



# The Digital Footprint Awareness of the Undergraduate Students in a Private Higher Education Institution in Nueva Ecija, Philippines: A Basis for a Plan of Action

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**Abstract:** This study sought to determine the digital footprint awareness of the undergraduate students in a private higher education institution in Nueva Ecija, Philippines, to provide a basis for a plan of action. A descriptive research approach was employed by the researcher. Using a survey instrument, the researcher gathered data from 190 college students at a private higher education institution. Results revealed that the respondents were composed of 68% males and 32% females. Most of the respondents were from the first and second year levels. In terms of their age brackets, most respondents belong to the 18–19 and 20–21 age brackets. Respondents expressed that they use the internet for an average of 5 to 6 hours every day and that social networking sites are the most frequently accessed sites, with smartphones being the most commonly owned gadget. An assessment of digital awareness revealed that college students are well aware of their digital footprint in terms of online activities, personal information, online transactions, online platforms and environments, privacy, and security. Overall, their awareness of their digital footprint was very evident. As a result of this study, the researcher suggests activities that would contribute to sustaining digital footprint awareness among college students and may also be used as a set of activities for incoming college students to ensure that future students are also well aware of their digital footprint, leading to becoming responsible digital citizens.

**Keywords:** Digital Awareness; Digital Citizenship; Digital Footprint; Information Technology; Plan of Action.

## I. INTRODUCTION

Information and communications technology (ICT) has significantly contributed to the improvement of the lives of many people in the 21<sup>st</sup> century. ICT has become an important tool that is used to help with change, creativity, and innovation [1]. Over the last decade, the world has witnessed how ICT has made an enormous impact on different sectors and industries of society. Today, it has grown and changed quickly as people have worked to improve their way of life, the tools they use to do daily tasks, and the services they offer to everyone in order to make life easier and more meaningful.

In the field of education, ICT has contributed to enhancing the scope of education by facilitating more inclusive learning. It has also made mobile and distance learning possible. ICT in education has been utilized to improve research and scholarly communication as well as the quality of the teaching and learning process [2]. Positively, ICT has made a huge impact in the education sector.

Meanwhile, in the field of business, ICT has improved the quality of providing different services to different clients all over the world. It has contributed to the vertical and horizontal aspects of businesses. Vertically, ICT has made business processes more efficient and effective through the use of state-of-the-art and advanced technologies that integrate ICT. Horizontally, it has become more responsive to the needs of different customers through real-time decision support systems. Further, ICT has been utilized in assisting business activities, which may include design, manufacturing, research and development, sales, and customer relationship management [3].

ICT has had a significant impact on many people today. The growing utility and ubiquity of online communication has caused a need to deeply understand the increasing role of digital footprints in people's lives [4]. While people are more exposed to different technologies and the internet in general, it is necessary to understand their implications, whether positive or negative. One great way to see how it affects the lives of many is by understanding digital footprints.

Digital footprints are the online data that people generate through interactions, whether passive or purposeful [5]. Passive actions are stored as cookies, while purposive or active actions are deliberately released by a user to share their information on social media or different websites [7]. Digital footprints are the data that people generate from their activities on different online platforms, whether e-commerce sites, social media, messaging applications, online games, video streaming platforms, workplace collaboration tools, and the like.

A digital footprint is also called a digital “shadow”, which refers to the traceable digital activities of an individual, including their online actions, contributions, and communications through the internet and digital devices. Through one’s digital footprint, one’s activities may be traced, resulting in a lot of opportunities. It can be positive or negative.

While there is a growing body of literature on the digital footprint available worldwide, there is a need for recent studies to fill research gaps. There is little literature available focusing on understanding the digital footprint awareness of higher education students from private learning institutions in the Philippines. Thus, this study contributes to the growing literature to fill in the knowledge gap. Also, by generating new insights on the awareness of private higher education institutions’ college students’ digital footprints, this study seeks to fill in population gaps as well as evidence gaps in a more contextualized manner.

### **A. Statement of the Problem**

In general, this study intended to conduct an assessment on the digital footprint awareness among undergraduate students from a private higher education institution in Nueva Ecija, Philippines, to provide a basis for designing a training activity on digital citizenship.

Specifically, it wanted to answer the following:

1. How may the demographic profile of the respondents be described in terms of
  - 1.1. Sex;
  - 1.2. Age;
  - 1.3. Year Level;
  - 1.4. Type of Gadgets Used in Accessing the Internet;
  - 1.5. Daily Internet Access Time;
  - 1.6. Frequently Accessed Sites?
2. How may the digital footprint awareness of the undergraduate students be described in relation to
  - 2.1. Online Activities;
  - 2.2. Personal Information;
  - 2.3. Online Transactions;
  - 2.4. Online Platforms and Environments; and
  - 2.5. Privacy and Security
3. How may the overall digital footprint awareness of the undergraduate students be described?

## **II. METHODOLOGY**

In the sections that follow, this study will talk about the research design used, the research location and participants, the research instrument, how the data was collected, and how the researcher analyzed the data.

### **A. Research Design**

This study employed quantitative research in the form of systematically investigating a phenomenon by means of collecting and analyzing numerical data. It was used to look for patterns and averages, as well as to generalize results to a wider population. There are different methods of quantitative research. For this study, the researcher used descriptive research to seek an overall summary of the variables under investigation regarding their demographic profile and awareness of their digital footprint to provide significant insights for designing a plan of action.

### **B. Research Locale and Respondents**

The locale of this study was one of the private higher learning institutions in Nueva Ecija, Philippines. The researcher did this study on this particular learning institution to find out how aware the college students were of their digital footprints so that they could make a plan for how to keep their students and new students aware of their digital footprints in the future.

