

[An example of annotated bibliography for Professional Issues coursework from previous students]

**Title:** Public perception of computer games and their suitability towards education.

**Draft RQs:**

- Why are educational games not seen as fun, or entertaining, while commercial games are seen as non educational (waste of time)?
- How do you determine if a commercial game is suitable for gamebased learning?  
Valiant Hearts: [https://en.wikipedia.org/wiki/Valiant\\_Hearts:\\_The\\_Great\\_War](https://en.wikipedia.org/wiki/Valiant_Hearts:_The_Great_War)
- How can or have newer games attempted to overcome these issues?  
ECO: <http://www.strangeloopgames.com/eco/>
- How can serious games be designed to fit into existing school curriculum?

**Suggestion:** Check

- Technologies that can help with the engagement?
- Other design aspects that might affect games
- 

<b>Total number of references:</b>	30
Learned/Referred Journals	22
International/ Referred Conferences	1
Books	1
Website	6

**Literature Review:**

**1. Why Educational games fail**

<https://etcjournal.com/2010/10/18/whyeducationalgamesfail/>

An insight into why educational games are not taken seriously

**2. A framework for understanding game-based teaching and learning**

<http://www.emeraldinsight.com/gcu.idm.oclc.org/doi/pdfplus/10.1108/OTH1120150069>

Four frames or categories of GBTL approaches were identified: the action frame, the structuring frame, the bridging frame and the design frame. Each frame represents a spectrum of related yet varied strategies and assumptions.

**3. A Study on Exploiting Commercial Digital Games into School Context**

[http://www.ifets.info/journals/15\\_1/3.pdf](http://www.ifets.info/journals/15_1/3.pdf)

Not only specially designed educational games but also general purpose commercial games can contribute to the achievement of standard curriculum mathematics educational objectives when used as part of appropriately designed activities.

Students engaged in the game supported educational activities achieved the same results with those who did not, with regard to the subject matter educational objectives. Digital Game supported educational activities resulted in better achievement of the general educational objectives.

Panoutsopoulos, H., & Sampson, D. G. (2012). A Study on Exploiting Commercial Digital Games into School Context. *Educational Technology & Society*, 15 (1), 15–27

#### **4. Using Games to Raise Awareness. How to Co-Design Serious Mini-Games?**

<http://search.proquest.com/docview/1728409587/fulltextPDF/EA7D04590CD44169PQ/7?accountid=15977>

The study suggests that serious mini-games can provide an efficient alternative to more complex serious games, since mini-games are short games focused on a single concept or learning goal.

#### **5. Game Based Learning: Serious Educational Play**

<http://www.gettingsmart.com/2015/11/gamebasedlearningseriouseducationalplay/>

In edutainment games, the game mechanics are completely divorced from the learning goals. This disconnect makes the game inauthentic and a veneer of game mechanics over a Worksheet like process doesn't fool students for a moment. Instead, real game based learning has learning as a side effect of achieving the game's main objective and gaining skill at the actual game mechanics.

Bjerede, M. (2015). *Game Based Learning: Serious Educational Play*. [online] Getting Smart. Available at:

<http://www.gettingsmart.com/2015/11/gamebasedlearningseriouseducationalplay/>  
[Accessed 10 Feb. 2016].

#### **6. Combining Software Games with Education: Evaluation of its Educational Effectiveness**

<http://search.proquest.com/docview/1287054066/fulltextPDF/EA7D04590CD44169PQ/11?accountid=15977>

In view of the above, we have conducted an evaluation study on a virtual reality educational game that we have developed, which has been briefly described in (Virvou et al. 2002).

#### **7. Using the Master Copy: Adding Educational Content to Commercial Video Games**

<http://search.proquest.com/docview/1549957139/fulltextPDF/EA7D04590CD44169PQ/5?accountid=15977>

Educational games often do not meet the promise of a sensed effortless learning. Habgood (2007) observes "chocolate covered broccoli"-like edutainment applications. Missing "intrinsic integration", i.e. intrinsic motivation cannot be consistently perpetuated during gameplay, is considered as an important reason (Habgood & Ainsworth 2011). These failures may result from the enormous complexity to create an "intrinsically integrated" educational video game.

#### **8. Serious games: video games for good?**

<http://journals.sagepub.com/gcu.idm.oclc.org/doi/pdf/10.1177/2042753014558380>

We investigate and problematize underlying beliefs regarding “serious” and “good”, particularly in relation to notions of “games” and “play”. “[...] popular commercial video game contents are seen to be based on violent and misogynistic themes within fictional storylines.”

