Mobile Intercultural Cooperative Learning

Funded by:

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Extended App Review:
Dinorama

Published by:	**TheSixtyOne Inc.**
Education level:	**Primary (9 - 11)**
Price: €2.99	Platform: iPad/iPhone (iOS5+)
Version: 1.0.2.4	Last Updated: October 2013

App store reference URL:
https://itunes.apple.com/ie/app/dinorama/id611016610?mt=8

This review was completed at Dublin City University during the development of the MICOOL App Rubric. For more information about MICOOL, the rubric, and for a range of shorter-form app reviews, please visit www.micool.org

Review Date:	22 March 2016
Rubric Score:	*This report used a previous (beta) version of the MICOOL App Rubric, and has an* <u>*equivalent*</u> *score of:*
	64: (70, 90, 50, 44)

MICOOL / DCU   www.micool.org

Introduction

This is an extended review which uses an evaluation rubric, specifically designed to determine a fair and thorough rating of the educational application that is being assessed. It gives an extensive evaluation of four main areas; content, design, assessment and technical. The app will be scored overall using these four thematic sections. The conclusion will provide a summary of the overall function of the app and will include a breakdown of the rubric score.

The Evaluated App

Dinorama is a game that lets juniors build their own dinosaur park and learn how to run their own businesses. The user will learn about the basics of running a business, improving, expanding, and making the most profits out of it. It focuses on entrepreneurial skills and teaches children valuable money saving skills.

It has a rating of 4+, however is aimed at primary school children aged nine to eleven years as they will have a better understanding of the concept of the game.

This app is optimised for iPad but can also be used on iPhone and iPod touch running iOS5.0 or later. It is priced at €2.99 in the apple store.

Instructional Content

This app aims to instill an entrepreneurial spirit in children aged between nine and eleven years old. The app focuses on running a dinosaur theme park with the incentive to invest money in order develop your park. The more you add to your park and invest, the more money you will make in the long run. This is a great way to teach children how to save money and use critical thinking to make informed decisions.

On opening the app, the user is directed to purchase a dinosaur to attract visitors to the park. Once the dinosaur is purchased, the user is then informed that it must be fed regularly to be kept healthy. The user begins the game with 55 coins which is only enough to buy the dinosaur and feed it once. As this purchase has attracted visitors to the park, the user begins to earn money back and generate profit. This quickly establishes the concept of the game to the user in an interactive and engaging way. This is a good method of teaching the user as it moves them into game play immediately. Although this is a good way to motivate the player, on assessing the game, this goal to create profit was not initially clear.

The concept and learning outcome of the game is not immediately clear, but comes to light as the user progresses further. Initially it is assumed that the aim of the game is aimed to teach children about dinosaurs, however there is not a sufficient amount information about them. This leads to the assumption that this is a poorly designed game and that the learning outcome is not the main objective. However, it soon becomes clear that this game is focused on money management and entrepreneurial skills. Once the objective of the game is apparent, it becomes addictive and the user can become fully immersed in it.

As the user continues playing the game they are encouraged to buy a photobooth as an instruction box appears. When the photobooth runs out of film, the user is prompted to buy more to attract more visitors to the park. Three different price options are displayed when the user chooses to purchase more film ranging from low to high. If the user purchases the cheapest film, they will not obtain any profit as they haven't made a long term investment. If the user buys either of the two more expensive options, investing a larger amount of money in the short term, they will make profit in the longer term. This encourages the user to spend their money wisely as they are rewarded for making long term investments. The game doesn't clearly outline to the user that they should make these investments, but it is expected that the user will figure out for themselves that this is the best option.

The user's progression in this game is measured by how successful the theme park is and how much money they save. There is no progress bar or leveling up mechanism, but there are items to be unlocked as the user progresses depending on how well the proceed. There is a shop where items can be unlocked throughout the game depending on how well they proceed. This method of gauging the player's success as the park works well, as the user understands that the theme park can be expanded more and become more successful when items are unlocked and purchased. This method of establishing progress is suitable for the target age range of the children (7-9 year olds) as it is easy to understand.

This game is appropriately aimed at children aged between 7 and 9 years old. At this age children are developing logical thought and this game definitely helps them to use this new skill. This game encourages the user to make strategic decisions in order to expand their theme park and build its success. At this age children should begin to learn about money and saving as they may begin to receive pocket money from parents. This game will give them the incentive to save money and make better decisions when spending it.

This game is aimed at independant learning and does not involve subjects that are on the school curriculum. It uses a behaviourist approach to learning as it focus' on repetition and rewards as key determinants in incorporating new learning. This game is suitable for playing at home and not in a school setting. The user is unable to modify any functions or settings in the game and the fact that it does not feature any in-app purchases or advertisements makes it a pleasant learning experience for the child. This also reassures parents that it is suitable for their children and they do not need to supervise their child whilst playing the game.

