

The Effect of Prior Characteristic on Perceived Prosocial Content in Media

Pawit Monkolprasit, Proud Arunrangsiwed

Abstract—It was important to understand the impact of media in young adolescents. The animated film, *Khun Tong Dang the Inspirations* (2015), was purposefully created for teaching young children to have a positive personal trait. The current study used this film as the case study. The objective is to understand the relationship between the good characteristic of movie audiences and their perception of the good characteristic of a movie character. One-hundred students from various age ranges responded to quantitative questionnaires. The questions included their age, gender, perception about their own personal traits, perception about their experiences with others, and perception about the bravery, intelligence, and gratefulness of the character. It was found that a good personal trait has a strong relationship with the perception of bravery, intelligence, and gratefulness of the character.

Keywords—Impact of media, children, personal trait, prosocial content.

I. INTRODUCTION

MEDIA have various influences on their audiences. These influences include the effect on personal traits of social network users [1], [2], the effect on behaviors of video game players [3]-[5], the emotional impact of movie audiences [6], [7], and other related effects. It was found that most research studies tend to examine the negative effect to understand the way to solve the problems caused by media [8]. The present study aims to examine a positive effect after the audiences were exposed to a prosocial film. Although there was a belief that media could not educate audiences about prosocial behaviors [9], media-based learning has been acceptable to use in classroom, and it causes a positive learning outcome [10]-[16]. It is worth to consider if some initial personal characteristic of media audiences that could be a predictor of positive media effect. Similarly, Polman, Castro, and Aken [4] found that people with initial aggressiveness were more likely to be influenced by violent video games. This is how the researchers of the current study expected to understand if initial prosocial characteristic of media audiences could increase the perception of prosocial behaviors of the fictional characters in the film.

P. Monkolprasit is with Faculty of Management Science, Suan Sunandha Rajabhat University, Bangkok, Thailand (e-mail: m_pawit@hotmail.com, pawit.mo@ssru.ac.th).

P. Arunrangsiwed is an lecturer in Animation and Multimedia program, Faculty of Management Science, Suan Sunandha Rajabhat University, Bangkok, Thailand (phone: 66-87-931-2327; e-mail: parunran@nyit.edu; Google Scholar: <https://scholar.google.co.th/citations?user=3FIYP6oAAAAJ>).

II. MEDIA AND PROSOCIAL BEHAVIOR

While many studies presented the negative outcome of media consumption [6], [17]-[19], and some researchers have explored positive media effect on the audiences. Helfgott [18] found that film audiences imitated murdering strategies from films. Hogan [20] raised a similar question about the positive media effect, which is that young adolescents may learn and imitate prosocial behaviors from prosocial media, too. Earlier, it was found that media exposure could have both positive and negative effects on preschool children at the same time. Media exposure can cause prosocial behavior and also aggression on audiences [21]. Similarly, Greitemeyer and Osswald [22] found that prosocial video games can lead to prosocial in video game players. The same researcher extended this topic to understand how prosocial media can reduce aggressiveness [23]. Craig Anderson, who is well-known in the field of video game violence, also found a similar effect in his study with his colleagues, Muniba Saleem and Douglas Gentile. Prosocial video games could cause positive outcome in its players, which is reduces their aggressiveness [24]. The same researchers also found a positive relationship of prosocial video game playing and helpful behaviors, and a negative relationship of prosocial video game playing and hurtful behaviors [25].

Some previous studies also identified the effect of using a special kind of media, such as listening to music with prosocial content in the lyrics. Listening to music with prosocial lyrics could promote prosocial thoughts, feelings, and behaviors of the listeners. Prosocial media also has a significant effect on a positive psychological trait, such as empathy [26]. Some films and other related media were created intentionally to cause a positive change in audiences' behaviors and positive changes in society. The content in popular media can act as agenda to make people to think about some important issue and cause a social change [27]. Keller and Brown [28] suggest the media used in promoting sexual responsibility, condom using, and reduce sexual activities in teenagers. This is how media producers could create media as a tool to solve social problems [29]. They should understand how the audiences unintentionally learn from media, and to create prosocial belief and ethics in audiences are important [30]. Not only media producers, who should consider this issue, but as well other segments of society should help to promote prosocial content in media and be aware of media violence [31].

