



Information Literacy Competencies of Pre-Service Teachers of Higher Education Institutions (HEIs)

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Abstract - This study aimed to determine the information literacy competencies of the pre-service teachers of higher education institutions in Pangasinan and the various factors influencing their performance. There were seven hundred seventy-seven (777) pre-service teachers who served as the respondents of the study. A complete enumeration technique was employed in choosing the respondents. An Information Literacy Standard Test was administered by the researcher with the assistance of the College Deans and program Heads of the Higher Education Institutions in Pangasinan to gauge their information literacy standards.

Most or 44% of the pre-service teachers belonged to the age range of 21-23 years old, are females (75.3%); taking Bachelor of Secondary Education specialize in English (31%) belonged to the third year (41%) have garnered a GPA of 1.75 for the second semester of 2019-2020 and first semester of 2020-2021 (40.7% and 39.5%); with a monthly family income ranging from P5001-10,000 (28.3%). Most of the respondents' mothers and fathers are high school graduates (32.8% and 32.6%) respectively. In terms of frequency of use of various sources of information at home, 696 out of 777 or 89.6% of the pre-service teachers always used Google, with an average weighted mean of 4.84. The most frequently used printed sources of information at home are dictionary, textbook and bible as indicated by the average weighted mean of 3.86, 3.7 and 3.46 respectively; while, the least frequently read are almanac and thesaurus with the average weighted mean of 2.1 and 2.47 respectively.

Pre-service teachers in public colleges/universities have higher level of information literacy standards as compared to those enrolled in private. Also, those pre-service teachers enrolled in Pangasinan State University have a higher level of acquisition of information literacy standards. Males have higher level of information literacy competencies than females. Significant majority marked much acquired in their information literacy competencies. There is no significant difference of the MAPEH versus non-MAPEH majors, Math versus non-Math majors, and Science versus non-Science major, and the level of information literacy competencies. Almost all the printed and online information sources significantly contributory to the level of Information literacy competencies of the pre-service teachers while utilization of Messenger and Instagram is not contributory with the information literacy competencies.

Keywords: information literacy, information literacy competency, pre-service teachers



INTRODUCTION

In the modern world, people demand high quality teaching and learning teachers. Teachers are considered mind builders. They have to possess a great deal of knowledge and skills for the sake of quality education.

Information literacy instruction to distance students plays a vital role during this Corona Virus Disease Pandemic. Educators cannot deny the fact that there are needs and problems faced by both educators and learners to deliver and receive important information. The Community Quarantine requires information literacy not only to the students but to the people of all ages to save someone from any harm or danger.

The Filipino broadcaster, Kim Atienza in his, "Lamang ang May Alam" can be associated to information literacy. In connection with our simple living, the more you learn, the more you gain, then the more you are becoming productive.

According to Lance and Potter (1995) as cited by Sacchanand (2002), Information literacy is considered a survival skill for the new century, the key-competency for independent study, self-directed learner, lifelong learning and the foundation of a literate society. This is important to student achievement and considered a desirable outcome of higher education.

Jonathan Quick (2019) a Doctor of Medicine, states that, in times of real fear, it is not facts that are going to convince people; it is having the message from people they trust in."

Therefore, future teachers, and contemporary teachers must be information literate and simultaneously develop the following: 1) awareness of how they engage with the digital world; 2) how they find meaning in the information they discover; 3) how to articulate what kind of information they require; 4) how to use information ethically; 5) understand the role they can play in the communication in their profession; and 6) how they evaluate information for credibility (<https://madisoncollege.edu/InfolitStudents> retrieved 2020).

The ability to read and write is called literacy; its opposite is illiteracy. There are no degrees of illiteracy - one either can or cannot read or write - but there are several degrees of literacy. In some societies a person who can read the letters of the alphabet or read or write his or her own name is considered literate. In general, however, literacy means the ability to read and understand a wide range of material, as well as the ability to write clearly and coherently.

By the 1980s, according to international but admittedly inconsistent definitions of literacy, about seven (7) out of ten (10) adults in the world were considered literate. The populations with highest levels of literacy were in the most economically advanced nations (Compton's Eyclopedia, 1995).