There were 190 people who took part in it. These were randomly selected college students. The number of respondents for this study was identified as statistically significant. Thus, the result presented can be representative of the entire population of the college.

### C. Research Instrument

This study used an instrument inspired by a previous study [6]. However, to suit the context of the current study, the instrument was modified. The instrument used was composed of two parts. The first part covered the demographic profile of the respondents, which included sex, age, grade level, type of gadgets used, daily internet access time, and frequently accessed sites. The second part of the instrument dealt with the assessment of the digital footprint awareness of the students in relation to their online activities, personal information being supplied on different platforms and sites, online transactions, online platforms and environments used, and privacy and security awareness.

The instrument was subjected to face and content validity by selected experts and scholars in the fields of education and information technology. Their comments and suggestions led to the improvement of the contents of the instrument. Afterwards, the tool was subjected to an internal consistency and reliability test. A sample group of respondents participated to validate whether the instrument presented internal consistency and validity. Table 1 shows the result of the reliability analysis performed by the researcher.

**TABLE I RELIABILITY ANALYSIS**

Scale	Cronbach's Alpha	Number of Items	Reliability Level
Online Activities	0.878	5	Good
Personal Information	0.886	5	Good
Online Transactions	0.895	5	Good
Online Platforms and Environments	0.870	5	Good
Privacy and Security	0.776	5	Acceptable

As can be seen from Table 1, the results of the reliability analysis indicate that the scales used had an acceptable to good reliability level. This was the rule of thumb presented by authors [8], who said “ $\alpha > .9$  – Excellent,  $\alpha > .8$  – Good,  $\alpha > .7$  – Acceptable,  $\alpha > .6$  – Questionable,  $\alpha > .5$  – Poor, and  $\alpha < .5$  – Unacceptable”. In addition, an alpha of 0.8 is considered a reasonable goal, according to authors [9]. Thus, the instrument used for this study can provide stable and consistent results [10].

### D. Data Gathering Procedures

To answer the identified research problems, the researcher performed the necessary activities to gather data. This study commenced on January 2022. The researcher first identified relevant literature and studies to be reviewed in order to gain deeper understanding of the topic under investigation. Afterwards, the instrument was formulated. Inspired by a previous study, the researchers modified some of its contents to suit the context of the present study. Then, necessary measures were taken to ensure that the instrument was ready to be used.

The researchers sought permission from the higher learning institutions involved. It was ensured that no personal information would be collected that would lead to identifying the research respondents. Compliance with strict confidentiality and the anonymity of the respondents were strictly observed.

The instrument was floated to a private learning institution in Nueva Ecija, Philippines, from May to August 2022. Because limited face-to-face interactions are still highly encouraged to prevent the spread and exposure of Coronavirus 2019, the researcher used Google Forms as an online survey tool during the study.

The link to the survey was sent to the respondents. It was explicitly stated in the online survey that their participation is purely voluntary and that no compensation or harm can be inflicted on them. Also, the researcher mentioned that the data gathered was used for research purposes only. Queries were also welcomed through instant messaging applications and short message services.

After the data collection phase, the researcher checked the completeness of the data, stored and secured them properly, and cleaned and analyzed the data accordingly. After the data has been analyzed, it is properly destroyed so that no copy is kept for the sake of confidentiality.

**E. Data Analysis**

Analyzing the collected data properly is a crucial activity that needs to be properly performed to yield good and valid results. For this study, the researcher used the following data analysis techniques:

In general, descriptive statistics were used. In answering the first research question, frequency count and percentage were utilized to describe the demographic profile of the respondents. To present a clearer assessment result for the second research question, the researcher computed the mean of each item on the scale as well as the average mean for each criteria. In answering the third research question, the mean was also computed to determine the students' overall digital footprint awareness.

The mean ratings were interpreted accordingly using Table 2.

**TABLE III RESPONSE MODE AND SCORING GUIDE**

Numerical Rating	Range	Verbal Interpretation for Level of Agreement	Verbal Interpretation for Level of Awareness
4	3.25-4.00	Strongly Agree	Fully Aware
3	2.50-3.24	Agree	Aware
2	1.75-2.49	Disagree	Not Aware
1	1.00-1.74	Strongly Disagree	Fully Not Aware

**III. RESULTS AND DISCUSSION**

**A. The Demographic Profile of the Respondents**

The following figures show the demographic profile of the respondents. The composition of the respondents is shown using a percentage distribution illustrated with graphs. Figure 1 presents the percentage distribution of the respondents in terms of their sex.

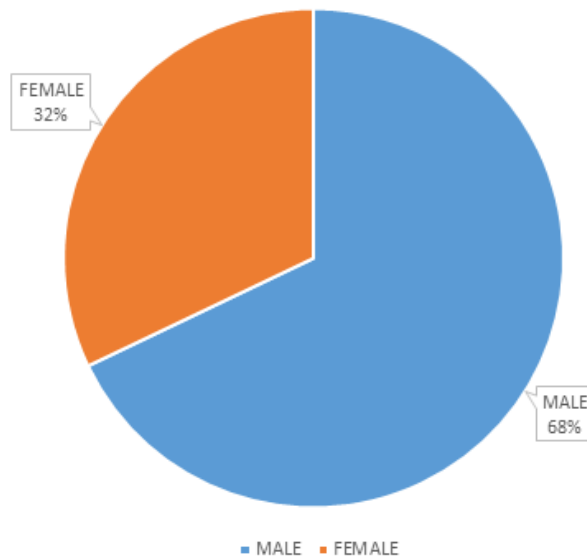


Fig. 1. Percentage distribution in terms of sex

Results show that the respondents were composed of 68% males and 32% females. A 36% difference exists between males and females. This indicates that computing courses like information technology are mostly dominated by male students. This result is similar to the studies of author [11], the report [12], and authors [13], which indicate a greater number of males than females enrolled in a computing program.

