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Audiobooks Business Model – Technologic Challenges, Case Study

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Abstract

In English-speaking countries, the audiobook is a popular format and used very often. In Portugal the audiobook is an unknown format of the majority of the population, there are few audiobooks in Portuguese, and the ones that are found, are mostly in Brazilian Portuguese. With this work, we intend studying the business and production models present in the English-speaking countries, indicating the way for Portuguese companies to have success. In the course of this work, a preliminary recording was made, in order to know the difficulties related to the recording of an audiobook. The recording was provided to the University student community, to conduct a questionnaire about the quality of the recorded audiobook. The results of the questionnaire are presented and analyzed.

Keywords: Audiobook, Business Models, Preliminary Recording, Questionnaire;

Introduction

An audiobook is a book that can be heard instead of being read. It is a recording of a text that can contain music or ambient sounds. The audiobook emerged as a mean of allowing book access to people who for various reasons, such as transitory or permanent disability, could not read in the traditional format.

For many years, the audiobook was an instrument used exclusively by the blind, who used this technology to gain access to information. Nowadays due to the lack of time, the audiobook is no longer an exclusively format of blinds and started to be appreciated for population in general. A lot of people access to this format also because is useful to help people finish more books in less time and improve the experience of 'read' a book.

The audiobook, because it is not a physical product, has monetary advantages over the printed book, as it does not have the inherent cost of manufacturing, stock, packaging and transportation. Besides that, the audiobook allows readers to read in situations where it would not be possible, for example while performing intellectually less demanding tasks and when doing household chores or exercise.

The audiobook is very widespread in English, however in Portuguese, the offer is very limited and almost all in Brazilian Portuguese, being very limited the offer in European Portuguese. The main purpose of this work is to get familiar with the existing supply of Audiobooks in European Portuguese, understand the attitude of the Portuguese publishers in relation to this format, understand the opinion of the authors regarding the possibility of having their books in this format and know the acceptance of this format by Portuguese readers. It's also intended to study the variants of narration for each genre of book and which are preferred by readers, and the technical constrains related to the record of an Audiobook.

In the course of this work a preliminary recording was made with the purpose of understanding the technical difficulties involving the recording process. It was conducted a questionnaire to Instituto Politécnico de Bragança (IPB) community about the recording quality. The questionnaire was conducted to understand the acceptance of this format by the student community.

Methodology

With the purpose of presenting ideas to boost the audiobook market in Portugal, a study was carried out on existing business models in the Anglo-Saxon markets.

In order to be aware of the difficulties related to the recording process, a preliminary recording was made. The recording complied with the technical requirements demanded by the companies specialized in its production and commercialization, as it is the case of ACX and Author's Republic.

In the end, to obtain an evaluation of the recording, and to obtain the degree of acceptance of the format in the Portuguese consumers, a questionnaire was carried out to the University student community. The data obtained in the questionnaire were subjected to a statistical study, in order to determine the existence of a relationship between the classifications attributed to the recording and the gender, age group and qualifications of the subjects.

International Audiobook Market

International Companies

In English-speaking countries, especially in the U.S., the audiobook is a format of general knowledge of the population, with numerous companies dedicated to its production and distribution. Among these companies are: Audible, OverDrive, Downpour, Scribd and Hoopla Digital (Hacker, n.d.).

In 2008, Amazon bought Audible for 300 million \$, making it the largest seller of audiobooks on the Internet. Its contents can be played on computers, gps, smarthphones and iPods. Audible has audiobooks available from a number of renowned authors such as Stephen King, Thomas Friedman and Jane Austen, and audio content from news and entertainment programs such as the New York Times, New Yorker, Fresh Air and Charlie Rose. Their audiobooks are available in several languages, having websites in countries like America, England, Germany and France (Figueira, 2010).

One of the reasons why this format is so popular in the US is the existence of the Audio Publishers Association (APA), APA is a non-profit-trade association that defends the common commercial interests of audiobook publishers. APA estimates that audiobook sales in 2016 totalled more than \$ 2.1 billion, the third consecutive year in which audiobook sales have increased by nearly 20 percent (Richards, 2017).

In Europe, Germany is one of the countries with the highest volume of sales of audiobooks, this is due to the fact that a law has recently been approved in which the rate of VAT applied to audiobooks is the same as the books, being charged a tax of 7 %. The introduction of this measure allowed the emergence of some companies such as: Xinxii, Feiyr and Mein Horbuch (German, 2014).