Information literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion in all nations.

Technology is so much fun, but we can drown in our technology. The fog of information can drive out knowledge.

The emerging of information technologies poses a challenge of considerable importance to education systems, schools and teachers. It is of universal agreement that knowledge can double in less than a decade. Presently, schools and the teaching staff are regarded as repositories of knowledge. It will not be long, with the advent of information and communication technologies, when the knowledge explosion will necessarily demand new and more effective teaching methodologies, streamlined school administrative processes and ultimately new learning styles among the clientele.

From the information literacy landscape, (Coonan and Jane 2014), information literacy measures study skills and academic writing, transliteracies, critical thinking and evaluation, critical analysis and search skills.



Information literacy goes with information technology. These days, people usually depend on the screen. When checking the time, talking to someone on the phone, send and receive a message or even looking for the meaning of a word and doing research. These are very common in getting any information. If these are very helpful to us, there are also negative effects not only to the adult but especially to the children.

We may lament the way young people treat their phones as a body appendage, and how they prefer texting to talking. But to understand today's teens, "digital natives" of the i-Generation, we must also talk honestly about our own attachment to technology. If we hope to limit the screen time of our children, we have to be willing to put down our own phones and laptops to spend time talking, listening and doing things together.

To support this, according to the study, 79 percent of teens "display symptoms of emotional distress when kept away from their personal electronic devices."

Johnson (2019) enumerated four-step plan to limit screen time: First, honestly assess your own media use. Second, If your phone or other digital device has become a sort of idol, you may need sacramental solution, confessing to a priest and expressing sorrow over the fact that your excessive reliance on devices has taken time and attention from family, loved ones, prayer time and other religious obligations. Third, given the powerfully addictive nature of technology, you may not be able to "just say no." Lastly, picture your next interaction with an i-Generation young person in your life.

Whatever source of information we have, it is important to be careful and wise to become an information literate individual.

Thus, the researchers decided to conduct a study on information literacy competencies of pre-service teachers of Higher Education Institutions (HEIs) in Pangasinan.

OBJECTIVES OF THE STUDY

This study sought to determine the information literacy competencies of pre-service teachers of Higher

Education Institutions (HEIs) in Pangasinan during the school year 2020-2021.

Specifically, it sought to answer the following:

1. What is the profile of the pre-service teachers in terms of:
 - a. age;
 - b. sex;
 - c. specialization;
 - d. year level;
 - e. Grade Point Average (GPA) for the last two (2) semesters
 - f. monthly family income;
 - g. highest educational attainment of parents;
 - h. frequency of use of various sources of information at home;
 1. printed
 2. online
2. What is the extent of information literacy competencies as perceived by themselves?
3. Is there a significant difference between literacy competencies of pre-service teachers and their profile variables?
4. What is the relationship between the frequency of utilization of various sources at home at the level of information literacy competencies of pre-service teachers?

MATERIALS AND METHODS

The research instruments used in the study were adopted from Queroda (2016) to measure the information literacy competencies of the respondents. A cover letter with a description of the purpose and the importance of the study were attached to the instruments. Respondents were assured of their anonymity and confidentiality of information all throughout the conduct of this research work.

Moreover, the instrument used for the profile of the pre-service teachers was enriched and enhanced in the context of the study.

In the light of gathering the needed information, the researcher prepared two (2) sets of research



instruments to evaluate the problems presented in this study.

The first part of the instrument is the profile of the pre-service teachers.

The second part of the instrument is the information literacy adopted from Queroda (2016). It consists of the five (5) following standards:

Competency No. 1 determines the nature and extent of the information needed; Competency No. 2 accesses needed information effectively and efficiently; Competency No. 3 evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system; Competency No. 4, individually, or as a member of a group, uses information effectively to accomplish in specific purpose; and Competency No. 5 understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

The researchers first secured the necessary endorsement and approval to conduct the study through written communication from appropriate offices and heads of the campuses under study. The instruments were distributed online by the researcher to guarantee that the necessary data be gathered as planned.