Sanford, K., Starr, L.J., Merkel, L. & Bonsor Kurki, S. (2015). Serious Games: Video Games for Good?. *ELearning and Digital Media*, 12 (1), 90106.

#### **9. Usability Testing for Serious Games: Making Informed Design Decisions with User Data**

<http://search.proquest.com/docview/1272333129/E4898F3F83114DACPQ/5?accountid=15977>

Because games are fundamentally different than general productivity tools, "traditional" usability instruments valid for productivity applications may fall short when used for serious games. In this work we present a methodology especially designed to facilitate usability testing for serious games, taking into account the specific needs of such applications and resulting in a systematically produced list of suggested improvements from large amounts of recorded gameplay data.

MorenoGer, P., Torrente, J., Hsieh, Y.G. & Lester, W.T. (2012). Usability Testing for Serious Games: Making Informed Design Decisions with User Data. *Advances in Human Computer Interaction*, doi:<http://dx.doi.org/10.1155/2012/369637>.

#### **10. An Analysis of the Motivations for Playing Computer Games in a Secondary Education Context: A Comparison With Higher Education (A)**

<http://search.proquest.com/docview/1009900791/fulltextPDF/EA7D04590CD44169PQ/3?accountid=15977>

This paper will present valuable empirical evidence in the field of gamesbased learning and will provide guidelines on which particular motivations to focus on in a secondary education context.

#### **11. A Valiant Hearts history lesson**

[http://www.gamasutra.com/blogs/EskeKnudsen/20150826/252235/A\\_Valiant\\_Hearts\\_history\\_lesson.php](http://www.gamasutra.com/blogs/EskeKnudsen/20150826/252235/A_Valiant_Hearts_history_lesson.php)

Both positive and negative aspects have been highlighted by progressive and traditional teachers. Negative: Issues in finding the extra information (hidden objectives in games), not being able to discern true facts with fictional characters, etc.

Positive: Studies have shown that knowledge gained through simulation are more likely to last longer, story and action as motivators for kids, contextual actions.

Knudsen, E. (2015). *A Valiant Hearts history lesson*. [online] Gamasutra. Available at: [http://www.gamasutra.com/blogs/EskeKnudsen/20150826/252235/A\\_Valiant\\_Hearts\\_history\\_lesson.php](http://www.gamasutra.com/blogs/EskeKnudsen/20150826/252235/A_Valiant_Hearts_history_lesson.php) [Accessed 10 Feb. 2016].

#### **12. Violence, Video Games, and the Serious Game Movement**

<http://search.proquest.com/docview/1037025469/E4898F3F83114DACPQ/7?accountid=15977>

Discusses how certain Serious Games have tried to overcome the social perception of being too violent and mindless.

Parks, N.S. (2009). Violence, Video Games, and the Serious Game Movement. *Journal of Cultural Research in Art Education*, 27, 8293.

**13. Factors affecting teachers' adoption of educational computer games: A case study**

[http://su3pq4eq3l.search.serialssolutions.com/?ctx\\_ver=Z39.882004&ctx\\_enc=info:ofi/enc:UTF8&rft\\_id=info:sid/ProQ%3Acomputerinfo&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=British+Journal+of+Educational+Technology&rft.atitle=Factors+affecting+teachers%27+adoption+of+educational+computer+games%3A+A+case+study&rft.au=Kebritchi%2C+Mansureh&rft.aualast=Kebritchi&rft.aufirst=Mansureh&rft.date=20100301&rft.volume=41&rft.issue=2&rft.spage=256&rft.isbn=&rft.btitle=&rft.title=British+Journal+of+Educational+Technology&rft.issn=00071013&rft\\_id=info:doi/10.1111%2Fj.14678535.2008.00921.x](http://su3pq4eq3l.search.serialssolutions.com/?ctx_ver=Z39.882004&ctx_enc=info:ofi/enc:UTF8&rft_id=info:sid/ProQ%3Acomputerinfo&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=British+Journal+of+Educational+Technology&rft.atitle=Factors+affecting+teachers%27+adoption+of+educational+computer+games%3A+A+case+study&rft.au=Kebritchi%2C+Mansureh&rft.aualast=Kebritchi&rft.aufirst=Mansureh&rft.date=20100301&rft.volume=41&rft.issue=2&rft.spage=256&rft.isbn=&rft.btitle=&rft.title=British+Journal+of+Educational+Technology&rft.issn=00071013&rft_id=info:doi/10.1111%2Fj.14678535.2008.00921.x)

Therefore, this study was conducted to (1) identify factors affecting teachers' adoption of educational computer games, (2) determine whether the factors affecting the adoption of modern educational computer games differ from those identified in the existing literature on the adoption of educational software in K12 settings and (3) identify whether the adoption factors are related to the barriers of using the games in K12 settings.

