

Enhancing the customer relationship management in public libraries

Findings from three developing countries

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Abstract

Purpose – The purpose of this paper is to investigate the possibilities of implementing the customer relationship management (CRM) concept and smart technologies in public libraries in developing countries. The goal was to explore the level of librarians' awareness about CRM concept and their willingness to accept the CRM concept in libraries. Also, patrons' satisfaction with the quality of services and relationships in public libraries is explored.

Design/methodology/approach – The authors obtained data for this research through two online surveys. The first survey measures librarians' level of awareness about CRM concept and their perception about CRM and smart technologies concept in public libraries in three developing countries: Serbia, Montenegro and Bosnia and Herzegovina. The second survey measures patrons' satisfaction with services and relationship in public libraries in these three countries.

Findings – The research results revealed that most surveyed librarians are familiar with the CRM concept. However, libraries in these three developing countries barely use CRM or smart technologies to improve the relationship with stakeholders. Also, most patrons are satisfied with relationships and services. The analysis of data indicates no significant difference in the satisfaction level among patrons between these three developing countries.

Research limitations/implications – Not all libraries participated in this research. Therefore, the sample is not distributed evenly across different types of libraries or user groups. Future research should include different types of libraries.

Practical implications – The results can be used by public libraries in developing countries to improve the relationship with stakeholders harnessing CRM concept and smart technologies.

Social implications – The use of CRM in combination with the smart technologies can help leverage the quality of the relationship between public libraries and stakeholders which in turn would secure their support and loyalty in the future.

Originality/value – The integration of CRM concept as a component of library business automation process is an idea that has not been discussed widely in the library community and could initiate a positive trend in public libraries in developing countries.

Keywords Library services, Library users, Developing countries, Public libraries, Customer relationship management, Smart technologies

Paper type Research paper

1. Introduction

Public libraries have always been places where people could get all sorts of reliable information, share ideas and collaborate. Although the forms and means of providing and acquiring the information have changed in the last few decades, the main purpose of libraries is still to "provide free access to quality knowledge, information, and culture" (Wade, 2012). According to Hernon *et al.* (2015) libraries as service providing organizations, which also function in a competitive environment, must create and perfect services that match the expectations of those they intend to serve. In recent years, there has been some positive change in the librarianship caused mainly by advancements in technology which, on the other



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hand, created a digital divide between developed and developing countries. Advanced libraries use smart technologies (Min, 2012), provide 3D printers (Moorefield-Lang, 2014), high-speed internet, music studios, robotic equipment and other technological “gadgets” to their patrons on a daily basis. Also, they use opportunities to take their business online, using platforms based on the “software as a service” technology as this eliminates the need for software installation on user’s computer (Breeding, 2017). Unfortunately, libraries in less developed countries, all over the world, struggle to provide basic computer equipment and internet connection. Majority of them are still trying to find ways to offer their services electronically or online which should be standard services in any library. Thus, it is imperative for public libraries of any type or size to take a step forward and start using new technologies to improve the quality of services they provide. Public libraries in developing countries have to accept the fact that the transitional process is not only technologically challenging, but also culturally and organizationally, since patrons in different countries perceive the benefits they derive from the public library rather differently, which makes this change significantly harder to achieve (Vakkari *et al.*, 2016).

Overall, the authors investigated the potential impact that CRM as a concept could have on public libraries in developing countries and possible new ways for them to establish long-lasting relationships with stakeholders in the future. The majority of public libraries in developing countries are financed mostly by local or other government authorities. However, they generate substantial income from membership fees, so it is important to create and provide services that match the information needs and expectations of those they serve to secure full support from all the stakeholders. Instead of just measuring the number of visits or books checked out, libraries should put the focus on patrons’ satisfaction by measuring the quality of services they provide and the impact they made in the community (Quinn and McCallum, 2012). These changes could be achieved only by efficiently implementing CRM culture into library’s everyday operations. As Hernon *et al.* (2015) point out any customer-driven organization should focus on fulfilling needs and expectations of their customers, both spoken and unspoken. In other words, it is of mutual interest for both, libraries and patrons, to adopt new services and technologies to the best of their knowledge. By automating some or majority of everyday operations, librarians would have more time to deal with patrons and patrons would get better services and quality information as a result. To achieve this, libraries in developing countries should explore and implement new relationship management models which in essence rely on the use of new technologies.

2. Literature review

2.1 CRM in libraries

Term “CRM” includes wide corpus of processes in area of marketing, social, sales and service through IT-enabled automation in order to maximize a value of interactions with customers (Pan *et al.*, 2006). In the beginning, CRM was exclusively related to business contexts, but during the time it involved to a comprehensive platform that covers much more than a simple relationship management. Accordingly, CRM has been used as powerful platform for improving different kinds of processes and interactions with stakeholders, almost in every area of human activities (Newby *et al.*, 2014). The customer relationship management (CRM) concept has not been addressed by public libraries in developing countries in the past for many reasons: poverty, constant government changes, outdated legislation, etc. (Witten *et al.*, 2002; Barać *et al.*, 2017). An appropriate definition of CRM that could apply to all public libraries is given by Peltier *et al.* (2009) which defines CRM as an “opportunity to better understand customers by developing mutually beneficial relationships.” The CRM concept is not necessarily tied to any specific technology but is a concept that aims at improving the relationship among all stakeholders such as librarians, patrons, authorities, publishers, authors and volunteers. The organization must first fully

understand CRM and philosophy behind it to efficiently and effectively implement this concept, using all means available. The technology, in this case, is just the tool that allows CRM implementation. Due to the high rate of failure (Garrido-Moreno *et al.*, 2010; King and Burgess, 2008), many authors agree that the successful CRM implementation requires an integrated and balanced approach to people, technology and processes (Rababah *et al.*, 2011; Chen and Popovich, 2003). The purpose of implementing the CRM applications in the library is to link “front desk” (e.g. adults department, children’s department, and reference department) and “back desk” (e.g. acquisition, processing, inter-loan, management, IT, finances and human resources) with library stakeholders. The goal is to keep track of requests and needs that stakeholders communicate via the internet, e-mail, call centers, mobile phones, self-serving kiosks or in person, all in one place. Since separate information systems are controlling all of these channels of communications the CRM aims at integrating all of them into one single point of communication. Also, implementing a CRM strategy will help build better communication within the library. The sharing of stakeholders’ data between different departments will enable librarians to work as a team thus providing better service to patrons. Libraries should not be looking into CRM implementation as an IT installation project but as a practice of creating a culture oriented toward satisfying patrons’ needs throughout the library. As most people visiting libraries today use the internet and smartphones, and they will use them in the future (Poushter, 2016), the authors consider the implementation of these technologies as a logical solution.