Presented in Figure 2 is the percentage distribution of the respondents in terms of their age.

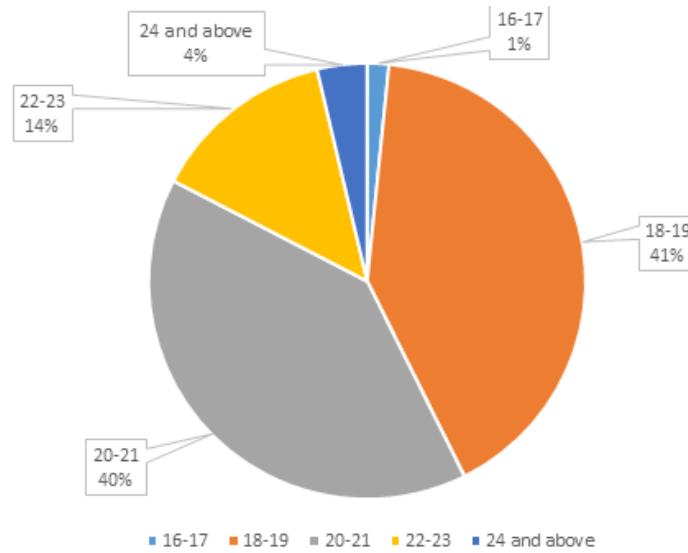


Fig. 2. Percentage distribution in terms of age

Results show that 41% of the respondents belong to the 18–19 age bracket. This is the largest group of respondents who have participated in this study. The next-highest number of respondents belongs to the 20–21 age bracket, constituting 40% of the total number of respondents. The 22–23 age group has 14%, followed by the 24–25 age group, which has 4%. The least number of respondents fall under the 16–17 age bracket, with only 1% of the total number of respondents. The result of the percentage distribution in terms of age is consistent with the result of the percentage distribution based on their year level, as shown in Figure 3.

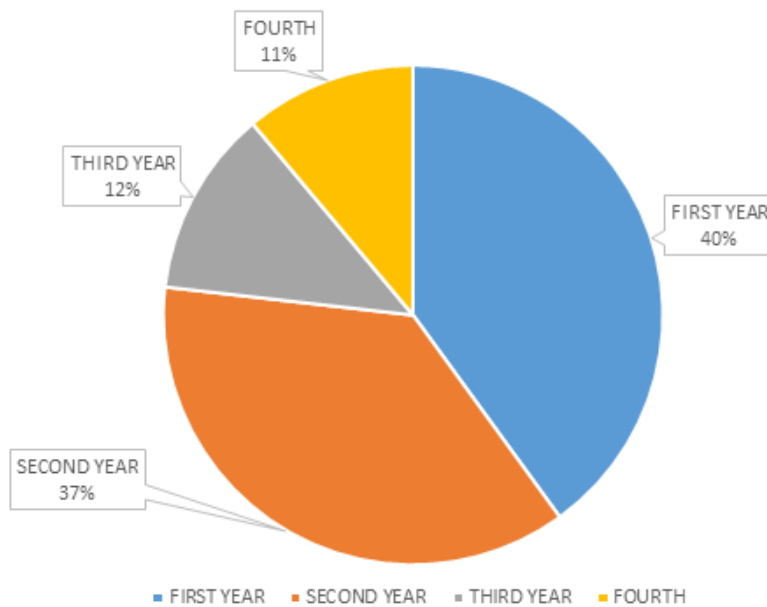


Fig. 3. Percentage distribution in terms of year level

In Figure 3, it can be observed that the majority of the respondents came from the first-year level, constituting 40% of the total number of respondents. This is followed by 37% of second-year students. The third year students made up 12% of the total number of respondents. The lowest number of students came from the fourth-year level, with only 11%. The results shown in Figure 2 are in agreement with the results in Figure 3.

In Figure 4, the frequency and percentage distribution in terms of the gadgets used by the college students are presented.

