

Librarians' familiarity with and attitudes toward Podcast technology

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Abstract— New media have influenced library services and as a result, librarians always have tried to learn, use and even teach how to use such technologies. A combination of Web, and personal media players and mobile phones has resulted in useful technologies including podcasting web sites and facilities. Unlike other media, podcasts have been paid less attention to as library materials. This research investigated librarians' familiarity with podcasting and their attitudes about such tools as a library service. The results indicate little knowledge and experience of Iranian librarians with podcasting tools and as a result their attitudes about those technologies is also vague. Also, it is demonstrated that unlike the importance of podcasts, there is currently little use of them in public libraries in Iran. Well-designed instructions of the librarians can improve the current state of podcasts as a media in libraries.

Keywords- *podcasting; librarians; instruction; media literacy*

I. INTRODUCTION

Libraries are among the institutions with the strongest ties to information and media technologies. Audio-visual products have been previously added to library collections and microforms, recorded tapes, videos and CD-ROMs are no more new materials for librarians. Instead, Web-based services are increasingly becoming popular for librarians. User satisfaction is a goal for library services and this can be achieved through offering up-to-date information, media and services to wide range of users.

Today's library audiences are mostly familiar or fluent in using communication technologies. *Net Generation* also *Digital Natives* and *Y Generation* are bolded definitions to describe the typical young people who are familiar with

information and communication technologies and spend their lives by using computers, videogames, digital music players, video cams, cell phones and all the other toys and tools of the digital age [1].

Research shows that the net generation's preferences and skills have been affected in many areas including communication, education and entertainments. For example, they prefer receiving information quickly and with fewer attempts. Through social networks, the digital natives prefer active rather than passive learning [1] [2]. As a result, librarians are also concerned about new technologies [3].

Podcast technologies appeared in 2004 with introduction of some portable media players supporting Web-based audio and video contents. A podcast lifecycle includes creation, distribution on the Web, transfer to personal media players and use. Although not very hard to build, transfer and use, XML files known as RSS Feed play a vital role in podcasting.

Blended library and media approach for teaching has been widely used and approved to be effective in most cases [4]. Many higher education institutions have adopted the use of virtual learning environments and incorporate e-learning into their traditional teaching mechanisms as part of a blended learning approach. Compared with traditional lectures, e-learning has the advantage of letting learner choose when, where and how to study [5]. As a result, librarians can be considered as target groups of podcast programs though they are not regarded as the end users of such technologies. An example of librarian-maintained podcasting environment can be found at: www.librarian.cast.ir.

Mobile learning or m-learning is a category of e-learning involved with use of mobile sets. Podcasting is a form of m-learning in which a device is used to listen to or watch an audio or video broadcast. Podcast has an advantage i.e. the material is delivered directly from the source internet location to the device rather than requiring the learner to seek it out and download it [6].

Students value the flexibility provided by podcasts in terms of the ability to study anywhere and anytime. More than 75% of them listen to them while travelling that makes them more accessible than some traditional devices. It means that they can accommodate a wider range of learning practices [7].

Regarding the increasing applications and use of podcasts especially in relation with libraries, this research aims to investigate the Iranian librarians' familiarity and attitudes toward podcasting. The following questions are focused to be answered:

1. To what extent, Iranian librarians are familiar or using podcasting technologies?
2. According to the librarians' point of views, how important is podcast for public libraries?
3. According to the librarians' point of views, how is the status of using podcasts in public libraries in Iran?

The rest of this research stands as follows. First, the importance and application of podcast is discussed and then the related work is reviewed. Methodology section describes how this research has been done. And the results and conclusion are next sections.

II. PODCASTS AND THEIR IMPORTANCE

By the end of 20th "knowing how to use a computer" was an important indicator of fluency in technology (FIT) [8]; although modern instructional technology effectiveness has been doubted by different people [9]. In few years, media and information literacy concepts have delivered complicated definitions and standards for e-learning.

Yamaguchi [10] suggests that a computer is better than a cell phone for handling different kinds of information but cell phone is superior to a computer in portability and some students do not have their own computer.

Audio has been ignored as a teaching and learning medium that may be related to the view that listening to audio is not learning and not synonymous with comprehension and action [11].

Meng [12] defines podcasting as the process of recording an audio event or speech and sending the digital sound object to a web site or blog in the structure RSS format or feed. It has two main features i.e. audio format and need for mobile audio devices.

A feed is a type of XML file that includes data about new or updated content of a web site or a blog. Atom is a protocol and different versions of RSS are being used in building syndications of feeds. RSS feeds are created by content publishers and delivered to their subscribers by a feed reader.

