Literature Review of Religion Video Game

Setya Chendra Wibawa
Informatics Department
Universitas Negeri Surabaya Jawa Timur,
Indonesia 60213
setyachendra@unesa.ac.id

Yuni Sri Rahayu
Biology Department
Universitas Negeri Surabaya Jawa Timur,
Indonesia 60213
yunirahayu@unesa.ac.id

Tri Wrahatnolo
Electrical Engineering Department
Universitas Negeri Surabaya Jawa Timur,
Indonesia 60213
T.wrahatnolo@unesa.ac.id

Vindy
Game Application & Technology Program,
Computer Science Department, School of
Computer Science
Bina Nusantara University
Jakarta, Indonesia 11480
vindy001@binus.ac.id

Harco Leslie Hendric Spits Warnars
Computer Science Department, BINUS
Graduate Program – Doctor of Computer
Science
Bina Nusantara University
Jakarta, Indonesia 11480
spits.hendric@binus.ac.id

Kiyota Hashimoto
Faculty of Technology and Environment
Prince Songkla University
Phuket Campus, Thailand
Kiyota.h@phuket.psu.th

Abstract— In this current digital era, the video game is favorite especially among young people. Besides widely known as a form of entertainment, some messages or lessons can be learned from a video game that may affect the players. Conscious or unconscious, games have influenced many sectors of life, and it has been recognized as a serious game and no exception to religion. Human as a living creature, like or dislike or even as an atheist should believe with something out there, and religion is as a medium which connects human with something out there. The game as a representation of entertaining, intelligent application will represent joy and happiness in human life's activities, and inevitably games will influence human religion. In the end, religion game will help the human to increase their faith in those their belief based on their religion. Similar to Information Technology which is implemented in business to increase revenue, the game as an entertaining intelligent application will increase human's faith. One kind of video game that provides it is religion video games which are the result of the incorporation between religion and video games. In this paper, we do a literature review about religion video games. We try to summarize how religious elements can be incorporated into a video game which can be seen from the parts, components, and approaches of the religion video game itself. We also try to summarize the positive side and controversies in religion video games.

Keywords—video game; religion Game; religious Video Game; Game elements; Game; Serious Game

I. INTRODUCTION

Before further exploration of religion video games, we must first understand the term of video games and the term of religion. The video game is defined as digital games played on a television or computer screen [1]. It is also described as digital systems that have the following features: an interactive and reactive nature, subtle signs and variable displays, multiple sensory and semiotic channels, and networking capabilities [2]. The digital game itself as a structured or semi-structured activity uses all multimedia elements (text, sound, picture, graphic art, animation and video) to enhance the game performance in presenting a play, fun, and entertainment making it usually undertaken for enjoyment but also can be used as educational tool to create an interactive learning [3,4,5].

The quality of the game as a tool for helping a human in their daily activities with the game approaching with fun and entertainment things were extended using game metric[6] as a measurement for the game as serious games for helping human using gamification approaches [7]. The implementation of a game for children with Attention Deficit Hyperactivity Disorder (ADHD) was extended by using metric game measurement [8]. Moreover, card game element also can be applied in order as serious game for decision-making purposes[9], and performance of serious game can be extended such as with extension of matchmaking in MOBA serious game[10] and expansion of User Interface (UI), User Experience (UX) and Gameplay Experience (GX) in serious game[11]. The game can be designed with object-oriented approach [12] such as Unified Modeling Language (UML)[13,14] where the software can be implemented with a mobile application and can be tested [15]and measured [16,17] including utilizing user feedback[18] for

The digital game is grouped into four general genres including their sub-genres [19]:

1. Simulation Games

   A game genre where the players can do activities and actions that simulate ones in real life. Some examples such as piloting a plane in Ace Combat: Assault Horizon (2011), driving a racing car in Gran Turismo 6 (2013), or farming in Farming Simulator 15 (2014).

2. Strategy Games

   A game genre where the players must make decisions based on the planning of a tactical course of action to achieve a particular goal in the games. The strategy games are divided into real-time strategy games and turn-based strategy games. Some examples of the games are Sid Meier's Civilization VI (2016) and Dota 2 (2013).

