LudoPor in the Facebook community

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Abstract

Nowadays games allows its users to contribute in some way, shape or form. Little Big Planet is a platform video game for the Playstation 3 and consists of a sackboy that races through the various levels. This is one example of where users can create maps, customise the character (sackboy) and share this with other users. Users are no longer mere players and have the ability to create within the games. When one specifically individualises Educational games, user contribution may raise questions regarding the quality of the same. LudoPor is the tool for creating/playing/sharing Portuguese Language puzzle games used in this project. This tool is subject to a quality assessment at the time of being included on Facebook. Throughout this document we describe the implementation steps, including the quality control mechanisms (such as contents review). At the end, the results will be presented and the conclusions explained.

Keywords: LudoPor, Play, Share, Create, Quality

1. Introduction

Computer use at schools has seen an increase over the last years ([1]). There are today a series of software packages used during classes. They are called Learning Software, although most of them have little or no educational relevance. These include a simple interface but have very poor contents ([1]). Besides this, they repeat exercises (CAI-Computer Aided Instructions) several times, thus reducing its difficulty, such as the Sydney Pressey teaching machine ([2]). The latter presents several multiple-choice questions to the student and shows the result by stating whether the answer is correct or incorrect. A type of Learning Software that attempts to deviate from the so called CAI are the Learning Games. These games are preferred for their ability to awaken an interest, thus facilitating learning.

Internet communities continue to grow on a large scale and with them bring new forms of interaction, as well as new paradigms. With regards to the communities linked to games, cooperation can be considered as one of the most important paradigms. This cooperation can be seen over three steps: playing, sharing and creating (To Play, Share and Create). By applying this cooperation in the creation of Learning Games, increases participation in this activity.

The LudoPor application emerged from the practical need of the "Ciber Dvidas" community to pass on its knowledge through a simple means for learning. The "Ciber Dvidas" are an expert community on the subject of Portuguese Language. Any person can raise doubts and receive an answer from the experts. Many questions give rise to public debates on the said subjects. In order to promote the use of LudoPor in a large scale community, it became necessary to implement quality control mechanisms.

2. Background

In this chapter, we present the subject of quality control in communities using the example of Wikipedia. Next, we present an example of a tool for creating games (LudoPor).

2.1. Communities Quality Control

The creation and organisation of collaborative knowledge is an ancient practice. From the beginning of times "scribes" have been known to transcribe, whilst at the same time edit, update and change the interpretation of original texts. Only free large scale access and public projects for creating collaborative contents are a recent phenomenon. On several websites interaction on behalf of users is fairly reduced. Take Amazon.com, for example. The main contents are placed by webpage administrators and only the comments concerning the sale of products are published by frequent users of the website. When we speak of contents, we are not making a distinction between multimedia contents. In communities, members are typically classed for sharing a view, responsibilities and sources of information.

Large scale active participation in creating contents and maintaining the quality of the same, raises several issues related to the organisation and quality of the information. Generally speaking, contents are partially or fully monitored by people: in order to avoid offensive language and/or contents; breach of copyright laws or simply to determine whether the published content is relevant to subject of the website. This demonstrates the poor efficiency and delay of the process. With the growing quantity of published contents, the ability to deal with this increased volume becomes a problem. Thus, traditional quality control becomes obsolete and no longer adjusts to current needs.

One of the major concerns, when dealing with the educational environment, is also the effectiveness of the quality control systems, as it is common knowledge that there are concerns related to errors, and forgeries, among other quality issues when dealing with the creation of contents in communities, there are three types of (quality control) reviews:

1. Single-blind peer review - The authors identity is revealed however the reviewers identity is concealed (aka as censored);

2. Double-blind peer review - The authors identity is unknown as is the reviewers;

3. Open peer review or Public peer review - Whereby the authors identity is known as is the reviewers; The interactive open peer review sometimes emerges as an improvement of the latter, given that it increases quality, reduces poor quality writing, reduces the rate of rejection and increases the density of the final document.