**14. Video Games: Play That Can Do Serious Good**

<http://search.proquest.com/docview/1617305581/E4898F3F83114DACPQ/11?accountid=15977>

Although many individuals may still consider video games nothing more than mindless fun, the authors argue that games serve also as serious tools for good.

Eichenbaum, A., Bavelier, D. & Green, C.S. (2014). Video Games: Play That Can Do Serious Good. *American Journal of Play*, 7 (1), 5072.

**15. Investigating Attitudes of Adult Educators towards Educational Mobile Media and Games in Eight European Countries**

<http://www.jite.org/documents/Vol9/JITEv9p235247Demirbilek777.pdf>

This study confirms that adult educators are willing to take advantage of the capabilities of mobile devices to meet their own needs and the needs of their students

**16. Using Valiant Hearts as a teaching resource**

<http://www.daddydaydream.com/2014/10/19/usingvaliantheartsasateachingresource/>

The other aspect of Valiant Hearts that is a great resource to have in the classroom is the problem solving. Problem solving is of great importance and forms a key part of the numeracy curriculum. Valiant Hearts' puzzles are great because they provide such a different form of problem to solving to that which we can usually offer in school.

Daddy day dream. (2014). *Using Valiant Hearts as a teaching resource*. [online] Available at:

<http://www.daddydaydream.com/2014/10/19/usingvaliantheartsasateachingresource/>

[Accessed 11 Feb. 2016].

**17. Studying Commercial Games: Justifying Choices**

<https://www.rit.edu/gccis/gameeducationjournal/studyingcommercialgamesjustifyingchoices>

By far the most common attribute supported by other references is the claim about the game's popularity and the most common outside reference is to sales figures. Simply stating that a first person shooter was needed for this study is no longer sufficient to

justify the choice of genre – it should be possible to explain what qualities of this genre are important.

Becker, K. (2011). Studying Commercial Games: Justifying Choices. *Journal of Game Design and Development Education*, 1, 48-53.

**18. Video-games as a serious medium**

[http://su3pq4eq3l.search.serialssolutions.com/?ctx\\_ver=Z39.882004&ctx\\_enc=info:ofi/enc:UTF8&rft\\_id=info:sid/ProQ%3Aeducation&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=unknown&rft.jtitle=On+the+Horizon&rft.atitle=Videogames+as+a+serious+medium&rft.au=Steinkuehler%2C+Constance&rft.aualast=Steinkuehler&rft.aufirst=Constance&rft.date=20160401&rft.volume=24&rft.issue=2&rft.spage=175&rft.isbn=&rft.btitle=&rft.title=On+the+Horizon&rft.issn=10748121&rft\\_id=info:doi/](http://su3pq4eq3l.search.serialssolutions.com/?ctx_ver=Z39.882004&ctx_enc=info:ofi/enc:UTF8&rft_id=info:sid/ProQ%3Aeducation&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=unknown&rft.jtitle=On+the+Horizon&rft.atitle=Videogames+as+a+serious+medium&rft.au=Steinkuehler%2C+Constance&rft.aualast=Steinkuehler&rft.aufirst=Constance&rft.date=20160401&rft.volume=24&rft.issue=2&rft.spage=175&rft.isbn=&rft.btitle=&rft.title=On+the+Horizon&rft.issn=10748121&rft_id=info:doi/)

Discusses why modern games have been stuck with lack of creativity for the most part. Steinkuehler, C. (2016). Video-games as a serious medium. *On the horizon*, 24 (2), 175-178.