With the help of the Office of the Presidents, Vice Presidents, College Deans and Program Heads of the Higher Education Institutions (HEIs) or the Public and Private Universities and Colleges in Pangasinan, the pre-service teachers' lists were gathered in their respective campuses and through online. Pre-service teachers answered the research instruments which consist of their profile, and information literacy competencies test. Respondents answered the questionnaire survey using Google form due to the Corona Virus Disease Pandemic. They answered the instruments individually using an online application.

The data gathered were subjected to appropriate statistical tools necessary for objective interpretation and evaluation. Generally, the descriptive and inferential statistics were used to present and describe the research problem.

Specifically, to answer the first statement of the problem, which elicits pre-service teachers' personal profile, frequency and percentages were used to summarize and describe the profile of the respondents; average weighted mean for the frequency of utilization to respondents on the various sources of information at home.

To provide answer to the second statement of the problem, which determined the relationship between the frequency of utilization of various sources of information at home and the respondents' level of information literacy competencies, Spearman Rho correlation was used.

For the third problem which aimed to determine the significant difference between the profile of the respondents and their level of information literacy competencies, the Mann-Whitney U test was used for variables with two categories or observations. Initially, only the variable 'sex' has two categories. For the school enrolled in by the respondents, their responses were re-classified to two categories in two ways: 1) as public and non-public school, and 2) as PSU and non-PSU institution. For the major of specialization, re-classification was used such as English major and non-English major, Filipino major and non-Filipino major, Math major and non-Math major, and others. For the variable highest educational attainment, re-classifications were 'college graduate' and 'non-college graduate'.

Kruskal Wallis H test was used for variables with more than two categories or observations. The year level has three categories—second year, third and fourth year. The Grade point Average (GPA) was re-classified to three categories—High GPAs, Average GPAs and Below-average GPAs. The monthly family income was re-classified also to three categories as closely patterned to the three lowest income bracket used by the Philippine Statistics Authority.

Both are non-parametric test used as alternative for the independent sample t-test or ANOVA. Mann Whitney U test and Kruscal Wallis H-test can test variables at ordinal scale of measurement. Further, both tests are used for variables which do not meet the normality distribution assumption.

Below are the formulae for (a) Percentage, (b) Mann Whitney U test, (c) Kruskal Wallis H test, and (d) Spearman Rho Correlation.

(a) Formula for Percentage

$$P = \frac{Y}{n} \times 100$$

Where P is the percentage, Y is the frequency of observation, n is the number of sample.

(b) Formula for Mann Whitney U test

$$U_1 = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1$$

Where U_1 is the Mann Whitney calculation, n_1 is the number of samples for the first category of the variable, n_2 is the number of samples for the second category of the same variable, and R_1 is the sum of ranks of the variables with two observations.

(c) Formula for Kruskal Wallis H test

$$H = \frac{12}{n(n+1)} \sum \frac{R_i^2}{n_i} - 3(n+1)$$

in the jth group, n_i is the size of sample 1, n is the total sample size.

(d) Formula for Spearman Rho correlation

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where

- ρ = Spearman's rank correlation coefficient
- d_i = difference between the two ranks of each observation
- n = number of observations

For the fourth statement of the problem pertaining to information literacy competencies of the pre-service teachers, the average weighted mean for each indicator was interpreted in a given set of numerical values with their corresponding descriptive equivalents as expressed using five-point rating scale and range as stated in the below;

Scale Range	Scale	Descriptive Equivalent
4.21 - 5.00	5	Very Much Acquired (VMA)
3.41 - 4.20	4	Much Acquired (MA)
2.61 - 3.40	3	Acquired (A)
1.81 - 2.60	2	Fairly Acquired (FA)
1.0 - 1.80	1	Not Acquired (NA)

RESULTS AND DISCUSSION

In accordance to the research query, data on the profile of the pre-service teachers were obtained which included age, sex, specialization, year level, Grade Point Average (GPA) for the last two semesters, monthly family income, highest educational attainment of parents and frequency of use of various sources of information at home.

