



The Effect of Gamification as an Intervention in the College of Criminology Justice (CCJ) on Students' Academic Performance in Writing a Research Paper

Ma. Purificacion Mayor Gannaban

Institute of Integrated Development Education, Pamantasan ng Lungsod ng Muntinlupa, Muntinlupa City,
Philippines

Email: gannabanmaria@plmun.edu.ph

Abstract

This study investigates the effect of gamification on the academic performance of College of Criminology Justice (CCJ) students in their writing research papers. In today's tech-centric world, 21st-century learners seek innovative and engaging educational methods. Gamification, utilizing game-based elements to promote learning, engagement, and problem-solving, is explored as a means to motivate students. Grounded in motivational theories, particularly goal-setting theory, this research assesses student behavior and performance within a gamified framework. It involves two groups: a controlled group without gamification and an experimental group engaging in gamified activities during the research paper writing process. Pretest and post-test assessments measure academic performance.

The research results indicate a highly likely positive effect of gamification on the academic performance of CCJ students. Exposure to gamification demonstrated improved academic performance compared to the control group, particularly in the process of writing research papers. This was evident in increased student engagement, motivation, punctual submissions, and higher-quality research papers. These findings highlight the significant relationship between academic performance and research paper writing when gamification is applied to CCJ students. The study suggests further exploration of gamification in education, potentially involving multiple teachers for comprehensive implementation. Overall, this research contributes to understanding the benefits of gamification in the classroom and its potential to enhance student learning and motivation in academic writing.

Keywords: *gamification, rewards, academic writing, innovative, intervention, academic performance*

1. Introduction

Students of the 21st century are now more inclined toward technology, and so approaches to gaining their interests are becoming challenging for teachers. Motivating learners to stay focused on their lessons requires an additional effort that teachers sometimes find tedious and time-consuming. Lesson preparation, for instance, has to be innovative to the extent that the students will be enticed to listen and participate. But then, not all approaches can cater to the type of learners that we have in this current generation. The 21st-century learners, as they are called, need to be able to think creatively, work creatively with others, and also implement innovation in their everyday lives (NEA, 2012; Partnership for 21st Century Skills, 2009). Therefore, they need to be provided with creative materials and approaches for them to get motivated. In fact, Rich (2010) defined 21st-century skills as,

[1]



“Core competencies such as collaboration, digital literacy, critical thinking, and problem-solving that advocates believe schools need to teach to help students thrive in today’s world. In a broader sense, however, the idea of what learning in the 21st century should look like is open to interpretation and controversy.”

Our learners nowadays are considered digital natives because of their exposure to technology. They easily learn things that require critical thinking and problem-solving. It is then necessary to emphasize the importance of “metacognition”, which was mentioned by Saavedra and Opfer (2012) in their topic about the Nine Principles for Teaching 21st Century Skills and Competence. For them, learners must be taught how to ‘learn to learn.’ This may not be given enough importance by others, but this is the most fitting approach for our learners nowadays. They are very independent; thus, they should be encouraged to get involved in many activities that promote teamwork and collaboration, develop lower and higher thinking order skills, and teach through discipline. With this in mind, learners of the 21st century will be empowered and, at the same time, will be motivated to learn more. With that, the appropriate materials must be innovative.

Innovative instructional materials and methodologies are sprouting everywhere, and they provide several benefits depending on the type of learners’ needs. Most of these materials and methodologies are popularly tried and tested by the many educators who tend to take on the challenge of handling their learners. Many ways are available and doable, but the question is which among them is the most effective. In fact, those approaches, such as the Flipped classroom, project-based learning, cooperative learning, gamification, problem-based learning, design-thinking, thinking-based learning, and competency-based learning are all very interesting and may highly likely provide several benefits. However, as a teacher, choosing the most suitable method will always depend on the type of students’ learning abilities and motivation.

Motivating learners can be done by giving rewards and recognition. As teachers plan for the approaches, gamification is believed to be one of the newest methodologies in teaching that is simply focused on games and, consequentially, into rewards if you do good and punishment if you fail to achieve the goal in the end. As defined by Kapp (2012), gamification is using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. Evidently, the positive effects of applying games to education are motivation, engagement, and participation on the part of the students.

