Internet Subscription and Senior High School Performance

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Abstract:
This study assessed the association of Internet subscription on the academic performance of Grade 11 and 12 senior high school students. The study used quantitative approach-descriptive survey research design. Complete enumeration was used as a sampling design. The research tool was a self-made questionnaire. The table of frequency of students with and without internet subscription stated that majority of students has internet subscription and students who have internet access has an advance rating of academic performance. The level of the necessity of internet subscription and level of academic performance stated that the level of necessity of having internet subscription was necessary. The table about with and without internet subscription and level of academic performance stated that students who have internet subscription had a satisfactory rate of academic performance. The lambda correlation between level of academic performance and level of necessity of internet subscription resulted if level of performance was considered independent, 13% of students intend to have internet subscription with better academic performance. Likewise, if internet subscription was considered independent, 13% percent that internet subscription predicts the level of performance in opposite direction. Internet subscription was proved to connection predicts the level of performance in opposite direction. Internet subscription was proved to students are expected to improve their academic performance by improving their study habits and look for information on books and articles. Teachers may give in structural materials wherein the lessons were already present so that students will be guide. Teachers may introduce peer monitoring and administrators may improve school library. The study showed that students’ academic performance was not affected by the availability of internet connection.

Keywords: academic performance, internet subscription, senior high school students, social media

1. INTRODUCTION

Internet subscription dichotomously offers both utile and recreational use whoever uses it, students, teachers, businessmen and any other professionals. In the educational institutions, it has intensively used in the daily classroom activities and tasks of students, instructional activities of the teachers and even the school administrators and educators. In particular, the learners live and learn with internet nowadays through cellphone mobile data or purely internet subscription. Gamboa and Suaza (2011) found out that increasing the initiatives that are oriented to increase the utilization of computer in young people to generate positive externality on their academic performance. In like manner, Stephen (2011) ascertained that the use of automated media to support and facilitate academic programs was where modern university education worldwide depends. Youssef and Dahmani (2008) learned that new possibilities for learners and teachers were offered by higher education due to profound impact in the learning process through ICT. Major factor in student performances and achievement was through adoption of complementary organizational innovation. Nelson (2009) learned that if internet was accessed by students and scholars, academic performance generates and contributed to the advancement of education[4]. In addition, Sahin, Balta and Ercan (2010) observed that using less accessible and more secure internet use gather more useful reliable information. Reliability of results cannot be ensured even using highly accessible internet sites may give fast results. Furthermore, Brown (2011) discovered an increase in students’ overall academic performance when TEL or technology enhanced learning are effectively used.

