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## GAMES, GAMIFYING AND LIBRARIES

### Abstract

### Introduction

Games have nowadays become an important part of collection in many public libraries. On the other hand, gamifying is utilized in the teaching of different types of content and skills in libraries. We may at first think that games are just entertainment, but their importance as a source of interest and a pedagogical tool is also noticeable in scientific libraries. Games can be both: entertainment and a way to learn new things. Unfortunately, games and gaming are still associated with prejudice and may even be perceived as non-library content. The idea of gamifying may not have been understood in libraries either.

Gamification has become a trend topic during the 2010's (Hamari, Koivisto & Sarsa 2014). Unfortunately, gamification's role in libraries has not been widely analyzed even though libraries have actually used gamification in their work. According to Haasio and Madge (2020) there was 21 peer reviewed articles about gamification in libraries in the end of 2019. In addition to this, various practical guides have been published on the subject.

In this article, we will open up the concept of gaming first and consider what it means. We then create an overview of how games are used in libraries. We use case examples to analyze various applications in which has been utilized for gamifying in public and scientific libraries. Finally, we consider the opportunities and challenges that gamifying brings to libraries and the importance of games as part of the library's collection. In addition to gamifying, we also discuss the role and significance of games in the library more broadly.

What is gamification?

The concept of gamification has several definitions and there is no single, accepted definition. The most often quoted one comes from Deterding and colleagues (2011), and Huotari and Hamari (2012):

*“the use of game design elements in nongame-contexts”* (Deterding, Dixon, Khaled, & Nacke, 2011) *“a process of enhancing a service with affordances for gameful experiences to support user’s overall value creation”* (Huotari & Hamari, 2012).

According to Hamari, Koivisto and Sarsa (2014) “gamification has been defined as a process of enhancing services with (motivational) affordances in order to invoke gameful experiences and further behavioral outcomes”. In defining the concept of gaming, Huotari and Hamari (2012) emphasize that gaming produces the same type of psychological experience as games. Vesa and Harviainen (2019) have pointed out that despite the definition of gamification, using game-like elements to make nongame tasks more interesting has a much longer history.

Karl M. Kapp’s (2013) definition underlines the educational features of gamification. According to him, *“gamification is using game-based mechanics, aesthetics and game-thinking to engage people, motivate action, promote learning and solve problems”*. In libraries, one of the main tasks is to support customer’s learning by giving them tools and contents, which make learning sufficient and effective.

Rewards, badges and other motivators are typical tools when gamifying different contents. When playing games and learning new things, the motivation is important and it can be increased by gamification. According to Kim (2015) gamification in libraries captures people’s attention, to engage them in a different activities, influences their behavior.

Mihály Csíkszentmihály’s (1990) concept of *flow* explains us why gamification can increase the motivation, for example, when learning new things. His concept of flow can be understood as the state of concentration and engagement that can be achieved when completing a task that challenges one's skills. Gamifying the learning process supports self-paced learning and self-gratification (Pappas 2014). The charm of the games and the possibilities of playing them are based above all on the fact that an interesting game makes the player immerse themselves in it.

When we think of library as a space and try to make it more attractive to new customers and especially for children and youth, games are in an important role. According to McMunn.Tetango (2017) games make libraries more welcoming and friendly as a space,

## Games in libraries

According to Haasio and Madge (2020), games in libraries can be understood as

- 1) material to borrow
- 2) to be played in libraries
- 3) used educational purposes like teaching library use, cultural phenomenon's etc.

Games and gamification in libraries seems to be a new trend, but actually, it is not. We have had games in many libraries for decades. Traditional board games are a good example of that. Chess and Monopoly have been in many public libraries for customer's use. When we talk about games in libraries, it should be noted that while the majority of games today are electronic, board games are still important. (Haasio & Madge 2020.) Nicholson (2013) has stated that there has been games in libraries for over one hundred years; in 1800's some American libraries were providing gaming opportunities for their customers.

