SMART Information Resource Centers for Generation Z Users in the Digital Era

Ravindra D. Sarode,

Professor,
Department of Library and Information Science,
Sant Gadge Baba Amravati University, Amravati (MS), 444602

ABSTRACT:

This research paper focused on how to make Smart Information Resource Centers (IRCs) for Gen Z in digital era. This paper concentrates on the concept of Smart IRCs and the Gen Z users. It highlights the existing digital trends and role of IRCs and IRMs which is very important to bridge the gap between digital technologies and Gen Z users.

In this research paper review was taken for existing status of the IRCs and also the study of greater use of new equipments and interactive communication technologies to make smart IRCs for Gen Z users. The paper highlights the various services and activities for IRMs to attract more Gen Z users in the SMART IRCs. Further research paper discussed on various challenges for IRMs and gives some suggestions for the development of IRCs.

KEYWORDS: SMART Information Resource Centers (IRCs), Information Resource Manger (IRM), Gen Z users, Information Communication Technology (ICT), Digital Information Technology (DIT), Skills, etc.

1. INTRODUCTION:

The term, 'library' has defined by various research scholars and information scientists at various stages of development in technologies, changes in manpower, information media, library services, and library users as the factors of the libraries. The nature and functions of the traditional library change due to advancement in digital technology. The overall working of the library changes, users are became more techno-savvy and traditional library services became digital. Therefore, term, 'library' is used as 'Information Resource Center' and the term; 'librarian' is used as 'Information Resource Manager' in this research paper by author. The most of the IRC's users are the Gen Z users; they are smart in use of technology. IRC will become smart with the help of programming language and smart technological programmes created with the help of human intelligence. To perform better in the information resource centers trained Information Resource Manager (IRM) will needed. Simply, smart information resource center is assembled or combination of various computer and allied technologies, hardware and software installed through programmes for IRCs. This research paper highlighted the services, activities, and essential skills for IRMs in digital era.

2. DEFINITIONAL ANALYSIS OF TERMS AND CONCEPT:

2.1 Information Resource Center:

The information resource center, "generally referred to as the knowledge hub of higher education institutions, is saddled with the responsibility of supporting the teaching, research and community engagement functions especially in the colleges and university" (Schmidt, 2006).

The changing types of users, advancement in technology, nature and functioning of IRCs are the cause of modification in information services. This modification is the need of today's digital environment. This modified information services is provided by information resource centers.

2.2 SMART Information Resource Center:

The term "smart" is used in different text by various meaning, the commonly used to describe the capability of an object, person or technology in presenting the intelligence which has been implanted. The word "smart" is printed on the phone to show its intelligence so as to as to support many activities or everyday human life through various services provided (Muhamad et al, 2017). The term "smart" refers mainly to efficiency due to the use of technologies and to an automatization of processes to facilitate the working and everyday environment (Chan, 2018).

Smart is a network enabling free access to all information resource centers. The term "SMART Information Resource Center" used in different contexts as a synonym for the various terms, such as "SMART Library", "intellectual library", "digital or virtual library". The meaning of the term 'smart' is intelligent, flexible, adaptive, extendible, etc. Simply the SMART information resource center is solution to the existing library problems in a digital way. "It is sophisticated true multimedia streaming and digital delivery solution through a device and browser agnostic" (Khuntia, Mishra & Ramesh, 2016).

According to the Sotonye and Isaac in the year 2021, the term 'SMART' is used firstly in their research paper namely, 'What is "Smart" About Smart Libraries?' They used acronym SMART in which components stands for:

S = Services
M = Methods
A = Automation
R = Resources
T = Technology

Similarly, the Information Resource Manager (IRM) was providing access to digital information resources. For this they require to learn new skills and understanding evolving digital and virtual technologies. The skills such as negotiating license agreements, digital literacy, and Technological Proficiency is needed to provide quality virtual services to the Gen Z users.

The functioning role of traditional librarians is changed and they recognize as an Information Resource Manager in this digital environment. Here, in the context of Knowledge, qualities, and skills of the IRMs, the author suggested acronym of a SMART, in which components stands for:

S = Self-reliant
M = Motivational
A = Apprehensiveness
R = Rational
T = Techno-savvy

2.3 Generation Z:

The Generation Z, often referred to as Gen Z, is a generation which has come in the world which is defined by advance technology, quick access to information, and a rapidly changing digital environment. This Gen Z people were born roughly between the mid-1990s and the mid-2010s or 2012. The Gen Z is the first generation which completely grows and matured in the digital era.