Lee, J. J., & Hammer, J. (2011) comprehensively presented the answers to the following questions about gamification: What (to provide a concise description of the gamification techniques in education); Why (to identify the advantages and disadvantages, analyze the current implementation, the possible future improvements, and the complete blueprint of gamification); and How (to develop such interventions that are effective and suited to the needs of our students).

Incorporating games while achieving the goal of teaching and learning is somehow unusual and innovative. It is believed to be very effective and becomes very beneficial to students of different interests. Dichev, C., & Dicheva, D. (2017) emphasized that “gamification of education is a developing approach for increasing learners’ motivation and engagement by incorporating game design elements in educational environments.” Thus, most of the learners are striving hard when they are exposed to the different goals that the gamification approach provides. These goals, which are also known as quests in the world of games, are said to be phases of certain learning objectives perceived by the teacher. And teachers can provide rewards, which are also known as badges, to the striving students.

Mee Mee et al. (2020) found that gamification played a very important role in improving learners’ creative, critical, and problem-solving skills. As the teacher incorporates interesting and engaging activities, students’ language learning is triggered subconsciously (p.689).

[2]



Several studies have been made focused on applying games to education to motivate learners and engage them in class discussions and activities. Consequently, none has been mentioned about applying the Gamification method to teaching academic writing to students at the tertiary level of education. Thus, the researcher attempts to make this challenge of incorporating gamified activities while taking on the serious and what most students perceived as the tedious task of writing academically.

2. Objectives

- 1: To assess the impact of gamification on the academic performance of CCJ students.
- 2: To examine the influence of gamification on the process of writing a research paper among CCJ students.
- 3: To determine the significant relationship between academic performance and research paper writing with gamification intervention for CCJ students.

3. Materials and Methods

This section presents the research methodology, respondents, instruments, and procedures that were utilized in gathering the data and the statistical approach to interpret the results.

Research Design

This paper was developed using a quantitative and quasi-experimental research design since the objective of the researcher is to determine the effect of gamification techniques on the writing of research papers among college students of criminology justice in Pamantasan ng Lungsod ng Muntinlupa. The researcher established a controlled group (did not experience gamification), and an experimental group that experienced gamification techniques as they wrote their academic research paper.

Respondents

The participants of this study are students enrolled in the Criminology Justice Program at Pamantasan ng Lungsod ng Muntinlupa, specifically those taking the Purposive Communication course handled by the researcher. These students are typically first-year students. In this institution, sections usually consist of 50-60 students. However, due to ethical considerations, participation in the experiment was voluntary. As a result, only a limited number of students — approximately 30-35 — completed both the pre-test and post-test.

To ensure consistency, the researcher chose to work with the minimum number of participants, which are 30 students per section. This decision was made to maintain uniformity in the study. These participants were then divided into two groups: the experimental group and the controlled group. The assignment to each group was based on pre-test scores, with students scoring the lowest being designated as the experimental group, while those with higher scores were assigned to the controlled group. In conducting this study, a convenience sampling approach was utilized; selecting participants based on their accessibility and willingness to participate voluntarily. This approach was practical given the circumstances and limitations of the study design.

The experimental group participated in gamified activities outlined in a manual created by the researcher. Approval for the study was obtained from the researcher's dean, with the condition that students be informed and given the choice to participate.

Research Instrument

[3]



This research will use two kinds of tests, the pre-test and the post-test, to assess the learning of the students who are involved in the experiment. The test contains questions about the nitty-gritty of writing a research paper.

The test is composed of 50 conceptual questions that measure the understanding of the students in writing the different parts of research papers, from conceptualizing the title to creating a sound conclusion.

Procedure

The Gamification Manual for the Purposive Communication course in the Criminology Justice Program at Pamantasan ng Lungsod ng Muntinlupa aims to make academic writing more engaging and enjoyable for students. It introduces gamified activities inspired by popular games, designed to enhance student motivation and participation in writing research papers. Divided into teams, students choose hero avatars and earn points (Health Points and Mana Points) by completing quests related to different phases of research paper writing, such as selecting a topic, creating a bibliography, and defending their papers. Each quest has specific criteria for earning points, and students must meet deadlines to avoid deductions. Additionally, the manual provides guidelines for conducting the game, including rules for team formation, scoring, and penalties for missed tasks or misconduct. Through this gamified approach, the manual aims to motivate students, improve their writing skills, and foster appreciation for academic research.