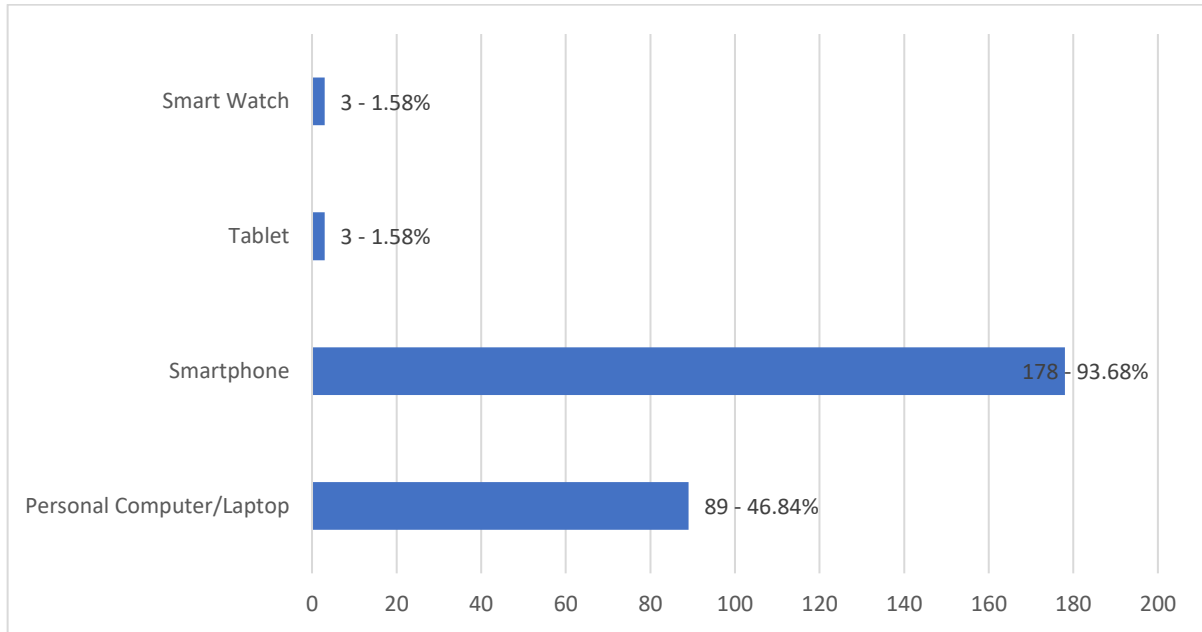


Fig. 4. Frequency and percentage distribution in terms of gadgets owned

As can be observed, 178 college students, or 93.68% of them, own a smartphone used for accessing the internet and other online platforms. There are 89 of them, equivalent to 46.84% of the population, who own a personal computer or laptop. Meanwhile, both tablet and smartwatch devices have 1.58% market shares, making it the least popular kind of gadget being used by college students to interact with others in the online world. According to author [14], the number of smartphone users has already surpassed six billion and is expected to increase by several hundred million in the coming years. In the report, it was mentioned that China, India, and the United States are the countries with the highest number of smartphone users. In the Philippines, the number of smartphone users is expected to reach 86.68 million by 2023 [15]. As the number of smartphone users in the Philippines grows, so will the number of people who use the internet. As such, the need to understand their awareness of their digital footprint is a much-needed endeavor to provide meaningful insights into becoming responsible and effective digital citizens.

In Figure 5, the percentage distribution in terms of the daily internet access time among the respondents is presented.

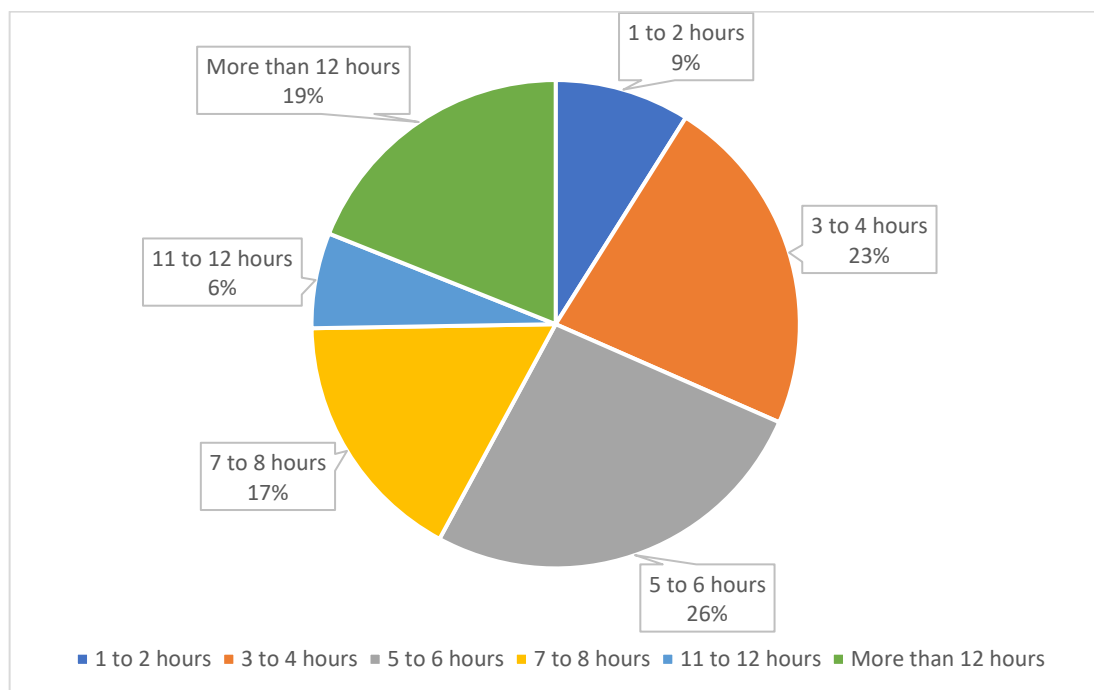


Fig. 5. Percentage distribution of daily internet time

In the figure above, 26% of the respondents expressed that they used the internet for 5 to 6 hours. There are 23% of respondents who use the internet for 3 to 4 hours. 19% of them said they use the internet for more than 12 hours per day, 17% for 7 to 8 hours per day, and 9% for 1 to 2 hours per day. Only 6% of the respondents expressed that they used the internet for 11 to 12 hours. According to a report by the Philippine News Agency, the average person spends 7 hours per day on the internet. In the Philippines, the average internet time was 10 hours and 27 minutes. It was also mentioned in the report that Japan spent the least amount of time on the internet, with a daily average of 4 hours and 26 minutes [16].

Presented in figure 6, the frequency and percentage distribution in terms of the frequently accessed sites by the respondents are shown.