Since the majority of libraries in developing countries are either small or medium in size, a focus on finding the best CRM practices that could help those libraries should be a priority. The challenges that small and medium-sized libraries face today could be compared to the challenges of small and medium-sized enterprises which, according to Newby *et al.* (2014), depend mostly on management characteristics and their innovativeness and positive attitude toward CRM. Subsequently, commitment from both management and employees leads to successful adoption and implementation of CRM in any organization (Newby *et al.*, 2014; Nguyen, 2009). According to Jamali *et al.* (2011), unlike in commercial organizations, principles such as mass marketing will not have a more significant effect when used in public libraries since each patron has different interests and demands, so the use of specific marketing tools for each person or specific user group is advised. The focus should be on establishing a better relationship with current patrons as well as attracting lost and new patrons. This approach implies the use of customization and personalization concepts when dealing with patrons. Garoufallou *et al.* (2013) presented an extensive and comprehensive literature review on marketing concept and practices in library and information services. Hernon *et al.* (2015) argue that it is not a book collection nor equipment that make a great library, but patrons whose needs libraries are trying to fulfill, a statement which emphasizes the importance of relationship management in libraries. Smart (2013) proposes an improvement in the quality of customer services for libraries by creating hybrid models for customer service standards. Findings from research that was done by Broady-Preston and Felice (2006) discovered that most users did not have any complaints regarding academic library staff performance. In fact, they were dissatisfied with book collections and the library website for example, but when explicitly asked for the suggestion on what could be improved, some respondents suggested that library could improve communication with other university departments. These findings indicate that CRM is primarily about managing relationships not only with patrons but all the stakeholders instead, as defined by Newby *et al.* (2014); Wang (2007). When comparing different examples of how to transfer corporate philosophy to a library setting, King (1996) gave an example of a book store’s policy. The store’s management encouraged employees to walk the customer to the correct section of a bookstore and to physically put a book into a customer’s hand, thus demonstrating an exceptional service standard. Twenty years later, we could still apply the

same philosophy, but instead of putting the book into the customer's hand, we could put a book or information into the customer's handheld smart device, which most library stakeholders nowadays use.

The use of the CRM applications present a suitable solution for retaining the existing and attracting new patrons, but it certainly requires substantial financial assets. The data collected in a survey conducted by Quick *et al.* (2013) indicates that EU countries with the highest levels of per capita spending on libraries are also countries with the highest levels of library visits. The findings present the reliable evidence that financial resources relate directly to the number of visits to the library. The research shows that nearly one in four adults in EU countries has used public libraries in 2013 (Quick *et al.*, 2013). Since libraries in developing countries cannot afford to spend significant financial resources on commercial software or to purchase the latest technological solutions, they should use the available free or open source software to provide new services and to improve communication with stakeholders. With the help of the open source community, libraries in developing countries could implement CRM and other useful application at an acceptable cost.

2.2 Integration of modern technologies into library automation

Public libraries in developing countries failed so far to use the full potential that new technologies offer. Research performed by Stokic and Paunovic (2017) discovered that just small percentage of libraries in Serbia use modern technologies to offer their services online. Out of 160 public libraries in Serbia, just 61.25 percent had a web page, and 67.50 percent had an online public access catalog (OPAC). Also, the use of social media to promote their business online was limited to very few public libraries. Further, 78.75 percent of public libraries had Facebook page, Twitter profile 11.25 percent, and YouTube channel 16.88 percent while just one public library in Serbia used Skype for online communication (Stokic and Paunovic, 2017). One of the biggest obstacles when it comes to adoption and implementation of modern technologies in small and medium-sized libraries is how to secure adequate financial assets. For public libraries in developing countries, the use of free and open source software (FOSS) could be considered as most feasible and, in some cases, the only solution that they can afford. It is, however, important to clarify that open source does not necessarily mean that it is free of charge. It simply means that once the software is acquired the owner has the right to change the source code or make any other change to it free of charge. Libraries could use either in-house IT staff or by enlisting the help of the third party, in which case the third party will charge for their services. There are some examples of successful implementations and research papers comparing different adaptation approaches of open source software in developing countries (Rafiq and Ameen, 2009; Vimal Kumar and Jasimudeen, 2012) and their possible use in libraries (Broadly-Preston *et al.*, 2006). Bissels (2008) argues that open source integrated library system (ILS) is more opened to customization and more easily meets the specific needs of libraries than proprietary software. For large libraries that have many patrons in different branches, conversion to open source software would certainly require substantial financial expenses. As explained by Brooke (2013), conversion and installation of an open source ILS cost about the same as a proprietary ILS, but the cost of annual support for an open source ILS costs 70 percent less. Anuradha *et al.* (2011) explained how efforts for enabling full-text search feature in open source Koha ILS by integrating it with Greenstone software gave exceptional results at an acceptable cost. However, this approach still needs to be researched on a larger scale since some libraries reported difficulties while trying to implement an open source ILS (Helling, 2010). Various authors (Brooke, 2013; Reddy, 2013; Singh, 2013; Singh and Sanaman, 2012; Breeding, 2009) provided a detailed comparison of an open source ILS and proprietary ILS systems.

2.3 Social CRM

Social customer relationship management is a new concept in libraries. It uses social media technology in combination with CRM to keep patrons informed and involved in all activities. Public libraries in most countries are using social networks as an affordable and efficient way to connect with stakeholders and to promote library goals. Garoufallou *et al.* (2013) explored contemporary library marketing techniques based on Web 2.0 and social networking concluding that they get the attention of young users and engage users in participating in the library scene. The research performed by Palmer (2014) identified different forms of social media activities that engaged library stakeholders in conversations. Findings have shown that libraries use Twitter for time-sensitive notices and information about current events, and Facebook for static linking and community building. Chen *et al.* (2012) found Facebook efficient in knowledge sharing and Twitter useful in facilitating communication. Over the last decade, social media and networks have transformed the way in which organizations interact with customers. As a result, social media platforms are becoming increasingly useful tools for CRM (Stewart *et al.*, 2017). Since the use of social media is voluntary, it is crucial for libraries not just to allow, but to encourage patrons to become active participants in online communities (Malthouse *et al.*, 2013; Culnan *et al.*, 2010).