**19. A case study of educational computer game design by middle school students(A)**

[http://su3pq4eq3l.search.serialssolutions.com/?ctx\\_ver=Z39.882004&ctx\\_enc=info:ofi/enc:UTF8&rft\\_id=info:sid/ProQ%3Apsychology&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=Educational+Technology%2C+Research+and+Development&rft.atitle=A+case+study+of+educational+computer+game+design+by+middle+school+students&rft.au=An%2C+Yunjo&rft.aualast=An&rft.aufirst=Yunjo&rft.date=20160801&rft.volume=64&rft.issue=4&rft.spage=555&rft.isbn=&rft.btitle=&rft.title=Educational+Technology%2C+Research+and+Development&rft.issn=10421629&rft\\_id=info:doi/10.1007%2Fs11423-016-9428-7](http://su3pq4eq3l.search.serialssolutions.com/?ctx_ver=Z39.882004&ctx_enc=info:ofi/enc:UTF8&rft_id=info:sid/ProQ%3Apsychology&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=Educational+Technology%2C+Research+and+Development&rft.atitle=A+case+study+of+educational+computer+game+design+by+middle+school+students&rft.au=An%2C+Yunjo&rft.aualast=An&rft.aufirst=Yunjo&rft.date=20160801&rft.volume=64&rft.issue=4&rft.spage=555&rft.isbn=&rft.btitle=&rft.title=Educational+Technology%2C+Research+and+Development&rft.issn=10421629&rft_id=info:doi/10.1007%2Fs11423-016-9428-7)

This study also examined the impact of the game design experience on the students' interest and motivation.

**20. Not Just for Children: Game-Based Learning for Older Adults**

<http://search.proquest.com/docview/1326330224/fulltextPDF/EA7D04590CD44169PQ/280?accountid=15977>

The paper discusses the issue of how to use games effectively with older learners

**21. Use of Commercial Games for Educational Purposes: Will Today's Teacher Candidates Use them in the Future?**

[http://www.mackenty.org/images/uploads/Prospective\\_teachers.pdf](http://www.mackenty.org/images/uploads/Prospective_teachers.pdf)

The assertions that the prospective teachers made about the advantages of games show that commercial computer games, if considered appropriate to the context, can be used in order to motivate students since games are a source of fun for them. In addition, the responses of prospective teachers point out students' mental skills and their abilities of using mouse and keyboard can be enhanced by using computer games in classroom.

Bakar, A., Inal, Y. & Cagiltay, K. (2006). Use of Commercial Games for Educational Purposes: Will Today's Teacher Candidates Use them in the Future?. In E. Pearson & P. Bohman (Eds.), *Proceedings of EdMedia: World Conference on Educational Media and Technology 2006* (pp. 1757-1762). Association for the Advancement of Computing in Education (AACE).

**22. Best Practices for Integrating Game-Based Learning into Online Teaching**

<http://search.proquest.com/docview/1497192689/E4898F3F83114DACPQ/75?accountid=15977>

They suggested that games can be used not only in a variety of ways, but also in a variety of different courses and pedagogical contexts. Ten guidelines were suggested to help guide the process of using game-based technologies with online instruction.

McDaniel, R., & Telep, P. (2009). Best practices for integrating game-based learning into online teaching. *Journal of Online Learning and Teaching*, 5 (2), 424.

### **23. Serious fun with computer games**

<http://search.proquest.com/docview/744076038/E4898F3F83114DACPQ/82?accountid=15977>

Yet few serious educational games make a profit most rely on funding from government departments, media organizations and science promoting charities. Attracting non-gamers is difficult: the word 'game' may alienate would be players and devalue the serious messages within. As a result, some developers use alternative names for their products, such as 'behaviour change platform'.

Krotoski, A. (2010). Serious fun with computer games. *Nature*, 466 (7307), 695.

### **24. Immersive technology strategies**

<http://search.proquest.com/docview/1437961915/BC0BD52D21A04246PQ/3?accountid=15977>

Various methods and technologies used to attempt to bring in game/video-based learning. Wortley, D. (2013). Immersive technology strategies. *Simulation and Gaming*, 44 (23), 452-465.

### **25. An activity theory-based model for serious games analysis and conceptual design**

<http://search.proquest.com/docview/1762110338/BC0BD52D21A04246PQ/4?accountid=15977>

A conceptual model of evaluating serious games.

Carvalho, M. B., Bellotti, F., Berta, R., De Gloria, A., Sedano, C. I., Hauge, J. B., Rauterberg, M. (2015). An activity theory-based model for serious games analysis and conceptual design. *Computers & Education*, 87 , 166-181.

### **26. A Platform Independent Game Technology Model for Model Driven Serious Games Development**

<http://search.proquest.com/docview/1501691189/fulltextPDF/BC0BD52D21A04246PQ/30?accountid=15977>

Model Driven Engineering (MDE) goes some way to provide the techniques required to generate a wide variety of interoperable serious games software solutions whilst encapsulating and shielding the technicality of the full software development process.

Tang, S., Hanneghan, M., & Carter, C. (2013). A platform independent game technology model for model driven serious games development. *Electronic Journal of ELearning*, 11 (1), 61-79.