European Portuguese and Brazilian Portuguese Supply

The audiobooks in European Portuguese are reduced, being mostly about historical books, such as: 'Tabacaria' by Álvaro de Campos, 'O Tesouro' by Eça de Queiroz and 'O Sermão de Santo António' by Priest António Vieira. In spite of this, some audiobooks for children begin to appear, such as the 35 Tales of the Brothers Grimm produced by 'Boca palavras que alimentam' (Boca, n.d.).

The Association of the Blind and the Visually Impaired (ACAPO), in partnership with Biblioteca Sonora do Porto, make available to its associates a repository of about 50 audiobooks. The audiobooks are recorded by volunteers under Article 80 of the Copyright and Related Rights Code of Portugal. In this context, audio reproduction of books is only allowed if strictly intended for visually impaired citizens (Biblioteca Sonora Digital, n.d.).

The Brazilian market is small, but it is in rapid growth, with the appearance of the first companies like the Ubook, Tocalivros and Livro Acústico.

Unlike European Portuguese, in Brazilian Portuguese it is possible to find a greater number of audiobooks, not only about historical books but also bestsellers.

In the category of bestsellers, we can find audiobooks like: 'The Girl on the Train' by Paula Hawkins or the 'Diary of Anne Frank'.

Portuguese Companies

In Portugal the audiobook is a recent product, entering in the market at the end of 2005. The market is pretty small being composed only by 2 publishers: Boca palavras que alimentam and Companhia Nacional de Música.

While in the American market the companies operate through the Internet, Portuguese publishers are still very dependent on the physical object and the sale in stores. Because of this, publishers need to use intermediaries, which causes cost increases (Figueira, 2010).

Because of being a recent product in the Portuguese market, there is no specific legislation for the audiobook.

Audiobook publishers are ruled by the same laws as book publishers, but since the audiobook is not considered a cultural product, instead of paying 6% VAT like books, it pays a VAT of 23%. So as not to pay this high VAT amount, publishers instead sell only the audiobook CD, they sell the CD with the book (Figueira, 2010).

Business Model

Places of Sale

In the U.S, where e-commerce is heavily used by the population, the audiobook is mostly purchased over the internet.

Large companies such as Audible, Librivox or OverDrive do not sell their audiobooks in physical locations, but only through the internet. The internet has several advantages to these companies, but the most important of all is the reduction of costs in the transaction, which causes prices to be lower for the consumer (Figueira, 2010).

The internet is also a great place for advertising. According to Figure 1, the Internet is one of the sources of information that most contributes to the dissemination of the audiobook (Malczewski, 2012).

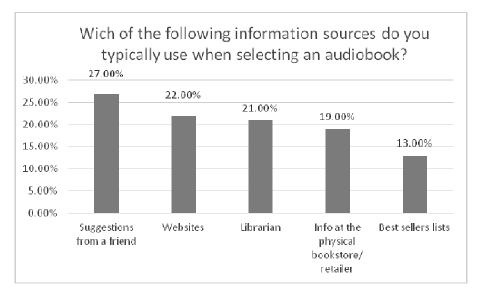


Figure 1 : The most used sources of information for discovering of new audiobooks source: produced based on (Malczewski, 2012)

According to Figure 1, most consumers were aware of the audiobook format by the suggestion of a friend.

Listening Experience

The first commercial format for audiobooks was the Vinyl record, this format was overpass with the introduction of the cassette and CD. Nowadays the preferred formats of access to the audiobook are the CD and the MP3, although in recent years the access to the CD has been decreasing, this format still continues to be greatly appreciated by audiobook enthusiasts, being the preferred format for listening to audiobooks while driving (Richards, 2017).

The table below shows the evolution of consumer preference over the audiobook format.

Table 1 : The most used formats by	y consumers; source:	produced based on (Richards, 2017))

	2011	2012	2013	2014	2015
CD	37,8%	34,0%	27,8%	21,2%	15,6%
Download	58,5%	62,9%	69,6%	76,9%	83,1%
Others	3,5%	3,1%	2,6%	1,9%	1,3%

The information presented in the table is up to the year 2015, but it is possible to verify the increase in consumption of the download format, this is due to the fact that the download format is cheaper than the physical format because there are no inherent costs of manufacturing, stock, packaging and transportation (Richards, 2017).