III. MEDIA USED IN EDUCATION

In previous studies, there are three aspects of using media to

heighten students' learning abilities. First, media-based learning is generally known as website, video, game, animation, and other educational media created as a part of course material. Media-based learning is more interactive and includes more movement than a PowerPoint slide show [32]. Students with a low initial class performance could develop their knowledge after participating in media-based learning conditions [10], [11]. It also works well in complicated lesson, such as astronomy, chemistry [12], and biology [13].

Teachers and educators do not only cooperate media in the class room in the visualization format. Arunrangsiwed [33] seeks to use original entertainment media, such movies, for the students to learn crisis response strategies lessons in the classroom. Earlier, Hearold [34], who conducted a meta-analysis of various media effects, also suggest that a film can help educate its audiences. Currently, many film makers intentionally include prosocial content in their films. For example, lately, Disney fairy-tale animated films have a better portrayal of female characters compared to previous Disney animations [35]-[38]. Feminist researchers also believe that male comic readers could learn the role of women in the society through reading comic books [39], [40]. Some comic books, such Wonder Woman, can enhance a positive attitude of men towards women [41], [42]. Comic books do not only teach feminism to its audience, but various comic books contain historical events and are used as a part of history class [43]. Some scholars have discovered the benefits of providing comic books in an academic library [44].

The third aspect of using media in the classroom is to incorporate fan identity and fan activities in classroom assignments. Various dimensions of fan activities and

motivation have been explored by one of the researchers of the present study [45], [46]. Fans join a fan community and participate in fan activities based on their own motivations [47]. These motivations and needs were adapted to use in business marketing [48]. Fan scholars encourage teachers and university lecturers to include fan fiction as a part of creative writing assignments, especially for ESL students. They found that fan fiction assignments could increase the writing among these ESL students [49]-[52]. To design homework characteristics to meet the needs and motivations of students could encourage students to finish the homework, which has a long-term effect on the students' overall academic achievement [53].

The current study primarily aimed to understand how young adolescents and teenagers perceive positive characteristics of the main cartoon character in the movie, *Khun Tong Dang the Inspirations* (2015). This movie was intentionally created to contain prosocial content, and its target audiences are young adolescents. The plot tells the story of three dogs. The producers used the relationship between the dogs and humans to teach audiences about bravery, intelligence, gratefulness, faithfulness, and sacrifice. The relationship between media exposure and psychological traits has long been explored, but most of them explore negative personal traits, such as narcissism [2], depression [54]-[56], and aggressiveness [57]-[61]. The current study also filled the unknown gap in previous studies, that the initial positive characteristics of the audience might have an effect on how they perceive positive messages from the media.

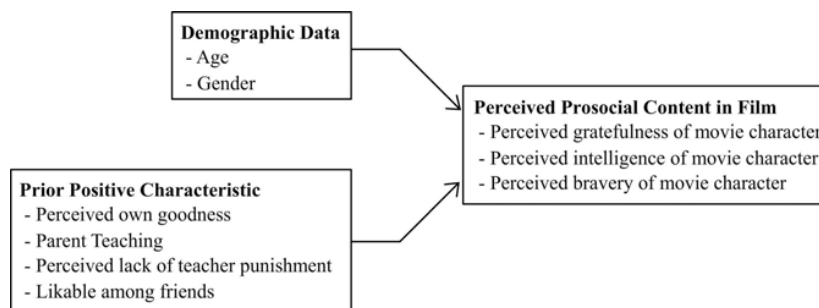


Fig. 1 Conceptual Model

IV. METHOD

A. Participant

One-hundred students from two institutes in the Bangkok metropolitan area were included in this study. They were asked to fill in a short questionnaire. Eighty students were from primary school, and 20 students were the first and second year students in bachelor degree. Based on the 100 participants, eight cases could not be used in final analysis, because the answers of some items were missing, and some participants filled in the same answer for all items.

