

CHAPTER FOUR

RESULTS.

The previous chapter explained the methodologies used in this study. This chapter reports the results of the study obtained from the single questionnaire survey. The data were analyzed by the Statistical Package for Social Sciences (SPSS) version 12.0 to calculate the basic descriptive statistics (frequency, percentage, mean, and standard deviation (SD)). The results are divided into two main parts, as presented below:

4.1 DEMOGRAPHIC INFORMATION OF RESPONDENTS

In this part, the tables record the characteristics of the studied undergraduate students, consisting of gender, age, major, level of education, and total number of years in English language background.

Table 1. Respondents by Gender

Sex	Frequency	Percentage (%)
Female	98	54.7
Male	81	45.3
Total	179	100.0

As illustrated in Table 1, most of the respondents were female students. The number of female respondents registered 54.7 % while male respondents had a contribution of 45.3 %.

Table 2. Respondents by Age

Age	Frequency	Percentage (%)
10-20	125	69.8
21-50	54	30.2
Total	179	100.0

As shown in Figure 3, most of the respondents were aged 10-19 years (69.8%), whereas only 2.2 % were 40-50 years. Therefore, it can be assumed that secondary and high school students were the majority of this study.

Table 3. Respondents by Education Level

Education	Frequency	Percentage (%)
Secondary	20	11.2
High School	101	56.4
Bachelor's degree	38	21.2
Master's degree	20	11.2
Total	179	100.0

In terms of level of education, the respondents can be categorized into four levels: secondary, high school, bachelor's degree, and master's degree. The number of high school students (56.4%) had the highest contribution, followed by bachelor's degree (24.8%), and secondary and master's degree students.

Table 4. Respondents by Field of Study

Level of Education	Frequency	Percentage (%)
Non Science	55	30.7
Science	124	69.3
Total	179	100.0

As reported in Table 4, the number of science students was highest at 69.3%, , while 30.7% were non-science students.

Table 5. Respondents by Years of Internet Experience

No. of Years	Frequency	Percentage (%)
0-1 hrs	8	4.5
2-3 hrs	31	17.3
3-4 hrs	24	13.4
>=4 hrs	116	64.8
Total	179	100.0

Table 6. Respondents' Frequency of Usage by Number of Days per Week

Hours per week	Frequency	Percentage (%)
7 days	7 days	33.0
1-2 days	1-2 days	31.8
3-4 days	3-4 days	21.8
5-6 days	5-6 days	13.4
Total	179	100.0

Regarding the participants' Internet experience and frequency of usage per week, the samples seem to be competent computer users as shown in Table 5 and 6. The majority of them access the Internet 7 days a week and most have been using it for more than four years.

Table 7. Respondents' Purpose of Usage by Ranks

Purposes of usage	Frequency	Percentage (%)
Academic search	74	46.5
Chat & Games	45	28.3
Online news	40	25.2

The respondents ranked the activities they engage as follows: 1st searching for information for academic purposes, 2nd E-mails, and 3rd Chat/Games. This question asked respondents to rank 7 items. No total is shown on this table because each respondent was asked to rate their top three Internet activities out of the list of seven.

Table 8. Respondents by source of Internet skills

<i>Sources of Internet knowledge & skills</i>		
School subject	96	33.7
Friends/experts	89	31.2
Home (parents/siblings)	73	25.6
Computer school (extra schooling)	27	9.5
Total responses	285	100.0

In regards to sources of Internet skills, the respondents learned how to use the Internet from four sources: homes; school; friends; and computer-schools. 34% learned from school curriculum. 31% counted on their friends. However, the figures

overlapped because the respondents were exposed to more than one source that affects their Internet skills.

Demographics

The following table shows summarized demographic information for the 179 participants in this study.

Demographic Item	Overall Results
Age	10-20 = 69.8%, 21-50 = 30.2%
Gender	54.7% female, 45.3 male
Level of Education	School = 68.2%, University = 31.8%
Field of Study	Science = 69.3% , Non-science = 30.7%
Years with Internet (mean)	<= 4 = 64.8%, <= 0 – 3.9 = 35.2%
Frequency of weekly Internet usage	7 days = 32.4%, 1-2 days = 31.8% 3-4 days = 21.8%, 5-6 days = 14%
Source of Internet Skills	School = 33.7%, Friends = 31.2% Home = 25.6%, Computer Sch. = 9.5%

4.2 ATTITUDES AND LEVEL OF CREDIBILITY OF RESPONDENTS TOWARD THE INTERNET INFORMATION

Table 9 reports means and standard deviations for the 10 attitude items. Each item is individually computed and reported in terms of means and standard deviations (SD). The statements of items can be referred to in Appendix B.