Feed readers are the programs that check the new information regularly on subscribed feeds and then download the referenced files. RSS 2.0 published in 2003 is the successor of RSS 0.92 that is the latest version of RSS. Its enclosure element has been commonly used to download MP3 files to digital audio players automatically [13].

Mobile learning facilitates the delivery of learning content through mobile devices [14] and when mixed with podcasting, the basic advantage will be the portability of learning sources anywhere and anytime.

Despite this advantage, there are some issues for using podcasts. Precise attention and tools are needed to make podcasts well-described, searchable, accessible and distributable. Their design should support inclusion in learning content management system (LCMS). One of its most important instructional features is learning through listening. Podcasts may be helpful in e-learning and be integrated with web-based e-learning [13].

Universities, instructional institutes and libraries can organize the collecting and publishing of podcasts. Herman & Downes [15] mentioned that RSS is a powerful device for content syndication. However, it lacks some important features to develop into a strong solution for the location and organization of instructional content.

Levine, Lamb & Norman [16] concluded that RSS feeding approach can be used as a mean of developing the practice of discovery beyond a web search. Any repository that places its content in a database can generate properly formed RSS feeds.

III. RELATED WORK

Durbridge [17] compared the advantage of audio with a written text in education and concluded that the spoken word can affect both cognition and motivation.

Kennedy et al. [18] surveyed 2000 students of Melbourne University in 2006 about their access to, use of and proficiency with information and communications technologies and devices. The results revealed that 96.4% of the students had access to cell phone and 68.9% to MP3 players.

Long & Fabry [19] studied the integration of podcasting in a graduate counseling course. They were given some podcasts related to the course. The final results indicated that the students were attending the classes well-prepared after using the podcasts; however, still they preferred traditional teacher-lead classes.

Thornton & Houser [20] developed many innovative projects using cell phones to teach English at a Japanese university. One focused on vocabulary instruction by SMS. They emailed mini lessons to students three times a day to be readable on the tiny screens. Students were tested biweekly and compared to those who received the same lessons via the web. The results showed that the SMS students had higher scores.

Chen et al. [21], reports on a study podcast conducted to seek insights for the further development of language podcasting. Data were collected from questionnaires of 120 Chinese and 61 Korean students as well as semi-structured interviews to ascertain their perceptions of the podcasts' quality and usefulness, and their attitudes towards podcast-based learning. It was found that there were statistically significant differences in the perceptions and attitudes of the two groups of students.

An experimental research reported in [22] was conducted in order to measure the effects of podcasts in classrooms. The control and experimental groups received some lectures presented in person by a lecturer. The experimental group had access to related podcasts as well. Results indicated that students that used podcasts scored higher than the other one. Similar work and results can be found in [23], [24] and [25]. Abdekhoda [3] reports a survey on medical librarians in Tehran universities. Questionnaire was used to gather data from 60 medical librarians, working in central and faculty libraries in three Medical & Sciences Universities. The results showed that minority of the librarians were reasonably familiar with facilities and applications of new web generations such as podcasts and video casts and were able to use these facilities in library. Furthermore, the research has shown that about 90% of respondents believed that they need to continue their career development programs (CDP) and associated education courses about web innovations.

Asadi & Jamali [4] report on a mixed method in which multimedia is integrated in traditional library service for teaching in order to improve the quality of teaching the geography in Iranian secondary schools. The results revealed that the blended method surpasses both library-based and pure multimedia teaching approach.

IV. METHODOLOGY

This research was conducted with a survey on the librarians of the public libraries of Art and Cultural Organization of Tehran Municipality. A questionnaire was distributed among 80 librarians of whom 68 returned the questionnaires with valid data for further process. The questionnaire consisted of different sections asking how familiar/fluent the respondents were with podcast technology, how important this technology was for libraries and how was the status of using podcasts in Iranian public libraries. Using SPSS the data was analyzed in order to extract descriptive and analytical results. Cronbach's alpha was 0.96 in general.

V. RESULTS

Among 68 respondents, 44 (64%) were female librarians. The age of 76.9% of the respondents was between 26 to 40 years (Figure 1). The average length of work experience was 9.8 years.

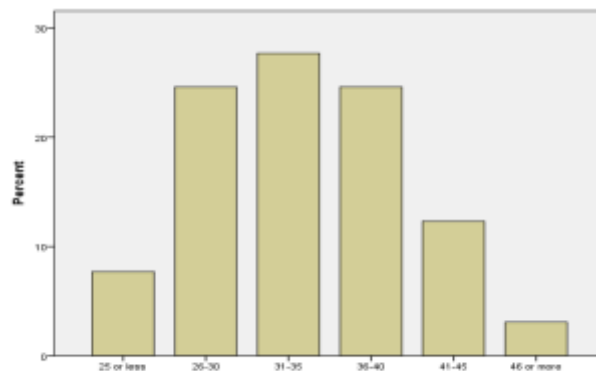


Figure 1. Average age of the sample.