2.4 Smart technologies

The use of smart technologies is a novice trend in libraries. Research performed by Wójcik (2016) showed that smart technologies have the potential to be used in library services and other activities, similar to how the commercial sector is using them. Technologies such as Radio Frequency Identification (RFID), Quick Response (QR) or Near-field Communication (NFC) provide opportunities to libraries to communicate their carefully tailored messages to stakeholders. This kind of communication can be initiated either by sending messages to users' smart devices or by giving them the option to access them voluntarily by scanning or reading various tags, posters or other devices.

RFID technologies are in use by public libraries in developed countries for many years now. Public libraries in developing countries could also use these technologies to organize library collections and to speed up the entire process of circulation thus eliminating the need for long waits or delays at the front desk. Also, the process of locating materials and shelving could be optimized as well. Due to the drop in prices of RFID tags and readers in recent years, public libraries could implement this technology at an affordable cost (Younis, 2012). Ong *et al.* (2014) presented a case study including a mobile phone as an interface to an RFID-based check-out system. They used existing RFID tags to enable patrons to use their smart devices to self-check library materials. Other example includes integration of UHF RFID and Koha ILS into a single intra-library automation system (Khor *et al.*, 2015).

QR technologies are used to provide additional information to smartphone users by offering them the opportunity to use their devices to read QR codes. These two-dimensional codes can then link users to location or context appropriate information and resources, using information embedded in them (Walsh, 2010). These codes can be placed inside and outside of the library to provide information to stakeholders regarding library services, operations, books, audio and video materials, events and other sources of information. They are easy to generate using specialized web applications. Due to the increase in the number of freshman students in recent years, Newman Library started using QR codes throughout the library to organize self-guided video tours to new students (Bradley *et al.*, 2016). Students tour the library on their own and use QR codes to learn about library layout, departments, facilities, services or to watch instructional videos. After completing the tour, students are then required to take a short quiz as a part of one of the classes (Bradley *et al.*, 2016). Another useful feature of QR codes is the ability to track and analyze their performance, which can be very useful in the decision-making processes.

NFC is based on existing standards of the RFID infrastructure. It is a short-range (radiofrequency), low-power wireless communication technology for electronic devices. It allows the communication between two devices by touching or bringing them at a very close distance (Ali, 2015). These NFC tags could offer information about the book itself but also allow readers to check out the book directly on their smart device. Readers will also be able to rate the books, read the reviews and even leave a comment that would be stored inside the NFC tag. Liao and Shieh, (2015) proposed a novice and reliable way to use NFC technology for the book-finding system by placing NFC tags on the shelves throughout the library enabling patrons with smart devices to easily find books. Borrego-Jaraba *et al.* (2013) presented a pervasive and context-aware system that uses NFC technologies in helping students with access to bibliographic sources located in the academic library, thus demonstrating that NFC technology provides a new and more intuitive interaction model.

2.5 User satisfaction and service quality

In the process of improving relationships with stakeholders, the library should not underestimate the importance of the quality of services it provides. According to Hernon *et al.* (2015), service and quality cannot be disconnected as quality presents the manner in which the service is delivered. Hence, service quality is a part of the interactive relationship between the library and patrons (Hernon *et al.*, 2015). In today's information and knowledge-based society, libraries are expected and, in a way obligated, to prove that they are efficient and productive. According to Hunter and Hambelton (2011), libraries should be able to demonstrate that the impact they make is generating new knowledge. Two areas that every public library should address in the future are measuring service quality and impact assessment. Both of these address the deeper effects of library services on patrons and their communities (Hernon *et al.*, 2015). To foster a culture of assessment, many authors suggest modeling best practices, providing training for librarians in specific skills and integrating assessment into the annual strategic planning process (Nitecki *et al.*, 2015; Farkas, 2013). The quality of library services can be assessed in many ways. Online tools such as SERVQUAL and LibQUAL+TM provide a great opportunity for quality assessment of library services in many dimensions with results helping to identify indicators to better assess library services (Stanly and Killick, 2009; Blixrude, 2003). These tools can be used to calculate the gap differences between users' expected and perceived benefits regarding different library services (Ahmed and Shoeb, 2009). Also, the performance measurement should not be overlooked in any case. It can give a clear insight if the library services conform to the patrons' expectations (Paley *et al.*, 2015; Hernon *et al.*, 2015; Koltay and Li, 2010; Streatfield *et al.*, 2015; Kim *et al.*, 2003). To increase the quality of services and to meet patrons' expectations, according to Lakos and Phipps (2004), libraries must embrace the use of internally developed systems that would enable successful assessment and evaluation of services and processes that create positive outcomes for stakeholders.

3. Research design and methodology

So far, there have been no studies analyzing CRM in public libraries in developing countries. Therefore, authors decided to perform cross-country comparisons to have a broader picture regarding this specific topic. The main issue explored in this paper is how libraries in developing countries could use new technologies to improve the relationship with stakeholders and to provide better services to their patrons. Garoufallou *et al.* (2013) state in their literature review regarding marketing concepts in libraries that further research is necessary on specific library marketing issues such as the awareness of marketing concepts by library staff and how library staff train in relationship skills improvements. Based on the suggestions mentioned above, authors decided to research these two topics to gain a better understanding of possible CRM use in libraries in developing countries. The goal of this

research is twofold. First, the goal was to explore the level of awareness about CRM concept by library staff and to explore the existence of conditions that are necessary for successful implementation of the CRM concept, such as familiarity with modern IT technology and terminology. The second goal was to measure the level of patrons' satisfaction with the quality of relationship and services that they receive. The idea was to establish the better insight of the current level of implementation of CRM in libraries and the potential that internet and smart technologies could have on improving the relationship with stakeholders. Also, the survey is used to discover elements of CRM and relationship marketing that could be used by public libraries in developing countries primarily to improve relationships among library's stakeholders.

The specific research questions are:

- RQ1.* To what extent are librarians in developing countries familiar with the CRM concept and smart technologies concepts?
- RQ2.* What perception librarians in developing countries have about the potential of harnessing CRM concept and smart technologies in improving the relationship with stakeholders? Are they willing to use these concepts?
- RQ3.* To what extent are patrons in developing countries satisfied with the relationships and the services that libraries provide.

The survey measured the readiness of both, librarians and patrons, to accept new relationship models and technologies. The level of readiness is assessed by averaging the results of the responses and by calculating the standard deviation for each question, for librarians and patrons respectively. Also, the analysis was performed using ANOVA tests.