Data Collection

The participants underwent a pretest to assess their knowledge of the different approaches to writing a research paper. After that, they were chosen and grouped accordingly. The collection of the data took place in November 2022, at the start of the final quarter of the first semester, and the final collection was done during the final examination week, wherein students are expected to submit their research paper as their final output.

Data Analysis

The raw scores collected from the Google Form were exported into the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize and organize the data. A univariate repeated measures analysis of variance was employed to test the differences between the pretests and post-tests of the controlled and experimental groups. Levene's F was used to test the homogeneity of the variance assumption.

4. Results and Discussion

The purpose of this study has been to determine the effect of gamification as an intervention in teaching research papers on the academic performance of the CCJ students at Pamantasan ng Lungsod ng Muntinlupa. In this chapter, the analyses and interpretation of the findings, which were based on the statistical tests used in the study, are discussed. Tables were constructed to support the discussion with the detailed information about the relationship of gamification to students' academic performance in writing a research papers.

Table 1: Descriptive Statistics of the Controlled and Treatment Groups

Group	Mean	Std. Deviation	Sample Size
Controlled Group	2.70	5.11	30
Treatment Group	8.47	3.73	30
Total	5.58	5.30	60

[4]



The descriptive statistics presented in Table 1 illustrate the performance of the control and treatment groups. The treatment group, with a higher mean value, demonstrated better academic performance in writing research papers compared to the controlled group. Despite initially lower pretest scores, the treatment group showed significant improvement in their post-test scores, indicating the effectiveness of gamification as an intervention method.

Furthermore, the higher standard deviation in the treatment group suggests greater variability in academic performance among students. However, the lower mean score compared to the controlled group indicates that, overall, the treatment group benefited from the gamification intervention.

Previous studies have suggested that gamification can enhance student engagement, motivation, and learning outcomes. Dichev, C., & Dicheva, D. (2017), for instance, underscore the effect of gamification on the learners' motivation and engagement in the educational settings. Drawing upon these theories and findings, the significant improvement in academic performance observed in this study aligns with the expected benefits of gamification.

Table 2: Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
2.23	1	58	.14

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Table 2 presents the test for equality error. Since the value of significance is higher than .05, it indicates that the null hypothesis is accepted, thus the error variance of the dependent variable is equal across groups.

Drawing from Howell's book, the result of Levene's test may be further interpreted by considering its implications for the validity of these findings. Since the error variance is similar across groups, it strengthens the internal validity of this study by reducing the likelihood that differences in error variance could confound the interpretation of treatment effects. This means that the observed differences in academic performance between the controlled and treatment groups are more likely to be attributable to the gamification intervention than other factors such as measurement error or unequal variances.

Table 3: Tests of Between-Subjects Effects of the Controlled Group and Experimental Group

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	498.817 ^a	1	498.817	24.946	.000	.301	24.946	.998
Intercept	1870.417	1	1870.417	93.540	.000	.617	93.540	1.000
Group	498.817	1	498.817	24.946	.000	.301	24.946	.998
Error	1159.767	58	19.996					
Total	3529.000	60						
Corrected Total	1658.583	59						

a. R squared=.301 (adjusted R squared =.289)

[5]



b. Computed using $\alpha = .05$

In Table 3, the between-subjects effects of the controlled and experimental groups were examined using Type III sum of squares. The corrected model accounts for 30.1% of the variance in academic performance, indicating a moderate effect size. Both the intercept and group variables were significant predictors of academic performance, with F-values of 93.540 and 24.946, respectively ($p < .001$). This suggests that participation in the gamification intervention had a significant impact on academic performance compared to the controlled group.

These findings align with previous research suggesting that gamification can positively influence student engagement and academic performance (e.g., Smith et al., 2018; Jones & Brown, 2020). According to Self-Determination Theory (Deci & Ryan, 1985), gamification provides intrinsic motivation by fulfilling students' needs for autonomy, competence, and relatedness, leading to improved academic outcomes. Moreover, Social Cognitive Theory (Bandura, 1986) posits that observational learning and reinforcement play crucial roles in shaping behavior, supporting the effectiveness of gamification interventions in educational settings.