These types of review are also known as peer-review. The lack of impartibility when reviewing contents is seen as a disadvantage due to biased reviewing. Delays in publication and high rates of rejection are also some of the disadvantages noted. The review of educational articles is called referring. This type of review when analysed must take into account the community under study. For example: in small communities, all articles that are auto referred, distributed, with poor coherence as well as articles written mainly by one person, are not reviewed as common practice. One of the reasons relates to the need for large communities with sufficient amount of willing people to have a role as a reviewer. Another is related to the fact that articles that are written by one person only, are not normally subject to a peer-review process. It is common for quality control to be confused with quality assurance. The main difference is that quality control only assesses the process and control has an influence on the process and affects the final product. Quality control is currently enhanced by the Web 2.0 paradigm with content management technologies such as wiki forums, CMS - Content Management System or LMS-Learning Management Systems.

One of the best examples of this is Wikipedia. Wikipedia[1] is an online encyclopaedia where anyone can participate in the preservation of contents. This approach strongly contrasts with traditional sources of information, such as encyclopaedias. Wikipedia allows any person with internet connection to modify or create articles. It also allows access of non-registered users enabling them to contribute towards existing articles. The philosophy behind this is: As the community collaborates in the contents, they become more and more trustworthy. In summary, Wikipedia articles are never classed as being completed, their editing always being a possibility. This opening is clearly visible because there are no mechanisms for content review by subject. This ideal also makes it vulnerable to acts of vandalism and tampering of information.

2.2. Game Creation Tools

Over the last decades, investigation has focused on getting learners involved in designing their own games. At the same time that learning through play was being introduced, educators took on the role of creators and highlighted learning through the creation of a game, this having a greater value, especially when it comes to creating games with an educational objective. The creation of a game allows for greater development, both mental and of expression, through various languages and also helps increase motivation and self-esteem for those who do not consider themselves to be good learners in what concerns some subjects.

This chapter describes the tools used in the creation of educational games, as well as their corresponding features. There are tools with different flexibilities (level of customisation) and different technical requirements for their use, however with regards to quality control there is still much to be explored. This comparative analysis will be carried out at the end of this chapter.

As an example, LudoPor is a tool that allows for the creation of educational games ([4]). It was created based on board games, following in the footsteps of other successful cases such as Trivial Pursuit or Scrabble. The objective of the board architecture is to add fun and motivation to play. In this tool we use word games and the target audience are youths, over 16s, with little or no experience in programming. This target audience is intended as a tool output, i.e., for the games themselves. The use of this tool to create games is intended for a more re-

[1] `http://www.wikipedia.org/`

strict audience, such as experts in Portuguese Language.

3. Implementation

The plan previously presented in the Masters Project ([3]) has the objective of using the existing tool, LudoPor, within the Facebook community, in order to assess the tool in a community, using quality control mechanisms. LudoPor is a tool for creating games based on board games and has some limitations. Placing the application online forced us to build a data model for registering user interactions. It should be noted that the focus was not on contents, but on the actual platform. This way, a model emerges which centres itself on the game versions. This data model is complemented by game contents that are stored in xml format. The content structure and the variable dimension of the game were the reasons for it not being directly included in the database. The games version is one of the main changes made to the tool. The objective of the Game is now defined by a set of versions with different intervenient. All these versions have one thing in common, the title of the game, as they are all part of the same objective. Thus, there are different versions, by different authors, that can all be played and, which may or may not be the users preferred choice. This change was inspired through the mechanism used in Wikipedia for versioning of articles. With this system, we value the author and allow for continuous improvement.

Implementation of the proposed changes in the project plan, was carried out in two phases. At the end of each one, we had a 1st and 2nd Version, respectively. The description of the versions is made in the two following sections. Finally, the focus is made on the topic of the dissertation through Community Stimulation.

3.1. 1st Version

The first stage of the implementation process had as main objectives: the migration of the current tool for the latest version of Flash Builder (Technological Evolution), the correction of problems found ([4]) and a basic integration with the community. To address this integration it was necessary to secure a personal area for each of the users and a common area. In this sense, was created a life cycle for the game that responds to this need (see Fig. 1).

This cycle comprises two statuses: (Private) Draft and (Public) Game. When a user creates a new game, this automatically generates the First Version of the game, as a Draft. This draft is only visible to the user that created it and is only available to other users when published. From the moment that is becomes available in the community, all users can play and edit it. When the game version is published, the action "Edit" produces a new version (ex: Version 2). The game entity cannot be removed, the same applying to the versions that make up the game. Only game versions can change from invisible status to visible status, depending on whether or not it has been published.