B. Measures

The questionnaire contains three sets of questions. First, the respondents would fill in their age and gender. Second, the respondents would answer four items about their own personal characteristics, traits, and how they perceived themselves. The items in this part are "I am a good child", "My parents teach me to be a good child", "My teacher often punishes me (reverse)", and "Many friends hate me (reverse)." The last part of the questionnaire contains the items which asked if the respondents perceived the prosocial content shown in cartoon character, "Khun Tong Dang," from the movie *Khun Tong Dang the Inspirations* (2015). There were three main

characteristics of Khun Tong Dang that the movie producer intended to show to teach young children. The items in this section were “Khun Tong Dang is grateful”, “Khun Tong Dang is foolish (reverse)”, and “Khun Tong Dang is cowardly (reverse).”

C. Analysis

The researchers tested the influences of prior positive characteristics of participants and the demographic data on their perceived prosocial content in the film, Khun Tong Dang the Inspirations (2015). Correlation and Regression were used to test such relationships and the predictive model. Correlation was used to test the relationship among all variables and all items. Regression was used to test four possible models. The first model includes the item, “Khun Tong Dang is grateful,” as the dependent variable. Second, “Khun Tong Dang is (not) foolish” is the dependent variable. Third, “Khun Tong Dang is (not) cowardly” is the dependent variable. Finally, the numeric results of prior positive characteristics were combined together to be used as independent variable, which predict the level of perceived prosocial content in the film. In this model, the level of perceived prosocial content the film was also the combination of numeric results for four items.

V. RESULTS

A. Pearson's Correlation

The questionnaire used in the current study consists of nine variables with a single-item measuring. Based on these nine variables, five pairs of variables meet a statistical significant level. Perceived own goodness is negatively related to perceived intelligence of movie character ($r=0.212$; $p=0.043$), which in turn, positively related to perceived lack of teacher punishment ($r=0.265$; $p=0.011$). There is also a positive significant relationship between perceived intelligence of movie character and likable among friends ($r=0.220$; $p=0.035$). Finally, Perceived gratefulness ($r=.336$; $p=0.001$) and bravery of movie character ($r=0.217$; $p=0.038$) together are positively conjured by parent teaching.

B. Linear Regression

Four regression models were included in the current analysis. The independent variable of first model is perceived gratefulness of movie character. The dependent variables can describe 18.7% of variance in this independent variable ($R^2=0.187$). This model is statistically significant ($F=3.264$; $p=0.006$), and the dependent variable that sends the strongest influence on perceived gratefulness is parent teaching ($t=2.712$; $p=0.008$; $r_{\text{partial}}=0.282$).

Following the second model with perceived intelligence of movie character as the dependent variable, this model is also statistically significant ($F=3.268$; $p=0.006$). Similar to the previous model, the independent variables can describe 18.7% of variance in this independent variable ($R^2=0.187$). The independent variables with the highest influence are perceived own goodness ($t=-2.620$; $p=0.010$; $r_{\text{partial}}=0.273$) and perceived lack of teacher punishment ($t=2.423$; $p=0.017$; $r_{\text{partial}}=0.254$). Noticeably, perceived own goodness sends a negative effect

on the perceived intelligence of the movie character. This relationship would be discussed later.

The perceived bravery of the movie character is the dependent variable of the third model. There is no significant result found in this model ($R^2=0.081$; $F=1.255$; $p=0.287$). Parent Teaching is highly influential on the dependent variable without being statistically significant ($t=1.781$; $p=0.079$; $r_{\text{partial}}=0.190$).

The final model is the overall model where the related variables are combined as a single variable. The level of perceived prosocial content in the movie included perceived gratefulness, perceived intelligence, and perceived bravery of movie character. Prior positive characteristics included perceived own goodness, parent teaching, perceived lack of teacher punishment, and likable among friends. Prior positive characteristics together with demographic data can describe 8.2% of variance in the level of perceived prosocial content in the movie ($R^2=0.082$). This model generates a moderate effect size, but there is no statistically significant found ($F=2.626$; $p=0.055$). Prior positive characteristics have a stronger influence than the demographic variable on the level of perceived prosocial content in the movie ($t=2.651$; $p=0.010$; $r_{\text{partial}}=0.272$). Pearson's correlation also shows a positive relationship between both prior positive characteristics and the level of perceived prosocial content ($r=0.269$; $p=0.010$).