Review of Related Literature
Crampton, Ragusa and Cavanagh (2012) ascertained that both the diversity of available resources and the proportion of each type accessed by students were related to the relationship between resource access. Likewise, Deore (2012) argued that internet is a most powerful educational tool for teaching learning and useful for self-study to student, gives student a lot of information for students to achieve goal, and could also be used for assignment and the progress of students. Similarly, Nyokabi and Lukandu (2012) found that Internet was considered very important for students in order for them to excel in their academic performance in all units they study. Then, Ogedebe (2012) discovered that Internet usage and academic achievement has a positive correlation[9]. Abubakar and D_ipvshak (2014) found that Internet usage has a significant relationship to their library visits. Coupled with, Aitokhuehi, Os_ghale and Os_jhogo (2014) found that generally, academic performance of computer-literate students is more enhanced than those who are not. Toress-Diaz, Duart, Alvarado, Gutiérrez and Faggio (2016); and Turel, ToramanKaml-Raj (2015) ascertained that greater academic success is achieved when a balanced use of Internet tools was achieved by students for their course work leading to a significant influence of Internet use on academic performance. Likewise, Siraj and Salam (2016) ascertained that there is no significant negative correlation between academic achievement of students and their internet usage and that students who have high internet usage accompany better academic results for
students can avail the opportunity to access the information world. Jehopio, Wesonga and Candia (2017) noticed that higher academic achievement was attained by students who use Internet in harmony with the aim of their study. Osnunde (2003) ascertained that academic performance of students with Internet access has a significant difference. Sun and Bradley (2003) mentioned that frequent computer usage was not a good indicator in predicting academic achievement. Higher achievement scores were achieved by students who use computer almost every day than those who use it moderately or low frequencies. Luaran, Abdul, Rom and Nadzri (2010) found that negative effects will result to high intensity of Internet use if the users do not know their priorities. Akhter (2013) discovered that internet addiction and academic performance has a negative significance. Elllore, Niranjan, and Brown (2014) observed that there was no significant relationship between Internet usage and academic performance because most students have access to Internet on their cellphones and have control over the use of Internet. Aba, Kwaghga, Ogbam and Umogbai (2015) found that limited impact was made through the provision of internet services usage. Galgao (2015) discovered that internet usage doesn’t affect respondent’s academic performance. Sachitra (2015) ascertained that academic performance of students was negatively impacted by internet addiction. Emeka and Nyeche (2016) observed that student’s academic performance was affected by the number of hours spent on the internet. Internet usage for study purpose and academic achievements are directly proportional. McCamey, Wilson and Shaw (n.d.) discovered that students’ use of the internet and the effect of such use on the academic performance have found no statistically significant correlation. In this research study, the researcher intends to assess the association between internet subscription and academic performance of the senior high school students. Brown (2011) found that TEL programs are effective and can increase students’ overall academic performance. Gamboa and Suaza (2011) surveyed 277, 267 students ascertain that access at home and at school plays specific roles on student training, and the quality in use, rather than intensity in use, affect positively the student performance. Stephen (2011) found that use of automated media to support and facilitate academic programs is where modern university education worldwide depends [p.10]. Crampton, Ragusa and Cavanagh (2012) surveyed 593 students discovered that resource access and academic success was due to both diversity of available resource and the proportion of each type is by the student . Deore (2012) ascertained that one of the useful progress that can achieve their goal is to access the Internet .Nykabi and Lukandu (2012) found that internet helps students to excel in their academic performance .Ogedebe (2012) surveyed 350 respondents of questionnaire in Bingham University, Nasarawa State Nigeria discovered that Internet usage and academic achievement has a positive correlation .Abubakar and Diyoshak (2015) surveyed 207 students found that using internet plays an important skill of a student .Aitokhuehi, Osoghale and Ojogho (2014) surveyed 120 out of 1,200 final year students ascertain that computer literacy enhances student performance generally, computer literate students perform better academically. Díaz, Duart, Alvarado, Gutiérrez and Faggioni (2016) surveyed 4,697 students discovered that students have greater academic success in using of Internet tools for their coursework. Siraj and Salam (2016) surveyed 234 medical students of academic session students ascertain that higher internet brings better academic result to students. Jehopio, Wesonga and Candia (2017) surveyed 312 Makerere University students found that whoever who use internet as their bases of learning aim their study were more likely to attain higher academic achievement. Osnunde (2003) surveyed 160 out of 200 students discovered that there is a significance difference of academic performance of students with Internet access. Sun and Bradley (2003) surveyed 4,990 students ascertain that computer usage is not a good indicator. Luaran, Abdul, Rom and Nadzri (2010) surveyed 8 TESL students at the Faculty of Education in University found that high using of Internet brings negative effects. ICT can be used to rescue students in their inadequacies like in preparation of communication to parents electronically in which these letters can be customized according to the user’s liking and information dissemination to students and parents with regards to computerized academic system (Rahayu, and Huda, 2017) and integrate ICT effectively in teaching and learning. (Van der Westhuizen, Nel, & Richter, 2012). ICT plays an effective role in students’ academic performance. (Alemayehu, & Natarajan, 2018); possible positive effect on student performances and achievement. (Youssef, andDahmani, 2010). Particularly, it improves academic performance of the students in Social Studies particularly between students taught using ICT and text books students alone. (Arinze, Okonkwo, Wino and Augusta, 2012); Mathematics and Language ( Garcés and Soto, 2017). In some other cases, the availability of internet so that students can access showed a better improvement in students’ academic performance than those who do not use the internet (Yebowaah, 2018). Likewise, computer literate perform better in their academics than the non-computer literate, female computer literate performs better than male computer literate students and co-educational secondary school literate performs better than gender exclusive school computer literate (Aitokhuehi, & Ojogho, 2014). When E-learning is implemented with ICT facilities, student performance is academically improved. (Zahir, Razak, Chi, Zainan, & Kasim, 2018). ICT access at home moderately contributes to learning and better achievement. (Vincze, 2016): Learning process and support in preparing assignments and classroom activities reduce social disparities but promote teamwork. (Khan, Siraj-u-Din, Ismail, Khattak, & Jan, 2015). Gender and Grade Point Average (GPA) and school performance. (Basri, Alandjejani, & Almadani, 2018). In the contrary, ICT bears no significant association between Information and Communication Technology usage and the academic performance of students. (Mbaeze, Ukwandu, Anudu, 2010); It has no effect on the learning process (Alderete, and Formichella, 2016).