Table 1

Distribution of Pre-service Teachers in Terms of Age

Age Range	Frequency	Percentage
18-20	320	41.2%
21-23	342	44%
24-26	58	7.5%
27 and above	57	7.3%
Total	777	100

Out of 777 pre-service teachers, 342 of them or 44 percent have an age range of 21-23. Fifty seven (57) or 7.3 percent of them are within the age bracket of 27 and above.

This finding is expected in the Philippine educational context, i. e. a college student usually ages 21-23 years old, since the Philippines adopted the K-12 program.

Other respondents belonged to the age range of 18-20 years old. They are those students who started school earlier than the required age in elementary level.

Table 2

Distribution of Pre-service Teachers in Terms of Sex

Sex	Frequency	Percentage
Male	192	24.7%
Female	585	75.3%
Total	777	100

It can be gleaned from the table that 192 pre-service teachers or 24 percent are males, while 585 or 75.3 percent are females.

This observation is in agreement with the findings of Meimban (2012) that pre-service teachers are more populated by females. The pre-service teachers are dominated by female than male.

As cited by Meimban (2012), according to the National Statistics Office (NSO), more females pursued higher levels of education than males.

Table 3
Distribution of Pre-service Teachers in Terms of Specialization

Course	Frequency	Percentage
Bachelor of Secondary Education – English	241	31
Bachelor of Secondary Education – Filipino	86	11.1%
Bachelor of Secondary Education – Mathematics	68	8.8%
Bachelor of Secondary Education - Music, Arts, Physical Education and Health	26	3.3%
Bachelor of Secondary Education – Science	86	11.1%
Bachelor of Secondary Education - Social Studies	141	18.1%
Bachelor in Technical-Vocational Teacher Education	74	9.5%
Bachelor of Technology and Livelihood Education	55	7.1%
Total	777	100

The table above exemplifies that most of the pre-service teachers are taking Bachelor of Secondary Education specialize in English which has 241 out of 777 or 31 percent.

The table implies that majority of the pre-service teachers in Higher Education Institutions in Pangasinan are taking BSE English.

English is one of the most dominating language of the world which is having its impact on every field of

work. Undoubtedly, English plays a much greater role in the world that is inevitable for people to ignore it fully.

According to Simon-linguaenglish (2015) there are ten reasons why English is considered such an important language. These are the following: (1) it is the most commonly spoken language in the world; (2) it is the language of international business; (3) most movies are in English; (4) it's easy to learn; (5) it helps you understand other languages; (6) you can say things in a hundred different ways; (7) it can be used around the world; (8) it is really flexible; (9) it is the language of the internet; and (10) it continues to change.

This proves that English provides an excellent preparation for careers in business, public service, education, law and many other areas.

The Wall Street Journal (2012) reported that communication, the ability to clearly articulate your point of view, would be a valuable skill.

In addition, University of Lynchburg, brought out majoring in English makes a student explore the English and American literary traditions, develop abilities as a reader and interpreter of literature, understand the role of critical and analytical perspective in any analytical situation, enhance pleasure in the enjoyment of literature, and improve abilities as a writer and editor.

Table 4
Distribution of Pre-service Teachers in Terms of Year Level

Year Level	Frequency	Percentage
Second Year	305	39.3%
Third Year	323	41.6%
Fourth Year	149	19.2%
Total	777	100

In terms of the year level of the pre-service teachers, 323 or 41 percent are in third year. However, 149 or 19.2 percent among the pre-service teachers are in fourth year.

Table 5
Distribution of Pre-service Teachers in Terms of Grade Point Average (GPA)

Grade Point Average (GPA)	S. Y. 2019-2020 2 nd Semester		S. Y. 2020-2021 1 st Semester	
	Frequency	Percentage	Frequency	Percentage
1.0	10	1.3	8	1.0
1.25	20	2.6	28	3.6
1.50	171	22.0	203	26.1
1.75	316	40.7	307	39.5
2.0	152	19.6	126	16.2
2.25	40	5.1	47	6.0
2.50	35	4.5	25	3.2
2.75	19	2.4	19	2.4
3.00	14	1.8	14	1.8
Total	777	100	777	100

This shows that during the second semester of 2019-2020, 316 or 40.7 percent garnered a GPA of 1.75 while only 10 or 1.3 percent garnered a GPA of 1.00.