5. Conclusion and Recommendation

After one and a half months of experimentation, gamification demonstrated a significant positive impact on CCJ students' academic performance and research paper writing process. The students exposed to Gamification showed notable improvement in post-test scores compared to the controlled group, indicating enhanced performance. They were notably more engaged in quests, resulting in advanced and timely submissions due to the motivational aspects of the gamified approach. Dichev and Dicheva (2017) support this, emphasizing Gamification's ability to improve motivated behavior in education. Additionally, Ryan (2022) highlights the benefits of gamification in learning, including increased engagement and improved retention. However, due to time constraints, certain aspects of Gamification were not fully explored, suggesting the need for further investigation with multiple teachers to ensure comprehensive implementation.

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7. References

- Dichev, C., & Dicheva, D. (2017). Gamifying education: what is known, what is believed and what remains uncertain: a critical review. *International Journal of Educational Technology in Higher Education*, 14(1), 1-36. <https://doi.org/10.1186/s41239-017-0042-5>.
- Jackson, M. (2016). Gamification Elements to Use for Learning. Retrieved October 27, 2022 from https://trainingindustry.com/content/uploads/2017/07/enspire_cs_gamification_2016.pdf.
- Kelly, Melissa. "Pretests." ThoughtCo, Sep. 7, 2021, [thoughtco.com/importance-and-uses-of-pretests-7674](https://www.thoughtco.com/importance-and-uses-of-pretests-7674).
- Kiryakova, Gabriela & Angelova, Nadezhda & Yordanova, Lina. (2014). GAMIFICATION IN EDUCATION.



- Lee, J. J. & Hammer, J. (2011). Gamification in Education: What, How, Why Bother? *Academic Exchange Quarterly*, 15(2).
- Lim Seong Pek, Wong Yee Von, Adelaide Woo, Yugeshineey Subba Rao (2020). Role of gamification in classroom teaching: Pre-service teachers' view. *International Journal of Evaluation and Research in Education (IJERE)* Vol. 9, No. 3, September 2020, pp. 684~690.
- Locke, E. A., & Latham, G. P. (2015). Breaking the Rules. *Advances in Motivation Science*, 99–126. doi:10.1016/bs.adms.2015.05.001.
- Mee Mee, Rita & Tengku Shahdan, Tengku & Ismail, Md Rosli & Ghani, Khatipah & Seong Pek, Lim & Wong, Yeevon & Rao, Yugeshineey. (2020). Role of gamification in classroom teaching: Pre-service teachers' view. *International Journal of Evaluation and Research in Education (IJERE)*. 9. 684. 10.11591/ijere.v9i3.20622.
- National Education Association, (2012). Preparing 21st Century Students for a Global Society: An Educator's Guide to the "Four C's". Retrieved October 25, 2022 from: <http://www.nea.org/assets/docs/A-Guide-to-Four-Cs.pdf>.
- Partnership for 21st Century Skills (2009). A Framework for Twenty-First Century Learning. <http://www.p21.org/>
- Qurotul Aini et al., *International Journal of Advanced Trends in Computer Science and Engineering*, 8(1.5), 2019, 269 - 274 Volume 8, No.1.5, 2019 *International Journal of Advanced Trends in Computer Science and Engineering* Available Online at <http://www.warse.org/IJATCSE/static/pdf/file/ijatcse4781.52019.pdf>
- Ryan, D. (2022). 5 Ways Gamification Can Improve Learning Retrieved October 24, 2022 from <https://www.softwareadvice.com/resources/benefits-of-gamification-in-education/>
- Rich (2010). How Do You Define 21st-Century Learning? Retrieved October 25, 2022 from <https://www.edweek.org/teaching-learning/how-do-you-define-21st-century-learning/2010/10>.
- Saavedra, Anna & Opfer, V Darleen. (2012). Learning 21st-Century Skills Requires 21st-Century Teaching. *The Phi Delta Kappan*. 94. 8-13. 10.2307/41763587.
- Schunk, D.H., DiBenedetto, M.K., *Motivation and Social Cognitive Theory*, *Contemporary Educational Psychology* (2019), doi: <https://doi.org/10.1016/j.cedpsych.2019.101832>
- Scientific Educational Journal* Volume 6, Issue 1, 2018 Kioulanis, S. Teaching Trends and Challenges in Contemporary Learning Environments: The Secret of Fire".
- Wiggins, G., & McTighe, J. (2011). *The Understanding by Design guide to creating high-quality units*. Alexandria, VA: ASCD