2.4 Generation Z Users:

Generally, the people who seek and use the information through IRCs to fulfill their educational, career and or personal requirement are refereed as users or clientele. The concept of 'Generation Z users' is same as traditional library users. They may be any person who enters the information resource center's premises whether or not they are a member or have enrolled for the information resource center. The Gen Z users are techno-savvy and using more social media platforms for information searching in the digital era.

3. DIGITAL TRENDS FOR GEN Z USERS AND INFORMATION RESOURCE CENTER :

Gen Z users was the primary generation to have prevalent access to the Internet from an early age. Internet and digital technologies has strongly influenced to the Gen Z users in terms of education, communication, and also their career information behavior. These are already trained and digital natives with the help of technology. The mostly Gen z users are having knowledge about technology due to actual use of it. To increase footfall in the IRCs, IRMs should take serious actions and to attract Gen Z users in their IRCs. The IRMs must know the recent digital trends for Gen Z users. Following are the activities to increase footfall in the IRC.

- Bridging the quantitative skill gap
- Collection strategies for professional development of Gen Z users
- Healthy communication with Gen Z users
- Embracing Gen Z users
- Shaping work study to fit Gen Z users
- The rise of educational approach such as STEAM (Science, Technological, Engineering, Arts & Mathematics)

4. SERVICES AND VARIOUS PROGRAMMES FOR SMART IRCs:

Gen Z users have been born and grown up in a magical world of technology, where the presence of digital innovation is essential and the internet is surrounded them. They have highest number of computer gazette and technological devices in their routine. Most of the information resource centers established digital services for the Gen Z users. Due to techno-savvy behaviors of these users and their information

needs, IRCs and IRMs were adapted services and conducted various programmes. Following are the few examples of services and programmes which are applicable for IRCs.

4.1 Smartphone Access in IRCs:

These Gen Z users commonly used Smart/Android mobile phones. The Smartphone technology is the most economic and easy to access and communicate with others. It is flexible, fastest and share information at long distance boundary within time. Most of the IRCs are adopting Smartphone interfaces along with the new applications. This is effective as compared to traditional way in terms of delivery of service to their Gen Z users. Some of the common services give by IRCs are-

- **SMS notifications:** Notifications of new information arrivals, overdue statement, book claim/registration, instant messaging for reference services.
- **Optimized IRCs facilities:** Gen Z users can optimized facilities such as websites/blogs/WEB-OPAC, e-book access and other electronic resources access through their Smartphones.
- **Special services through Smartphone:** SMS alert services, IRC site, reference enquiry, CAS and SDI Services, IRC Maps and floor plan, suggest a purchase of books and journals, new arrivals, IRCs news and current update, blogs and events, etc. are some examples of special services through Smartphone.

4.2 Use of Social Media in IRCs:

IRMs and IRCs staffs were already starting to use social media for various purposes. This staffs were acquainted with social media technologies such as Facebook, Instagram, Twitter, TikTok, Pinterest, Snapchat, Linkedin and YouTube. They are using social media to share activities, functions, pictures, and events of the IRCs. Naturally, Gen Z users are the most active on social media. They used social media every day. IRMs, IRC staff and Gen Z users all are using social media platform for bridge the gap between this new technologies and information requirement. IRMs were educated users about IRC's services, highlight their collections, and support other IRCs also through social media. Social media platform is the chipset way to communicate with others.

4.3 Growth in Digital Content:

Searching and browsing digital information and use of interactive multimedia for their educational purposes is the common symbol and second nature for Generation Z. The all information will be digital in future, some time such techno-savvy users require training how to search information through physical books and journals. It is necessary to trained them for use of both physical and digital information resources or otherwise there is chance to lose the users of IRCs.

The future IRCs will have multiple characteristics such as digital, virtual and electronically distribution of information resources, the more impact is of digital information resources. As per need of Gen Z users IRCs were shifted towards digital publishing rather than print. The nature of IRCs will become virtual and the information resources will be digital. Such information is largely available on the user's desktop and Smartphone devices. For this through network infrastructure, Bluetooth beacon signals, and geo-fencing micro location technology is used. Finally, the digital, virtual and electronic information resources will be distributed to the Gen Z users.