Table 9. Descriptive Statistics for the 10 Attitude Items

<i>Values</i>	<i>Mean</i>	<i>SD</i>
Source of Knowledge	4.50	0.55
Equal Learning Opportunity	4.13	0.73
Self Efficacy – ease of use	4.01	0.99
Low Cost Knowledge	3.96	0.86
Commercialization	3.94	0.97
Skill for Future Work	3.84	0.80
Computer Efficacy	3.44	0.96
Intellectual Property	3.41	0.92
Social Problem	3.33	0.87
Sex and Violence Content	2.97	1.14
<i>Total/Overall Attitude</i>	3.75	0.88

When computing to compare the mean shown in Table 9, the value of items 3, 8, 9, and 10, which were bias scores, were recoded so that the higher scores on all items reflected the real values.

Clearly shown in the above table, the means of the ten items internalized in the ‘value-Internet usage’ dimensions have a contribution of 3.75. Item # 1 (The Internet is a source of knowledge.) received the highest central tendency of 4.50. Among the ten values, ‘source of knowledge’ received the highest score ($M = 4.50$, $SD = 0.55$) followed by ‘equal learning opportunity’ ($M = 4.13$, $SD = 0.73$), and ‘self efficacy’ ($M = 4.01$, $SD = 0.99$).

The itemized mean suggests that respondents have the highest agreement on the Internet being a source of knowledge, means of equal learning opportunity and ease of use.

However, the samples were not sure if the Internet encourages violations of Intellectual property. Item 10, ‘sex and violence related content’ received the lowest mean. The samples showed their disagreement on this aspect of Internet usage.

In summary, students have positive attitudes toward the Internet and view themselves as competent computer and internet users.

This section contains the credibility factors that represent the selected six categories, coverage, currency, reliability, authority, prominence, objectivity and their respective overall means. The possible range for the mean is

4.51-5.00	Strongly Credible
3.51-4.50	Credible
2.51-3.50	Neutral
1.51-2.50	Not Credible
1.00 – 1.50	Strongly Non-Credible

Questionnaire

Credibility Factors

Coverage

1. Graphics and Statistics are relatively provided.
2. Links to credible sources are provided.
3. In depth information.

Currency

4. Latest update dates are shown on the web pages.
5. Update dates are relevant to the topics.
6. Frequently updated.

Reliability

7. User provided content web sites - social networks, e.g. Wikipedia.com.
8. Content of URL types: .com, .biz, .net, .info
9. Content of URL types: .ac.th, org, co.th, or.th, go.th.
10. Information is relevant to students' previous knowledge

Authority

11. Authors' names are provided.
12. Authors' credentials are relevant to write about the topics.

13. Contacts are provided for users' verification purposes.

Prominence/Presentation

14. Professional look of Web pages.

15 Correct grammar and spelling

16. Images, illustrations, video clips or multimedia are provided.

Objectivity/Bias

17. Contents show opinions rather than facts.

18. Objective is not clear. It is difficult to distinguish ads from information.

Table 10 presents the factor analysis of the items relating to the credibility of information. As mentioned early, this study tests six factors with two – four items each, which are particularly designed to measure the level of credibility held by students who use the Internet for academic purposes.

Table 10. Descriptive Statistics for the 18 Credibility Factor Items

<u>Indicators/Factors</u>	<i>Item No.</i>	<i>Mean</i>	<i>SD.</i>
<i>The content is more credible in the following conditions:</i>			
URL types: .ac.th, org, co.th, or.th, go.th	9	3.58	0.98
Links to credible sources are provided.	2	3.56	0.84
Professional look of Web pages	14	3.56	0.94
Information is relevant to students' previous knowledge	10	3.54	0.93
Images, illustrations, video clips or multimedia are provided.	16	3.50	0.96
In depth information	3	3.47	0.93
Latest update dates shown	4	3.46	0.90
Graphics and Statistics are relatively provided	1	3.41	0.78
User provided content web sites - social networks, e.g. Wikipedia.com	7	3.38	0.93
Update dates are relevant to the topics.	5	3.37	0.98
Frequently updated	6	3.35	1.00
Correct grammar and spelling	15	3.32	1.04
URL typs: .com, .biz, .net, info	8	3.31	0.84

Table 10. (continued)

Contacts are provided for users' verification purposes.	13	3.25	1.02
Authors' names are provided	11	3.24	1.05
Authors' credentials are relevant to write about the topics.	12	3.21	0.96
Contents show opinions rather than facts.	17	3.10	0.87
Objective is not clear. It is difficult to distinguish ads from information.	18	2.89	0.92
<i>Total/Overall Level of Credibility</i>		3.36	0.937

From Table 10, the overall mean of credibility ($M=3.36$, $SD = 0.937$) shows that students remained neutral or not sure about the credibility of information. However, the three items that received highest scores show that URL types, links to credible sources, and prominent presentation are the most important criteria for judging the information.