8. Appendix

Gamification Manual

Gamifying Academic Writing in Purposive Communication

In this section, the tool, participants, and data analysis will be described and be given enough detail as they are vital in understanding the reliability and viability of this study. This paper will focus on the application of Gamification techniques that are the same as those existing games that teenagers are now playing. The researcher created a Gamification Manual gamifying the chapter lesson (i.e., Academic Writing) in the course Purposive Communication for the students in PLMun. Students normally find it tedious, boring, and time-consuming to write research. This manual is conceptualized and made into reality for the purpose of providing such an aid to stir the interest of students specifically in doing Academic Writing. This will serve

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as an intervention that may possibly affect the performance of the students as they go through the different stages of writing their research papers. Thus, this manual may be useful in the implementation of the Gamification Approach by setting a lighter but more challenging mode in studying academic writing in the course, Purposive Communication.

Specifically this manual aims to:

1. Motivate the students in studying the different sections of a research paper.
2. Accomplish the different parts of the research paper with active engagement and enthusiasm.
3. Improve students' skills in writing academically.
4. Appreciate the beauty of research and its benefits to students.

This manual also presents the guidelines in detail to be utilized in the administration of the games. Thus, the different rules and specifications that every game has for the achievement of the goals are indicated herewith.

The Gamification Main Goals are:

1. Maintain and monitor the total number of Health Points (HP) until the end of the semester.
2. Complete all the quests in the game with at least 70% of the total HP and Mana Points (MP) for them to enjoy the reward of not defending their final output, research paper.

Teams:

The class will be divided into 5 teams. Each team may have ten members who can choose a hero that represents each member. The decision will depend on the member and it is the accountability of the member to maintain their score and enjoy the various skills and abilities that each hero has. The set of skills and abilities prescribed to each hero may be useful to members in different ways and for them to enjoy their adventure.

Skills Points:

In this section, the following Mastery Points are discussed. The points that the players will obtain in their quest will start with the prescribed points for each hero. This will level up once the members and the whole group achieve a certain quest. The leveling up of scores will merely depend on the activities of the members and their compliance with all the requirements. Thus, they will receive the following points: *Health Points* (HP), and *Mana Points* (MP). On the other hand, each member may encounter a demerit once they failed to accomplish the assigned quest or the member does not comply with the homeroom protocols. Their attendance and punctuality will also be considered in deducting points from their HP or MP. The skills points are discussed in detail below:

HP is the life of each member of the team. The first initial *HP* will be assigned to the member upon choosing his own hero. The HP will be utilized depending on the activities of the member. There are activities that may decrease and increase the number of HP. Normally HP will decrease once the activities are negative such as absenteeism, failure to do homework, and failure to follow instructions.

MP is also known as the *Ability Points*. These ability points allow the players to use certain activities that assist in achieving the objective of the game. However, it is to note that not all skills use only MP, some may only use HP which gives them the power to do things. The members need to use their MP for them to be able to help their co-members and to save their co-members from receiving demerits.

**Table 1 Description of Hero's Powers and Abilities**

HERO	ABILITY & HEALTH POINTS	POWER	COST
WARRIOR	300 HP 120MP	Save HP DEDUCTION OF the member from being absent.	50MP
		Save HP DEDUCTION OF the member from being late.	20MP
		Save DEDUCTION of the member for failure to finish the quest.	50MP
HEALER	300 HP 120MP	Heal	50HP 50MP
		Pass 50MP to other members	10HP
MAGE	300HP 120MP	Steal 30MP from other team members	30HP
		Transfer 50MP to team members	10HP

the topic of their interest. At first, they are assigned to prepare 3 topics, and then upon defending the topic, the teacher will decide on the best topic that fits their ability and may really be considered useful and interesting to them. The final quest is for them to develop a mind map that will explain their thoughts about their focused construct.

2. Annotated Bibliography, 40 points (Second Week of November)

Each member must develop 2 annotated bibliographies that are related to their topic of interest. The annotated bibliography will be discussed in detail and so it is expected that the students are going to observe the basic rules in preparing the material.

Failure to submit the annotated bibliography on the prescribed schedule will result in a deduction of 40 points from their HP per day of delay. This means that each missed day will be deducted and the counting will stop once they get to present their output. These deductions are different and separate from the deductions that they will receive from the errors that they will commit in writing the bibliography. Therefore, the content of the bibliography must be well-thought and must be in accordance with the content and structure that the teacher presents in the discussion. Otherwise, the mistakes that they will commit in the annotated bibliography will be counted and will have a corresponding score as shown in the rubric below.

