very important to understand the change that we need to bring & implement. In today's world where everything is available on Internet, it becomes tricky to select appropriate & authentic piece of

information. Being a responsible Digital Citizen, it is crucial to detach oneself from traditional methods and teach skills of future [4].

III. RESPONSIBILITIES OF DIGITAL CITIZEN

We have categorised the various responsibilities of Digital Citizen as follows:

A. *Be Online – Use of Technology*

Good digital citizens maintain awareness of how they use technology tools. It is important for learners to be mindful of how their online activities can impact their health and wellness, as well as other people in their physical and digital spaces. They build awareness of how online time affects health and wellness. Some of the facts are:

- In a 2017 survey conducted by the [American Psychological Association](#), 81% of respondents said they were constantly or often connected to a device. In this same survey, 65% of Americans agree that periodically disconnecting from technology is a good thing, but only 28% follow through.

Methods to check on yourself:

- Use timers/alarms for screen breaks.
- Blocks distracting websites to enhance focus while doing work.
- Survey tool to increase communication in the learning environment and provide value to student input.
- Mobile app that allows family members to set screen limits, see browsing history across devices, see device locations, and more.

B. *Be Public*

Be mindful that online interactions can never truly be deleted.

- Good practices in this area include:
- Always think before posting online,
- "How does this improve what is already there?"
- Always think if this action online represents the TRUE self.
- Old or inactive accounts should be disabled or deleted.
- Ask before tagging others in photos.

Some of the facts are:

- 70% of employers say they check social media as a screening method before hiring an applicant.
- 54% of employers surveyed said they chose not to hire a candidate based on content found on social media.
- 36% of surveyed college admissions officers admit to visiting prospective students' social media before granting entry to their university.

C. *Be Personal – Digital Privacy*

Being connected with others is a good thing. A March 2020 [Psychology Today article](#) says that people who are connected with others have

- Lower anxiety rates.
- Fewer incidents of depression.
- Higher self-esteem.
- Increased empathy toward others.

D. *Be Respectful – Intellectual Property*

Educators must teach learners the basics of copyright and fair use of online content, including ways to avoid plagiarism and respect ownership of digital content. Some of the key points are as follows:

- Understanding the difference between citation and attribution is an important concept.
- Citations give credit to the authors of restricted or copyrighted sources. Attributions are used when sources are not restricted.
- Uses artificial intelligence (AI) technology to discover information about an image.
- Filter searches for license restrictions.

E. *Be Perceptive – Knowing Trusted Sources*

It comes under Information Literacy, skills needed to:

- Find information
- Retrieve information
- Analyse information
- Use information

This section can be concluded by saying that technology continues to evolve and become more prominent in schools, and it is imperative that good digital citizenship skills are covered in different learning environments. Good digital citizenship skills can't be taught or mastered all at once. Educators should look at the other components of good digital citizenship and find ways to integrate them into lessons and activities already being presented in the classroom [5]. The following section will discuss the implementation of the Ministry of Education, Government of India Program that is run and developed by IIT Bombay. The name of the program is Spoken Tutorial which teaches Free/Libre Open Source Software (FLOSS). It is taken as an example that acts as a crucial tool to implement 21st Century Skills.

IV. SPOKEN TUTORIALS – A TOOL TO IMPLEMENT 21ST CENTURY SKILLS

The Spoken Tutorial website is a highly acclaimed educational resource offering a wide range of courses on Free and Open Source Software. With its self-paced, multilingual approach, learners can access courses from anywhere at any time, and in a language of their choice. The courses are designed to be simple and easy to follow, yet also cater to the needs of learners at all levels, from basic to intermediate and advanced. Engaging digital content and practical exercises ensure that learners are actively engaged in the learning process. The software taught is relevant to various disciplines, including engineering, pure sciences, and undergraduate and postgraduate studies, as well as commerce, arts, and management streams. Additionally, the website offers courses aimed at the school level, providing visual aids for difficult concepts in mathematics and science, and assisting teachers in preparing lesson plans, explaining abstract concepts, and assigning digital coursework to their students.