Although board games have been in libraries for a long time and customers have had the opportunity to be play them on library premises, digital games and their suitability for libraries have been the subject of debate until recent years. Adams (2009) has pointed out that "video games can be seen to support educational, recreational and democratizing goals of the library". Today, there is a growing perception that digital games are cultural products that have a similar role in library collections as, for example, CDs or videos.

Digital games are individual cultural pieces of work that are equivalent to movies, music and literature. They can be understood as a popular and useful hobby and also a source of stories. With them one can create own stories and interact with others, They can also be a way to express personality and deal with frightening themes. Often we think that games are just for kids, but actually games can be a shared activity for the whole family. They are technological innovations, but one has to remember that some games are also physical and they can be sports equipments. (Harviainen, Meriläinen & Tossavainen 2015.)

In many public libraries, it is possible to borrow video games in exactly the same way as other material. Playing electronic games in libraries has also become more common in this millennium. Some twenty years ago some public libraries restricted playing games on computers, today libraries organize gaming events and many libraries have their own corner for gaming. This is a good

indication that libraries increasingly understand the importance of gaming and games, and that games are part of our culture in much the same way as, for example, movies. In fact, the advent of movies and popular music into public libraries once received as much critical reception as gaming. As one of the important tasks of the library is to guarantee all citizens equal access to the various achievements of knowledge and culture, it now also offers access to different forms of game culture. From a media education perspective, libraries can also promote an understanding of which games are high quality and which are even harmful. The library is also a promoter of game culture by emphasizing the good aspects of gaming and investing in high quality and developing games, for example, in its own collection work.

Increasingly, the public library is a meeting place where people can meet each other. It is not just a provider of information and entertainment but also a living room for all citizens. The fact that the library offers games to play on its premises is understandable. You will spend time in the library and meet friends. Playing can be one way to spend time on the library premises.

The library must offer games for both borrowing and playing on the library premises. However, that is not enough, as the library's role as a media educator also focuses on games. The library plays a significant role as a game educator, which is part of media education. Games are often discussed without adequate information or comprehension and they are seen good or bad depending on the speaker (Meriläinen 2015).

What is meant by game education? Meriläinen (2015) points out that game education is understanding game culture and having a games literacy. According to him “game literacy is familiarity with the different sections and properties of games, the ability to perceive gaming as a diverse cultural phenomenon, the ability to interpret the different signals games give out, and being aware of the role gaming plays in today’s society”. When we understand that games are a central part of contemporary culture as well as movies or music are, the role of the public library as a game educator is logical. The mission of the library is to promote media literacy on a large scale, whether the cultural product is printed or electronic. Game education done by the libraries also promotes game knowledge and the elimination of false prejudices against games.

The popularity of gaming, especially in the younger age groups, is high. According to several studies there is a link between playing video games and enhanced well-being, problem-solving skills, intergroup relations, and physical activity. (Adachi & Willoughby 2017.) When games, as

some forms of learning and storytelling, are part of library collections and services, it is also possible to gain new customers. Young people may not find the traditional cultural assets offered by the library interesting, but instead of literature, for example, games can attract young people to the library. Swiatek and Grosse (2016) underline that gaming should be formally stated in library charts and should be a department. According to theme should not understand it just as a tool, but an important part of library's activities.

### Doing gamification in libraries

Gamification can be carried out either by game-like structures and processes, which are grafted onto systems libraries already have or by designing new games for the library's use (Felker 2014). It should also be borne in mind that libraries and their needs, objectives and clientele differ considerably, for example in public and scientific libraries. Therefore, the starting point for gaming should be to support the core activities of the library and its goals and strategy.

User's experience of service can be enhanced by using gamification (Prince 2013). According to Prince (2013) libraries may try to engage customers and enhance their experience by using gamification in library applications. Even though gamification is a fairly new concept, many libraries have actually done it for a long time. Spina (2014) says that points and rewards have been given in libraries to motivate people's reading long before the concept of gamification was known. And scavenger hunts and so-called "big games" have been used to introduce youths to various library services (e.g., Grief, 2014).