On the market there are several softwares for listening audiobooks, such as Librivox and the Audible app, which have a wide range of audiobooks. However, these apps do not allow you to play audiobooks that have been recorded independently, they only play the audiobooks present in their bookstores.

The user to play audiobooks by independent record, need to use applications such as: Audiobook

Player, Booxio and Audiobooked (Booxio, n.d.).

These applications are free and allow the user to divide their work into several chapters, the division of the audiobook into chapters allows the user to know where is in the book and prevents reading to be hard and tedious.

Copyright

Contrary to what happens in Portugal, the American market is an open market, and there are some forums where authors can contract or exchange ideas with producers.

One of the most popular forum is Audiobook Creation Exchange (ACX), ACX is an Audible platform where authors and copyright holders can hire narrators and producers to produce their audiobooks.

At ACX, the Author or the rights owner can choose between two types of contract: exclusivity or non-exclusivity. In the exclusive agreement, if the Author and the Narrator agree to the payment by per-finished-hour rate, the Author gets 40% royalties on each sale (ACX, 2018).

In the exclusive agreement, if the Author and the Narrator agree to the royalty share deal, 40% royalties will be divided between the Author who owns the copyright and the Narrator, each receiving 20% of each sale, while the remaining 60% of royalties remain with Audible. In the exclusive agreement, the audiobook can only be distributed by the following companies: Audible, Amazon and iTunes.

At non-exclusive agreement, the Author will receive 25% royalties for each audiobook sold, and their audiobook may be distributed by any companies, in this method of payment the Author must pay to the Narrator directly for the production of the audiobook (ACX, 2018).

Regardless of the type of agreement signed, the Author through the \$ 50 Bounty Program will receive \$ 50 each time his audiobook is the first purchase of a new Audible member. In the royalty share deal, the author receives half of the amount and the other part goes to the narrator.

Production Payment

The ACX gives the opportunity for the narrators to make castings for the audiobooks they intend to narrate.

At the conclusion of the audiobook, the Narrator has the possibility to choose how to get paid, being able to choose in two different ways: to receive by per-finished-hour rate or by royalty share (ACX, 2018).

By the per-finished-hour rate deal, Narrators are paid according to the total length of the audiobook, in order to help everyone involved, to better estimate the cost of the project.

This method is applied because if the copyright owner paid to the Narrator for the total hours spent on the project, he probably would not know how much it would be necessary to spend for the project. On the other hand, the per-finished-hour rate, forces the narrator to be more efficiently, since he will receive the same regardless of the time he will spend to carry out the project.

A Narrator approved by Audible, receives on average per hour of recording between 170 euros to 340 euros.

If the Narrator agrees with the Author, be paid by per-finished-hour-rate, will be paid directly by the Author, while in the royalty share deal is paid by Audible, receiving 20% royalties on each

audiobook sold and 50% of the 50 \$ Bounty program (ACX, 2018).

Narration Styles

Narration style is an important part of an audiobook success, there is an ideal narration style for each genre of book, if this factor is not taken into account we may be paying for a narration that does not bring any added value to the audiobook.

There are several styles of narration such as: Unvoiced, Partially Voiced, Fully Voiced and Full – Cast (Cahill & Richey, 2015).

Unvoiced readings are not contrary to what their name might imply, silent, but simple readings of the text with a single voice, without resorting to any kind of representation. Due to its simplicity, and be resembling to a simple reading of the book, the Unvoiced narration has a greater potential to failure (Beavin, 1995).

In Partially Voiced readings, the narrator uses distinct voices in the main characters, while in the secondary characters he keeps the same record, without a great emphasis. This form of narration is used in books that revolve around central characters with very characteristic and dominant voices, probably because much of the action is filtered through the sensibility of one of the participants (Beavin, 1995).

The fully voiced narration is the most used narration style in the audiobook industry, in which the narrator employs a different voice for each of the characters. This type of narration is appropriate for books, in which the characters have very different personalities or traits.

In the Full-Cast narration, several narrators are used to represent different characters, the result is a dramatization of the Audiobook, which resembles more a movie that is taking place inside our head and less a story to sleep. Although this type of narration may look similar to the Fully Voiced narration, the dynamics of integrating multiple narrators dramatically changes the quality of the Audiobook (Mason, Michael, & Deward, n.d.).