VI. DISCUSSION AND SUGGESTION

A. Discussion

The current study tested if the positive characteristics of young adolescent may affect how these children perceive positive content in media. Based on the findings, it was shown that the children who perceived their own goodness thought that the movie character with positive trait is foolish. In fact, the character, “Khun Tong Dang” was created to be perceived as a character with intelligence, bravery, and gratefulness. Khun Tong Dang was a dog who was very grateful to her owner, and looked for a way to save the life of her owner, and also to protect public property from criminals. In line with this plot, Khun Tong Dang was not afraid to get hurt or to be killed by criminals. This might cause the children, who perceived their own goodness, to view Khun Tong Dang as a foolish dog. Young children may understand that an intelligent dog has to be afraid of being killed. This implies that the school should expand the meaning of positive words, such as “intelligence” in a moral way. On the other hand, another element of the findings showed that the teachers do not often punish the students who perceive the intelligence of Khun Tong Dang. Generally, teachers would punish those students with a lack of responsibility or who are displaying anti-social behavior. Those students who are not punished by teachers might be the responsible ones, who understand the concept of ethical intelligence (using intelligence to help other people) and unethical intelligence (using intelligence for personal benefit). In the movie, Khun Tong Dang was ethically intelligent. She planned the strategies to save the community and her friends from the criminals. This information could

explain how the students, who can perceive the intelligence of Khun Tong Dang, might be the responsible students, and do not get punished by their teachers.

Another related finding is that those children who are likable among their friends view Khun Tong Dang as an intelligent character. It could be described that when children are with their group of friends or school community, they understand the importance of society. The way Khun Tong Dang dedicated herself to protecting public property, would be viewed as the intelligent act among these children.

It is a generally belief that parents teach good things to their own children. However, some samples of the current study did not agree with the statement that parents taught them a good thing. Those children who agreed that their parents taught them well should be the ones who learned to develop their own gratefulness toward their parents. This could be the reason that these children perceived the gratefulness of Khun Tong Dang. Also, these children viewed Khun Tong Dang as a brave animal. This may be because Khun Tong Dang was able to fight for the rightfulness based on her prior gratefulness.

Finally, both correlation and regression results reveal that female students perceived that Khun Tong Dang was grateful, but male students did not. This does not mean that men are less grateful than women, but male students may develop this feeling towards others later than female students. This finding will lead a media dilemma, where media developed for male adolescents contains more violence and less emotional concern, compared to media targeting female adolescents.

B. Future Study

Anderson and Warburton [62] pointed out that the level of identification with an avatar in video game is an important factor that leads video game players to imitate the violent acts. Hearold [34] identified three dimensions that cause the change in the level of identification, attractiveness of the characters, perceive heroic of the character, and perceived similarity of the characters. Future studies should include these three dimensions and the level of identification into the questionnaire. Khun Tong Dang is a suitable movie character for testing this relationship. This is because Khun Tong Dang is an animal, and the samples are human. The samples could not easily perceive the similarity between themselves and Khun Tong Dang. For such a research design, the findings should be able to answer if perceived similarity is an enable predictor for the level of identification [35].

ACKNOWLEDGMENT

The current study is supported by Suan Sunandha Rajabhat University.