For instance, among visually impaired students using of ICT tools. (Eguavoen, 2016) and in ICT-induced multi-tasking through self-regulation, emotional control, productivity and the span of the student attention. (Jehopio, Wesonga, and Candia, 2017) Socio-economically poor students have poorer academic performance in the public schools though ICT use was inculcated intensively which is suspected to be due to misuse ICTamong students. (Kisese and Kwasira, 2015). Otherwise, ICT integration skill among teachers can very minimal due to its unavailability (Mbugua Ngugi, Gori Mochama, & Tanui, 2015). Likewise, students in the private schools do not integrate ICT into their studies. (Charlesa and Issifu, 2015). In this regard, the
researcher intended to assess the association of internet subscription to the academic performance of the students in the local and contextualized scenario.

2. MATERIALS AND METHODS

Design
The quantitative approach – descriptive survey is utilized by the researchers in which throughout the research process, analysis of data is included. The sampling design utilize by the researchers is complete enumeration.

Respondents and Environment
The study was conducted in a senior high school (SHS), located in Mandaue City, Cebu, Philippines. The Senior High School in answer to the implementation of the K to 12 program of the Philippine government throughout the country. The senior high school is offering the three academic strands namely General Academic subjects; Humanities and Social Sciences; and Accountancy and Business Management. With the population of 273 students as of school year 2017-2018, 34 students are in 11-ABM, 55 students are in 11-GAS, 40 students are in 11-HUMMS. On the other hand, there are 51 students in 12-ABM, 64 are in 12-GAS and 29 students are in 12-HUMMS. By complete enumeration, a total number of 245 students from both Grade 11 and 12 are responded.

Instrument
There will be one (1) self-made questionnaire for this study with eight (8) questions. The first question was related to having an internet subscription, second question was about the average grade of the students and third question was about the influences made by the internet on the academic performance of students. The added five statements were about the possible benefits that the internet may give to the students.

Gathering of Data
The researchers submitted a transmittal letter to the head of the school which was signed as an approval for the survey to be conducted. The researchers gathered the data through room-to-room survey. The survey was done last September 4, 2017. They distributed the survey sheet to the respondents and let them answer freely. After answering, the questionnaires were collected, tabulated treated statistically, analyzed & interpreted.

Statistical Treatment

Simple Percentage
The simple percentage is used for computing simple percentage to identify the percentage of the students in their academic performance and internet connection.

Chi-square with Yates Correction
The Yates correction is a correction made to account for the fact that both Pearson’s chi-square test.

Goodman- Kruskall-Wallis gamma
The value of one variable is used to predict/ estimate the value of another variable. In this study, the researcher intends to know if internet subscription determines the performance of the students unless the academic performance determines the utilization of internet of the students to help them in their studies.