As a complement to the narration of the text, many audiobooks contain music and other sound elements. The sound effects present in audiobooks consist mainly of: instrumental music, theme music or page-changing sounds (Cahill & Richey, 2015).

Music, if used effectively, can represent words, events in history, and reinforce the text. Sound effects like: a door slamming, a piece of paper being kneading and people walking, are all good examples of how to make a good impression, and record in the memory of the listeners the action that is taking place (Cardillo, Coville, Ditlow, Myrick, & Lesesne, 2007).

Preliminary Recording

To test the difficulties involving the recording process, a recording of a book was performed. For being a preliminary recording, neither the ideal recording equipment nor the most suitable recording studio was used.

The microphone used was the MGS MS-102, a highly sensitive condenser type microphone with a frequency response of 20 to 16 kHz.

Technical Characteristics

The recording software used for recording and editing the audiobook was Audacity, because it is a free and intuitive software, which facilitates the editing process. Besides these factors it is one of the recommended software in the audiobook industry.

According to ACX and Author's Republic, to produce high quality Audiobooks and maximize sales, it is necessary to respect a set of technical requirements.

The audiobook must be consistent in sound and format, that is, it must be consistent in sound level, tone, noise, spacing and pronunciation allowing the listener a pleasant experience. In order to obtain a good use of the book, an audiobook should have an average spacing of 157 words per minute (Cahill & Richey, 2015).

The audiobook must be divided into files, each chapter must be an individual file, so the listener can easily navigate between chapters. The audiobook must also contain opening and closing credits, the opening credits must contain the name of the work, author and narrator (ACX, 2018).

Audio files must be free of any external sound such as: microphone pops, mouse clicks, and other sounds that may distract the listener.

Audiobook volume is an important factor, each file should have a volume between -23dB to -18dB RMS (Root Mean Square), this range allows listeners not to constantly adjust the volume, allowing the listener to concentrate (ACX, 2018).

Files should not have peak values greater than 3dB, reducing the possibility of distortion, avoiding a reduction in the quality of the Audiobook. This value is also essential to ensure that files are successfully encoded.

The noise is all the sound that should not be part of the recording and distracts the listener. In order not to affect the quality of the audiobook, noise values should not exceed 60 dB RMS (ACX, 2018).

All files must be recorded in mono with a sampling rate of 44.1 kHz, at a rate of 192 kbps in Constant Bit Rate (CBR). The format of the files should be MP3 or M4A.

The Audiobook must be narrated by a human voice, recordings in Text-to-Speech are not allowed. Listeners choose Audiobooks for the performance of their narrators and for the quality of their story. To have this experience, it is essential that it be recorded by a human and not by a machine (ACX, 2018).

The Book and the Narrator

For the experimental recording was chosen a book of a renowned Portuguese author, the used book was "A Fada Oriana" by Sophia de Mello Breyner. This book is part of the study plan of the elementary school in Portugal.

The narrator is 24 years old female as the main character of the book. She has experience in studio recording.

In the book much of the action is filtered through the sensitivity of one of the participants, so the type of narration used was the Partially Voiced. The narrator used different voices in the main characters, while in the secondary ones maintained the same vocal record.

Questionnaire and Results

In order to evaluate the recording quality, a questionnaire was carried out. The target audience was the University student community. The questionnaire was developed on the google forms platform, and consisted of 9 questions. The first 5 questions of the questionnaire were intended to characterize the subjects and their experience with audiobooks, while the last 4 were related to the recorded audiobook and the narrator voice.

Questions

In the questionnaire, the five questions about the subjects are:

What is your Gender? What age group are you in? What is your formation (degree of education)? How many books do you read per year? How many audiobooks have you heard?

What is your Gender?

Regarding the quality of the audiobook and the narrator voice, the following questions were asked: How appropriate is the Narrator's voice? How appropriate is the pace of reading? What is the quality of the interpretation of the different characters? How do you rate the sound quality of the audiobook? (Relative to noise and volume)

Results

In the questionnaire it was possible to obtain a sample of 48 subjects. In this sample there are people of both genres with an age range from 18 to 65 years old.

Relative to the gender of the sample, as can be seen in the cheese diagram below, 56.3% of the sample is female, totalling 27 individuals, while 43.8% are male, totalling 21 individuals.