REFERENCES

- [1] C. J. Carpenter, "Narcissism on Facebook: Self-promotional and anti-social behavior," *Personality and individual differences*, vol. 52, no. 4, pp. 482-486, 2012.
- [2] P. Arunrangsiwed, "Echo Loves Art: The Achievement of Narcissistic Online Artists," *Journal of Psychology Kasem Bundit University*, vol. 9, no. 1, pp. 59-75, 2015.
- [3] C. A. Anderson, D. A. Gentile, and K. E. Buckley, "Violent video game effects on children and adolescents: Theory, research, and public policy," New York, NY: Oxford University Press, 2007.
- [4] H. Polman, B. Orobio de Castro, and M. A. G. Van Aken, "Experimental study of the differential effects of playing versus watching violent video games on children's aggressive behavior," *Aggressive Behavior*, vol. 34, pp. 256-264, 2008.
- [5] C. A. Anderson, A. Shibuya, N. Ihori, E. L. Swing, B. J. Bushman, A. Sakamoto, H.R. Rothstein, and M. Saleem, "Violent video game effects on aggression, empathy, and prosocial behavior in eastern and western countries: a meta-analytic review," *Psychological bulletin*, vol. 136, no. 2, pp. 151, 2010.
- [6] M. Chraif and M. Aniței, "The Physiological Effects of Cartoons Blood Scenes on the Youngsters in Romania," *Procedia-Social and Behavioral Sciences*, vol. 30, pp. 465-470, 2011.
- [7] S. J. Kirsh, "Cartoon violence and aggression in youth," *Aggression and Violent Behavior*, vol. 11, no. 6, pp. 547-557, 2006.
- [8] P. Arunrangsiwed, "The Documentary Analysis of Meta-Analysis Research in Violence of Media," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 8, no. 1, pp. 77-80, 2014.
- [9] R.E. Clark, "Reconsidering research on learning from media," *Review of Educational Research*, vol. 53, no. 4, pp. 445-459, 1983.
- [10] A.Badre, M. Beranek, M. Morris, and J. Stasko, "Assessing Program Visualization Systems as Instructional Aids," in Proc of 4th International Conference on Computer Assisted Learning, 1991.
- [11] C. Rebetez, M. Bétrancourt, M. Sangin, and P. Dillenbourg, "Learning from animation enabled by collaboration," *Instructional science*, vol. 38, no. 5, pp. 471-485, 2010.
- [12] R. Tasker and R. Dalton, "Visualizing the Molecular World - Design, Evaluation, and Use of Animations," *Visualization: Theory and Practice in Science Education*, pp. 103-131, 2008.
- [13] B. J. Stith, "Use of animation in teaching cell biology," *Cell Biology Education*, vol. 3, no. 3, pp. 181-188, 2004.
- [14] R. Mayer and R. Moreno, "Animation as an Aid to Multimedia Learning," *Educational Psychology Review*, vol. 14, no. 1, 2002.
- [15] L. P. Rieber, "Animation in computer-based instruction," *Educational technology research and development*, vol. 38, no. 1, pp. 77-86, 1990.
- [16] C. Kehoe, J. Stasko, and Taylor, "A. Rethinking the Evaluation of Algorithm Animations as Learning Aids: An Observational Study," *International Journal of Human-computer Studies*, vol. 54, no. 2, pp. 265-284, 2001.
- [17] J. Cornelissen, "Corporate Communication: A Guide to Theory and Practice (3rd Edition)," Great Britain: SAGE Publications. 2011.
- [18] J. B. Helfgott, "Criminal behavior and the copycat effect: Literature review and theoretical framework for empirical investigation," *Aggression and Violent Behavior*, vol. 22, pp. 46-64, 2015.
- [19] D. A. Gentile, S. Coyne, and D. A. Walsh, "Media violence, physical aggression, and relational aggression in school age children: a short-term longitudinal study," *Aggressive behavior*, vol. 37, no. 2, pp. 193-206, 2011.
- [20] M. J. Hogan, "Prosocial effects of media," *Pediatric Clinics of North America*, vol. 59, no. 3, pp. 635-645, 2012.
- [21] J. M. Ostrov, D. A. Gentile, and N. R. Crick, "Media exposure, aggression and prosocial behavior during early childhood: A longitudinal study," *Social Development*, vol. 15, no. 4, pp. 612-627, 2006.
- [22] T. Greitemeyer and S. Osswald, "Playing prosocial video games increases the accessibility of prosocial thoughts," *The Journal of social psychology*, vol. 151, no. 2, pp. 121-128, 2011.
- [23] T. Greitemeyer, "Effects of prosocial media on social behavior when and why does media exposure affect helping and aggression?," *Current Directions in Psychological Science*, vol. 20, no. 4, pp. 251-255, 2011.
- [24] M. Saleem, C. A. Anderson, and D.A. Gentile, "Effects of prosocial, neutral, and violent video games on children's helpful and hurtful behaviors," *Aggressive Behavior*, 38(4), 281-287. (2012).
- [25] M. Saleem, C. A. Anderson, and D. A. Gentile, "Effects of prosocial, neutral, and violent video games on college students' affect," *Aggressive Behavior*, vol. 38, no. 4, pp. 263-271, 2012.
- [26] S. Prot, D. A. Gentile, C. A. Anderson, K. Suzuki, E. Swing, K. Lim, M., ..., and A. K. Liao, "Long-term relations among prosocial-media use, empathy, and prosocial behavior," *Psychological science*, vol. 25, no. 2, pp. 358-368, 2014.

