Music and Academic Performance: Impact of Listening to Music of Filipino Millennials

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ABSTRACT--This study aims to identify the impact of listening to music on the student's academic performance at Polytechnic University of the Philippines. This quantitative study involved 395 students who voluntarily participated and answered the survey questionnaire. In this research, Chi-square and Pearson Correlation were utilized as statistical tools.The study reveals that Filipino students acquired good grades but cannot be directly attributed to music alone because not all students listen to music. It is also found out that the students spend their time the most in listeninat=3g to music; loud music is the most commonly heard but they preferred Pop music. Results also revealed no significant relationship between year level and impact of listening to music to the academic performance, but significant to college and time length of listening. Type of music and GWA also were insignificant to the impact of listening to music.

Keywords-- Genre, Soft music, Hip-hop, Science, Math, English

I. INTRODUCTION

Music is an art that gives pleasure and entertainment, soothes anxiety and gives calmness on the human brain through mediation but too loud or to jarring music distracts and may compete with attention (Sharma, 2019) [1]. Opinions regarding the influence of music in classrooms vary among experts; some say that it relaxes or motivates students whereas; others say that it is a distractor.

Students listen to music for many reasons and to experience comfort. Goodwin (2015)[2] explained that it is common for students to listen to music for relaxation to release stress or anxiety.

Focusing on studying is one of the challenges students meet in their too-many-distractions environment. To address this, they have devised different strategies just to concentrate. Listening to music has been one of their ways to escape from the noisy surroundings and detach themselves from the focus-grabbing disturbances. Students prefer to listen to music while studying or even reading a book; they use this as a study buddy for more focused attention or a tool for relieving the stress from their academic endeavors. In any academic institution, one may notice that students roaming on the campus or waiting for their friends/professors have their earphones plugged to their ears. Mostly, students listen to music to avoid the crowds, ease their anxiety or make use of their idle moments. They listen to music when engaged in their almost-everyday complex cognitive process; music assists them when they are studying, answering their homework, completing their requirements, reading or writing.

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In this modern era where technology permits anyone to access almost everything, students have been more exposed to music; they have gained more access to Youtube and Spotify, download their favorite songs to and save them into their mobile phones.

It is undeniably true that student, in order, to accomplish their everyday academic tasks, listen to music and this inclination raised a question on how music affects their concentration and performance.

This paper attempted to identify the impacts of listening to music to the academic performance of Filipino students from the Polytechnic University of the Philippines (PUP), Manila, Philippines.

II.   MATERIALS AND METHODS

Descriptive method was used in the study. As defined, this method targets to gather information from the current existing condition. From 28,569 students enrolled in PUP, 395 randomly selected from 13 colleges. The researchers used a survey questionnaire, with 0.922 reliability score, containing the demographic profile of the respondents, music preferences/ background and the impacts of listening music to the academic performance of the student- respondents. Chi-square and Pearson r Correlation between used to determine the relationship between the variables.

Descriptive Statistics

The distribution of the respondents: 67 or 16.96% were from the College of Engineering (COE), 63 or 15.9% from the College of Accountancy and Finance (CAF), 49 or 12.4% form the College of Business Administration (CBA), 31 or 7.8% from the College of Communication (COC) and College of Social Sciences and Development (CSSD), 30 or 7.6% form the College of Education (CoED), 28 or 7.1% form the College of Science (CS), 23 or 5.8% from the College of Tourism, Hospitality and Transportation Management (CTHTM), 22 or 5.6% form the College of Computer and Information Sciences (CCIS), 18 or 4.6% form the College of Arts and Letters (CAL), 13 or 3.3% form the College of Architecture and Fine Arts (CAF), 12 or 3% form the College of Political Science and Public Administration (CPSPA) and 8 or 2% from the College of Human Kinetics (CHK).

In terms of year level, 305 or 77.2% of the respondents were 4th year; 61 or 15.4% were 1st year; 24 or 6.1% were 3rd year and 5 or 1.3% were 2nd year. General Weighted Average of the respondents: 256 or 64.8% of the respondents got grades ranging from 1.50-1.75 (Very Good), 73 or 18% had 2.00-2.25 (Good), 41 or 10.4% received 1.00-1.25 (Excellent) and currently or .3% with a passing grade of 3.0.

III.   RESULTS AND DISCUSSION

Using the survey questionnaire as the instrument in gathering the data, respondents were asked about their music preferences. Results were discussed in the succeeding tables.