### **27. Serious Games and Edutainment Applications**

[https://books.google.co.uk/books?id=pb9uFv1P\\_68C&pg=PA37&lpg=PA37&dq=edutainment+bad+reputation&source=bl&ots=R4hU3wU2tm&sig=PxO5CnGgBV2pwum8XyKMMB7ra00&hl=it&sa=X&ved=0ahUKEwjOq\\_Oi4YvSAhWlJsAKHeDPDmcQ6AEIKjAD#v=onepage&q=edutainment%20bad%20reputation&f=false](https://books.google.co.uk/books?id=pb9uFv1P_68C&pg=PA37&lpg=PA37&dq=edutainment+bad+reputation&source=bl&ots=R4hU3wU2tm&sig=PxO5CnGgBV2pwum8XyKMMB7ra00&hl=it&sa=X&ved=0ahUKEwjOq_Oi4YvSAhWlJsAKHeDPDmcQ6AEIKjAD#v=onepage&q=edutainment%20bad%20reputation&f=false)

Games for entertainment gave a “bad reputation” to the idea of having games for other purposes, the main factors are:



- Marketing strategies of video games manufacturers that targeted children's entertainment
- Several controversies about the content of video games, especially their violence and the possible impact it may have on children.

Ma, M., Oikonomou, A. and Jain, L. (2011). *Serious games and edutainment applications*. 1st ed. London: Springer, pp.36-37.

## 28. Digital Game-Based Learning: Still Restless, After All These Years

<http://er.educause.edu/articles/2015/10/digitalgamebasedlearningstillrestlessafteralltheseyears>

The concerns regarding violent videogames leading to violent behavior are unsupported by violent crime statistics and empirical research but that some videogames could indeed lead to aggressive behavior under the right conditions (e.g., length of exposure, lack of social mediating factors, mental disability, age). But overall there is evidence and design tools to demonstrate that digital games are powerful learning tools.

Van Eck, R. (2015). *Digital Game-Based Learning: Still Restless, After All These Years*. [online] EDUCAUSE Review. Available at:

<http://er.educause.edu/articles/2015/10/digitalgamebasedlearningstillrestlessafteralltheseyears> [Accessed 11 Feb. 2016].

## 29. Think Games on the Fly, Not Gamify: Issues in Game-Based Learning Research

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4477550/>

Learning is not solely under the control of the environment, as Skinner suggested, but it exists as an inherently social process driven by cognitive factors like our experiences and prior knowledge (i.e., information we already understand). Learners interact with the world in personalized, complex, and dynamic exchanges—likewise, gamers engage in multiple social interactions outside of the games they play (e.g., online help forums, strategy guides, cheat websites—a “meta-game”). Games regularly change to sustain player interest, with patches adding new dimensions and enriching the overarching game narrative, and they explore, expand, and build upon existing storylines (e.g., Lord of the Rings, Star Wars) to take advantage of players' prior experiences. If course designers were to incorporate these principles (e.g., building from established narratives; encouraging the use of social, meta-game-like resources), it might be possible to make supportive learning environments extremely effective because they would extend beyond the behaviourist token economies instantiated as gamification.

Slota, S. and Young, M. (2014). Think Games on the Fly, Not Gamify: Issues in Game-Based Learning Research. *Journal of Graduate Medical Education*, 6(4), pp.628-630.

## 30. Serious games stigmatized in and out of the industry, says Schell

<http://www.gamesindustry.biz/articles/20130530seriousgamesstigmatizedinandoutoftheindustryayschell>

"It's not like there's some hard line between fun games and transformational games," (Serious games) Schell said. "It doesn't need to be a weakness; it can be a real strength. That's why people got excited about Spec Ops. It's a change that feels powerful, because that game forces you to confront what you are truly like. And when you're forced to reflect not on something external, but on what you yourself are like, it can definitely be something that promotes change in yourself, which I think is exciting. "If you're talking about direct to consumer, right now it can be very difficult to sell educational or transformational games to anybody over the age of 6, at least in the American market," Schell said. "But I think we have a situation where schools are about to get an avalanche

of tablets. So there's going to be this new market of selling games to schools, which will be a real market.

Sinclair, B. (2013). *Serious games stigmatized in and out of the industry, says Schell* .

[online] GamesIndustry.biz. Available at:

<http://www.gamesindustry.biz/articles/20130530seriousgamesstigmatizedinandoutoftheindustryayschell> [Accessed 11 Feb. 2016].