On the other hand, on the first semester of 2020-2021, 307 or 39.5 percent among the pre-service teachers garnered a GPA of 1.75 while only 8 or 1 percent garnered 1.00.

The GPA of the pre-service teachers follows a normal distribution for the second semester of 2019-2020 and first semester of 2020-2021, with mean of 1.75.

Table 6
Distribution of Pre-service Teachers in Terms of Monthly Family Income

Monthly Income Range	Frequency	Percentage
P1,000 and below	82	10.6%
P 1,001 to P 5,000	220	28.3%
P5,001to P 10,000	227	29.2%
P10,001toP15,000	124	16.0%
P15,001toP20,000	62	8.0%
P20,001toP25,000	25	3.2%
P25,001and above	37	4.8%
Total	777	100

It can be gleaned from the table that 227 or 28.3 percent of the pre-service teachers' monthly family income ranges from P5001-10,000 and 25 or 3.2 percent ranges from P20,001- 25,000. It exposes that most of the pre-service teachers belong to poor income class bracket (PSA, 2020).

Further, Biswas (2021) pointed out that the near-term outlook for the Philippines economy has been impacted by sharply rising wave of COVID-19 cases. The Philippines economy suffered a deep recession in 2020 due to the impact of COVID-19 pandemic, with the GDP contracting by 9.6% year-on-year. This was the largest annual decline ever recorded since National Accounts data series for the Philippines commenced in 1946.

Table 7
Distribution of Pre-service Teachers in Terms of their Parents' Highest Educational Attainment



Highest Educational Attainment of Parents	Mother		Father	
	Frequency	Percentage	Frequency	Percentage
Elementary Level	58	7.5%	62	8.0%
Elementary Graduate	58	7.5%	52	6.7%
High School Level	103	13.3%	99	12.7%
High School Graduate	255	32.8%	253	32.6%
Vocational Undergraduate	8	1.0%	11	1.4%
Vocational Graduate	36	4.6%	60	7.7%
College Level	101	13.0%	110	14.2%
College Graduate	134	17.2%	117	15.1%
With Master's Units	10	1.3%	2	0.3%
Master's Graduate	9	1.2%	6	0.8%
With Doctoral Units	1	0.1%	3	0.4%
Doctoral Degree	4	0.5%	2	0.3%
Total	777	100	777	100

Most (32.8%) of the respondents' mothers are high school graduates while 134 out of 777 (17.2%) have their college degree. Only 0.1 percent are with doctoral units. Findings show that pursuing college education is not the priority of the respondents' mothers. This can be contributed to the low family income.

It can be gleaned from table 7 that most (32.6%) of the respondents' fathers are high school graduates while 117 out of 777 (15.1%) have their college degree. Only 0.3 percent of the respondents' fathers are with master's units or with doctoral degree. Again, findings of the study show that pursuing a college degree was not the priority of the scholars' father. Although their fathers were not doctorate degree holder, still it is their responsibilities to send these learners to the University to earn knowledge from the program.

Based on historical accounts, the Philippine education started with tribal tutors where education is informal and unstructured, and children were provided with vocational training and less academics by parents and houses of tribal tutors. (Florido 2006). This could

be an answer to the speculation on why students' parents are usually high school or elementary graduates, deprived of having a college formal education.

The information literacy competencies of the pre-service teachers is directly enhanced by certain factors as the pre-service teachers' frequency of use of various sources of information at home presented in Table 8.

The result shows the profile of the scholars in terms of frequency of use of various sources of information at home. It can be seen in the table that 696 out of 777 or 89.6 percent of the respondents always used Google, with an average weighted mean of 4.84.

The most frequently used printed sources of information at home are dictionary, textbook and bible as indicated by the average weighted mean of 3.86, 3.7 and 3.46 respectively; while the least frequently read are almanac and thesaurus with the average weighted mean of 2.1 and 2.47.