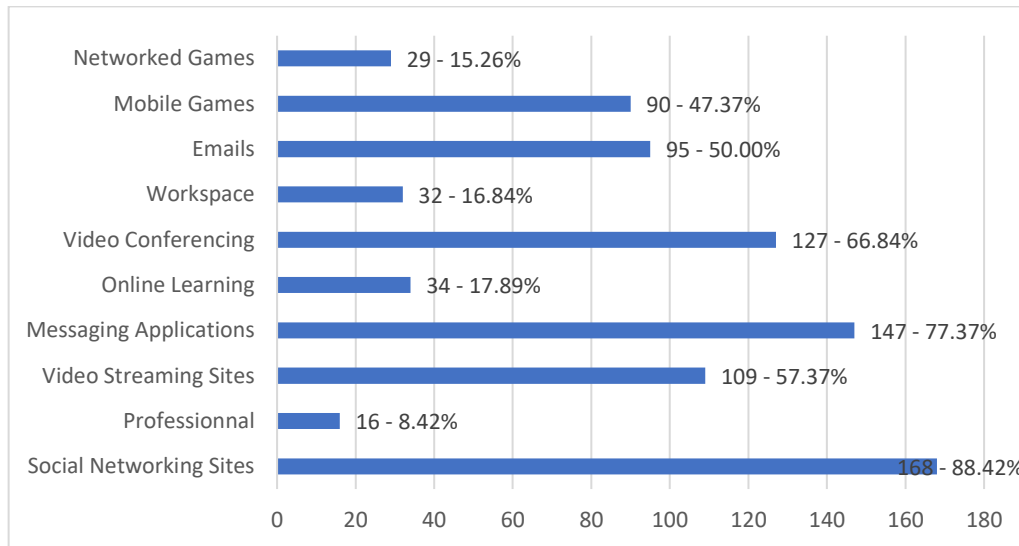


Fig. 6. Frequency and percentage distribution in terms of frequently accessed sites and applications

The topmost reason for accessing the internet among the respondents was the use of social networking sites, with 88.42%. 168 of the respondents expressed that, on a daily basis, they access social networking sites like Facebook, Twitter, and Instagram. The second-most-accessed platform by the respondents was messaging applications. The internet offers a more efficient way of communicating with others, regardless of their distance or location from each other. 147 or 77.37% of the respondents expressed they use messaging applications like Facebook Messenger, Viber, and Telegram. Video conferencing applications such as Zoom and Google Meet were the third most accessed platforms by the college students, constituting 66.84%, followed by video streaming sites like Netflix and YouTube with 57.37%. Accessing emails has 50%, and mobile game applications have 47.37%. Online learning with 17.89%, workspace collaboration tools with 16.84%, networked gaming sites with 15.26%, and professional sites with 8.42% are the least-accessed sites by the respondents.

The students' most frequently visited websites are appropriate for the age group represented. Since all respondents were college students, it is expected that professional networking sites are still new to them and that social networking sites are where they spend most of their time.

**B. The digital footprint awareness of the undergraduate students**

**1. Online Activities**

Online activities pertain to the interactions made by end-users online with other end-users and include different forms of communications such as sending emails, texts, and online files, social media engagement, and the sharing of pictures and videos through different websites, applications, and social networking platforms.

Table 3 shows the digital awareness of the undergraduate students in terms of their online activities.

**TABLE IIIII DIGITAL FOOTPRINT AWARENESS ASSOCIATED WITH ONLINE ACTIVITIES**

<b>Item Statements</b>	<b>Mean Rating</b>	<b>Verbal Interpretation</b>
Before sharing a comment or article in digital environment, I check what I have written in terms of style many times and then share it.	3.48	Strongly Agree
Before sharing a comment or article in digital environment, I check what I have written in terms of spelling many times and then share it.	3.42	Strongly Agree
Before sharing a comment or article in digital environment, I check the date it was posted and the source, and then share it	3.37	Strongly Agree
I conduct fact-checking of comments and/or articles I see online before sharing it	3.37	Strongly Agree
I double check the sources of information if it is a legitimate source before sharing it in digital environment	3.45	Strongly Agree
<b>Grand Mean</b>		<b>3.42</b>
<b>Verbal Interpretation</b>		<b>Fully Aware</b>

The results, as shown in Table 3, indicate that the respondents of the study are fully aware of the impact of their online activities on their digital footprint. This is reflected in the overall mean score of 3.42, considered as “fully aware”. This suggests that the respondents understand that their online actions leave a permanent record and can affect their online reputation and digital identity. The high level of awareness among the college students indicates that they are conscious of their online behaviour and the potential consequences of their actions in the digital world.

The respondents strongly agrees that they thoroughly review the style ( $\mu = 3.48$ ) and spelling ( $\mu = 3.42$ ) of their comments or articles before sharing them in a digital environment. This indicates that the respondents holds a strongly belief in the importance of reviewing the style of their comments or articles, and on the accuracy and professionalism of their written contents before sharing them in a digital environment. Respondents also ensure that contents are free of spelling errors and that the style follows the correct forms. The statements mean that the respondents are committed to presenting well-written, clear, and polished content when sharing information online. Reviewing the style of written content can help to improve the readability and overall quality of the information being shared. It also shows that the respondents value professionalism and wants to make a positive impression on others through the content they share online. The strong agreement on the correctness of the spelling and grammar also suggests that the respondents take their online communication seriously to present a well-written output to others.

It is noteworthy to mention that the respondents has a strongly agree ( $\mu = 3.37$ ) that they check the date a comment or article was posted and its source before sharing it in a digital environment. This means that the respondents values the accuracy and credibility of the information they share online and wants to ensure that they are share up-to-date and trustworthy information. Checking the date and source of information before sharing can help to avoid spreading false or outdated information and maintain the credibility of the respondent’s own online presence. The strong agreement with this statement indicates that the respondents takes their online communication seriously and wants to present a reliable and trustworthy image to others.