- [27] W. J. Brown and A. Singhal, "Ethical considerations of promoting prosocial messages through the popular media," *Journal of Popular Film and Television*, vol. 21, no. 3, pp. 92-99, 1993.
- [28] S. N. Keller and J. D. Brown, "Media interventions to promote responsible sexual behavior," *Journal of Sex Research*, vol. 39, no. 1, pp. 67-72, 2002.
- [29] W. J. Brown and A. Singhal, "Ethical guidelines for promoting prosocial messages through the popular media," *In the eye of the beholder: Critical perspectives in popular film and television*, pp. 207-223, 1997.
- [30] W. J. Brown and A. Singhal, "Ethical dilemmas of prosocial television," *Communication Quarterly*, vol. 38, no. 3, pp. 268-280, 1990.
- [31] V. C. Strasburger and M. J. Hogan, "Children, adolescents, and the media," *Pediatrics*, vol. 132, no. 5, pp. 958-961, 2013.
- [32] P. Arunrangsriwed, "The Experimental Research Design of Animation-Based Learning Research" Proc. In The 10th National and International Social Science Symposium: Social Innovation for Sustainable, Chiang Rai Rajabhat University, 2014.
- [33] P. Arunrangsriwed, "Teaching Method in Situational Crisis Communication Theory: A Literature Review," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 10, no. 8, pp. 2652-2655.
- [34] S. Hearold, "A synthesis of 1043 effects of television on social behavior," *Public communication and behavior*, vol. 1, pp. 65-133, 1986.
- [35] P. Arunrangsriwed and M. Pasomsat "The Evolution of Disney Fairy Tales: A Meta-Review of Past Studies," *Faculty of Management Science, Suan Sunandha Rajabhat University, SSRU Journal of Management Science*, vol. 3, no. 1, 2016.
- [36] S. Wilde, "Repackaging the Disney Princess: A Post-feminist Reading of Modern Day Fairy Tales," *Journal of Promotional Communications*, vol. 2, no. 1, 2014.
- [37] M. C. Rochester, "Trends in Gender and Sexuality in Contemporary Children's Fairy Tales" (Doctoral dissertation), 2014.
- [38] D. Morrison, "Brave: A Feminist Perspective on the Disney Princess Movie," California Polytechnic State University (Doctoral dissertation), San Luis Obispo, 2014.
- [39] M. R. Lavin, "Women in comic books," *Serials Review*, vol. 24, no.2, pp. 93-100, 1998.
- [40] E. Avery-Natale, "An analysis of embodiment among six superheroes in DC Comics," *Social Thought and Research*, vol. 32, pp.71, 2013.
- [41] S. S. Pratiwi, "Women's Portrayals in the Comic Books (A Visual Grammar of the Heroines' Portrayals in the Selected Comic Books Published by Dc Comics and Marvel)," *Passage*, vol. 1, no. 2, pp. 119-124, 2013.
- [42] M. Dunne, "The Representation of Women in Comic Books, Post WWII Through the Radical 60's," *PSU McNair Scholars Online Journal*, vol. 2, no. 1, pp. 20, 2006.
- [43] A. C. Decker and M. Castro, "Teaching history with comic books: A case study of violence, war, and the graphic novel," *The History Teacher*, vol. 45, no. 2, pp. 169-187, 2012.
- [44] Lavin, M. R. "Comic books and graphic novels for libraries: What to buy," *Serials review*, vol. 24, no. 2, pp. 31-45, 1998.
- [45] P. Arunrangsriwed, "The Confirmation Study of Mutant Being and Friendship of Slash Characters in Original Media," *Silpakorn University Journal of Social Sciences, Humanities, and Arts*, vol. 16, no. 1, 2016.