3.1 Procedure

The survey covered national, public, school, university and special libraries from three countries in the Balkan region: Serbia, Montenegro, and Bosnia and Herzegovina. The survey data were collected in each country using the same data collecting procedure an online survey tool Google forms. The reason for selecting these three countries is that all three countries are at the approximately same level of cultural and economic development, and the level of library automation is similar in all three countries. However, the overall situation in small and medium-sized public libraries in these three countries does not differ. It is because the majority of libraries use the same, commercially developed, OPAC (Injac, 2013; Filipi-Matutinović, 2005).

The authors conducted two separate surveys. One survey intended for librarians and the second survey for patrons. The questionnaires are based mainly on the recommendations given by authors that explored the use of relationship marketing and measuring the customer satisfaction in libraries (Vakkari *et al.*, 2016; Hernon *et al.*, 2015; Garoufallou *et al.*, 2013). Also, the authors took into consideration other published research on various topics related to library users' satisfaction (Quick *et al.*, 2013; Fried *et al.*, 2010). Also, questionnaires were designed based on the research work presented by (Streatfield *et al.*, 2015; Peltier *et al.*, 2013; Markless and Streatfield, 2012; Fried *et al.*, 2010; Wu and Hung, 2008).

The surveys intended for librarians were sent by e-mail to the public, school, university, special and national libraries using official lists of libraries found on national libraries' web presentation for all three countries. Also, the surveys were distributed via internally developed mailing lists in three main libraries in Serbia, Montenegro and Bosnia and Herzegovina. Since some of the e-mail addresses found in the official list were not valid, the authors used contacts found through libraries' OPACs, which proved to be a very efficient way of getting more responses. The surveys intended for patrons were distributed individually and with the help of library directors in various libraries using the

mailing lists. Also, the surveys were distributed using social networks, mostly Facebook and, in one case, the Moodle e-learning platform for the distribution of surveys to university students in Serbia.

3.2 Sample

The total number of librarians that took part in this survey was 133. There were 62 librarians from Serbia, 32 from Montenegro and 39 from Bosnia and Herzegovina. An online survey was undertaken by librarians from the public, school, university, special and national libraries. The data collection took place between June and December 2016.

In Serbia, 214 libraries were drawn from the official National library records. Sixty-two completed questionnaires were returned, yielding a response rate of 28.9 percent. The Serbian sample was characterized to over-represent librarians from public libraries.

In Montenegro, 76 libraries were drawn from the official National library records. Thirty-two completed questionnaires were returned, yielding a response rate of 42.1 percent. The Montenegro sample was characterized to over-represent librarians from public libraries.

In Bosnia and Herzegovina, 144 libraries were drawn from the two official National libraries' records. In all, 39 completed questionnaires were returned, yielding a response rate of 27.1 percent. The Bosnia and Herzegovina sample was characterized to over-represent public libraries as well.

The total number of patrons that took part in this survey was 224. The target population was patrons who are 14 years old or above. Of that number, 86 respondents were from Serbia (39.5 percent were male, and 60.5 percent were female). Characterizing the Serbian sample, the gender distribution was well-balanced, yet it was biased toward the highly educated and urban population. In Montenegro, 44 patrons participated in the survey (36.4 percent were male, and 63.6 percent were female). Characterizing the Montenegro sample, the gender distribution was well-balanced, yet it was biased toward the 20-39 years old and urban population. In Bosnia and Herzegovina, 94 patrons participated in the survey (23.4 percent were male, and 76.6 percent were female). Characterizing the Bosnia and Herzegovina sample, the gender distribution was biased toward the females and highly educated. All participants visit the library at least once a year. Details and sample description are shown in Table I.

3.3 Instruments

3.3.1 Surveying librarians. This research aimed to determine the librarians' awareness of relationship management concepts and the level of CRM adoption in public libraries in Serbia, Montenegro, and Bosnia and Herzegovina. Also, it explored to what extent are librarians in these three countries ready to accept CRM and smart technologies and what available tools could be used to improve relationships among library stakeholders. The librarians were asked 22 questions and had the option to leave a comment at the end of the survey. The survey consisted of five different sections. The first section examined the current use of ILS in libraries. Other areas of interest included the use of CRM, smart technologies, marketing and open source technologies in libraries. The first question aimed to identify different library types. Afterwards, librarians had to answer 13 questions regarding topics related to ILS, CRM, communication, smart technologies and marketing activities in libraries. These questions could be answered using the five-point Likert scale, one being "I strongly disagree" and five being "I strongly agree." Also, there were six questions concerning the use of ILS, CRM, smart, RFID, and open source technologies in libraries which required respondents to answer with "Yes," "No" or "I do not know." Also, there were two multiple choice questions regarding the communication channels and open source usage in libraries.

Sample	Serbia (%)	Montenegro (%)	Bosnia and Herzegovina (%)	Enhancing customer relationships in libraries
<i>Age group</i>				
14–19	5.8	11.4	13.8	
20–29	25.6	27.3	35.1	
30–39	34.9	29.5	39.4	
40–49	22.1	15.9	8.5	
50–65	10.5	13.6	3.2	
Over 65	1.2	2.3	0.0	
<i>Occupation</i>				
Pupil	4.7	9.1	7.4	
Student	18.6	15.9	24.5	
Employed	61.6	59.1	59.1	
Unemployed	8.1	11.4	4.3	
Retired	4.7	4.5	1.1	
Other	2.3	0.0	3.2	
<i>Education background</i>				
Elementary school degree	0.0	6.8	0.0	
High school degree	36.0	36.4	27.7	
University degree	43.0	25.0	54.3	
Master's degree	19.8	29.5	16.0	
Doctoral degree	1.2	2.3	2.1	
Other	0.0	0.0	0.0	
<i>Place of residence</i>				
Urban	77.9	68.2	79.8	
Suburban	15.1	27.3	12.8	
Rural	7.0	4.5	7.4	
<i>Duration of membership</i>				
1 year or less	10.5	0.0	8.5	
1–5 years	9.3	6.8	9.6	
5–10 years	15.1	22.7	17.0	
More than 10 years	65.1	70.5	64.9	

Table I.
Sample description – patrons

3.3.2 Surveying patrons. The primary purpose of this survey was to establish the level of patrons' satisfaction regarding library services. Mainly, the survey explored the patrons' satisfaction with the number of topics such as quality of service, the number of provided services, library staff performance, communication, quality of answers received from library staff, satisfaction with materials and accessibility. The patrons were asked 42 questions and also had an option to leave a comment at the end of a survey. In the first section of the survey, patrons were asked to answer seven basic demographic questions. In all, 12 questions use a five-point Likert scale, and 19 questions, regarding patrons' satisfaction with specific topics, use the same Likert scale, one being "Very dissatisfied" and five being "Very satisfied." Also, there is one question regarding the possession of a valid library membership card which patrons' answered with "Yes," "No" or "I do not know," as well as three multiple choice questions regarding the use of different library services.