3. RESULTS AND DISCUSSIONS

The internet subscription of the Senior High School students was assessed using a three self-made questionnaire. In order to determine whether the respondents had an internet subscription, they were asked to answer the first question in the questionnaire. All the answers were tallied according to their average grade indicated in the number two question. The results were totaled according to the results from the level of academic performance and the availability of internet connection.

Table 1. Frequency of students with and without internet subscription and academic performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>F</th>
<th>%</th>
<th>S</th>
<th>%</th>
<th>VS</th>
<th>%</th>
<th>A</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>With connection</td>
<td>internet</td>
<td>34</td>
<td>58.62</td>
<td>53</td>
<td>55.79</td>
<td>26</td>
<td>41.94</td>
<td>18</td>
<td>60</td>
</tr>
<tr>
<td>Without connection</td>
<td>internet</td>
<td>24</td>
<td>41.38</td>
<td>42</td>
<td>44.21</td>
<td>36</td>
<td>58.06</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>58</td>
<td>100.00</td>
<td>95</td>
<td>100.00</td>
<td>62</td>
<td>100.00</td>
<td>30</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Legend: Fair (F), 80-below; Satisfactory (S), 81-85, Very Satisfactory (VS), 86-90, Advance (A) 90-above

Table 1 shows that majority of the students of Senior High School Department has internet subscription. 53% or 131 out of 245 of the respondents answered that they have access on the internet. The highest percentage is 60% under the advanced level of academic performance.

Therefore, students who are under the advanced level of academic performance have internet connection. Students can access fast internet through Wi-Fi but nowadays it can easily access through cellular data. Internet subscription becomes progressive in the Philippines. In the study of Adaja (2005) stated that Internet can effectively contribute to educational advancement which makes use of internet. With the use of cellular data, students can easily access on social media—Facebook, twitter, Instagram and Spotify. Sometimes, cellular data helps you to search some information found in the google and other search engine. Also, Turkish Online Journal of Educational Technology (2010) agreed that internet has been shown to influence the academic performance of students both academic and attitudes towards learning. Necessity of having Internet Connection the necessity of having Internet subscription of the Senior High School students was determined by tallying the results and determining the total results. The results were
toted according to the results from the level of academic performance and the level of internet necessity.

<table>
<thead>
<tr>
<th>TABLE 2. Level of necessity of internet subscription and level of academic performance</th>
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<tr>
<td>LEVEL</td>
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<tr>
<td>-------</td>
</tr>
<tr>
<td>Fairly Necessary</td>
</tr>
<tr>
<td>Necessary</td>
</tr>
<tr>
<td>Absolutely Necessary</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

**Legend:** Level of Necessity of Internet Connection: Poor(1.00-1.80), Not Necessary(1.80-2.60), Fairly Necessary(2.61-3.40), Necessary(3.41-4.20), Absolutely Necessary(4.21-5.00)

The leveling proceeded to fairly necessary level because the level “not very necessary” to “not necessary” has low frequency. So instead of including it to the computation which may give an error to the results, the low number of frequencies is collapsed to the level fairly necessary. The table shows that 98 out of 243 respondents has an average grade of 81-85 or under the satisfactory level. The level of necessity of internet subscription3.41-4.20 has the highest number of result which is 48.15% out of 100% which means internet is necessary for students who look for information found in the internet which helps them to make their assignments faster. Other level such as “fairly necessary” has a result of 19.75% out of 100 which means that to students with access on internet has a low academic performance.

In absolutely necessary, it gives a result of 32.10% out of 100. Students with higher access on internet earned a higher academic performance to students. Therefore, 48.15% of students having an average of satisfactory needs internet connection. The level of necessity of having internet subscription is necessary.