Design

On entering the game, the user is given an almost empty dinosaur theme park and just enough coins to purchase a dinosaur and some food. As visitors enter the park to visit the dinosaurs and various other attractions, the user is provided with more

and more ways to earn money through interactions with the park. The user must interact with the visitors and item icons to earn more money and create savings and profit. The app is designed for iPads and must be used in landscape mode. The game scene is situated in a dinosaur theme park. The background of the scene is given depth by layering flat single coloured landscapes on top of eachother. This is very like in traditional disney animations where the layered backgrounds create a sense of depth. In the foreground of the scene lies the theme park itself which comprises of characters, dinosaurs, and buildings all designed in a textured vector style. The colours used are very vibrant and lively which appeals to children of the seven to nine year old age bracket. There is a bar that runs along the bottom of the screen which displays the number of coins the user has collected, the objectives chart and the shop. On entering the shop, there is a list of all of the items that can be purchased for the theme park. The user is required to unlock more items by collecting stickers obtained through interacting with the characters. The items yet to be unlocked are greyed out which is a design technique used to encourage progression for the user.

Though there are three different fonts used within the app, the dominant font is a quirky serif font which is youthful yet clear to read. The vector style of animation definitely appeals to the younger age group but isn't so childish that it would turn away an older audience.

The responsive design of the app makes use of the iPad's capabilities by using the tap, drag and drop and swipe mechanisms throughout the game. This also creates variety for the user. The app is very straightforward to navigate. The user can easily navigate through the scene by swiping left and right through the theme park. The clearly laid out bar along the bottom of the screen displays the user's options as they move through the game. Once the user begins the game by pressing play on the homescreen, they cannot restart the game or play as another user until the game is completed or the user's theme park gets shut down due to lack of attention.

As the user progresses through the game, the user is encouraged to tap on the objectives box in the bottom bar (it is designed to pulse when it requires to be tapped), at which point notifications pop up taking over almost the entire screen with clear, legible instructions on how to proceed. In most cases where the user is given an instruction, an animated image appears beside the text to support it. Animation is the only type of media used within the app, there are no photographs or video which creates a consistent feel. There was an upbeat audio track supporting the app which definitely adds to the overall feel. When playing the app, the user is encouraged to develop time management skills and the lively music accompanies this well. The audio levels can not be managed within the app, the volume can only be turned up and down on the side of the iPad itself.

The vivid colours, quirky font and the wide variety of icons within the game creates a diverse visual scene. This encourages learning for the user effectively keeps them engaged.

Assessment:

The app evaluates the user on their progress in numerous ways. For example, on occasion when a visitor leaves the theme park, they will present their qualm about the park in a speech bubble. This gives feedback to the user about what they feel could benefit the park and attract more visitors, for example, "I would come back to this park if it had a cafe." In essence, by use of repetition, the student learns the concept of supply and demand. The more facilities that are constructed at the park directly impacts the growth in numbers of visitors that will arrive, providing the user with more business, and consequently, more money and profit. If the user continues to progress on, they will quite clearly have learned the basics of "supply and demand", however if the user has not learned this concept, their park will inevitably fail.

The game also encourages the user to save their money for a "rainy day" which a very beneficial attitude for young savers to have. It implements this by throwing hurdles at the user such as varying extreme weather conditions. When faced with a storm the user suffers a drought in business as less visitors come to the park. Therefore if the user is not careful enough with their money during the good weather periods, then they would not have enough money to feed their dinosaurs. If their dinosaurs aren't fed they become tired and sick, hence, the park loses its main source of capital. This in many ways reflects on the Irish government's reckless attitude with money during stages of boom and bust. As Michael Noonan, Minister for Finance explained, "This Government has consigned to the history books the days of boom and bust, and the attitude of 'if I have it, I'll spend it.'".

The app therefore assesses the user repeatedly on good saving practices as each storm presents itself. Encouraging the user not to act as the Irish government did, but rather to mind their assets and their savings for the future.

The assessment methods used in the app are appropriate to the learner and are suited to the learning objective of the app. It is in game assessment is constantly ongoing. However, as the game progresses and the user obtains a large amount of facilities in their park, keeping up with all the queries of the visitors proves more difficult due to the fact that they simply walk out of the park and their speech bubble leaves with them. Often only the beginning of their speech bubbles can be read, "I would return to the park if…", and the user is left unsure about what their qualm was. This however, can be construed as effective assessment. Proving that the user has gotten to a stage wherein they can't process the comments given by their visitors due to being too distracted by the ongoing business of the park such as: the upkeep of the dinosaur's pens, the dinosaurs health and building structures such as photo booths and popcorn stands. If the customer's desires are not met for expansion then the park owner's capital would not increase at a sufficient enough speed. If the owner wisely invest their funds into expansion, then the visitors would be provided with a better experience, thus encouraging more visitors to attend the park, and in turn providing the park owner with more capital.