4. Research results

4.1 Findings obtained from librarians

The results indicate that libraries in developing countries barely use the benefits and opportunities that CRM concept provides. While most surveyed libraries use ILS (61.3 percent in Serbia, 50 percent in Montenegro and 46.2 percent in Bosnia and Herzegovina), a significant

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number of libraries do not (20.3 percent in Serbia, 41.9 percent in Montenegro and 35.9 percent in Bosnia and Herzegovina). Some librarians in all three countries answered that they did not know whether their library used ILS or not (17.2 percent in Serbia, 9.4 percent in Montenegro and 17.9 percent in Bosnia and Herzegovina). When asked whether their library had clear guidelines and strategies that defined the relationship between the library's personnel and patrons, most librarians were not sure if there were such guidelines in place or not. Although librarians believe that the use of applications for mobile and smart devices would have a positive impact on everyday business, just a small percentage of libraries offer the possibility for the use of mobile and smart technologies to patrons. When it came to the use of marketing tools in libraries, the librarians in all three countries revealed that they had not used tools to analyze marketing activities.

Table II shows the findings related to the use of ILS, CRM, smart technologies and marketing techniques in libraries. At the end of each section, the result is presented as a mean and standard deviation value for each group of questions. The questions were defined based on findings from "Assessing service quality" (Hernon *et al.*, 2015) and authors' experience from this area.

Questions	Serbia		Montenegro		Bosnia and Herzegovina	
	Mean	SD	Mean	SD	Mean	SD
<i>ILS</i>						
Integrated library system optimizes library processes and provides benefits to patrons?	4.32	0.90	4.47	0.76	4.34	0.91
<i>CRM</i>						
The library is familiar with customer relationship management (CRM) concept?	2.89	1.43	2.47	1.44	2.69	1.38
The library has clear guidelines and strategy which define the relationship between library personnel and patrons?	3.45	1.26	3.38	1.21	3.49	1.19
By implementing CRM concept, the library would improve the relationship with stakeholders?	4.16	1.03	4.16	0.95	4.13	1.13
Library uses all available means of communication with its patrons, partners, and interested parties?	4.13	1.05	4.13	0.87	3.79	1.13
Communication through social networks improves relationship with stakeholders?	4.42	0.97	4.56	0.72	4.79	0.52
Average (group)	3.81	1.15	3.74	1.04	3.78	1.07
<i>Smart technologies</i>						
The use of applications for mobile and smart devices has a positive impact on patrons?	4.15	0.99	4.09	0.89	4.28	0.97
By using smart technologies, the library would significantly improve and optimize its business?	3.98	1.02	3.66	1.07	4.13	1.03
The implementation of RFID technologies would significantly optimize the process of handling library materials?	3.81	1.08	3.91	1.06	3.95	1.10
Average (group)	3.98	1.03	3.89	1.01	4.12	1.03
<i>Marketing</i>						
Greater availability of digital materials will generate more traffic on the library website?	4.52	0.76	4.41	0.80	4.56	0.82
By implementing loyalty programs, the library could improve the relationship with its patrons?	3.76	1.20	3.63	1.04	3.95	1.17
Library organizes special events for its patrons?	4.08	1.12	3.78	1.36	3.95	1.26
Library regularly uses tools to analyze marketing activities?	2.35	1.29	2.16	1.08	2.62	1.33
Average (group)	3.68	1.09	3.50	1.07	3.77	1.15

Table II.
Librarians' attitude
toward different
services

Table III illustrates the usage of various services in libraries, which indicates that most libraries possess a database of stakeholders, but they rarely use smart technologies.

Regarding the use of open source software in libraries the most frequently used are applications for website creation and maintenance, presentation, digitalization, ILS and word processing. However, a significant number of librarians answered that their libraries do not use open source software at all (in Serbia, 33.9 percent, Montenegro, 53.1 percent and Bosnia and Herzegovina, 48.7 percent).

4.1.1 Librarians' familiarity with CRM concept (RQ1). This section determines whether there are significant differences in the level of familiarity with CRM Concept between Montenegro, Bosnia and Herzegovina and Serbia (Table IV).

The Mean value of the scores from all countries i.e. Montenegro ($M=20.21$), Bosnia and Herzegovina ($M=21.12$) and Serbia ($M=20.65$) is higher from the actual mean (i.e. $M=16.5$) revealed that all of these countries are familiar with the concept of CRM in libraries and highest mean value is obtained for Bosnia and Herzegovina (i.e. $M=21.12$).

Table V compared the countries over familiarity with the concept of CRM and it was found that there is no significant difference among these three countries and thereby, it can be said that all countries are equally familiar with the concept of CRM.

4.1.2 Librarians' perception about CRM concept and the use of smart technologies (RQ2). This section determines whether there are significant differences in librarians' perception about CRM concept and the use of smart technologies between Montenegro, Bosnia and Herzegovina and Serbia.

Table VI shows the mean scores for the perception of librarians in developing countries about CRM concept and the use of smart technologies to improve the relationship with customers and stakeholders. The mean score obtained for countries Montenegro ($M=59.56$),

Services used by libraries	Serbia (%)	Montenegro (%)	Bosnia and Herzegovina (%)
CRM	29.0	21.9	20.5
Database of stakeholders	58.1	37.5	64.1
Smart technologies	8.1	6.3	10.3
RFID	27.4	34.4	28.2
Open Source applications	59.7	34.4	23.1

Table III.
Use of different
services in libraries

	<i>N</i>	Minimum	Maximum	Mean	SD
Montenegro (CRM)	32	15	27	20.21	3.02
Bosnia and Herzegovina (CRM)	39	12	27	21.12	3.61
Serbia (CRM)	62	13	27	20.65	3.407

Table IV.
Librarians' familiarity
with CRM concept

Montenegro ($N=32$)		Bosnia and Herzegovina ($N=39$)		Serbia ($N=62$)		F	p	
M	SD	M	SD	M	SD			
TSI	20.21	3.02	21.12	3.61	20.64	3.40	0.64	0.52
Note: $N = 133$								

Note: *N* = 133

Table V.
Comparison of
familiarity with
CRM concept

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Bosnia and Herzegovina ($M=58.38$), and Serbia ($M=58.25$) is higher than the mean of the scale, i.e. ($M=45$). thereby, higher than average scores are obtained for the perception of librarians in Montenegro, Bosnia and Herzegovina, and Serbia about CRM concept and the use of smart technologies to improve the relationship with customers and stakeholders.