3.1. Length of Time

Table 1: Length of Time in Listening to Music

Minutes	Frequency	Percentage

5-10 minutes	14	3.5%
10 - 15 minutes	19	4.8%
15 - 20 minutes	32	8.1%
20 - 30 minutes	62	15.7%
30 - 60 minutes	268	67.8%
Total	**395**	**100%**

Table 1 shows the distribution of time length spent listening to music. It shows that 268 or 67.8% of the respondents spent 30-60 minutes in listening to music, 62 or 15.7% 20-30 minutes, 32 or 8.1% 15-20 minutes, 19 or 4.8% 10-15 minutes and 14 or 3.5% 5-10 minutes. It can be inferred from the table that majority of the respondents spend 15 minutes to 1 hour listening to music. Chua (2017)[3] in her "Pinoys listen to 'phenomenal' amount of music -Spotify", she noted that on average, Filipinos spend 154 minutes per day, an average, on the app. Subido (2019)[4] wrote in his article "Filipino Listen to More Music Daily Than Anyone Else in the World" that the Philippine has the highest average daily music listening time. He said that Filipino internet users listen to an average of two hours and six minutes' worth of music each day.

3.2. Type of Music

For the type of music, 239 or 60.51% of the respondents listen to loud music and 156 or 39.49% enjoy soft music, shown in Table 2.

Table 2: Frequency and Distribution of Type of Music

Type of Music	Frequency	Percentage
Soft Music	156	39.49%
Loud Music	239	60.51%
Total	**395**	**100%**

It can be deduced that the student-respondents prefer loud music when they listen to it. Marlen (n.d.)[5] enumerated five (5) reasons why people like loud music. People love loud music since it relieves stress. A song sounds better when it's played loud. It invokes emotions. Loud music is a stimulant and blocks out the world.

Črnčec (2006)[6] believed that music can affect mood and arousal differently, and soothing music could be used as a tool in the classroom

3.3. Genres

When asked about the music genre, results revealed that Pop, R&B, and Rock were the top three preferred genres (see Table 3).

Table 3: Frequency Distribution and Ranking of Genres

Genre that they listen the most	Frequency	Ranking
Pop	342	1
R&B	303	2
Rock	202	3
Classical	178	4
Asian	158	5
Hip-hop	157	6
Country	122	7
Alternative Rock	117	8
Jazz	103	9
Electronic	81	10
Blues	79	11
Modern Folk	43	12
Novelty	30	13
Caribbean and Latin American	23	14
African	8	15

O'Malley (2016)[7] in her article explained that people preferred pop songs because these are so catchy and create a sense of familiarity with the listeners. When the listener hears the same 'whoop', it sounds familiar to them and makes them more inclined to ease into a piece of music.

Tze & Chou (2010)[8] found out that hip hop had a significantly adverse effect on reading comprehension when compared to light classical music or no music.

3.4. Assessment on Impact in Listening to Music

Results revealed that student- respondents moderately agreed that music increases their productivity (4.13), and music stimulates and helps them execute better task performance (4.02). They also moderately agreed that music helps them to concentrate on their daily activities in school that they felt boring (3.97). They believed that music increases their inspiration and focus towards my school tasks (3.94) (Brewer, 1995; Brunken, Plass & Leutner, 2004)[9][10] and it stimulates them when they started to feel distracted or restless and helps them to stay engaged on their tasks (3.89).

Other impacts of music to students' academic performance include recognition of images, faces and fine details and visualization of objects from different angles (3.87); increases task execution excellence (3.85); build retention abilities (3.84); helps in memorization of extended information (music and text) (3.80) (Bloor, 2009; Hallam & Price, 1998; Leguto & Trissler, 2012)[11][12][13]; improve phonemic (distinctive sound; B&V, F&P etc.) awareness (with 3.72); helps in solving multi-step problems (3.70); improves reading comprehension (3.60); helps stay engaged while studying (3.59); and contributes on ability to spell and read words (3.58).

On the other hand, respondents agreed that music helps them to understand the meaning of what they are reading (reading comprehension) with a weighted mean of 3.33. They also agreed that it helps them to learn proper reading (3.29). Listening to music gives them the energy to finish the Mathematical problems (3.21) and improves their Mathematical and arithmetic performance (3.05). Hallam & Price (1998)[12] revealed that class sessions with background music had a significant impact on the result of the students.

The general weighted mean is 3.69 which means that music has a moderate impact on the academic performance of the respondents. Oshin (2019)[14] noted in her article that listening to music could boost productivity and mental performance.