3. Action Games

   A game genre where the players are conditioned to make quick decisions that require them to have constant concentration and fast reaction-time while playing. The action games are divided into first-person games and third-

person games. Some examples are Dante's Inferno (2010) and Devil May Cry 3: Dante's Awakening (2005).

4. Role-playing games

A game genre where the players control their imaginary characters called avatars, develop those avatars by learning skills and defeating enemies, and accomplish quests. The role-playing games usually use fantasy literature and combine settings like science fiction or historical scenarios. Some examples are Final Fantasy X (2001) and World of Warcraft (2004).

Meanwhile, R.E. Ferdig stated that there are three general terms of religion [1]:

1. The belief in a God or a group of Gods.

2. An organized system of beliefs, ceremonies, and rules used to worship a God or a group of Gods.

3. An interest, a belief, or an activity that is very important to a person or group.

The third term is the most common one used in the religion video game.

The video game is one of the results of popular culture in modern society. It can re-enhance the players' rationalized world as it allows them to live in fictional world, excite their enthusiasm by giving them away to witness impossible things to do in reality, relieve their stress and also have fun while the players themselves still carrying their own beliefs in what to do and what not to do when they play the video game [10]. However, recent studies managed to prove that video game is not only a mere form of entertainment anymore. The video game can be used as a platform for the players to learn educational things including morality and cultural practice which are derived from real life. This can happen because as the product of popular culture, the video game itself mirrors the general culture practice in real life as it creates its own culture inside the video game[19]. This cultural practice reflection makes a video game can contribute to the social construction of reality in essential ways as it affects the player's view towards the culture in real life or vice versa [20,21].

As one of the cultural practices in real life, religion is often to be presented in a video game either in the form of incorporation or the game itself is faith-based for the objective of learning about the religion. It is given through the game elements such as narratives, aesthetics, worlds, play, and culture which represent various religious groups inside the video game. One of the examples is Asura's Wrath (2012) an action video game that takes elements from Hinduism and Buddhism cosmology blended with science fiction. This integration of religion into the video game elements has the purpose of increasing the video games' appeal by making the game more meaningful, more culturally relevant and more immersive for the players. It can support the motivation factors such as perceived value, enjoyment story, enjoyment length, enjoyment control and customization that strengthen the customer purchase intention [22].

However, because of video games with religious elements inside can either reflect, reject, or reconfigure religious ideas, playing the religion video games can result in video games affect the player's spirituality. That statement increases the interest in the research about studying religion in digital gaming where scholars in religious studies have begun to explore how video games can be seen as sacred texts, can be framed about spiritual experiences or can serve as an extension of religious practice [23]. Slavomir in his study about the existence of spirituality in media (cyber-spirituality) states that cyber-spirituality does exist and it takes a different form from the traditional religion. In traditional belief, the human body represents an essential component that keeps the human in reality and gives them a chance to experience spirituality in a broader sense including direct communication with other people. Meanwhile, in cyber-spirituality, it is about the mental submerging into cyberspace and the players experiencing a new, magical and fascinating world that can change their consciousness[24]. However, because the cyber-spirituality is merely a general reflection derived from the religious practice, in reality, it doesn't reach the standards of the traditional religion in existence [25,26].

II. ELEMENTS OF RELIGION VIDEO GAMES

Religious aspects inside it the present the reflection of religion in the video game. The supernatural elements can serve as indicators for the variety of negotiation processes of religious topics in different socio-cultural settings, the construction of fictional spiritual worlds, justification of conflicts that centered around religion or can be used as instruments for the visualization of subliminal socio-cultural discourses in society. In order to find the religious elements inside a video game, we can analyze the five-game elements which are [27,28]:

1. Game Narratives

The narrative is defined as a spoken or written account of connected events; a story (Oxford, 2017). The narrative structure in a video game environment tells the stories of the game. The ideas of the narrative itself can be derived from real life, and it is affected by the players especially if the structure of the description is based on players' decisions. Therefore it can be said that the game narrative itself can

act as the reflections of contemporary socio-cultural discourse. In the religion video game, the religious elements can be seen from its usage in the narrative itself either implicitly or explicitly. BioShock Infinite (2013) through its story refers to contemporary Christianity, indicated by the baptism scene at the beginning of the game. Castlevania: Lords of Shadow (2010) also relates to Christianity through the whole storyline.