Table VII compared Montenegro, Bosnia and Herzegovina and Serbia over the perception of librarians about CRM concept and the use of smart technologies to improve the relationship with customers and stakeholders and it was found that there is no significant difference among these three countries.

4.2 Findings obtained from patrons

The survey included questions on the benefits of public libraries as perceived by patrons. The patrons' top-ranked library services are leisure, personal improvement, followed by education. When asked how frequently they use library services, approximately 70 percent of the respondents in Serbia and Bosnia and Herzegovina answered that they used library services between one and five times per month, while approximately 10 percent answered that they used it between six and ten times a month. The respondents in Montenegro had somewhat different results, which show that 52 percent of them use library services between one and five times a month, 25 percent use them between six and ten times and 20 percent use library services between eleven and twenty times per month.

The research revealed that more than 80 percent of patrons possess a valid library membership card and they agreed that possession of a valid membership card increases the sense of belonging to the library. The majority of patrons answered that the lending of books and other library materials with the help of library staff was the most popular way of finding information or resources inside the library. The least used method was using library services remotely via the internet (Table VIII).

The survey also revealed services that were of great importance to patrons, such as online catalog, library website, online reservation of library materials and access to the digitized material. Of all communication channels, the patrons value communication via e-mail and Facebook the most (Table IX). Interestingly, the importance of attending promotions and panel discussions organized by the library showed the difference between patrons among the three countries. Statistically, in Serbia, 50.0 percent of participants answered that it is important to them, in Montenegro 75.0 percent, while in Bosnia and Herzegovina just 24.5 percent.

Table VI.
Perception of librarians in developing countries about CRM concept and the use of smart technologies

	<i>N</i>	Minimum	Maximum	Mean	SD
Montenegro	39	37.00	72.00	59.56	6.75
Bosnia and Herzegovina	62	42.00	72.00	58.38	5.86
Serbia	32	49.00	70.00	58.25	5.61

Table VII.
Comparison over librarians' perception about CRM concept and the use of smart technologies

	Montenegro (<i>N</i> = 32)		Bosnia and Herzegovina (<i>N</i> = 39)		Serbia (<i>N</i> = 62)		<i>F</i>	<i>p</i>
	<i>M</i>	SD	<i>M</i>	SD	<i>M</i>	SD		
TSI	58.25	5.61	59.56	6.75	58.38	5.86	0.56	0.57

Note: *N* = 133

In what different ways did you find information in the past (check one or more answers)	Enhancing customer relationships in libraries		
	Serbia (%)	Montenegro (%)	Bosnia and Herzegovina (%)
Locating sources of information on your own (without the help of library staff)	48.8	68.2	31.9
Lending books and other library materials with the help of library staff	73.3	88.6	73.4
Using a computer in the library (internet, CD/DVD, digitized material, etc.)	23.3	34.1	20.2
Searching the library collections (books, magazines, catalogs, databases, etc.)	34.9	20.5	23.4
Visiting events at the library (forums, promotions, workshops, meetings, etc.)	23.3	45.5	16.0
Using the internet in the library	16.3	31.8	11.7
Using the library website	12.8	43.2	6.4
Using the library Facebook profile	17.4	18.2	10.6
Using "Ask a librarian" service	8.1	15.9	16.0
Using library services remotely (via the internet)	8.1	6.8	3.2
Searching the scientific and academic databases to which the library subscribed	8.1	13.6	3.2
Accessing the library website via smartphone or tablet	5.8	22.7	7.4
Using other sources	19.8	6.8	13.8

Table VIII.
How patrons find information in libraries

Please mark services that are of the highest importance to you	Use of different communication channels		
	Serbia (%)	Montenegro (%)	Bosnia and Herzegovina (%)
Library website	47.7	50.0	33.0
Online catalogue (library collections)	60.5	75.0	70.2
Online reservation of library materials (books, magazines and other materials)	43.0	56.8	37.2
Online access to user account (possibility to check status, important dates, fees, etc.)	34.9	47.7	39.4
Communication via Facebook	30.2	40.9	17.0
Communication via Twitter	3.5	2.3	1.1
Communication via Viber	10.5	13.6	11.7
Communication via e-mail	36.0	52.3	27.7
Communication via mobile phone	12.8	11.4	11.7
Access to digitized material (books, magazines, postcards, videos, etc.)	48.8	54.5	35.1
Participation in workshops organized by the library	32.6	31.8	22.3
Attending promotions and panel discussions organized by the library	50.0	75.0	24.5

Table IX.
Use of different communication channels

The patrons answered questions aimed at measuring the extent of their satisfaction with services, performance, communication, accessibility, equipment and materials provided by the library. The results showed that the patrons will very likely use library services again and would recommend library services to others. The research showed that patrons were satisfied with the services provided by libraries. On the other hand, the majority of surveyed patrons answered that they are not satisfied with the support and questions answering system. Also, patrons declared that the system for submitting comments, suggestions and complaints is not easy to use. Most patrons were satisfied with the library staff performance and relationship with library staff, in general. The patrons in all three countries were

satisfied with opening hours, accessibility and the layout of offices and equipment. However, although they found communication with the library and library staff to be very professional, they were somewhat satisfied with communication through Facebook or e-mail. When it came to the equipment and materials that libraries provide, the responses showed that patrons in all three countries thought that this was the area that needed improvement (Table X).

4.2.1 Patrons' satisfaction with the relationships and the services that libraries provide (RQ3). This section determines whether there are significant differences in patrons' satisfaction with the relationships and the services between Montenegro, Bosnia and Herzegovina and Serbia.

Table XI shows the mean scores for patrons' satisfaction with the relationships and the services that libraries provide. The mean score obtained for patrons from the countries Montenegro ($M=112.09$), Bosnia and Herzegovina ($M=119.07$), and Serbia ($M=113.54$) is higher than the mean of the scale, i.e. ($M=99$), thereby, higher than average scores are obtained for patrons' satisfaction with the relationships and the services that libraries provide.

Table XII compared libraries in Montenegro, Bosnia and Herzegovina, and Serbia over patrons' satisfaction with the relationships and the services that libraries provide in these countries and it was found that there is no significant difference in the satisfaction level among patrons from these three countries.