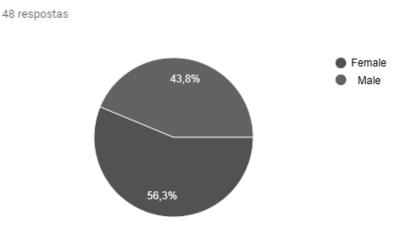


Figure 2: Gender characterization of the sample

Relative to the age range of the sample, as previously mentioned, it is between 18 and 65 years old (figure 3).

What age group are you in?

48 respostas

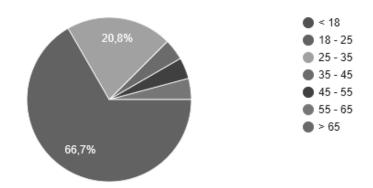


Figure 3 : The age group of subjects

Since the questionnaire population was the University student community, the vast majority of the sample is in the age range of 18 to 25 years, yet it was still possible to collect a considerable sample outside this age group, with 16 subjects with more than 25 years. In the group of subjects with more than 25, 10 are between 25 and 35, while the remaining age groups have 2 elements each.

Figure 4 shows the literacy of the subjects, it is possible to verify that the majority of the sample, more specifically 38 subjects have a higher education, while the remaining sample has the High school or elementary school.

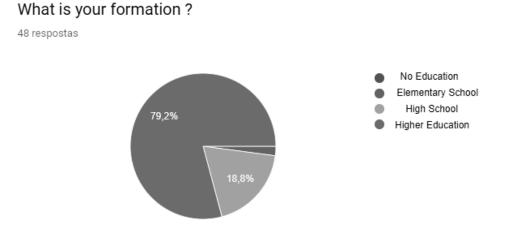


Figura 4 : Qualifications of subjects

In relation to the number of people who do not have higher education, 9 have the high school education, while only one respondent said that he had the elementary school education.

In figure 5 a cheese diagram is presented on the number of books read by the subjects in one year.

How many books do you read per year?

48 respostas

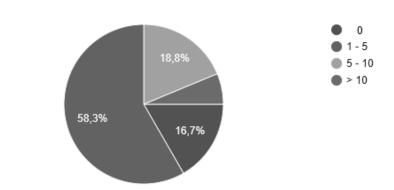


Figure 5: Number of books read per year

The vast majority of subjects have reading habits, only 8 subjects answered that they did not read any book per year.

Figure 6 shows the number of audiobooks that subjects have already heard in their lives.

How many Audiobooks have you heard?

48 respostas

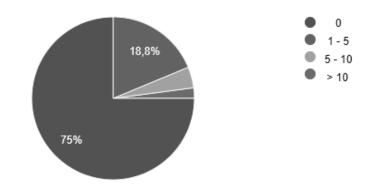


Figure 6 : Number of audiobooks listened by subjects

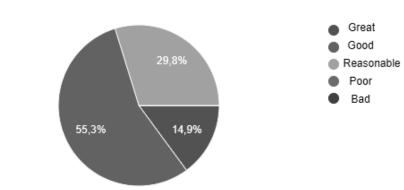
The big majority replied that they never listened to an audiobook in their lives, in the sample collected only 12 of the subjects have listened to one or more audiobooks.

In figure 7, we can see the opinion of the subjects regarding the voice of the narrator, most of the subjects considered the narration appropriate for the work.

Great Good Reasonable Poor Bad 12,8% 51,1%

Figure 7 : Narrator's Voice Quality

The big amount of answers is between the reasonable and the excellent, only one person considered the narration poor.



How appropriate is the pace of reading?

How appropriate is the Narrator's voice?

47 respostas

47 respostas

Figure 8: Reading pace quality

Figure 8 shows the opinion of the subjects about the reading pace present in the audiobook.

According to the cheese diagram, no respondent considered the reading pace inappropriate, with the answer 'good' being the classification of more subjects.

Figure 9 shows the opinions of the subjects about the quality of the interpretation of the different characters by the narrator.

What is the quality of the interpretation?

46 respostas

47 respostas

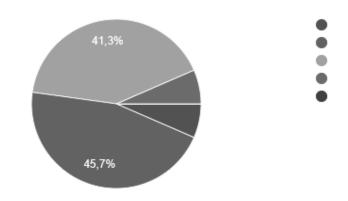
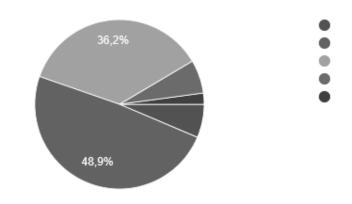


Figure 9 : Quality of interpretation of the different characters

The most selected answer was the 'Good', with 23 subjects. In second place appears the 'Reasonable', with 17 subjects, while the 'Excellent' and the 'Poor' each received two answers respectively.