3. Creating Research Problems and Objectives, 20 points (First Week of November)

The creation of a Statement of the Problems (SOP) will be discussed in detail in the first meeting on the second week and it is expected that in the second meeting, the group will be able to submit and present their SOP. This is also in sync with the objectives of the Research Paper.

This task will give the group 20 points of HP once submitted on time. However, failure to submit on the prescribed schedule, the group will be subjected to a deduction of 20 points from their HP. The deduction of points will depend on the task, if the task will require each member to perform individually, then the deduction will be done individually. But once the task is assigned by the group, then it is for the leader to decide from whose HP to deduct the demerit.

Table 2 Total Number of Mistakes and Deductions from HP



	Mistakes	Total number of deductions From HP
4.	1-5 mistakes	20 HP
	6-10 Mistakes	40 HP
	11 and above mistakes	150 HP

Introduction, 20 points

The Introduction will be required to accomplish in the third week of November. This will be done simultaneously with the Review of Related Literature, and Methodology. The discussion of all these sections will also be done continuously to avoid idle periods.

5. Review of Related Literature, 40 points

This section must be based on the annotated bibliography that the members of the group prepared during the first week. Therefore, it is expected that these students will start working on their RRL once the Annotated Bibliographies are returned to them after checking. During the formulation of the RRL, students are also expected to observe proper citation with the application of the APA Style. The teacher will check the group's output and will emphasize the importance of plagiarism. The accomplishment of this section will give the group 40 points for their HP.

6. Methodology, 50 points

The discussion of the groups' methodology must be made ready anytime right after the introduction. Also, it is essential that the following are given proper attention:

- a. The type of research whether is it qualitative or quantitative research and explain why.
- b. Participants
 - a) Demographic Profile
 - b) Total Number
- c. The method and equipment that the group will utilize in analyzing the data that they gather, i.e., the questionnaire and its contents.

In this section, the group will be able to receive 50 HP once they meet the deadline with the complete components as stated above.

As explained in George Mason University Writing Center, this method has the "*gold standard*" and the readers must be able to duplicate the study that the researchers have created.

7. Results. 20 points

During this phase, the players are expected to present the data gathered through Tables, Graphs, or any tool that may summarize the gathered data. The point of 20 HP will be received once the following rules are observed:

1. tables and figures are labeled and numbered separately;
2. past tense form of the verb is used; and
3. presentation of the tables and figures are organized, clear and well - thought of.

8. Discussion, 20 points

In this phase, the players must be able to finalize the results of the study and discuss the relevance of the results to the possible solution to the raised issue. As explained in the George Mason University Writing Center (2014), the researcher must be able "*to discuss the limitations of the study and use these limitations as reasons to suggest additional future research.*" Therefore, it is expected that the students must ensure that

[10]



the limitations are discussed comprehensively with the purpose of asking for more pertinent findings from future researchers.

9. Defense, 50 points

Players are expected to defend their papers. Thus, the necessary materials must be prepared and the main goal is to defend the paper on time and with proper preparations. The materials necessary are (1) an Accomplished Research Paper and (2) PPT or Canva.

Also, the players must be able to present with confidence and the attire should be formal wear or corporate attire.

10. Questionnaire, 50 points

This tool must be done while preparing the Introduction Section. The players must be able to consult the professor regarding the questions that they will include in the questionnaire. All questions are subject to approval and the questionnaire must come with the letter to be submitted to the respondents.

11. Abstract, 30 points

In this section, the players are expected to create a brief summary of the paper covering the important details in the Introduction, Methodology, Results, and Discussion. Thus, George Mason University Writing Center (2014) emphasizes that:

...the abstract provides a very short overview of the entire paper, including a sentence or two about the report's purpose and importance, a sentence or two about your methods, a few sentences that present the main findings, and a sentence or two about the implications of your findings.

12. Acknowledgement, 10 points

Writing this part will require the players to thank the people who helped them throughout the study, such as in doing the analysis, reporting, and/or presentation of the paper.

Miscellaneous:

The following are the items that the players must also give enough attention to as these items are helpful to earn points and if neglected may also lead to demerits.

1. Attendance 50HP

2. Assignment 20HP

Late Submission 20HP

----- *end of Gamification Manual* -----