Zaman (2012) provided reasons why Google is the leading search engine website. Before Google, there are three popular and big search engines already dominating the search industry. They are Lycos, Alta Vista, and Yahoo Search. These search engines were already competing against one another, but their popularity decreases as Google slowly rises up and gain momentum.

Statistics show that in the United States alone, around 70% of their internet populations are Google users. Google's popularity is surely the product of hard-work and constant innovation.

The table above implied that the Bible has played a vital role in our educational setting. A critical study of the Bible as literature can prepare students with the thinking skills needed in the 21st century. As an all-time bestseller, the Bible has had a profound impact on history, literature, and culture and it remains a vital part of American life.

Siao (2018) posited that according to the study of Lifeway Research, the number one predictor of spiritual maturity is reading the Bible on a daily basis. Put simply, studying and reading the Bible are the practices that have the most impact on spiritual growth.

On the other hand, dictionary is one of the most important learning tools while studying in the University. Dictionary helps the learners learn vocabularies better, understand the subject matter deeper, and improve communication by using words correctly.

**Extent of Information Literacy Competencies
Of the Pre-Service Teachers**

INFORMATION LITERACY COMPETENCIES	AWM	Descriptive Meaning
Competency No. 01- The information literate students determine the nature and extent of the information needed	3.84	Much Acquired
Competency No. 02- The information literate student accesses needed information effectively and efficiently.	3.76	Much Acquired
Competency No. 03- The information literate student evaluates information and its sources critically and incorporates selected information into his/her knowledge base and value system.	3.85	Much Acquired
Competency No. 04 - The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.	3.88	Much Acquired
Competency No. 05 - The information literate student understands many of the economic, legal, and social issues surrounding the use of information and access and uses information ethically and legally.	3.94	Much Acquired
OVERALL AVERAGE WEIGHTED MEAN	3.85	Much Acquired

1.00– 1.80 – Not Acquired 2.61 – 3.40 – Acquire
 4.21 – 5.00 – Very Much Acquired 1.81 – 2.60 – Fairly Acquire
 3.41 – 4.20 – Much Acquired

Based from the summary, out of the 5 competencies, the table reveals the findings on the extent of information literacy competencies of the pre-service teachers. Competency No. 5. is referred as, “The information literate students understand many of the economic, legal, and social issues surrounding the use of information and access and uses information ethically and legally”. The learners obtained an average weighted mean of 3.94 in Competency No. 5.

To sum up, the extent of information competencies is “much acquired” by the pre-service teachers with the reflected average weighted mean of 3.85.

The presentation below summarizes the results of the study.

1. Profile of the Pre-service Teachers

Most or 44% of the pre-service teachers belonged to the age range of 21-23 years old, are females (75.3%); taking Bachelor of Secondary Education specialize in English (31%) belonged to the third year (41%) have garnered a GPA of 1.75 for the second semester of 2019-2020 and first semester of 2020-2021 (40.7% and 39.5%); with a monthly family income ranging from P5001-10,000 (28.3%). Most of the respondents’ mothers and fathers are high school graduates (32.8% and 32.6%) respectively. In terms of frequency of use of various sources of information at home, 696 out of 777 or 89.6% of the pre-service teachers always used Google, with an average weighted mean of 4.84. The most frequently used printed sources of information at home are dictionary, textbook and bible as indicated by the average weighted mean of 3.86, 3.7 and 3.46 respectively; while, the least frequently read are almanac and thesaurus with the average weighted mean of 2.1 and 2.47 respectively.

2. Extent of information Literacy Competencies

In terms of the extent information literacy competencies of the pre-service teachers, the competencies were measured with a five-point scale.



Among the five competencies, the pre-service teachers obtained an average weighted mean of 3.85 which means all the five competencies are “much acquired”.

3. Significant Difference Between the Information Literacy Competencies of the Pre-service Teachers and their Profile Variables

To determine the significant difference between the profile of the respondents and their information literacy competencies, the Mann-Whitney U test was used for variables with two categories or observations. The variable ‘sex’ has two categories. Males have higher level of information literacy competencies as indicated in Competency No. 3.4 with a mean rank of 419.21 (for males) vs. 379.08 (for females); Competency No. 4.1 with a mean rank of 423.07 (male) vs. 377.82 (female); Competency No. 4.3 with a mean rank of 423.07 (male) vs. 380.23 (female); Competency No. 5.1 with a mean rank of 419.92 (male) vs. 378.85 (female) and Competency No. 5.3 with a mean rank of 421.07 (male) vs. 378.48 (female).