The respondents further expressed that they conduct fact-checking of comments and/or articles they see online before sharing it ( $\mu = 3.37$ ). This shows that the respondents place a high value on the accuracy and reliability of the information they share with others in the digital environment. By checking the facts before sharing, the respondents aim to ensure that they are not spreading false or misleading information and that their own online reputation is not tarnished by sharing incorrect information. The fact-checking process can help to promote the credibility and trustworthiness of the information being shared, and by extension, the respondents themselves.

Lastly, the respondents practice double-checking of sources of information before sharing it in a digital environment ( $\mu = 3.45$ ). This behaviour indicates that the respondents is concerned about the credibility and legitimacy of the information they share with others online. By verifying the sources of information, the respondents are ensuring that they are sharing reliable and trustworthy information, which can help maintain their own online reputation. Sharing misleading information can lead to negative impact to respondent’s online presence too. Thus, it is necessary to conduct double-checking at all times.

Being fully aware of one’s online activities is crucial in maintaining a positive digital footprint. In today’s digital world, individuals are leaving a vast amount of information about themselves online, and this information can be easily accessible



to others. This digital footprint can impact a person’s personal, professional, and social life. A positive digital footprint, which is a result of being fully aware of online activities, can open doors for personal and professional opportunities, whereas a negative digital footprint can lead to missed opportunities, embarrassment, and even harm one’s reputation. Therefore, it is essential for individuals to be mindful of what they post online, the information they share, and who can access it. By being fully aware of one’s online activities, individuals can maintain a positive digital footprint and ensure that their online presence reflects who they are and what they stand for.

**2. Personal Information**

Presented in Table 4 is the result of the assessment made by the undergraduate students on their digital footprint awareness in terms of the personal information being shared in different online platforms.

**TABLE IVV DIGITAL FOOTPRINT AWARENESS ASSOCIATED WITH PERSONAL INFORMATION**

Item Statements	Mean Rating	Verbal Interpretation
I am aware that information about myself in digital environments can be encountered in my school, professional, or private life	3.42	Strongly Agree
I play it safe when I share information in digital environments because they may be encountered in my professional or private life	3.41	Strongly Agree
I am aware that the contact details I supply in different sites in different digital platforms can be use by others	3.26	Strongly Agree
I know that the personal details I put the different online platforms that I use can leak and be accessed by others	3.27	Strongly Agree
I am aware that somebody may access my public personal information and use it to their advantage	3.30	Strongly Agree
<b>Grand Mean</b>	<b>3.33</b>	
<b>Verbal Interpretation</b>	<b>Fully Aware</b>	

As presented in Table 4, the respondents strongly agree ( $\mu = 3.42$ ) that they are aware that information about themselves in digital environments can be encountered in their school, professional, or private lives. This suggests that they understand the implications of their online activities and how they can affect different aspects of their lives. The respondents are likely to take steps to manage their digital footprint and ensure that the information they share online is appropriate and in line with their personal values and goals. By being aware of the potential consequences of their online activities, they can maintain a positive digital footprint and protect their reputation and privacy in all aspects of their lives.

The respondents also strongly agree ( $\mu = 3.41$ ) that they play it safe when sharing information in digital environments because they may be encountered in their professional or private lives. This suggests that the respondents are cautious and mindful of their online activities and the information they share. They understand the potential impact of their online actions and want to ensure that they maintain a positive digital footprint. By being mindful of the information they share and its potential consequences, they can protect their reputation, privacy, and future opportunities in both their professional and personal lives.

Moreover, respondents strongly agree ( $\mu = 3.26$ ) that they know other people can use the contact information they give on different sites and digital platforms. This suggests that the respondents understand the potential for their personal information to be misused online. They are mindful of the privacy risks associated with sharing their contact information and are taking steps to protect themselves from unwanted contact or other negative consequences. Respondents are taking steps to make sure their personal information stays private and safe in a digital world by being aware of the risks.

The respondents strongly agree ( $\mu = 3.27$ ) that they know that the personal details they put on different online platforms can leak and be accessed by others. This shows that the respondents are aware of the security risks associated with sharing personal information online. They understand that their data may be vulnerable to breaches and that the details they provide on different platforms can be accessed by unauthorized individuals. The respondents’ agreement suggests that they are taking steps to ensure the safety and privacy of their personal information online by being cautious and vigilant about the information they share.

Finally, respondents strongly concur ( $\mu = 3.30$ ) that they are aware that others may access and use their publicly available personal information to their advantage. This suggests that the respondents have a high level of concern about the potential

risks and consequences associated with sharing personal information in digital environments. They know it's important to be careful and keep their personal information safe so they don't get hurt.

Being fully aware of the personal information shared online is critical to maintaining a positive digital footprint. The Internet has made it easy to share personal information with a large audience, but this can also lead to the spread of sensitive or private information. Unwanted exposure of personal information, such as contact details, financial information, or even opinions, can have serious consequences, such as identity theft, online harassment, and loss of privacy. On the other hand, being mindful of what personal information is shared online and who has access to it can help maintain a positive digital footprint and protect one's privacy and security. Additionally, it is important to consider the long-term effects of sharing personal information online, as the information can persist even after being deleted. By knowing what personal information they share online, people can make smart choices about what they share and make sure their digital footprint shows them in a good light.

### 3. Online Transactions

In Table 5, the result of the assessment on the digital footprint awareness associated with the online transactions made by the college students is shown.