4.4 Space and Environment in IRCs:

The IRCs are restructuring the available space as community meeting places for work with study, reading areas and reference areas. IRCs concentrate on offering specialized spaces like meeting rooms, studios, maker space areas, etc. which is their prime focus. The IRCs study area and reading room has changed for Gen Z users and converted into blended space for socializing and relaxing. As they are like to do work with multiple activities and want multiple facilities at one place. Their study time is spent doing more than one activity. They read to use their Smartphone and laptops while eating, or chat also while doing other work.

4.5 Focus on easy access:

Because of immersing Gen Z users are with various technologies they expect immediate results with high speed. They more focus on easy access. For this smart IRCs were performed smart. Generation Z users were reading large amount of content online and reading in print is often a nice change for them. So that, they want to visited the IRCs, which is good opportunity for the IRCs. The user's registration procedure, administration and other technical process should be minimizing or convert it into on-line so that users can get easy access and friendly environment in the IRCs.

4.6 Increase usable space in IRCs:

If IRCs have space for all types of users and they regularly visited the IRCs, take care of multiple and plenty of power supply outlets for Smartphone, laptop and other electronic gazettes charging. If there are not enough outlets, Gen Z users will not come or seat more in the IRCs. Additionally, create healthy

spaces, and they have space for worked with others. There is space for group discussion and smart classes with virtually connecting facility. Definitely this initiative increase footfall of Gen Z users in the IRCs.

5. ACTIVITIES CONDUCTED BY IRM TO ATTRACT MORE GEN Z USERS IN THE SMART IRCs.

Figure-1: Activities for Information Resource Manager to attract Gen Z users

6. WAYS TO KEEP GEN Z USERS ENGAGED IN SMART INFORMATION RESOURCE CENTER:

Some Gen Z users were visiting the library for that most traditional of reasons to browse the shelves and check out print books, but many others were looking for digital information resources. The IRCs must use following ways to keep Gen Z users engaged in the IRCs.

1. **Connect with Gen Z users with hands on training activities:** Another way to educate Gen Z users already coming to IRCs is by offering some creative fun with a training demonstration on the various activities such as e-books, Frisco Public Library (TX), e-bookworm using Popsicle sticks and pom-poms, audiobooks, ChatGPT, AI educational tools etc.
2. **Digital archives:** IRCs must have digital archives that house documents, photos, videos and other materials related to local history or significant events.
3. **Digital comics and graphic novels:** Platforms such as Comixology, Comic book plus, WEBTOON, Dark Horse Comics, etc. may be available through IRCs, allowing Gen Z users to borrow and read digital comics and graphic novels.
4. **e-Books and audio books:** IRCs must provide access to digital resources such as OverDrive and Libby, where users can borrow and download a wide range of eBooks and audiobooks for free.
5. **Financial Literacy Programmes:** IRCs should create financial literacy programs for Gen Z users that include the basics like budgeting, how to open and manage a bank account, various funding resources information, educational loan, and realistic tips to help them in higher education.
6. **Institutional Repository:** IRCs must have their local, regional, and subject specialized repositories.
7. **Job and career resources:** IRCs may offer access to job search platforms, databases, curriculum vitae building tools, professional and career development resources to assist Gen Z users. IRCs staff can help Gen Z users create their first resume and successfully navigate interviews.
8. **Music streaming:** Libraries can partner with services like Freegal for music streaming, enabling users to listen to a wide range of songs and albums or give access to the open/free streaming services such as Pandora, YouTube Music, Spotify, etc.
9. **Online courses and learning platforms:** IRCs may offer access to educational platforms like LinkedIn Learning, Coursera, Udacity, Teachable, Codecademy, Canvas Network or Khan Academy, providing a variety of courses on various subjects ranging from technology and business to creative skills.
10. **Video streaming services:** IRCs must provide access to video streaming services like Discovery, Youtube TV, Disney, Brightcove, amazon.com, Kanopy or Hoopla, offering movies, documentaries and educational content that can be accessed for free.