The methods in which assessment occurs are very relevant to the task at hand. As opposed to the user being tested on what they learn, they are thrown into a scenario wherein, if they fail it is clear that they have not learned anything about 'supply and demand' and 'saving for a rainy day' concepts. If they do learn, they can progress further into the game while having more fun in doing so. Also, when the user gets to a certain stage of wealth and success, a large piggy bank appears encouraging the user to add money to save more money. Once money is placed in the bank for an extended period of time, the money grows in interest. The user is encouraged to leave the money in the savings bank and only spend the interest that is earned. Not only is this feature an award for the user for doing well and successfully comprehending the task at hand, but also teaches them about the concept and benefits of interest.

The assessment in the game is simply the success of the user. This is shown by how much property and money they have managed to accumulate. There is no other report of such about their learning outcome. Teachers and parents are not made aware of the student's progress by any means other than looking at how much money the user has saved up and how fast paced the game has become for them. Obviously the more of each (money and property), the better the student understands the basics of business.

Technical

Dinorama is exclusively available to IOS devices, including the Ipad, Iphone, and Ipod Touch. To download the 49.8 MB app, it will be available via the App Store without any complications. As this is a paid application, there will have to be an account made with Itunes to create an Apple ID paired with a credit/ debit card. Your Apple ID will be your account used to download from the App Store to make the purchase. Instructions to do so are simple and executed with ease. There is no In-App purchases, €1.99 is the only price that'll be paid for the full experience of the

app. This will allow no distractions for the user and will focus on the game, learn from it without the promotion of in-app purchases.

There is no option for the app to be downloaded onto any other tablet or phone running Android software through Google Play. This strongly limits the amount that will be able to gain access and be able to download this E-Learning app.

The app itself has its own specifications that the IOS devices will have to achieve to be able run the app. The IOS compatibility requires IOS 5.0 or later. Considering IOS 5.0 was released in 2011, it would be comfortable in saying that most Ipads and other IOS devices should have adequate software. This will be convenient for schools and learning environments as running outdated software on their devices will not become an issue.

The Application ran very smoothly on newer Ipad models with an up to date IOS as expected, but when tested on an 16gb Ipad 2 running IOS 7 the application ran smooth, with minimal complications. The only reported lag with Dinorama was the opening up off the application, and secondly entering back into the app after switching applications using the multi-tasking. Such complications could have arrived from the lack of memory on the Ipad causing the ram to slow down, or a more up to date IOS running on an older generation Ipad. Overall these slight moments of lag in the application did not ruin the experience of Dinorama. This reassures that Dinorama is a reliable and stable app

Dinorama is a stand alone piece of software. There is no other external piece of software or hardware that is required to complete. It is all based off of the touch screen of the device. It does not interact with any other piece of internal software on the device, which is suitable for learning environments such as classrooms. The size of the application is a pleasing 49.8 MB, an application of this size will not take up much space on the hardware, and it can be easily accommodated on a device which memory could be nearly full and still run smoothly.

External support was offered upon release of the app, but as of today it seems that the support is not available anymore, on the App Store there is two links, one that is labelled as the applications publishers "Thesixtyone" with www.dinora.ma being the website you are sent to. The second link labelled as "Dinorama support" http://forums.dinora.ma/. Unfortunately when the link is pressed it is greeted by an error stating "site can't be reached". There could have been support given to the first users of the application in 2013, but now in 2016 there is a lack of any support given to players who will be the current users of Dinorama. If any user was to encounter a bug, there will be no support to report it to, the last software bug update was in 2013, meaning there is a small chance that a reported bug in software will lead to a new application update to resolve any problems.

Conclusion

Overall, this is a successful app. It is aimed appropriately for children who are at the prime age for developing logical thinking, which this app encourages and requires. It is an effective way to learn skills that are not featured in the school curriculum and are useful in everyday life. It encourages children to use entrepreneurial skills, which cannot be learned in a school setting.

This app does not include a clear guideline of the learning objectives at the beginning, however they quickly become clear whilst playing the game. This app is well designed which makes for a pleasant learning environment for the user.

Score Breakdown:

Instructional Content: 35/50

The beginning of the game featured unclear instructional content to the user, however the app featured appropriate content for the age group. It did not include

any advertisements or in app purchases which makes it a fully age appropriate and pleasant app for the user.

Design: 45/50

This was awarded because the overall design of the app is very effective and appropriate for the target audience. The use of youthful fonts, vibrant colours and animated characters make for an enjoyable and engaging learning experience for the user.

Assessment: 25/50

The overall assessment in the app is very subtle. There is no clear testing or obvious progress bar or levels, however, the real assessment is made by the user creating a successful theme park by using concepts about business that they have learned.

Technical Considerations: 22/50

This app is great but only for users with apple devices. It technically is very good with regard to storage and the fact that it is a stand alone app. Marks were deducted for lack of help link and the fact that there is no platform for android users.

Total: 127/200