The learning can happen in an organised manner as well. Faculty in institutes can organise their batch of students into groups, who will learn a particular software course for an entire semester. The ST course can be mapped to the Course/Lab manuals and systematic learning can take place. If the academic timetable permits, then a single student can learn upto 3 different ST courses in one semester during the designated academic Lab hours.

End-of-Course online tests and certificates are available for those who wish to test their expertise in a particular software. These certificates give an edge to students during placement by increasing their employability potential.

A. *Student Training*

Till date, Spoken Tutorial trained 71,18,933 students covering 5437 Institutes through 1,41,130 Workshops. Table 1 shows the statistics of Spoken Tutorial Student Training Workshops whereas Fig.2 shows Graphical Representation of the same.

Table 1: Spoken Tutorial Student Training Workshops

Total number of Workshop/Training	141130
Total number of Institutes	5437
Participants Count	7118933
Total participants (women)	2740235
Total participants (men)	4050244

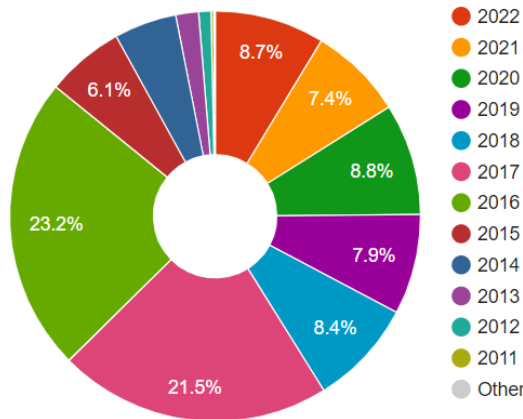


Fig.2: Graphical Representation of Spoken Tutorial Student Training Workshops

B. Faculty Training

Similarly, what Spoken Tutorial did with students training, total of 1,93,741 teachers trained covering 811 Institutes through 3164 workshops. Table 2 shows the statistics of Spoken Tutorial Teacher Training Workshops, whereas Fig.3 shows Graphical Representation of the same.

Table 2: Faculty Training

Total number of Workshop/Training	3164
Total number of Institutes	811
Participants Count	193741
Total participants (women)	98022
Total participants (men)	95719

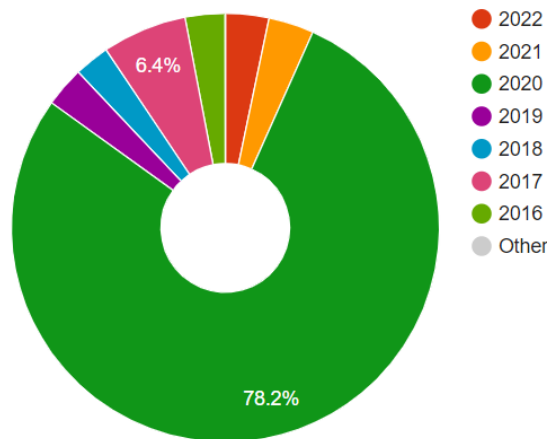


Fig.3: Graphical Representation of Spoken Tutorial Teacher's Training Workshops

C. Online Test

After training of learners, they appear for the test. The data for the same is shared below in Table 3.

Table 3: Online Assessment Tests by Spoken Tutorial

Total number of Online-Test	46844
Total number of Institutes	2063
Participants Count	1607101

D. Individual Learning Workshop

On the platform of Spoken Tutorial, individuals can also self-enrol, take the course & after training appear for the test to get completion certificates. Total number of such events & participant count is shown in Table 4.

Table 4: Individual Learning Workshops

Total number of Events	1486
Participants Count	20199
Total female participants	10875
Total male participants	9302

V. CONCLUSION

Digital Citizenship plays a vital role in 21st Century Learning Design (CLD) through which learning communities can witness Digital Skilling in themselves. It shows the path of how one can have a positive impact on society following the guiding principles of Digital Citizenship, also considered as responsibilities. With the use of various platforms like Spoken Tutorial that supports 21st Century Learning Design should be widely used by the learning community, whether student or faculty, which enhance the skills and ready the workforce for the future. This paper throws light on various responsibilities being a Digital Citizen and also, from the point of instance, implementation of the Spoken Tutorial IT Training Program is discussed.

VI. REFERENCES

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