3.5. *Relationship of Impact of Listening to Music and Academic Performance*

Table 4: Relationship between Year Level and the Impacts of Listening to Music to the Academic Performances

Year Level	Impacts			
	Chi-square	p value	Decision	Remarks
	8.502	0.745	Accept Ho	Not Significant

*Significant at .05 level.

Table 4 revealed no significant relationship (8.502, 0.745) between the students' year level and the impact of music on academic performance. Result implies that the impact of listening to music to academic performance does not determine year level. It suggests that the impact of music can occur to any year level of students.

Table 5: Relationship between College and the Impacts of Listening to Music to the Academic Performances

College	Impacts			
	Chi-square	p value	Decision	Remarks
	56.864	0.015	Reject Ho	Significant

Significant at .05 level.

Table 5 revealed that there is a significant relationship (56.864, 0.015) between the college and the impact of listening to music on the academic performance of the students. It can be inferred from the table that colleges in the university use music in their activities. For instance, the College of Human Kinetics uses music (other than instruments) in its activities especially dance being one of the activities. The College of Engineering and College of Computer Information Sciences, on the other hand, also utilize music in their discussion, embedding music in creating audio-visual presentations. These colleges focus on the creative application of digital sound technologies to a broad range of artistic and academic purposes.

Table 6: Relationship between Time Length of Listening and the Impacts of Listening to Music to the Academic Performances.

Time Length of Listening to Music	Impacts			
	Chi-square	p value	Decision	Remarks
	40.47	0.000	Reject Ho	Significant

Significant at .05 level.

As shown in Table 6, there is a significant relationship between the time length spent on listening to music and the impact on the academic performance of the students (40.47, 0.000). It may imply that the longer the time that the students listen to music, the more impact or influence it will have on academic performance. Relative to the result in the previous discussion, students believed that music relaxes the mind and helps achieve focus and concentration. The World Health Organization (2013)[15] mentioned that listening to music for an hour a day can effectively reduce the state of being out of focus; hence, music helps the students concentrate on their studies which led to their good academic performance.

Table 7: Relationship between General Weighted Average (GWA) and the Impacts of Listening to Music to the Academic Performances

Impact	GWA			
	Pearson r	p value	Decision	Remarks
	-0.042	0.402	Accept Ho	Not Significant

Significant at .05 level.

Results showed no significant relationship between the two variables (-0.042, 0.042) and rejected the null hypothesis of the study. Dolegui (2013)[16] mentioned that students choose to listen to their preferred music when doing homework or studying. She also revealed that the participants not listening to music performed better on a cognitive test. Meanwhile, Cockerton et al., (1997 as cited by Doligue, 2013) [1] believed that music can improve cognitive performance.

Table 8: Relationship between Impacts of Listening to Music to the Academic Performances and Types of Music

Impact	Type of Music			
	Pearson r	p value	Decision	Remarks
	0.010	0.848	Accept Ho	Not Significant

Significant at .05 level.

As seen from Table 8, results showed no significant relationship between music genre and the impact of music on academic performance.   Therefore, the type of music the students listen to does not necessarily affect their academic performance.

Studies of Wakshlag, Reitz & Zillmann, (1982)[17] and Thompson et al., (2011)[18] revealed that genre of music affects reading comprehension. However, Dolegui (2013)[16] noted that the intensity of music matters in cognitive performance than the type of music.

IV.   CONCLUSIONS

Based on the analyses of data discussed in the previous chapter, results revealed a general weighted average ranging from 1.50-1.75 interpreted as very good. Most of the respondents were from the College of Engineering of PUP Sta. Mesa, Manila.

With regards to the music genre, respondents preferred to listen to POP music and spent 30-60 minutes listening to loud music. Respondents also preferred listening to loud music.

In terms of assessment on listening to music to academic performance, results revealed that music moderately affects their academic performance. Furthermore, music increased the productivity of the students. It also helps the students to have more focus on their tasks. By perception, music also helped the students in some academic areas including visual memorization, improved phonemic awareness and helped in reading and writing skills.

The results of the correlations using the Chi-square and Pearson- r Correlation showed that college and the time spent listening to music have an impact on academic performance. However, year level, GWA and the genre of music were insignificant on academic performance.

It can be deduced from the findings that the students showed 'good to very good students' on their grades; however, their academic performance or achievement can't solely be attributed to music although they listen to it.

These students listen to music for different reasons, and one of the reasons could be for concentration when they are studying but most of the time they listen to music to make use of their free time or for them to be relaxed.