Figure 1: Life Cycle of a Game and its corresponding versions - Version 1

With the inclusion of the LudoPor tool in the community, it became necessary to have an internet connection and register in the community where it is inserted (in this case, Facebook). The result of the first integration within the community was only with regards to login access to the application and gathering of user information. The entry is made with the credentials to access the community transparently in application. The user experience in these cases, it is as if interacting with something native to the community. The information gathered from each user, is public, with display of the name, public URL of profile photo and user ID within the community. This integration was done using the Facebook ActionScript API[2].

In conclusion, community integration was the main responsible for the most relevant changes in the application, with the remaining changes being due to technical reasons. Facebook provides community features to LudoPor such as: message exchange between users, comments and likes.

After publication of this online version, a testing phase was handed out. For that, two user scenarios were created: to create/publish and to edit/play. Instructions were given in the form of script and were observed/gathered during this testing phase.

3.2. 2nd Version

Version 2 of LudoPor focuses essentially on quality control and on the services provided by the community. However, the results of Version 1 are not discarded; much to the contrary, they are important in assessing the acceptance of the tool in the community.

Besides these requirements identified in Version 1 and in order to address the original purpose of quality control in the tool LudoPor it was necessary

[2] https://code.google.com/p/facebook-actionscript-api/

to change the life cycle of the game (see Fig. 2).

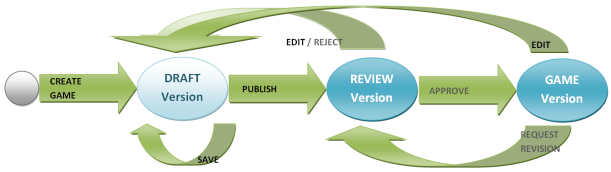

Figure 2: Life Cycle of a Game - Version 2

In this version there is a new status "Under Review" (Public). This status is based on the review mechanisms of community contents presented in related work (2.1). In every community there is a phase of contents review. The public version of the game is because it is an Open review mechanism. We are not seeking a censoring prior to publication in the community; nor are looking for a review with unknown actors (anonymous users). In the Under Review status, the version of the game is already public, however the actions must be revised (Accepted/Rejected) and can only be used by user administrators. This concept was discussed above during the explanation of the data model. The Administrator Group aims to maintain a database of experts in the field with sufficient knowledge to evaluate the contents. In an open review mechanism such as the one implemented, any content is subject of review when published. Next, it is up to the group of administrators to either approve or reject. When a game is not approved it ceases to be public, returning to the list of drafts of the user that created it.

After implementation, the next phase is to include it on Facebook. The applications developed for Facebook can be of various formats (web, mobile and desktop application), multiple platforms (iOS, Android, Windows and Linux) and inserted in many ways (Facebook application, website with login session, among others).

The insertion method chosen in Facebook was the Application method due to this providing greater transparency within the community. For the user it is a native application of the community. When one creates a Facebook application it is assigned an identifier and an access code. The next steps for the creation, go through configuring the basic information, permissions and additional details. For the basic information one is required to indicate a contact email address (of the person responsible for the application), the URL for the application (`https://apps.facebook.com/ludopor`), the external address of the application (HTTP and HTTPS), and also the dimensions of the application to be put into the Facebook page (fixed or fluid dimension). The HTTPS requirement in the connection to the Facebook application has become an embarrassment and is due to be reviewed.

Accepting permissions is a requirement for any application within the community, including LudoPor, for operational reasons of the same. This request for permissions is only presented to new users. In the case of LudoPor the required permissions are:

1. user_about_me - allows access to the user's profile photo;
2. publish_stream - allows publications in the application timeline (i.e.: Created the game), on behalf of the user.

The details filled in allow Facebook to build the so called Application Details Page. This is a presentation page for the application. The publication of this page requires submission to the Facebook review team. In addition to this, there is the Profile Page. This is the same as Facebook user profile page[3]. It is here that one finds a timeline with photos, messages and comments. All the native features of the community can be used here (in the framework of the LudoPor page).

Following completion of the changes and subsequent publication of this 2nd Version of the application comes the phase of promotion, which will be developed in the following section.

3.3. Promoting the Community

Promotion is the last phase of implementation of the LudoPor community. It is here that the application takes shape and one can use the most valuable results obtained from LudoPor in the community. In all large-scale online communities and social networks that rely on content posted / shared by users, the majority of these have very little involvement. On the other hand, a small percentage of users, is normally responsible for the majority of content. This discrepancy in numbers was initially studied by Will Hill in the early 90s. What some describe as the 90-9-1 rule of participation in an online community. The meaning of the rule is:

- 90% of users conduct only one search for information and do not insert content;
- 9% of users insert content occasionally.
- 1% of users participate avidly and are responsible for most content (these sometimes transpire as "having no life" due to content being published only minutes apart).