2. Game Aesthetics

For the term of game aesthetics, there are three critical concepts of aesthetics in digital games as identified by Niedenthal [5]:

a. Sensory phenomena that the player encounters inside the game such as visual, aural, haptic, and embodied.

Briefly, it is how a game looks, sounds and presents itself to the player.

b. Aspects of digital games that are shared with other art forms and thus provides a means of generalizing about art.

c. An expression of the game which is experienced as pleasure, emotion, sociability, form-giving, etc. concerning the aesthetic experience found while playing the game.

Building architecture, landscape, religious icons or symbols in a game can indicate the religious elements inside the game as it becomes the game resources to represents specific religion. Castlevania: Lords of Shadow (2010) has church and items such as cross that represent Christianity.

3. Game Worlds

Game worlds can be seen as a significant and complex connection in which all elements of game aesthetics and structure of game narratives are being merged and combined with the feature in the game that provides the player's opportunity of interaction with them such as with the objects, characters, spaces, stories, etc. The interaction with those elements can give a significant experience to the players, giving them the feeling of being in a humanmade universe.

An example of the game world is the world of Final Fantasy X which has its unique cultural practice and also a belief that is derived from the concept of religion the real life. Those all are supported by the environment in the places there and even the representation of characters.

4. Gameplay

The gameplay is about tactical aspects in the video game such as the plot and the way how the game itself is being played which also includes how the players interact with the game itself. There are three possible approaches towards religion through the gameplay itself which are [27]:

a. Specific elements of gameplay are parts of reception processes of religious beliefs, symbols, and narratives, both by game designers and players.

b. Through said reception processes, a religion about gameplay can play a significant role in influencing and shaping the actual mechanics and gameplay experience of a game.

c. The construction of game mechanics and game rules can also have a significant role in influencing and shaping the presentation and the reception of the religious beliefs, symbols, and narratives inside the game. It is because of the complicated decision-making process and tradeoffs involved in the course of creating an enjoyable, challenging (and commercially successful) gameplay experience.

One example of gameplay and religion is represented in the game Sid Meier's Civilization IV (2005) where players must make their civilization by choosing between seven pre-set religions (Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, and Taoism) [29].

5. Game Culture

Culture consists of norms, values, beliefs, and meaningful symbols. The religion video game can be indicated by seeing how religious beliefs and symbols are used inside the games to identify specific cultural group or faction. There are two different but sometimes overlapping angles of game culture which are [27]:

a. Religion and Culture in Games

This approach refers to the way how religious elements such as symbols, narratives, and practices derived from real-life are being represented inside the video game. Some examples are symbols and the environment in the World of Warcraft (2004) [30], the characters derived from Gods in Hinduism & Buddhism in Ashura' Wrath (2012), and the Christianity representation such as the church, the cross, fight against demon and evil spirits in Castlevania: Lords of Shadow (2010).

b. Religion and Games in Culture

This approach refers to how religious beliefs and practices from inside the video game are being represented in the real world to create something new in society. Cosplay conventions that are often held every year in certain cities in the world such as America, Japan, Indonesia, etc. as a new form of popular culture in the modern society are one of the examples. There are also movie adaptations from the video games that represent religious elements in the originated video games.

III. COMPONENT OF RELIGION VIDEO GAMES

To help to understand the relationship between video games and religion and how religion is studied in the context of video games, R.E. Ferdig developed a framework consists of four key components which are [1, 2]:

1. Game Content

Seeing from the content of the game or the whole game itself, the relationship between religion and video game can occur in two ways depends on the definition of religion used:

a. The purpose of the game is to teach principles, skills, or knowledge associated with a named religion. For example a mobile phone game Superbook Bible Trivia Game which has the purpose of teaching Bible to children.

b. Create the desired pedagogical outcome of learning a moral or ethical behavior or attitude. For example, Darfur is Dying (2006) a narrative-based simulation game about a crisis in Darfur, western Sudan where a player takes the role of a displaced Darfurian living in a refugee camp. Through the game, players' morals and behavior are being measured.