Figure 2 shows the level of academic degrees of the sample. About half of the respondents had B.A. and M.A. scored the second position.

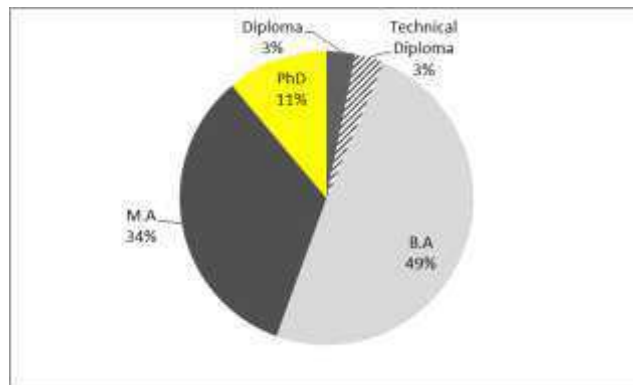


Figure 2. Level of academic degree of the sample.

In reply to the first question of this research, we Figure 3 compares the fluency of audiences in different technologies related to podcasting. According to the figure, SMS and PDF are widely learnt and practiced by the librarians. Audiovisual materials as well as e-books and full-text papers are also broadly understood and used by them. In the other extent, more specific podcasting technologies e.g. RSS, Atom and Mashups are less known or practiced by librarians. The figure can indicate little familiarity of the respondents with podcast tools and applications.

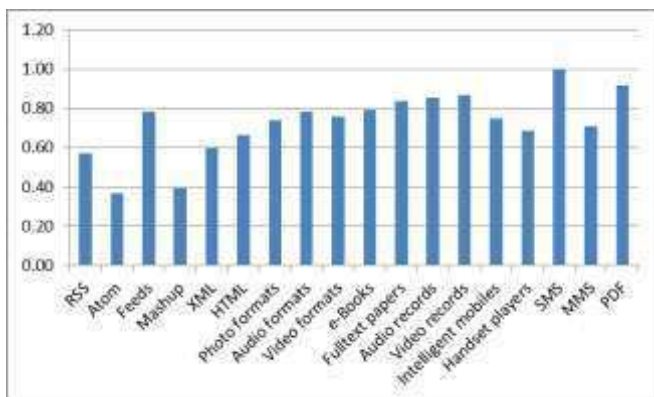


Figure 3. Fluency in podcasting technologies.

TABLE IV. USE OF PODCASTING BAR THE LIBRARIES.

	Test Value = 30					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Impo	7.911	51	.000	10.346	7.72	12.97

According to the tables 3 and 4, t score is 7.911 which indicates the undesirable application of podcasting currently in library services.

The second question was about the importance of podcasting for public libraries. A t-test approach as shown in Table 1 and Table 2 was conducted to answer this question.

TABLE I. IMOPOTANCE OF PODCAST FOR PUBLIC LIBRARIES.

	N	Mean	Std. Deviation	Std. Error Mean
tools_Use	51	20.65	8.736	1.223

TABLE II. T-TEST FOR SHOWING PODCAST IMPORTANCE.

	Test Value = 40.35					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Use	-16.107	50	.000	-19.703	-22.16	-17.25

The negative *t* score shows that the podcast technology is considered highly important for public libraries.

The third question was about the current status of podcasting technologies in Iranian public libraries. A t-test approach as shown in Table 3 and Table 4 was conducted to answer this question.

TABLE III. CURRENT SITUATION OF PODCASTING IN THE LIBRARIES.

	N	Mean	Std. Deviation	Std. Error Mean
tools_imp	52	40.35	9.431	1.308

VI. CONCLUSION

Podcast technology has influenced different areas including teaching environments as well as libraries. Libraries have shown effective in teaching [4] and librarians have always tried to be adopted with new media and technologies. Having potential aspects for being used in libraries, podcasting seems to be a useful area for attracting more audiences to the libraries. This research showed that Iranian librarians are not familiar enough with podcasts while they think this technology is important for public libraries. The results also show the limited or no use and appearance of podcasts in Iranian public libraries which require more attention.

THE results are in general in coordinate with those examined in [3], [22], [23] and [18]. This reveals the fact that podcast are capable of being used in entertainment, communication, teaching and library services.

Although the results of this research can be used as an evidence for planning new services in libraries, more education is needed for both librarians and users in order to make a better use of podcasts.

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