**TABLE V DIGITAL FOOTPRINT AWARENESS ASSOCIATED WITH ONLINE TRANSACTIONS**

Item Statements	Mean Rating	Verbal Interpretation
I know that all kinds of transactions that I perform in digital environments will be recorded	3.32	Strongly Agree
I am aware that none of the transactions that I perform in digital environments may remain anonymous	3.23	Agree
I know that the transactions I perform in the digital environments leave a trace and contribute to my online trail	3.25	Strongly Agree
I am aware that may online transactions in digital environments are stored in the site which I visit	3.21	Agree
I know that part of the transactions I made online can reflect in different accounts I access.	3.22	Agree
<b>Grand Mean</b>	<b>3.25</b>	
<b>Verbal Interpretation</b>	<b>Fully Aware</b>	

Table 5 shows the digital footprint awareness of the college students associated with their online transactions. According to the results, respondents strongly agree ( $\mu = 3.32$ ) that they know everything they do in digital environments will be recorded. This suggests that the respondents have a high level of understanding that their online activities are being monitored and documented, which is important for maintaining privacy and security in digital spaces. The respondents further agree ( $\mu = 3.23$ ) that they understand that none of the transactions they perform in digital environments can be kept anonymous. This suggests that they recognize that all digital activities leave a trace that can potentially be monitored and are aware of the implications this may have for their privacy and security.

In terms of the transactions they perform, the respondents have strong agreement ( $\mu = 3.25$ ) with the idea that the transactions they perform in digital environments create a digital trail or footprint. This means that individuals recognize that their online actions, such as purchasing products, using social media, or accessing websites, create a record that can be tracked and potentially accessed by others. The respondents are aware that this online trail contributes to their overall digital footprint, which is a representation of their online presence and actions.

Most of the people who answered the survey ( $\mu = 3.21$ ) agree that they know their digital transactions are saved on the websites they visit. This suggests that the respondents have some understanding of the fact that their online activities are being recorded and can potentially contribute to their digital footprint. Finally, the respondents agree ( $\mu = 3.22$ ) that some of the transactions they have made online can be reflected in different accounts they access. This indicates that the respondent recognizes the connection between different online platforms and that their actions on one platform may have an impact on their digital trail as a whole.

Becoming fully aware of the online transactions performed is essential in relation to the digital footprint, as they directly impact an individual's online presence and reputation. Transactions performed in digital environments, such as purchasing

goods and services or accessing financial accounts, leave a trace and contribute to an individual's online trail. This information can be saved on the websites visited and reflected in the various accounts accessed, making it easily accessible to others. Furthermore, online transactions may not remain anonymous and can be recorded, which can be accessed and used by others to their advantage. To protect privacy and personal information, it is important to be aware of and educated about online transactions and how they affect a person's digital footprint.

#### 4. Online Platforms

Presented in Table 6 is the assessment of the digital footprint awareness associated with online platforms accessed by the college students.

**TABLE VI DIGITAL FOOTPRINT AWARENESS ASSOCIATED WITH ONLINE PLATFORMS**

<b>Item Statements</b>	<b>Mean Rating</b>	<b>Verbal Interpretation</b>
I am aware that my information/sharings may be found by other people in environments like internet cafe and shared computers	3.32	Strongly Agree
I take necessary precautions so that other people will not see or use my personal information in digital environments	3.38	Strongly Agree
I am aware that my log trail in different environments and platforms are being recorded	3.28	Strongly Agree
I am aware that the passwords and other personal details are stored in different environments I use and access	3.31	Strongly Agree
I know that there is a possible of leakage of information in the sites I visit	3.36	Strongly Agree
<b>Grand Mean</b>	<b>3.33</b>	
<b>Verbal Interpretation</b>	<b>Fully Aware</b>	

In Table 6, the result of the assessment on the digital footprint awareness of the college students is presented. The overall grand mean of 3.33 shows that college students are very aware of how their digital footprint affects the security of the different online platforms they use.

Specifically, the respondents have a strong understanding of the concept that the information they share or store on public or shared devices, such as internet cafes or shared computers, may be accessed by others ( $\mu = 3.32$ ). The computed mean indicates strong agreement with the statement. Meaning, the respondents consider this to be a serious issue and take the necessary steps to protect their information. This awareness of the potential risks associated with using public or shared devices highlights the importance of being conscious of one's online presence and mindful of the information shared in digital environments.

The respondents also have a high level of concern for the security of their personal information in a digital environment. They acknowledge that their information may be vulnerable to access or misuse in public spaces and therefore take necessary precautions to prevent this from happening. The mean rating of 3.38 indicates that they hold this belief strongly and are likely to take it seriously. They take steps to protect their personal information because they think it's important to keep it safe and private in digital environments.

In terms of their activities being recorded, the respondents strongly agree with the idea, indicating that they understand that their movements in digital environments are not private and are being monitored ( $\mu = 3.28$ ). The respondents are likely to take the necessary precautions to protect their personal information and privacy in different digital spaces. The respondents are also highly aware that the passwords and other personal details they use in different digital environments are stored on those platforms ( $\mu = 3.31$ ). The computed mean rating suggests that the respondents are conscious of the security of their personal information online and understand that it is important to take precautions to protect it.

Finally, the respondents have a strong belief that there is a high likelihood of information being leaked from the websites they visit. They know that sharing personal information online can be dangerous and that they need to take the right steps to protect their digital footprint ( $\mu = 3.36$ ).

Being fully aware of one's digital footprint is crucial for college students, as they are likely to use a variety of online platforms such as social media, educational sites, job portals, etc. These platforms store a wealth of personal information, including personal details, contact information, online activities, and transactions, which contribute to an individual's

digital footprint. A digital footprint can have a significant impact on one's personal and professional life, especially in terms of security and privacy. It can reveal sensitive information, including personal preferences, behavior patterns, and financial transactions, to both individuals and organizations. Therefore, it is essential for college students to be aware of their digital footprint and take the necessary precautions to protect their personal information and online reputation. This includes being careful about what they share online, using strong passwords, and being vigilant about phishing scams and online frauds. By being fully aware of their digital footprint, college students can take control of their online presence and protect themselves from potential security and privacy risks.