- [46] P. Arunrangsriwed, "Equality, Friendship, and Violence in Slash or Yaoi Fan Art," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 9, no. 12, pp. 3747-3751, 2015.
- [47] P. Arunrangsriwed, "Self-Esteem as the Motive Power of Fans' Communication," in Proc. 4th World Conference on Psychology and Sociology, Rome, 2015.
- [48] I. Pairoa and P. Arunrangsriwed, "The Effect of Brand Mascots on Consumers' Purchasing Behaviors," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 10, no. 5, pp. 1612-1615.
- [49] R. W. Black, "Language, culture, and identity in online fanfiction," *E-learning and Digital Media*, vol. 3, no. 2, pp. 170-184, 2006.
- [50] R. W. Black, "Online fan fiction and critical media literacy," *Journal of Computing in Teacher Education*, vol. 26, no. 2, pp. 75-80, 2009.
- [51] F. Y. Lam, "Comic Market: How the World's Biggest Amateur Comic Fair Shaped Japanese Dōjinshi Culture," *Mechademia*, vol. 5, no. 1, pp. 232-248, 2010.
- [52] Chen, J. S. A study of fan culture: Adolescent experiences with animé/manga doujinshi and cosplay in Taiwan. Visual Arts Research, 14-24. 2007.
- [53] U.Trautwein and O. Lüdtke, "Predicting homework motivation and homework effort in six school subjects: The role of person and family characteristics, classroom factors, and school track," *Learning and Instruction*, vol. 19, no. 3, pp. 243-258, 2009.
- [54] H. Odacı, "Are Adolescent Girls More Depressive than Adolescent Boys in Turkey?" *Depression*, vol. 8, no. 9, 2011.
- [55] E. J. Jeong, H. R. Lee, and J. H. Yoo, "Addictive use due to personality: focused on big five personality traits and game addiction," *World Academy of Science, Engineering and Technology: International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 9, no. 6, 2015.
- [56] G. Lavanco, V. Catania, A. Milio, and F. Romano, "Learning and relationships in the cyberspace," *World Academy of Science, Engineering and Technology: International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 2, no. 4, pp. 473-477, 2008.
- [57] M. Jelinek and P. Květon, "Violent Videogame Playing and Its Relations to Antisocial Behaviors," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 10, no. 6, pp. 1792-1795, 2016.
- [58] E. Chernyshkova, "Dynamic of Aggressive Behavior at the Context of Reflective Process," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 5, no. 8, pp. 948-950, 2011.
- [59] M. P. D. D. Maria, "Employee Aggression, Labeling and Emotional Intelligence," *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, vol. 8, no. 7, pp. 2173-2176, 2014.
- [60] S. M. Agerwala, A. Votta, B. Hogan, J. Yannocone, S. Samuels, and S. Chiffriller, "Aggressive driving in young motorists. International Journal of Humanity and Social Sciences," vol. 2, no. 3, pp. 182-185, 2008.
- [61] P. Arunrangsriwed, "Science School Was Burned: A Case Study of Crisis Management in Thailand," *International Journal of Social, Behavioral, Educational, Economic and Management Engineering*, vol. 8, no. 7, pp. 2231-2239, 2014.
- [62] C. A. Anderson and W. A. Warburton, "The impact of violent video games: An overview," *Growing up fast and furious: Reviewing the impacts of violent and sexualised media on children*, pp. 56-84. 2012.