2. Game Context

Game context refers to the story, environments, symbols, rules, characteristics of both worlds and players, and situations within gameplay that either explicitly or implicitly refers to a particular religion. The references can be parts of the environment in the game or pieces of the game rules, and they typically fall into one of these categories:

a. Environmental factors such as buildings (e.g., churches or synagogues) or tools (e.g., crosses or religious artifacts) that create the backdrop or setting for a video game. One example is the cross and the church in Castlevania: Lord of Shadow (2010).

b. Situations when religion impacts or directs the rules of the game (often being done implicitly). Some examples are in Grand Theft Auto V (2013) and Darfur is Dying (2006) where players' moral and ethical behavior is being tested there.

c. Miracles of fantasy and the science of the real world. Portrayed in the games where players can create their avatars which represents them in the game and the players can choose to be on the right side or on the evil side. One example is in The Elder Scrolls V: Skyrim (2011).

3. Game Challenge

The game challenge is talking about the activities inside the games that players can take or will face which relates to the actual goals or the purpose of the game itself. The challenges in the game depending on the game objectives or targets. If the use of the game is teaching the players about specific things such as Bible for example, then all activities in the game will be focused on how the players can learn the Bible from the game. One of the games that teach that example is Superbook Bible Trivia Game. In the exploration of religion-related to the game challenge, three avenues can be explored from video game [1]:

a. God Game

This type of game is where the players have omnipotent and omnipresent perspectives in the game world that they are engaging with. The players are free to control everything inside the game as an entity with divine and supernatural power. The Sims (2000) is one of the examples where the players can control the lives of their creation and also socialize with their creations in a virtual life [31,32].

b. A game where the sole purpose is being evil or being kind.

This type of game uses a good scale as a resource to measure players' morality based on the decisions they make in the game. Every choice made by the players has its consequences, and this makes players get the impression of being an integral part of the narrative and ludic experience of the game itself. At the same time, there is also a possibility

action taken represents players' behavior and therefore can affect their behavior in real life making usually age restriction implemented in the game age rating. [33,34].

Some examples of this type such as Red Dead Redemption (2010), The Graveyard (2008) and Mass Effect 3 (2012).

c. Activities that are part of a larger narrative and may be presented in 'God Mode' and challenges that represent one's view of the role of their religious deity.

An argument regarding this is about how technologists should understand technology from the world perspective and also religion perspective so that the religious elements or phenomena in the game can be relevant to real-world teaching hence increase the players' morality and spirituality instead of causing controversy [21].

4. Personal Capital

The concept of personal capital is where players who play video games bring their religious and moral beliefs which will affect their actions or decisions that they will make in the game regardless of the gameplay. A religion video game that has a morality system can be an example of this concept [33,34]. Some cases are Alpha Protocol (2010), Darfur is Dying (2006) and The Elder Scrolls V: Skyrim (2011).

IV. APPROACHES OF RELIGION VIDEO GAMES

As explained by S. Heidbrink, T. Knoll, and J. Wysocki, two approaches can give valuable insights into the way how religion and video games interact with each other [28]:

1. Game-immanent approach

The method is talking about how video games as the product of popular culture carrying its religion, stories, myth, and symbols derived from the real world which players encounter while playing the game through the religious elements represented through game elements. Therefore, from those elements, we can analyze a video game to create a feeling of consistency and coherency in the game world which can affect the player's views towards the game itself. In the relationship between video games and religion, religious elements presented here are the ones that are being analyzed. One example is about the game elements in the Castlevania: Lord of Shadow (2010) and BioShock Infinite (2013) such as church and religious artifacts that represent Christianity.

2. Actor-Centered Approach

The approach is talking about how video games with all its elements including narrative, rules, and play, only act as a medium or platform to provide something such as learning for the players. What happens in the video game and what the players will get from playing the game depending on the players' inputs or decisions made during the time they play the game. In the incorporation of religion into a video

game, a video game provides the religious elements inside it and it depends on the players' perspective how they interact with those elements may result in them having their own opinions about the religious matters. The game with morality scale that can measure players' morals and behavior during playing the game such as Dragon Age II (2011) is one of the examples [35].

V. THE POSITIVE SIDE OF RELIGION VIDEO GAMES

The incorporation of religious elements in video games not always for the sake of entertainment by making the game more interesting. As explained before, a religion video game can affect the player's spirituality and also view the culture in real life especially if the game is about learning a specific religion. Following the advance of technology, the fact is that the young generation nowadays is digitally native and active production seen by the familiarity and reliance on information and communication technology. Old methods of teaching and learning used before the advance of technology are proved to be not valid and efficient anymore, a new approach in teaching and learning must be implemented which is for the interactive learning method [36].