### 5. Privacy and Security

In Table 7, the assessment in terms of the privacy and security made by the college students associated with their digital footprints is presented.

**TABLE VII DIGITAL FOOTPRINT AWARENESS ASSOCIATED WITH ONLINE PLATFORMS**

<b>Item Statements</b>	<b>Mean Rating</b>	<b>Verbal Interpretation</b>
I use privacy settings in online forms	3.47	Strongly Agree
I always check and arrange privacy settings in online tools	3.39	Strongly Agree
I read and understand the privacy and security terms of the sites I access and use	3.35	Strongly Agree
I always delete history logs and cookies	3.18	Agree
I change my password in different accounts regularly	2.98	Agree
<b>Grand Mean</b>	<b>3.27</b>	
<b>Verbal Interpretation</b>	<b>Fully Aware</b>	

In Table 7, the result of the assessment made by the college students on their digital footprint awareness associated with privacy and security is presented. In general, the overall computed mean rating of 3.27 indicates that the students are fully aware of this idea relevant to having a high understanding of digital footprint.

The respondents have a high level of awareness about the potential dangers of sharing personal information in digital environments and take steps to protect themselves. The use of privacy settings indicates a recognition of the need for control over the dissemination of personal information as well as a proactive approach to securing one's digital footprint. The high level of agreement ( $\mu = 3.47$ ) suggests that the respondent places a high priority on maintaining privacy and security in their online activities.

The second item mentioned in Table 7 implies that the respondents have a high level of conscientiousness when it comes to their privacy and security in the digital world. They understand the importance of protecting their personal information and take proactive steps to ensure that their information is kept confidential. With a score of 3.39 (strongly agree), it can be inferred that the respondents regularly takes the time to review and adjust their privacy settings in the various online tools they use. They are aware of their digital footprint and do what they need to do to protect their information.

This third statement reflects the importance of understanding the privacy and security measures of the sites that an individual accesses and uses in the digital environment. The assessment made by the respondents, with a computed mean score of 3.35, indicates that they strongly agree and are highly proactive in ensuring their privacy and security by reading and comprehending the privacy and security terms of the sites they visit. They take the time to understand what measures are in place to protect their personal information and how it will be used, stored, and shared. This level of awareness and attention to detail can help prevent potential privacy breaches or the unauthorized use of personal information.

In terms of deleting history logs and cookies, the respondents agree that this practice is being done appropriately, with a computed mean rating of 3.18. The statement implies that the respondents have a habit of regularly deleting the history logs and cookies on their devices to minimize the amount of information that is stored and potentially vulnerable to being accessed by others. This practice shows that the respondents value their privacy and are proactive in protecting their personal information in the digital world. The computed mean rating suggests that the respondents are fairly confident in their beliefs and behaviors related to maintaining privacy online.

Lastly, with a computed mean rating of 2.98, the respondents agree that they change their password regularly in different accounts. This indicates that they recognize the importance of maintaining security of their personal information in digital environments and take proactive measures to protect it by regularly updating their passwords.



Digital footprint awareness is crucial for security and privacy in today's digital age. With the increasing use of online platforms and services, the amount of personal information being shared and stored in digital environments is growing rapidly. This information can include sensitive details such as login credentials, financial information, and personal contacts. If this information falls into the wrong hands, it can result in serious consequences such as identity theft, financial fraud, and privacy violations. Being aware of one's digital footprint and taking proactive measures to protect personal information is essential to maintaining online security and privacy. This includes regularly reviewing and adjusting privacy settings, using strong and unique passwords, being cautious when sharing personal information, and regularly deleting history logs and cookies. By staying informed and proactive, individuals can protect themselves and their information in the digital world.

C. Overall digital footprint awareness

Presented in Table 8 is the overall assessment made by the respondents on the digital footprint awareness.

TABLE VIII OVERALL DIGITAL FOOTPRINT AWARENESS

Item Statements	Mean Rating	Verbal Interpretation
I am aware of the concept of digital footprint	3.27	Fully Aware

The presented result for the overall digital footprint awareness shows that respondents have a strong understanding as reflected in the mean rating of 3.27. This high level of awareness of digital footprints is important because it means that the person is likely to take steps to manage their online presence in ways that protect their security and privacy. By being aware of the concept, they can better understand the ways in which their online activities are being recorded and monitored and take steps to minimize their exposure to security and privacy risks.

IV. CONCLUSION AND RECOMMENDATIONS

A study conducted at a private higher education institution in Nueva Ecija, Philippines, aimed to determine the digital footprint awareness of undergraduate students. The study used a descriptive research approach with a survey instrument that collected data from 190 college students. The results showed that the majority of respondents were male, in their early twenties, and used the internet for 5–6 hours a day, mostly accessing social networking sites through smartphones. The study found that the students were well aware of their digital footprint in terms of online activities, personal information, online transactions, online platforms and environments, privacy, and security. Based on the results, the researcher suggested activities to sustain digital footprint awareness and educate future students.

The following are the recommendations made by the researcher.

1. A follow-up study could be done in the future to keep track of how aware college students are of their digital footprints.
2. The results of this study may become the basis for crafting a plan of action on how to sustain a positive and high level of digital footprint awareness among college students.
3. So that college students are aware of their digital footprints in the future, the college may want to hold seminars and workshops on digital citizenship. This would make sure that the students are more knowledgeable and aware.
4. This study could serve as the foundation for future studies in different contexts and over different time periods.

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