5. Discussion and implications

The main contribution of this paper is directed toward analysis of the current trends, possibilities and conditions necessary for implementing CRM and smart technologies in public libraries in developing countries. Taking into consideration the findings obtained from this research, authors concluded that neither librarians nor patrons in developing countries are entirely familiar with new technologies, terminology, services or trends in public libraries. This conclusion is consistent with findings from other authors (Walsh, 2010; Wang, 2007) which also emphasized the importance of user awareness. Walsh (2010) also stated that one of the major challenges that they faced when trying to introduce new technology into library surrounding was to increase the awareness about QR codes within a population of library users. In relation to the findings from the two research questions (*RQ1* and *RQ2*), librarians must explore possibilities that new technologies provide and present the benefits of their use to the stakeholders on all levels. Garmer (2014), states that libraries should strive to fulfill local community goals and to generate new knowledge that significantly improves the quality of life in the community. Every public library in developing country should strive to fulfill this goal. Also, according to Farkas (2013), it is vital for libraries to make certain relationship improvements with stakeholders by embedding a culture of assessment into everyday business processes. Even though this research revealed that most librarians are aware of CRM concept and most of them have positive perception about its use in libraries it is clear that majority of surveyed libraries did not fully adopt the customer-oriented culture. The customer-oriented culture will justify the need to create the awareness among librarians, thus emphasizing the importance of the main principles of CRM concept that should be in use by public libraries.

Various authors explore the integration of CRM concept into higher educational organizations and the academic environment (Rigo *et al.*, 2016; Vulić, 2013; Daradoumis *et al.*, 2010) hence the same principles and techniques could apply to public libraries as well. Since there are no significant differences between three developing countries when it comes to librarians' familiarity and perception about CRM concept the obtained results could be used by any library in these three countries that show an interest in tackling this matter. According to Walker *et al.* (2011), it is essential for public libraries to identify effective

Enhancing
customer
relationships in
libraries

Questions	Serbia		Montenegro		Bosnia and Herzegovina	
	Mean	SD	Mean	SD	Mean	SD
<i>Services</i>						
The library is of great importance to you?	4.14	1.00	4.00	1.01	4.22	0.94
The quality of services that library provides is very high?	3.79	0.88	4.07	0.82	3.95	0.87
The number of services that library provides is satisfactory?	3.57	0.96	3.84	0.91	3.93	0.92
Would you recommend the services that library provides to others?	4.05	0.91	4.50	0.66	4.26	0.87
It is very likely that you would use library services again?	4.56	0.76	4.80	0.46	4.63	0.70
Level of satisfaction with library website?	3.34	1.05	3.36	1.01	3.50	1.22
Level of satisfaction with online catalogue?	3.21	1.19	3.18	1.21	3.49	1.34
Level of satisfaction with access to digitized materials (books, magazines, postcards, video material, etc.)?	3.08	1.15	2.93	0.87	3.34	1.24
Level of satisfaction with workshops and training provided by the library?	3.40	1.11	3.30	0.88	3.34	1.16
Level of satisfaction with promotions and events organized by the library?	3.77	1.11	3.93	0.95	3.59	1.14
Average (group)	3.69	1.01	3.79	0.88	3.83	1.04
<i>Performance</i>						
I am very satisfied with library staff performance and relationship?	4.15	0.94	4.18	0.87	4.45	0.77
The systems for support and answering services are of high quality?	3.72	0.98	3.43	0.97	3.97	0.96
I received the answers to questions sent to library and library staff promptly?	4.14	0.84	4.20	0.79	4.21	0.85
The quality of received responses is satisfactory?	4.15	0.73	4.16	0.78	4.19	0.82
Average (group)	4.04	0.87	3.99	0.85	4.21	0.85
<i>Communication</i>						
Communication with library and library staff is very professional?	4.06	0.94	4.11	0.92	4.34	0.78
The system for submitting comments, suggestions, and complaints is very easy to use?	3.22	1.23	3.02	1.07	3.73	1.06
Level of satisfaction with communication and notifications via Facebook?	3.26	1.12	2.61	0.92	3.18	1.29
Level of satisfaction with communication and notifications via E-mail?	3.27	1.14	3.07	1.15	3.33	1.24
Possession of a valid membership card increases the sense of belonging to the library?	4.01	1.17	3.98	1.07	4.24	1.00
Average (group)	3.56	1.12	3.36	1.03	3.76	1.07
<i>Accessibility</i>						
Level of satisfaction with library opening hours?	4.40	0.82	4.55	0.82	4.41	0.82
Level of satisfaction with accessibility (the entrance to the library, shuttle service to the library, parking, etc.)?	4.05	1.04	4.30	0.90	4.15	1.00
Level of satisfaction with the layout of offices, equipment and shelves in the library?	4.02	0.95	3.77	0.74	4.23	0.80
Average (group)	4.16	0.94	4.21	0.82	4.26	0.87
<i>Equipment</i>						
Level of satisfaction with computer equipment for internet access?	3.44	1.05	3.07	0.97	3.71	1.04
Level of satisfaction with the availability of printers and copiers?	2.88	1.21	2.48	1.13	3.24	1.20
Level of satisfaction with terminals for searching library materials (online catalog)?	2.97	1.17	2.68	1.09	3.20	1.30
Average (group)	3.10	1.14	2.74	1.06	3.38	1.18
<i>Materials</i>						
Level of satisfaction with books?	3.83	0.90	3.89	0.87	3.91	0.73
Level of satisfaction with audio-books?	2.62	1.14	2.34	0.91	2.91	1.22

(continued)

Table X.
Satisfaction with
different services
in libraries

LHT

Questions	Serbia		Montenegro		Bosnia and Herzegovina	
	Mean	SD	Mean	SD	Mean	SD
Level of satisfaction with video material (DVD, Mp4 etc.)?	2.52	1.07	2.23	0.89	2.84	1.24
Level of satisfaction with audio material (CD, Mp3 etc.)?	2.56	1.06	2.18	0.87	2.80	1.24
Level of satisfaction with e-books?	2.45	1.14	2.20	1.02	2.84	1.24
Level of satisfaction with periodicals (newspapers, journals, proceedings etc.)?	3.47	1.03	3.36	1.24	3.43	1.08
Average (group)	2.91	1.06	2.70	0.97	3.12	1.13

Table X.

Table XI.

Patrons' satisfaction with the relationships and the services that libraries provide

	<i>N</i>	Minimum	Maximum	Mean	SD
Montenegro	44	77.00	154.00	112.09	17.56
Bosnia and Herzegovina	94	56.00	158.00	119.07	21.42
Serbia	86	76.00	158.00	113.55	19.21

Table XII.