With the advance of technology, learning can now be accessed digitally using digital devices such as laptops and smartphones with the use of multimedia. Learning about religion now is the same, a video game can be used as an interactive tool to learn especially mobile games played on the smartphone. The game that focuses on educational purposes like that is categorized as a serious game. It supports the player to achieve learning targets while having fun in the learning process [37]. Learning religion from video games itself can be about learning about the Holy Books and traditions of the religion and mainly targeted for the religion learning for children [38, 39]. Below are some beliefs and examples of games [40, 41] that represent them:

1. Christianity

    a. Play The Bible Game: Ultimate Verses

        An android game which is about patent-pending word matching game where players can learn about Bible verses from it.

    b. Bible Crush

        An android game has the combination of puzzle game and also trivia quiz which is based on the Bible.

    c. Superbook Bible, Video & Games

        An android game where players can learn about Bible from videos in it and test the knowledge got by playing various mini-games related to the knowledge they have acquired such as quiz, word search, and word scramble.

2. Islam

    a. Muslim Kid Games Free

        An android game that helps the players to learn about Islamic traditions such as knowing salat times, wudhu, salat movements, iqra, and also learn about Arabic alphabets and numbers.

    b. Game Edukasi-Islam for Kids

        An android game that introduces Islamic traditions and also general knowledge.

    c. Cerdas Cermat Islam

        An android game that tests players' knowledge about Islam lessons either in school or public that can help the players studying while learning.

In order to make the video games more interactive and make the learning more engaging for the players, the technology such as augmented reality can also be implemented in religion video games, for example, to view the religious objects or characters. The augmented reality technology allows the live presentation of the natural environment to supplemented through additional information. The performance of virtual characters or spaces designed and processed through a computer. One of the applications of Augmented Reality is Aurasma which uses the smartphone or tablet camera to recognize real-world images that are overlaid with content in the form of images, videos, animations, 3D models and websites [42]. Besides augmented reality, there is also a possibility for the religion video games development using virtual technology such as virtual information system which combines information system and game. The virtual information system itself can be applied to the working area to present a more exciting and fun working atmosphere [43].

A religion video game that is not about learning a religion but more to having religious elements to make the game more meaningful and immersive can also bring good positive impacts on the players. One game that shows this is Assassin's Creed series. This game presents a well-balanced narrative that incorporates historically justified the representation of the Nizari Isma'ilis and implicitly corrects one of the most famous Western legends about the 'Assassins'. It makes the game itself succeed in discarding the stereotype representation of Muslims and the Arab race associated with Western orientalism [44]. Besides that, there is also a game called Ibn Battuta which was created with the purpose to represent Islamic history through interactive multimedia where players will experience a piece of historical events in the 14th century and indirectly learn about the history of Islamic civilization of the areas visited in the game [45].

VI. CONTROVERSY IN RELIGION VIDEO GAMES

Mixing religion and gaming is still problematic for many people. Games are still widely considered as merely a form of entertainment for young people. They're seen as a virtual medium that is not real and does not reflect reality. In the point of view of religious groups, some technologists, and even game designers, video games are also seen as an inferior medium of expressions that are shallow and not effective to carry or communicate essential ideas. The incorporation of the religion in the video game itself, not all can bring good impacts for morality and religious teaching. There are still games that present religion in a negative way irrelevant with the actual

education to the point even considered as blasphemy [46,47]. Below are some religions and examples of games that represent each religion but causing controversy:

1. Christianity

   a. BioShock Infinite (2013)

      This game presents a forced baptism scene at the beginning of the game that caused a significant controversy as it is considered as blasphemy as it does not represent the actual teaching of Christianity. The game itself is said to criticize the notion of American exceptionalism including its religious foundation and symbolism [9].

   b. Resistance: Fall of Man (2006)

      The combat scene against an alien that takes place within a church which is a virtual representation of Manchester Cathedral in England caused controversy with the Church of England. The game designers are expected to respect the sacred spaces as places of prayer, worship, worship, peace learning, and heritage.

   c. Left Behind: Eternal Forces (2006)

      The game promotes the option to play on the side of the Antichrist in a Christian video game, and it also fosters sexism, bigotry, intolerance, violence, and religious warfare which is irrelevant to Christian teaching [48].