Music is utilized in different ways by different colleges and purposes. Physical Education, for instance, uses music as a medium of teaching particularly when teaching dance subjects. While in the College of Engineering and Computer Science and Information Technology, music is also used as audio when creating audio-visual presentations. In the College of Arts and Letters, music is used by theater arts students when they have a production number or a play when they are creating an Indie film.

The type of music, soft or loud, is listened to depending on the occasion, mood or interest of the student although; Pop music is really 'pop' for most of the students.

V. RECOMMENDATIONS

The University may consider installing pipe-in music in the library or the study area since students are really fond of listening to music. The Administration may also construct a separate study area for students; those who want background music and those who just want a quiet place.

Professors who use music in their activities may also ponder on the genre or type of music they are employing in these activities; they may want to take into consideration Pop and loud music.

VI. ACKNOWLEDGMENTS

REFERENCES

1. Sharma, Sanjay (2019, August 25). The Effect of Music on Human Health and Growth. Retrieved August 2019, form https://owlcation.com/social-sciences/The-Effect-of-Music-on-Human-Health-and-Brain-Growth

2. Goodwin, E. (2015 January 31). Do or Don't: Studying while Listening to Music. Retrieved from https://www.uloop.com/news/view.php/149570/Do-Or-Dont-Studying-While-Listening-To

3. Chua, Zsarlene B. (2017). Pinoys Listen to 'Phenomenal' Amount of Music – Spotify. Retrieved from http://www.bworldonline.com/content.php?section=Arts&Leisure&title=Pinoys-listen-to-%C2%91phenomenal%E2%80%99-amount-of-music----Spotify&id=143199

4. Subido, Lorenzo Kyle (2019, February). Filipinos Listen to More Music Daily Than Anyone Else in the World. Retrieved from https://www.esquiremag.ph/culture/music/philippines-music-listen-longest-a00288-20190207

5. Marlen, Siebert (n.d.). 5 Reasons Why People Like Loud Music. Retrieved from https://blog.loopearplugs.com/why-people-love-loud-music/

6. Črnčec, R., Wilson, S. J., & Prior, M. (2006). The Cognitive and Academic Benefits of Music to Children: Facts and fiction. Educational Psychology, 26(4), 579-594.

7. O'Malley, Katie (2016). The Millennial Whoop: This is the Reason Why Pop Songs are so Catchy.

Retrieved from https://www.elle.com/uk/life-and-culture/culture/news/a31710/the-millenial-woop-the-reason-why-pop-songs-are-so-catchy/

8. Chou, P. T. M. (2010). Attention Drainage Effect: How Background Music Effects Concentration in Taiwanese College Students. Journal of the Scholarship of Teaching and Learning, 10(1), 36-46.

9. Brewer, C. B. (1995). Music and learning: Integrating music in the classroom. (Reprinted from Music and Learning). Retrieved from http://education.jhu.edu/PD/newhorizons/strategies/topics/Arts%20in%20Education/brew er.htm

10. Brünken, R., Plass, J. L., & Leutner, D. (2004). Assessment of Cognitive Load in Multimedia Learning with Dual-task Methodology: Auditory Load and Modality Effects. Instructional Science, 32(1-2), 115-132.

11. Bloor, A. J. (2009). The Rhythm's Gonna Get ya'–background Music in Primary Classrooms and Its Effect on Behaviour and Attainment. Emotional and behavioural difficulties, 14(4), 261-274.

12. Hallam, S., Price, J., & Katsarou, G. (2002). The effects of background music on primary school pupils' task performance. Educational studies, 28(2), 111-122.Leguto, R. S. & Trissler, T.T. (2012). The effects of background music on learning disabled elementary school students' performance in writing. Current Issues in Education, 15(1), 1-9.

13. Legutko, R. S., & Trissler, T. T. (2012). The effects of background music on learning disabled elementary school students' performance in writing. Current Issues in Education, 15(1).

14. Oshin, Mayo (2019, March). Why Music Affects Your Productivity. Retrieved from https://qz.com/work/1573440/why-music-affects-your-productivity/

15. World Health Organization (2013). Retrieved from www.who.int

16. Dolegui, A. S. (2013). The Impact of Listening to Music on Cognitive Performance. Inquiries Journal, 5(09).

17. Wakshlag, J. J., Reitz, R., & Zillmann, D. (1982). Selective Exposure to and Acquisition of Information from Educational Television Programs as a Function of Appeal and Tempo of Background music. Journal of Educational Psychology, 74(5), 666.

18. Thompson, W. F., Schellenberg, E. G., & Letnic, A. K. (2012). Fast and loud background music disrupts reading comprehension. Psychology of Music, 40(6), 700-708.