Comparison of patrons' satisfaction with the relationships and the services that libraries provide in Montenegro, Bosnia and Herzegovina and Serbia

	Montenegro (<i>N</i> = 44)		Bosnia and Herzegovina (<i>N</i> = 94)		Serbia (<i>N</i> = 86)		<i>F</i>	<i>p</i>
	M	SD	M	SD	M	SD		
TSI	112.09	17.56	119.07	21.42	113.55	19.21	2.58	0.78

Note: *N* = 224

means of promotion and dissemination of their value to society. However, not all libraries need to implement complex channels of communication to improve the relationship with stakeholders. It is up to each library to design an appropriate CRM concept that best suits their needs. Subsequently, even if the library does not provide that many services, it still should strive to deliver carefully tailored messages to its patrons, by all means available. Based on the results of this survey it is evident that there is a systematic lack of clearly defined guidelines and strategies that define the relationship between library personnel and patrons in all three countries. For example, marketing community developed a new breed of CRM lately. It is referred to as xRM which, according to Roche (2003), consists of technologies and business processes that support the relationship network of partners, employees, customers, and suppliers. Barač *et al.* (2017) describe xRM more as a strategic approach than a new feature or a service. A logical question arises how could librarians in developing countries understand xRM concept if, in fact, they are not familiar with the fundamental CRM concept in the first place?

The most important implication of this research derives from our findings concerning the librarians' perception and knowledge about the new technologies and terminology. The of this this research revealed that 22.7 percent of respondents from Montenegro used smartphones or tablets to access the library website, compared to Serbia, 5.8 percent and Bosnia and Herzegovina, 7.4 percent. The result comes as no surprise since Montenegro has the highest mobile penetration rates in Europe, at 170 percent (European Commission, 2016). At the same time, approximately 30 percent of librarians in all three countries answered that

libraries use RFID technologies, but when asked about the use of smart technologies, less than 10 percent of respondents acknowledge the use of smart technologies, although RFID is considered to be a technology of this kind. These findings indicate that there is still a certain degree of misconception among librarians in developing countries when it comes to using modern technologies in public libraries.

When it comes to effective communication with stakeholders, either in physical or virtual space, the use of advanced communication tools and channels is the key to addressing this problem, since it gives more opportunities to communicate the message to a broader audience. Libraries are becoming places where people now, beside reading books, can obtain new knowledge, skills or attend different workshops. They use libraries for resume writing when looking for a new job, improving computer skills or learning to use new technologies. Also, libraries have always provided a sanctuary and safe place for refugees and migrants (Vårheim, 2014). They help them learn languages or new literacy and computer skills. By using a CRM system, libraries could keep track and be in contact with people that they have helped, thus it would present libraries as positive and motivating examples to the rest of society. One of the other possible benefits that CRM could have is to help librarians in the event of an unexpected occurrence such as a natural disaster or fire for example. The role that public libraries play in communities after the natural disaster has changed the perceptions about libraries in many areas affected by the hurricanes, mostly because libraries were able to provide essential information and a range of services to those in need (Jaeger *et al.*, 2006). Also, by having a CRM system in place libraries would have a better opportunity to establish communication with stakeholders, plan and coordinate the recovery process more efficiently.

6. Conclusion

Literature analysis shows that the previous research on CRM implementation in public libraries in developing countries provides insufficient information regarding this particular topic. Unfortunately, as stated earlier, it has been of great concern for many public libraries in developing countries how to provide financial support for any such change. However, in today's world, libraries can acquire FOSS for little or no cost at all; so it is a matter of having a positive attitude toward the new technologies and skillful staff to make these changes happen. It is not something that can be forced onto librarians "as is"; to the contrary; this change needs careful planning, lots of preparation and support from top management (Barać *et al.*, 2017; Newby *et al.*, 2014). With the help of top management, public libraries in developing countries should be able to implement the CRM concept, which had been used successfully in different profit and non-profit organizations, to improve relationships with stakeholders. Even though, improvement of customer relationships skills requires extra knowledge and effort, it is still something that every librarian should strive to master in the future. Librarians should accept this as "one step at the time" process, where incremental changes would eventually lead to a significant changeover in CRM in libraries.

In addition, when implementing CRM in libraries, organizational and cultural challenges have to be taken into account. It is extremely important to understand the clients' values, norms, traditions, language, religions, perceptions, etc. in their culture. Hernon *et al.* (2015) argue that customer expectations vary from community to community and from individual to individual. At the same time, management of a business entity, i.e. a library in this case, has to define a strategy for how to embrace and control internal organization and its values. There must be innovation within the organization in order to absorb the knowledge and to use it efficiently (Newby *et al.*, 2014). However, this was not in a focus of the research.

The additional value of using the CRM concept in libraries in developing countries presents an opportunity to determine which services to keep in their current form and which ones to transform to suit users' needs. Willingness and readiness to reach out to

stakeholders in this new and appealing way would help libraries secure their support in the future. This change would also enable seamless and permanent library improvements and the development of new services. The future research should secure support from stakeholders and different library types in larger numbers to obtain more valid data. According to Hernon *et al.* (2015), when libraries survey their customers, and the response rate is low, it undoubtedly shows that they failed to create a culture of listening to their customers and valuing what they say. The same applies to librarians as well, indicating that public libraries in developing countries did not recognize the importance of impact assessment and customers' satisfaction measurement, whose results they could use to improve their business practices as well. The future study will be based on the work of Newby *et al.* (2014) assessing not only whether the library has appropriate IT resources to support the implementation of CRM but also whether management and employees have the appropriate skills.

The ultimate goal will be to develop a framework for CRM adoption which public libraries in developing countries could use with as little resources as possible. The next step in the future research would be to anticipate integration of smart technologies into the library CRM system, as suggested by Wójcik (2016); Bradley *et al.* (2016); Liao and Shieh (2015). And to make use of context-aware services as described by Borrego-Jaraba *et al.* (2013); Chang and Liao (2006) to improve services and optimize relationships with stakeholders. Finally, public libraries in developing countries need to step up their effort to improve library services and relationships with stakeholders to keep up with the trends and standards that developed countries are setting. Further, as Newby *et al.* (2014) emphasize, it is important that library management accept the fact that there are responsible for securing the successful implementation of the CRM by providing a supportive, innovative and positive attitude toward the use of the new technologies within the organization.

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