2. Hinduism and Buddhism

   a. Fallout 3 (2008)

      The game contains a character of two-headed mutated cows called Brahmin. The Brahmin itself is the name of an ancient and powerful caste of Hindu priests and religious scholars in India. It can also refer to Brahma who is a leading God and heavenly king in Buddhism.

   b. Asura's Wrath (2012)

      President of the Universal Society of Hinduism is upset with the game, saying that the game trivializes the symbols and concepts of the Hindu religion. One example is the murdered wife of Asura, Durga who is a major Hindu deity.

3. Islam

   a. Muslim Massacre: The Game of Modern Religious Genocide (2008)

      It is a top-down shooting video game of which aim is to kill all Muslims that appear on the screen.

   b. Call of Duty: Modern Warfare 2 (2009)

      The game contains a painting consists of a quote from Muhammad that is located directly above a toilet in one of the buildings in the game.

Besides the controversy from video games that initially created and not modification made by other people, there is another example of the debate caused by a game that has been modified by other people which is Twitch Plays: Pokemon. The game adopted narratives, important characters, imagery, and religious structure of Christianity in developing the in-game lore such as "Bird Jesus" and the modification of "The Lord's Prayer" into "Pokemon Red Archive Prayer" [49].

VII. CONCLUSION

A video game that contains religious elements in it can indeed add the game values for the players. However, the game itself should relevantly represent the religion based on actual teachings to bring positive impacts and support the players' morality and spirituality when they play the game. If there is a controversy about the game, it is a problem that shows that we as human beings do not respect each other's religion[50]. A religion video game should be created to increase the players' faith towards their religion, make them believe more in their God, and implement their religious teaching. It will be great also if a religion video game can make people have more tolerance with different religions so that they can respect each other and live together well without any discrimination which is based on religion.

REFERENCES

[1] R. E. Ferdig, "Developing a framework for understanding the relationship between religion and videogames", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.68-85, 2014.

[2] F. G. Bosman, "The word has become game: researching religion in digital games", Online Heidelberg Journal of Religions on the Internet, vol. 11, pp.28-45, 2016.

[3] H.L.H.S Warnars, "Game information System", Proceedings of CGAMES 2008 - 12th International Conference on Computer Games: AI, Animation, Mobile, Educational and Serious Games, Louisville, Kentucky, USA, 30 July-2 Agt 2008.

[4] Y.C. Chang, H.Y. Peng, and H.C. Chao, "Examining the effects of learning motivation and of course design in an instructional simulation game", Interactive Learning Environments, vol. 18, pp.319 – 339, 2010.

[5] H.L.H.S Warnars, "Game information System", International Journal of Computer Science and Information Technology (IJCSIT), Vol.2, No.3, pp. 135-148, June 2010.

[6] J. Junaidi, A. Julianto, N. Anwar, S.Safrizal, H.L.H.S. Warnars, and K. Hashimoto, "Perfecting a Video Game with Game Metrics", Telkomnika, Volume 16, Issue 3, pp. 1324-1331, June 2018.

[7] L.K.P. Suryapranta, F.L. gaol, B. Soewito, H.L.H.S. Warnars, and G.P. Kusuma, "Quality Measurement for serious Game", IEEE International Conference on Applied Computer and Communication Technologies (IEEE ComCom 2017), Jakarta, Indonesia, 17-18 May 2017.

[8] R. Bahana, FL Gaol, T Wiguna, SWHL Hendric, B Soewito, E Nugroho, BP Dirgantoro and E Abdurachman, "Performance test for prototype game for children with ADHD" Journal of Physics: Conference Series, Volume 978, Issue 1, March 2018.

[9] H. Pranoto, E. Genaldi, R. Anthony, A. Kurnia, H.L.H.S. Warnars, A. Trisetyarso, B.S. Abbas, B.S. and W. Suparta, "Card game element rising academy to improving decision making ability", Cybernetics and Computational Intelligence (CyberneticsCom), 2017 IEEE International Conference on, Phuket, Thailand, 20-22 Nov 2017.