Dispersion in the percentage of users has an impact on content, i.e., existing content is not representative of the average user. It is common to find references to the same users in virtually all content.

[3] `https://www.facebook.com/513935905312116`

Being aware of these values, the next step is to choose the proportion. Dispersion has always existed and the only option to be taken is with regards to the distribution values, such as 90-9-1 or 99-10-1. All users are different, but there are ways to minimise this impact.

The community moderator/manager plays an important role in helping users move from being consumers to being active people in the community. The four Cs model by Derek Wenmoth describes the evolution of participation in an online community.

The four phases that make up the Derek model are:

Consumer this is a user who only reads and explores content of other users.

Commentor this is a user who starts making comments to existing content.

Contributor this is a user who starts contributing with his or her own ideas/creations.

Commentator this is a user that already holds a leadership role within the community. His or her work consists of analysing and synthesising content.

In order to consolidate the results obtained in LudoPor, we published a questionnaire for users.

In the following section, we will present the results obtained, as well as a comparative analysis of the initial goal.

4. Results

The publication of the 2nd Version in conjunction with promoting the community allowed us to obtain the following results (see Table 1 and 2);

Metrics	TOTALS
Users	28
Games Created	27
Versions Created	42
Published Versions	25
Reviews Not Accepted	4

Table 1: Totals obtained in LudoPor.

The results obtained reveal a strong dependency on the quality tool. Of the mechanisms of peer-review presented (2.1), the Open-review mechanism implemented allowed for more results, when compared with existing review mechanisms on Facebook, in what concerns reviewing publications of the applications. This type of review mechanism, mostly result in a longer waiting time above and was detrimental on the outcome of the tool (impossibility of using the OpenGraph API). At the start of a tool with such a specific theme as is the creation of Portuguese Language Games it had a reasonable performance. The number of users and the number of games reached to date show an increasing use. The key advantage of the tool when compared to any other and which no other adopted so far was versioning. Through this, continuous improvement of the games was visible and reflected the number of times a particular version was played.

Metrics	Max per Game	Average per Game
Versions Created	10	3
Published Versions	4	2
Played Versions	11	5
Favourites Versions	2	1

Table 2: Values obtained by each Version of the LudoPor Game.

The questionnaire presented obtained answers from 20 users. The answers obtained reinforce the results achieved from the tool. Through these we can confirm that users liked the tool although there were some difficulties in the process of creating a game. Learning was something that was confirmed by all who answered the questionnaire, although the quality of the content was not consensual. Once again the quality of the tool (layout) did not allow some 20% of users to use the functionality of Report Abuse and Favourite".

For Facebook it was also possible to collect some metrics regarding the number of users and demographics. Demographic data show a dispersion of users throughout various age groups as it would be desirable when using the Facebook community.

5. Conclusions

Already there are several communities for creating games, but they are not taking advantage of existing consolidated communities such as Facebook. Alternatively they prefer to create new communities, limiting the number of users and thus forcing a new registration. At this moment in time, the new registration factor for a new community, is seen as a negative point, given the amount of registrations that each person already has (i.e.: email, forums, among other). In addition to this, very few are in Portuguese. The implementation of the Open Review mechanism had several advantages in that it promoted community interaction around LudoPor. Through review/report abuse, the community contributed effectively to the quality of the games presented. The games that were the subject of complaints had effective faults. The versioning of the games was also positive towards continuous improvement of games. The role of the group

of administrators regarding the validation of games (content and structure), had no impact on the operation of the community. In most cases this is the bottleneck of interactions (excess validation). Such a process, implemented on Facebook, would reduce waiting times, increase the number of developments and involve the community in building/controlling value/quality. The game disposition in TOPs allowed for filtering of greater value games, keeping them visible, not discarding new games through the more recent ones. The formalisation of the board with fixed positions and the use of arrows to set paths was considered something positive and familiar.

In short, the LudoPor tool has until now allowed users to learn Portuguese Language. In terms of quality control over the initial purpose, it can be considered as having been achieved if one considers as positive the 80% of users who liked the content in the existing games.

References

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