For the school enrolled in by the respondents, their responses were re-classified to two categories in two ways: 1) as public and non-public school, and 2) as PSU and non-PSU student. Pre-service teachers in public colleges/universities have higher level information literacy competencies as compared to those enrolled in private. Also, those pre-service teachers enrolled in Pangasinan State University have a higher information literacy competencies.

For the major of specialization, re-classification was used such as English major and non-English major, Filipino major and non-Filipino major, Math major and non-Math major, Science and non-Science, Technology and Livelihood Education and non- Technology and Livelihood Education, Social Studies and non-Social Studies, Technological, Vocational and Technical Education and non- Technological, Vocational and Technical Education, and Music, Arts and Physical Education and non- Music, Arts and Physical Education. For the variable highest educational

attainment, re-classifications were ‘college graduate’ and ‘non-college graduate’.

Kruskal Wallis H test was used for variables. The year level has three categories—second year, third and fourth year. The third year level of the Higher Education Institutions in Pangasinan has a higher information literacy competencies. The Grade point Average (GPA) was re-classified to three categories—High GPAs, Average GPAs and Below-average GPAs. The monthly family income was re-classified also to three categories as closely patterned to the three lowest income bracket used by the Philippine Statistics Authority.

Both are non-parametric test used as alternative for the independent sample t-test or ANOVA. Mann Whitney U test and Kruscal Wallis H-test can test variables at ordinal scale of measurement. Further, both tests are used for variables which do not meet the normality distribution assumption.

4. Relationship Between the Frequency of Utilization of Various Sources of Information at Home and the Level of Information Literacy Competencies

As regards relationship between the frequency of utilization of various sources of information at home, printed and online, and the information literacy competencies almost all the printed information sources such as bible, magazine, textbook, dictionary, encyclopedia, pocketbook, newspaper, journal, thesaurus and almanac are significantly contributory to the level of acquisition of information literacy competencies of the pre-service teachers. This means that the more they read these sources, the higher information literacy competencies.

On the other hand, some of the online sources of information such as e-book, Google, Twitter, Wikipedia and YouTube are significantly contributory to the information literacy competencies of the pre-service teachers. This implies that the more they utilize these sources, the higher the information literacy competencies. In contrary, utilization of Messenger and



Instagram is not contributory with the information competencies.

CONCLUSION AND RECOMMENDATION

Based on the summary of findings of the study, the following conclusions were drawn.

1. The pre-service teachers belonged to the age range of 21-23 years old, are females, enrolled in Education program taking Bachelor of Secondary Education specialize in English, with a monthly family income range of P5001-10,000 and with parents who are high-school graduates. For the frequency of use of various sources of information at home, the pre-service teachers always used Google and the most frequently used printed sources of information at home are dictionary, textbook and bible respectively while the least frequently read are almanac and thesaurus.

2. The pre-service teachers have much acquired all the five information literacy competencies.

3. There is a significant relationship between the frequency of utilization of info sources and information literacy competencies of the pre-service teachers. The more frequent the information sources are utilized, the higher the level of acquisition of literacy standards.

Based on the conclusions deduced from the study, the following recommendations are forwarded.

1. The pre-service teachers must spend time in the library, reading other materials not available in their home.

2. The pre-service teachers may continuously read the Bible and dictionary to enhance their information literacy competencies.

3. The pre-service teachers must develop good study habits in order to improve their information literacy competencies.

4. The pre-service teachers should be encouraged to use and utilize the various sources of information available at home efficiently and effectively.

6. The administration must provide more seminars, workshops and other resources to the pre-

service teachers focusing on the enhancement of their information literacy competencies.

7. The instructors and professors should administer more reading activities and tests to the pre-service teachers pertaining to the information literacy competencies.

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