[10] M.F. Pramono, K. Renalda, D.P. Kristiadi, H.L.H.S. Warnars, and W. Kusakunniran, "Matchmaking problems in MOBA Games", Int Journal of Electrical Engineering and Computer Science, Volume 11, issue 3, May 2018.

[11] D.P. Kristiadi, Y. Udjaja, B. Supangat, R.Y. Prameswara, H.L.H.S. Warnars, Y. Heryadi and W. Kusakunniran, "The effect of UI, UX and GX on video games", Cybernetics and Computational Intelligence (CyberneticsCom), 2017 IEEE International Conference on, Phuket, Thailand, 20-22 Nov 2017.

[12] Binanto, I., Warnars, H.L.H.S., Gaol, F.L., Abdurachman, E. and Soewito, B. 2018. Measuring the quality of various version an object-oriented software utilizing CK metrics. Information and Communications Technology (ICOIACT), 2018 International Conference on, Yogyakarta, Indonesia, 6=7 March 2018.

[13] Warnars, H.L.H.S. 2011. Object Oriented Modeling with unified modelling language 2.0 for simple Software Application based on Agile methodology. Behaviour & Information Technology an International Journal, 30(3), 293-307.

[14] Pranoto, H., Tho, C., Warnars, H.L.H.S., Abdurachman, E., Gaol, F.L. and Soewito, B. 2017. Usability testing method in augmented reality application. Information Management and Technology (ICIMTech), 2017 International Conference on, Yogyakarta, Indonesia, 15-17 Nov 2017.

[15] Iskandar, K., Gaol, F.L., Soewito, B, Warnars, H.L.H.S. and Kosala, R. 2016. Software size measurement of knowledge management portal with use case point. The international conference on Computer, Control, Informatics, and its Applications (IC3INA 2016), 3-5 Oct 2016, Tangerang, Indonesia, pp. 42-47.

[16] Sutoyo, R., Warnars, H.L.H.S., Gaol, F.L., Abdurachman, E. and Soewito, B. 2017. Measurement of QuestDone mobile application using 7 steps use case points method. Cybernetics and Computational Intelligence (CyberneticsCom), 2017 IEEE International Conference on, Phuket, Thailand, 20-22 Nov 2017.

[17] Arianto, R., Gaol, F.L., Abdurachman, E., Heryadi, Y., Warnars, H.L.H.S., Soewito, B. and Sanchez, H.E.P. 2017. Quality Measurement of Android Messaging Application based on user Experience in Microblog. IEEE International Conference on Applied Computer and Communication Technologies (IEEE ComCom 2017), Jakarta, Indonesia, 17-18 May 2017.

[18] Wahyono, T., Warnars, H.L.H.S., Wijaya, B.S., Fahri, A., Sasmoko, and Matsuo, T. 2017. Building a popular mobile application by utilizing user feedback. Innovative and Creative Information Technology (ICITech), 2017 International Conference on, Salatiga, Indonesia, 2-4 Nov 2017.

[19] E. Hemminger, "Game cultures as sub-creations", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.108-133, 2014.

[20] R. C. Thames, "Religion as a resource in digital games", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.183-196, 2014.

[21] S. Piasecki, "Redemption through annihilation?! Game designer's views on religion, culture and society and its influence on digital games", vol. 10, pp.45-73, 2016

[22] S. Stefany, "The effect of motivation on purchasing intention of online games and virtual items provided by online game provide", vol. 8, International Journal of Communication & Information Technology (CommIT), Vol. 8, pp.22-27, 2014.

[23] G. P. Grieve and H. A. Campbell, "Studying religion in digital gaming a critical review of an emerging field", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.51-67, 2014.

[24] R. M. Geraci, "Theological productions: the role of religion in video game design", Cultural Perspectives of Video Games: From Designer to Player, pp.101-114, 2012.

[25] Slavomir Galik, "Cyber-spirituality as a new form of religion", European Journal of Science and Technology, vol. 11, No.6, 5-14, 2015

[26] S.Heidbrink, T.Knoll, and J.Wysocki, "What would Jesus play? Actor-centered perspectives on gaming and gamers", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.1-16, 2015.

[27] S. Heidbrink, T. Knoll, and J. Wysocki, "Theorizing religion in digital games perspectives and approaches", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.5-50, 2014.