11. Virtual IRCs events: IRCs often host virtual events, book clubs, and discussions through platforms like Zoom or Microsoft Teams, allowing patrons to engage with library programs in the digital environment from the comfort of their homes.

7. VARIOUS TECHNOLOGIES USED IN SMART INFORMATION RESOURCE CENTERS:

On the basis of Digital Information Technology (DIT) and application of Information and Communication Technologies (ICTs) formation of smart IRC is possible. The following are the different types of technologies which are categorized in three groups as per their nature, characteristics, and application in IRCs.

Group-I Technology

- AI
- Augmented Reality AR
- Big Data
- Cloud computing
- Electronic Data Interchange
- 3-D Printing

Group-II Technology

- IoT
- Responsive User Interface
- RFID
- Smart Detection of Knowledge
- Smart Interface/Digital Interface
- Faceted Search and Discovery

Group-III Technology

- Smart Services
- Smart Technology of content information
- Usage of Mobile Applications
- Virtual Reality VR
- Smart Library Card

Figure-2: Various Technologies used in Information Resource Centers

8. ESSENTIAL SKILLS FOR SMART INFORMATION RESOURCE MANAGERS:

Skills are the process of wok which doing a complex wok in simplified manner with best possible way. The skill process of working involves making the optimum use of limited resources to achieve the goals of organization.

Skills are also essential in the information profession such as user need skills, retrieving of information, searching of information skills, managerial and leadership skills, reference services skills, etc.

Ayinde and Kirkwood (2020) were identified, "sense making, social intellect, novel and adaptive thinking, cross-cultural competency, computational thinking, trans-literacy, trans-disciplinary, design thinking and mindset, virtual collaboration and cognitive load management as the skills required for information professionals to survive in the digital era".

There are several skills to do the better job of IRM such as basic library skills and soft skills, other than those skills, the following are some essential skills for smart IRMs which is shown in the figure-3.
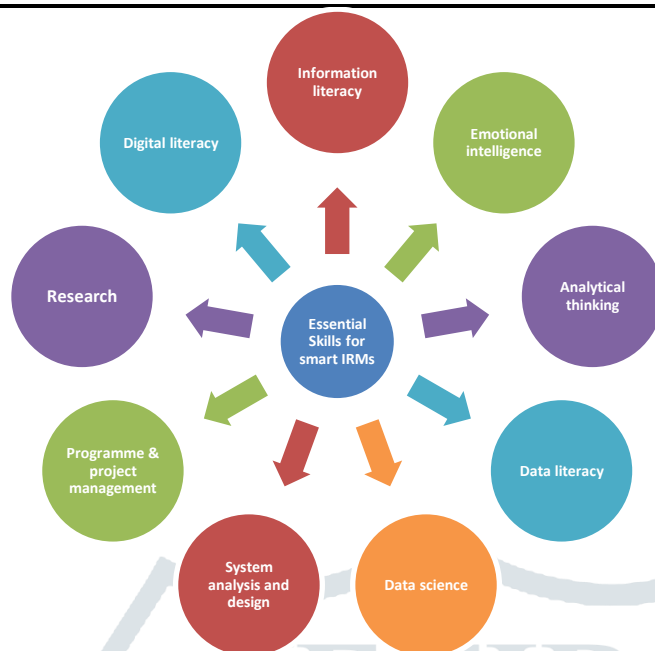
Figure-3: Essential Skills for Smart IRMs