Huotari and Hamari (2012) have pointed out that the idea is to produce "gameful experiences in order to support user's overall value creation". In practice, this means, for example, making information retrieval guidance. Various information related to the core activities of the library can also be gamified: for example, information related to literature or music can be turned into games, thus helping customers to deepen their knowledge in these areas.

There are three ways to implement gamifying (Haasio & Madge 2020):

- 1) All computer-mediated gamification when customers are using their mobile devices, computers or tablets.
- 2) Partly computer-mediated gamification.
- 3) Gamification where computers are not used at all.

Library customers may use their own devices or borrow tablets from the library. It is also becoming more common for customers to use their own mobile devices and play games specifically on smartphones. Whether you use your own smartphone or a library tablet also depends on whether the game is freely available online or whether the customer should use an application that only available in library's computers. All computer-mediated gamification can also be implemented completely virtually. (Haasio & Madge 2020.) While libraries hope that customers will also visit the library's physical facilities, in some cases, providing purely virtual game-enabled educational materials and other similar content to customers makes sense. For example, games related to learning information retrieval skills are a good example of this. Learning motivation can be increased by using badges, which often motivates younger learners in particular.

In some cases, libraries have consciously sought to avoid gambling through purely digital means. Because children and young people spend so much time online, the idea has been to provide, for example, game-like experiences in accessing library collections using a hybrid model. (Haasio & Madge 2020.) For example, library orienteering is one of these games which represents hybrid model. Customers use their mobile phones and get hints and questions from QR-codes. The answers on the other hand must be look at from books or other non-digital material so that the users get familiar with the collection. QR-orienteering motivates children to do the given assignment, because they can use their smartphones (Haasio & Madge 2020).

Non-digital gamification has been used for a long time in libraries. Different kind of quizzed are a good example of these solutions. Also reading diplomas are actually based on the idea of gamification. The aim is to obtain a diploma that can be compared, for example, to passing the level of a video game or earning an achievement after completing a number of tasks.

Nowadays the escape rooms have become popular in libraries. One example of gamifying things without computers are LARPs (Live-Action Role-Playing Games) in libraries (Harviainen 2014). Like library orienteering or scavenger hunts, live-action role-plays can be utilized to encourage participants to explore library spaces from new, often task-oriented perspectives, with the hope that they will come back again as normal customers, or at least appreciate library services more than before. LARPs are also used in education where they are sometimes called as edu-LARPS (educational live action role-playing). For example, according to Brekke (2018), they can be used successfully as pedagogical methods for teaching writing. In deploying any sort of gamification for educational purposes, however, one must keep the educational content at the core (Landers 2014).

The themes in LARPs and escape rooms used in libraries vary a lot. For example, they can be connected to the literature, like Harry Potter escape rooms and LARPs or famous media franchises like Star Trek. (Kroski 2019.)

According to Felker (2014) gamification is one way in which libraries can compete in a digital society to maintain their position. Google's dominance in information retrieval and the entertainment provided by the network are competitors to the library. Supporting the learning process and information retrieval skills by gamification, makes library and its services more interesting to the customers. Felker also points out that games make possible to learn new things by making people active during the learning process. In addition, gamification makes it possible to present the information a contextualized framework. In addition, gamifying makes learning fun, as Kim (2011) has stated, for example. This motivates customers and encourages them to study. Several different studies support this view. For example, Chapman and Rich (2018) have found that the vast majority of students they studied saw gaming as increasing interest in learning. Majuri, Koivisto and Hamari (2018) found in their systematic literature review that the impact of almost all research games on learning has been positive. Gamifying increases students' engagement and enhances learning (Buckley & Doyle 2014).