The last questionnaire question was about the sound quality present in the audiobook, mainly evaluating noise and volume.



How do you rate the sound quality of the Audiobook?

Figure 10 : Sound quality present in the recording

This was the questionnaire question with the most negative votes, and the only one that had a bad vote. This result is largely due to the fact that it was a preliminary recording, and because of that the most appropriate equipment was not used. Despite this, most of the subjects evaluated the sound quality between good and reasonable.

Cross Information Results

The answers in the questionnaire were subjected to a statistical analysis, the purpose of the analysis was to determine a relationship between the age, gender and the formation of the respondent with the answers given in the questionnaire.

A weight between 1 and 5 as settle to the answers from less positive (Bad) to more positive (Great). This weight was presented to the subjects in the questioner. Therefore a means of the answers varies from 1 - Bad to 5 - Great were 3 is Reasonable.

Table 2 shows the mean and standard deviation of the ratings assigned by the subjects to the Narrator's voice, pace of reading, interpretation of the different characters and the audiobook sound quality. These values are organized according to the gender, age and formation of the respondent.

Variables			v appropri Iarrator's v		How app is the p readi	ace of	What quality interpret the dif charac	of the ation of ferent	How do you rate the sound quality of the Audiobook ?		
	n	Mean	Std	Mean	Std	Mean	Std	Mean	Std		
	Female	26	3,8	0,59	3,9	0,65	3,5	0,71	3,6	0,81	
Gender	Male	21	3,7	0,85	3,8	0,68	3,5	0,75	3,4	0,81	
	18-25	31	3,7	0,68	3,9	0,68	3,5	0,78	3,5	0,77	
Age Group	26 or +	16	3,8	0,77	3,7	0,60	3,6	0,63	3,4	0,89	
Formation	Without Formation	10	3,7	0,82	4,0	0,67	3,7	0,95	3,7	0,48	
Pormation	Higher Formation	37	3,8	0,68	3,8	0,66	3,5	0,65	3,5	0,87	

Table 2 : Mean and Standard Deviation of the ratings assigned by the subjects, according the gender, age group and formation

With the application of the t-Student test, it was possible to conclude that there is no statistically significant evidence for each of the situations, by sex, age groups or formation. That can be confirmed by the means obtained that is very similar between this groups.

Although the values are not significant, it is possible to verify that the subjects without higher education attributed better classifications to the rhythm, interpretation and quality of the audiobook than the subjects with higher education.

This result may be due to the fact that people with higher education, for necessity, throughout their career have developed a critical sense when they hear or read something. During the statistical analysis was also analysed the relationship between the number of books read and audiobooks listened to the age group, gender and formation of the subjects.

Table 3 presents the results according to the gender of the subjects.

subjects												
Variables			How n		oks do yo year?	u read		How many Audiobooks have you heard?				
			0	1 - 5	5 - 10	> 10	Total	0	1 - 5	5 - 10	> 10	Total
Female	F 1	n	3	16	7	1	27	21	6	0	0	27
	Female	%	11,1	59,3	25,9	3,7	100	77,8	22,2	0	0	100
Carla	-	n	5	12	2	2	21	15	3	2	1	21
Gender	Male	%	23,8	57,1	9,5	9,5	100	71,4	14,3	9,5	4,8	100
	Total	n	8	28	9	3	48	36	9	2	1	48
	Total	%	16,7	58,3	18,8	6,3	100	75	18,8	4,2	2,1	100

Table 3 : Number of books read and audiobooks listened according to the gender of fects

According to the statistical analysis, there is no significand difference between male and female groups concerning the number of books read per year and audiobooks heard.

Table 4 shows the results according to the age group of the subjects.

 Table 4 : Number of books read and audiobooks listened according to the age group of the subjects.