9. CHALLENGES TO EFFECTIVE IMPLEMENTATION OF SMART INFORMATION RESOURCE CENTERS:

The IRCs faces many problems in effective use of technology and resources. These problems can takes as a challenges, and IRM work hard to find appropriate solution for it. Instrument and aid space saving, expansion of working hours, starting new services, promotes access to various information resources virtually, lack of technological knowledge, fear of technology, technophobia, willingness to take challenge, data privacy, cost of new services, maintenance and security of existing services and facilities, etc. are the challenges in front of smart IRCs. Besides these challenges the figure-4 shows some other challenges face by various IRCs in digital era.
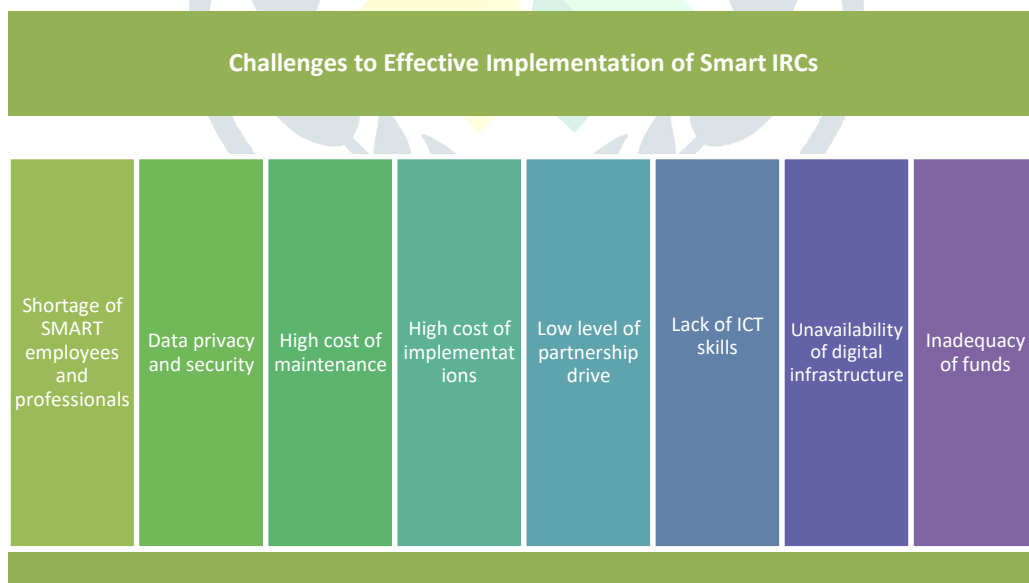

Figure-4: Challenges to effective implementation of Smart IRCS

10. SUGGESTIONS FOR IRCs:

However, the smart IRCS are facing some challenges in effective implementation of services, technologies and infrastructure in the IRCs. Based on the observations on present research study, the following suggestions are hereby made.

- IRCs must maximize access to digital and print collection and services to show the USP (unique selling proposition) of the IRC in an increasingly digital world.
- IRCs would be financially independent, capable to purchase and maintain advance technologies for the IRCs to effectively operating smart functions.
- IRCs must prove their value in the institution. It is important that IRCs should prove their value to the organization. Showing better results and good return against investment made by parental

institution. Improvement must see in the GEN Z users and their experiences, contribution and feedback must be taken.

- IRMs shall have creativity and innovation and more radical thinking is needed.
- IRMs should be a change manager; he/she must be able to manage valid change effectively within time.
- IRMs should regularly update their skills and upgrade knowledge.
- Partnership initiative must increase and collaborative approach with colleagues must be enhanced. It is essential for all information professional for conducting trans-disciplinary research in the field.
- IRMs should motive research attitude in a digital world. Takes part in various researches and communicated for other stakeholders. IRMs should conduct research on various topics such as, digital information sources, open access, Altmetrics, data sharing, digital humanities, text or data mining and use of social media, etc.
- IRMs should try to raise funds, for this think towards alternative funding agencies rather than routine.
- ICT efficacy should be developed, so that professional relation developed with the other ICT peoples. Also strengthen the confidence in handling complex situation regarding technical issues.

11. CONCLUSIONS:

Information Resource Managers should be familiar with the all functioning of information centers and know the requirement of Gen Z users. There is a big generation gap between older generation and the younger generation. IRMs have to adapt their perception to do work as expectations of the current generation i.e. 'Generation Z' and that is the challenge that requires a lot of analysis, understanding and most importantly changes in IRCs.

This paper shows that, the smart IRCs are mainly focuses on the use of new information technology and is considered to be very mutual education atmosphere where Gen Z users are encouraged to give new thoughts and process. As NEP-2020 was introduced in higher education for both UG and PG programme, IRMs should also contribute to perform better role in educational revolution. IRMs should work on their digital efficacy so they will perform their work smartly with having confidence to develop smart educational system for Gen Z students.

There is need to improve the conventional and non-conventional IRC services and improves the opportunities for user education and also provides web-based technology to the Gen Z users. Buildings of the IRCs be getting attractive but they are still as smart as the people that run them. This paper highlights the new technologies, essential skills for IRMs and need of Gen Z users in the advance digital environment.

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