Table 11. Descriptive Statistics for the Credibility Factor Items by Gender

	Gender	N	Mean	SD.	T	Sig. (2-tailed)
COVERAGE	Female	98	3.510	0.686	0.614	0.540
	Male	81	3.444	0.745		
CURRENCY	Female	98	3.337	0.796	-1.036	0.301
	Male	81	3.465	0.857		
RELIABILITY	Female	98	3.151	0.268	2.130*	0.035
	Male	81	3.056	0.328		
AUTHORITY	Female	98	3.293	0.876	1.016	0.311
	Male	81	3.160	0.852		
PROMINENCE	Female	98	3.473	0.772	0.230	0.818
	Male	81	3.444	0.877		
OBJECTIVITY	Female	98	3.020	0.753	0.234	0.815
	Male	81	2.994	0.760		

* Significance at 0.05.

Table 11 shows the level of credibility of Internet information held by female and male students. The difference with a significance value of less than .05 was found in reliability of female respondents. There are no differences among the two on other criteria. This can be interpreted that female students have a greater awareness on

the reliability of sources. Female students tend to give top priority to the types of domain names or URL (Uniform Resource Locator) such as .co.th, or.th, org.th.

Table 12. Descriptive Statistics for Differences of Credibility Factors by Age

	Age	N	Mean	SD.	T	Sig. (2-tailed)
COVERAGE	10-20	125	3.37	.76	-3.22*	0.002
	> 20	54	3.73	.51		
CURRENCY	10-20	125	3.35	.84	-1.12	0.263
	> 20	54	3.50	.80		
RELIABILITY	10-20	125	3.06	.28	-3.02*	0.003
	> 20	54	3.21	.31		
AUTHORITY	10-20	125	3.22	.87	-0.27	0.789
	> 20	54	3.26	.86		
PROMINENCE	10-20	125	3.45	.88	-0.36	0.717
	> 20	54	3.49	.67		
OBJECTIVITY	10-20	125	2.95	.77	-1.64	0.103
	> 20	54	3.15	.71		

* Statistical significance at 0.05

Table 12, there are differences of significance values of means among teenagers (10-20 years) and adolescents (21- 50 years). The older respondents have greater means in coverage and reliability factors. This can be interpreted that the two criteria are important factors for them in terms of credibility.

Table 13. Descriptive Statistics for Differences of Credibility factors by Education

	Education	N	Mean	SD.	t	Sig. (2-tailed)
COVERAGE	School	121	3.350	0.760	-3.306*	0.001
	University	38	3.789	0.545		
CURRENCY	School	121	3.333	0.823	-1.035	0.302
	University	38	3.491	0.812		
RELIABILITY	School	121	3.060	0.287	-3.224*	0.002
	University	38	3.230	0.275		
AUTHORITY	School	121	3.212	0.881	-0.156	0.876
	University	38	3.237	0.751		
PROMINENCE	School	121	3.441	0.892	-0.659	0.511
	University	38	3.544	0.650		
OBJECTIVITY	School	121	2.938	0.773	-1.554	0.122
	University	38	3.158	0.718		

* Statistical significance at 0.05

Table 13 shows the comparison of the credibility means of different education levels. The results are relatively the same with Table 12. Coverage and Reliability are the two factors important to them in judging credibility. These results can be considered valid because 'education level' and 'age' are parallel.

Table 14. Descriptive Statistics for Differences of Credibility factors by Field of Study

	Field of Study	N	Mean	SD.	t	Sig. (2-tailed)
COVERAGE	Sci	55	3.552	0.680	0.889	0.375
	Non Sci	124	3.449	0.726		
CURRENCY	Sci	55	3.442	0.910	0.514	0.608
	Non Sci	124	3.374	0.787		
RELIABILITY	Sci	55	3.132	0.284	0.721	0.472
	Non Sci	124	3.097	0.307		
AUTHORITY	Sci	55	3.182	0.886	-0.524	0.601
	Non Sci	124	3.255	0.859		
PROMINENCE	Sci	55	3.418	0.789	-0.454	0.651
	Non Sci	124	3.478	0.834		
OBJECTIVITY	Sci	55	3.091	0.782	0.975	0.331
	Non Sci	124	2.972	0.742		

Table 14, no significant differences of less than 0.05 were found. It can be assumed from the statistics that different fields of study does not affect the level of credibility that students have toward the information they find on the Internet.

Table 15. Descriptive Statistics of Correlations between attitude and level of credibility

	Credibility toward Internet Information	Sig. (2-tailed)
Attitudes toward Internet usage	.209**	.005

** Correlation is significant at the 0.01 level (2-tailed).

Statistics show in Table 15 that there is a positive relationship between attitudes and credibility variables. Correlation is significant at the 0.01 level. Its coefficient values registered at .2009. The students with higher levels of attitudes tend to believe in the information they find on the Internet more.