Variables			How m	any boo per y	ks do you ear?	read		How				
v ai	variables		0	1 - 5	5 - 10	> 10	Total	0	1 - 5	5 - 10	> 10	Total
	18-25	n	8	17	5	2	32	25	6	1	0	32
10-23	%	25	53,1	15,6	6,3	100	78,1	18,8	3,1	0	100	
Age	Age 26 or	n	0	11	4	1	16	11	3	1	1	16
Group	+	%	0	68,8	25	6,3	100	68,8	18,8	6,3	6,3	100
7	Total	n	8	28	9	3	48	36	9	2	1	48
	TOtal	%	16,7	58,3	18,8	6,3	100,0	75	18,8	4,2	2,1	100

It is possible to verify that subjects over 25 years of age have a higher number of books read and of audiobooks listened than subjects under 25 years of age.

Table 5 presents the results according to the school graduation of the subjects.

 Table 5 : Number of books read and audiobooks listened according to the formation of the subjects.

Variables				many bo read per		/ou		How n				
			0	1 - 5	5 - 10	> 10	Total	0	1 - 5	5 - 10	> 10	Total
	Without Higher	n	1	4	4	1	10	6	2	2	0	10
	Education	%	10	40	40	10	100	60	20	20	0	100
Formatio n	Higher	n	7	24	5	2	38	30	7	0	1	38
	Education	%	18,4	63,2	13,2	5,3	100	78,9	18,4	0	2,6	100
	Total	n	8	28	9	3	48	36	9	2	1	48
	TOtal	%	16,7	58,3	18,8	6,3	100	75	18,8	4,2	2,1	100

The results indicate that subjects without higher education read more books and listen to more audiobooks than those with higher education.

Conclusions

In Portugal, the audiobook market is small and with low visibility, with only two companies active. With the purpose of presenting ideas to boost the Portuguese audiobooks market, a research was made about the business and production models present in more developed markets.

With the study done about the American market, it was possible to conclude that for Portuguese companies to achieve success, their number should increase and develop efforts on their virtualization and promote the creation of an association of audiobook publishers.

The tax policy that applies a VAT of 6% for books and 23% for Audiobook also penalise this industry. The Portuguese companies adapt to include the audiobook in a CD format with the book. The business model of Audiobooks in Portugal can be improved.

In order to know the equipment and the procedures involving the recording of an audiobook, a preliminary recording was made. Because it was a preliminary recording, in order to gain experience, neither the equipment nor the studio were the most appropriate. To evaluate the quality of the preliminary recording, a questionnaire was conducted in the University student community. The results obtained in the questionnaire show not significant statistics between the gender, age group and the formation of the subjects concerning the number of books read by year and audiobooks heard.

As future work, a new recording experiment will be done, this time with appropriate equipment and a professional recording studio. With the recording completed, a new questionnaire will be conducted.

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References

ACX. (2018). Weblet Importer. Retrieved March 15, 2018, from https://www.acx.com/help/narrators/200484550

Beavin, K. (1995). Audiobooks: Four Styles of Narration. Horn Book Magazine, 72.

Biblioteca Sonora Digital. (n.d.). Biblioteca Sonora Digital. Retrieved March 15, 2018, from http://arquivodigital.cmporto.pt/Conteudos/Conteudos_BPMP/BDigital/Projectos/BSDigital/BSDigit al_PerguntasFrequentes.htm

Boca. (n.d.). Boca | BOCA - palavras que alimentam. Retrieved February 26, 2018, from http://www.boca.pt/boca.html

Booxio. (n.d.). Booxio Audiobook Player. Retrieved February 27, 2018, from https://boox.io/ Cahill, M., & Richey, J. (2015). What Sound Does an Odyssey Make? Library Quarterly: Information, Comunity, Policy, 85.

Cardillo, A., Coville, B., Ditlow, T., Myrick, E., & Lesesne, T. (2007). Turning in to Audiobooks. Association for Library Service to Children, Children L. Figueira, R. (2010). O NOVO LIVRO: conteúdo virtual gerador de lucro real? German, I. G. (2014). The Audiobook Market in Germany - Indies Go German. Retrieved March 15, 2018, from http://indiesgogerman.com/audiobook-market-germany/

Hacker, L. (n.d.). Five Best Audiobook Services. Retrieved February 26, 2018, from https://lifehacker.com/five-best-audiobook-services-1688572545

Malczewski, B. (2012). Multi-Tasker's Dream. Library Journal.

Mason, R., Michael, N., & Deward, E. (n.d.). The Audiobook Book: An Audiobook Production Guide for Indie Authors.

Richards, J. (2017). Audiobooks Continues Double-Digit Growth.