<table>
<thead>
<tr>
<th>TABLE 3. With And Without Internet Subscription and Level Of Academic Performance</th>
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<tbody>
<tr>
<td>STRAND</td>
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<tr>
<td>-------</td>
</tr>
<tr>
<td>WITH</td>
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<tr>
<td>ABM</td>
</tr>
<tr>
<td>GAS</td>
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<tr>
<td>HUMMS</td>
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<tr>
<td>TOTAL</td>
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<tr>
<td>WITHOUT</td>
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<tr>
<td>ABM</td>
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<tr>
<td>GAS</td>
</tr>
<tr>
<td>HUMMS</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

**Legend:** Fair (F), 80-below; Satisfactory (S), 81-85, Very Satisfactory (VS), 86-90, Advance (A) 90-above.

The table shows that General Academics Strand (GAS) has the biggest frequency in all strands that has internet connection. Likewise, General Academics Strand (GAS) also got the biggest frequency in all strands that has no internet connection. Most of the respondents answered that they have internet connection. Students who have access on the internet tends to have a satisfactory rate in the academic performance. Therefore, students who have internet subscription have a satisfactory rate of academic performance. A General Academic Strand student who has internet subscription has a total of 54 out of 131. In most aspects, GAS students influence their academic performance and internet connection. Those who have internet subscription usually have a good remark on their performance in school. Also, GAS students with no internet subscription tend to have a good remark in school. Therefore, academic performance would not depend upon the internet connection. Students can have a good remark with or without a internet connection. It doesn’t matter how fastest your internet is but on the student itself would depend on how can they good in their academics.

<table>
<thead>
<tr>
<th>TABLE 4. Lambda correlation between level of performance and level of necessity of internet subscription</th>
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</thead>
<tbody>
<tr>
<td>Level of Performance</td>
</tr>
<tr>
<td>Level of Necessity of Internet Connection</td>
</tr>
</tbody>
</table>

If Level of Performance is considered independent for about 0.13 or 13%, is the error reduced in the prediction. The students with better performance tend to use internet subscription for study or learning activity. Based on the grades, 13% of students intend to have internet subscription with better academic performance. According to the study of Ogedebe (2012), internet usage and academic achievement has a positive correlation. Also, Nyokabi and Lukandu (2012) found that internet is considered very important for students in order for them to excel in their academic performance in all units they study. Lastly, Crampton, Ragusa and Cavanagh (2012) ascertained that both the diversity of available resources and the proportion of each type accessed by students were related to the relationship between resource accesses. If Internet subscription is considered independent, about -0.13 or -13% is the error reduced in the prediction. Based on dominance of opposite direction, 13%...
present that internet subscription predicts the level of performance in opposite direction. Internet subscription is proved to decrease the level of performance. Osunade (2003) stated that academic performance of students with internet access has a significant difference. In addition, Luanan, Abdul, Rom and Nadzri (2010) found that negative effects will result high intensity of internet use if the users do not know their priorities.

Table 5. Summary of chi-square results

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>$\chi^2_{\text{comp}}$</th>
<th>df</th>
<th>$\chi^2 (0.05)$</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of performance and internet subscription</td>
<td>10.86</td>
<td>6</td>
<td>12.592</td>
<td>Failed to Reject</td>
</tr>
<tr>
<td>With internet connection</td>
<td>40.27</td>
<td>6</td>
<td>12.592</td>
<td>Reject</td>
</tr>
<tr>
<td>Without internet subscription</td>
<td>56.67</td>
<td>4</td>
<td>9.488</td>
<td>Reject</td>
</tr>
</tbody>
</table>