New generations have started working online and for many it is the most natural and meaningful way to work. For them, gaming has been one of the main pastimes from a very young age and games have become important cultural products for this generation. Once you are used to spending your free time with games, it is clear that they are a natural way to study and learn. Nistor and Iacob (2018) have pointed out that traditional motivational methods are less and less efficient

For what purposes can games be used in libraries? The development of information literacy, knowledge of literature and other culture, and teaching the use of the library and its collection databases are the most common uses (Felker 2014). However, the application possibilities of gaming are not limited to these most common topics, to which it has been primarily applied in libraries. Games are a great tool for learning with imagination as a limit. Kim (2015) has pointed out that libraries have semi-business-like functions where gamification can also be used. For example marketing their services and raising awareness about everything libraries offer to citizens.

In some libraries, gamification is linked with digital badging (Gamification n.d.). When a customer has completed a certain level of the game, she will receive a badge from it. The badge is an indication of a certain competence and is used, for example, in teaching knowledge of online skills and collections in universities and other educational institutions.

In public libraries, most of the gamified solutions are targeted to children and youth (see e.g. Haasio & Madge 2020). On the other hand, in academic libraries, games and gaming have been used extensively, above all in teaching information retrieval and media literacy.

IFLA has on several occasions emphasized the cultural significance of games and the importance of gaming in library work, for example in teaching media literacy (Cowing, Lee & Pun 2018). There are numerous examples of good results all over the world where gamifying has been used effectively. For example, when gamifying reading, the positive impact was clear according to Chan (2019). Games and gamified services can also be used as marketing and outreach tools to reach the Y-generation which has used to play games as a part of their everyday life (see Cowing, Lee & Pun 2018).

Gamifying libraries' websites is one goal for certain libraries. It can provide customers with a more meaningful way to explore the collection. According to Battles, Glenn and Shedd (2011) gamifying the library we pages “may have intensive effect on users/players and could engage them more in library processes”. Customers may for example, get points from reserving and lending a book (see e.g. Bigdeli et al. 2016).

Nevertheless, the use of games in public libraries in different countries varies widely. In some cases, games are common and gaming is aimed at promoting media literacy, for example, while in others games may still be perceived as material unsuitable for libraries. The difference between countries and their attitudes towards games and gamifying appeared, for example, when comparing the views of Finnish and Romanian libraries on the usefulness of games and experiences of their use in libraries (Haasio & Madge 2020).

Scientific libraries have increasingly made use of gamifying, for example in teaching information retrieval and assessing the reliability of information sources. Gamifying can also be used to teach the use of the library and to be acquainted with the collection databases.



## Discussion

The history of games in libraries dates back to the 19th century. Today, they have become an important part of the collection of public libraries, and at the same time, the use of games in the teaching of various forms of media literacy, information retrieval and culture has increased. Gamifying has enabled learning that motivates children and young people, for example, better than traditional methods.

The use of gamifying in libraries varies from country to country. Its importance has been emphasized in recent years, for example by IFLA, because of good learning outcomes. It can be used successfully in both, public and academic libraries to motivate the customers.

Games in libraries can be understood as material to borrow or a service when games are to be played in libraries. They can also be used for educational purposes when some of the library's activities are gamified.

There is still some prejudices against games and gamifying in libraries, but they are declining as the importance of games as cultural products and their potential in motivating customers is better understood. In order to remove prejudices and increase the expertise of library staff in relation to games, it is important that staff are also provided with training related to games. As one of the tasks of the library staff is to act as media educators, they will in the future also give game education for their clients. This must also be taken into account in librarians' education at the universities.

The role of libraries as game developers needs to be discussed and analyzed. In most cases, the resources of libraries are small and therefore the game designing is often impossible. However, different collaborative projects play a key role in this, as the same gamified content can be used extensively, even globally. The use of games in libraries has been little studied. In the future, for example, customers' experiences of game-based learning events in libraries and their meaningfulness will be one of the topics of interest for research.

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