[28] S. Heidbrink, T. Knoll, and J. Wysocki, "Venturing into the unknown(?) method(olog)ical reflections on religion and digital games, gamers and gaming", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.61-84, 2015.

[29] A.Testa, "Religion(s) in videogames historical and anthropological observations", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.249-278, 2014.

[30] S.Aupers and J.Schaap, "Beyond belief playing with pagan spirituality in the world of warcraft", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.190-206, 2015.

[31] P. Lorentz, "Socialization of teenagers playing the sims the paradoxical use of video games to re-enchant life", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.279-300, 2014.

[32] F.G, Bosman, "Introduction: playing god on god & game", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.185-189, 2015.

[33] T. Knoll, "Are those the only two solutions? Dealing with choice, agency, and religion in digital games", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.207-226, 2015.

[34] S.Piasecki and S. Malekpour, "Morality and religion as factors in age rating computer and video games", Online Heidelberg Journal of Religions on the Internet, vol. 11, pp.164-228, 2016.

[35] K.M.S. Bezio, "Maker's breath - religion, magic, and the 'godless' world of bioware's dragon age II (2011)", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.134-161, 2014.

[36] S. Pradono, M.S. Astriani, and J. Moniaga, "A method for interactive learning", International Journal of Communication & Information Technology (CommIT), Vol. 7, pp.46-48, 2013.

[37] L.K.P. Suryapranata, F.L. Gaol, B. Soewito, H.L.H.S. Warnars, and G.P. Kusuma, "Quality measurement for serious games", Proceedings of International Conference on Applied Computer and Communication Technologies (COMCOM), Jakarta, Indonesia, May 17-18, 2017.

[38] .C. Riady, S.Sentinuwo, and S. Karouw, "Rancang bangun aplikasi mobile learning Anak Sekolah Minggu dengan Teknologi augmented reality berbasis android", Jurnal Teknik Informatika Universitas Sam Ratulangi, Vol. 9, 2016.

[39] R. Lengkong, H.D. Waluyanto, and A. Zacky, "Perancangan Game Digital Interaktif Pembelajaran Alkitab", Jurnal DKV Adiwarna Universitas Kristen Petra, Vol. 1, 2014.

[40] V.G. Sahuburua, K.R. Purba, and A.N. Purbowo, "Pembuatan aplikasi media interaktif untuk pengenalan tokoh alkitab berbasis android", Jurnal Infra, Vol. 4, pp.234-239, 2016

[41] H. Sakti, Liliana, and K.R. Purba, "Game cerita alkitab untuk sekolah minggu", Jurnal Infra, Vol. 5, pp.35-40, 2017.

[42] P. Karamouzis and M.Keffalas, "The Design of Educational Materials for Teaching the Most Common Religions to Students in their Final Year of Primary School: A Cross-Curricular Approach of Religious Studies and Music, Through the Use of Augmented Reality", Online Heidelberg Journal of Religions on the Internet, vol. 11, pp.93-115, 2016.

[43] H.L.H.S. Warnars, "Virtual information system on working area", Indonesian Students' International Scientific Meeting, pp.169-181, 2008.

[44] F.G. Bosman, "Nothing is true, everything is permitted", Online Heidelberg Journal of Religions on the Internet, vol. 10, pp.6-26, 2016.

[45] R. Nugrahani and W. Wibawanto, "Framing Islamic history through interactive game (case study: ibn battuta games)", The 4th International Conference on Language, Society and Culture in Asian Contexts (LSCAC), pp.292-302, 2017.

[46] J.A. Irizarry and I.T. Irizarry, "The Lord is my shepard confronting religion in the mass effect trilogy", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp.224-248, 2014.

[47] J. O'Donnel, "A digital devil's saga representation(s) of demon in recent videogames", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.139-160, 2015.

[48] S.Jacobs, "Simulating the apocalypse theology and structure of the left behind games", Online Heidelberg Journal of Religions on the Internet, vol. 7, pp.85-106, 2015.

[49] J. Saucerman and D. Ramirez, "Praise helix! Christian narrative in twich plays: pokemon", Online Heidelberg Journal of Religions on the Internet, vol. 10, pp.74-94, 2016.

[50] F. G. Bosman, "The lamb of Comstock dystopia and religion in video games", Online Heidelberg Journal of Religions on the Internet, vol. 5, pp. 162-182, 2016.