The table above shows that between level of performance and necessity of internet subscription the computed value $X^2(10.86)$ is greater than $X^2_{0.05,6} (12.592)$ which means it is failed to reject. It also shows that academic performance and internet subscription has a significant association for accessibility of internet greatly helps students in providing necessary information in their various fields and subjects. Internet usage and academic achievement has a positive correlation. (Ogedebe. 2012; Nyokabi and Lukandu (2012). Crampton, Ragusa and Cavanagh (2012) ascertained that both the diversity of available resources and the proportion of each type accessed by students was related to the relationship between resource access. With internet subscription, $X^2(40.27)$ is greater than $X^2_{0.05,6} (12.592)$ and so it gives a result of reject. It shows that having internet subscription has no significant association with academic performance because although internet subscription is available and accessible, there is still a possibility that the information gathered is not reliable. In addition, Luanan, Abdul, Rom and Nadzri (2010) found that negative effects will result high intensity of internet use if the users do not know their priorities. Without internet subscription, $X^2(56.67)$ is greater than $X^2_{0.05,4} (9.488)$ and its interpretation is reject the $H_0$. It shows that absence of internet subscription has no significant association with academic performance because information can also be gained with the use of books, journals or articles that are available in libraries and bookstore. This might be true to some students who are still using library or personal references. Ellore, Niranjan, and Brown (2014) observed that there is no significant relationship between internet usage and academic performance because most students have access to internet on their cellphones and have control over the use of internet add, Galgao (2015) said that internet usage doesn’t affect respondents’ academic performance.

5. CONCLUSIONS

Senior high school students ‘level of performance does not depend entirely on the accessibility of internet connection. Internet subscription is not a necessity in having a good academic performance but its academic performance that determines students to improve their academic performance with the aid of internet connection. Brown (2011) agreed that internet subscription increase academic performance of students which enhance students’ learning experience and gives an additional understanding. Klein (2010) stated that technology is a tool that can enhance learning but cannot solely rely upon increasing student academic performance. In most desirable case, internet subscription is not a hindrance to achieve academic performance. UK Essays (n.d) agreed that accessibility of internet subscription increases academic grade of students. Technology is not a silver bullet—and cannot by itself—produces the good learnings of students but with the students itself. Somehow, in most cases technology is a key ingredient of learning. A Journal of Economics and Economic Education Research proved that when all venues of Internet use are exhausted which refer to as intense use gives lower grade compare to students with no internet access. Finally, attitudes towards internet utilization manifested as motivating factor to increase or decrease academic performance.

RECOMMENDATIONS

Students are expected to improve their academic performance by improving their study habits and instead of relying too much on the information found on the internet. Students can use books and reading articles. With that, students should do their part to be responsible—not just getting attached with internet with nonsense purpose. Also, students must focus on their studies by not doing unnecessary things not related to their study, like being tempted by their peers, playing online games and mobile games on their cellphones. Teachers may give instructional materials wherein the lessons are already there so that students will be guided on the lessons that will be tackled in class. They should provide a curriculum guide to let know the students what the teacher is going to discuss. Teachers should do an activity first before discussing so that students will be energized to listen. Teachers may introduce peer mentoring where there is
collaboration between students on the lessons that they found a hard time and on the future lessons that they will tackle. Teachers may improve the school library where there are given a book that can be referred to any subject or that can be related to a study. Administrators may improve the school library where there are more books for student’s library works and assignments. Every classroom should have bookshelves for students who have a difficulty of words, to search for a narrative research and to read more books on a specific topic. The current study is focusing only in students’ academic performance and internet connection. Furthermore, research is recommended particularly in Social Media, Online Medium of Instruction and Academic Performance and Access in Online Games and Academic Performance.

6. APPENDICES

QUESTIONNAIRE

1. Do you have an internet subscription?
   ___Yes ___No

2. What is your average grade?
   ___75-below
   ___75-80
   ___81-85
   ___86-90
   ___91-above

3. What are the influences made by the internet on your academic performance?
   ___It aids research
   ___Provide access to current internet sources
   ___Help prepare for examinations and tests
   ___Help in assignments
   ___Aids communication between students and teachers

<table>
<thead>
<tr>
<th>Internet</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>It aids my studies in providing the information needed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Internet provides the current sources that meets my necessity of information.</td>
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</tr>
<tr>
<td>Internet helps me in my assignments because it has all the information.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet aids communication between students &amp; teachers to help provide necessary information.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet helps me prepare for my assignments &amp; tests as it serves as my reference of information.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Legend: Strongly Agree (5); Agree (4); Neutral (3); Disagree (2); Strongly Disagree (1)

7. REFERENCE


