Awareness on data privacy vis-à-vis data management practices at a state university in Quezon province: Input towards data-driven policy and manual for good governance

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Abstract: This study investigated the relationship between awareness on data privacy and management practices at Southern Luzon State University (SLSU). Awareness on data privacy was gauged based on the provisions of the Data Privacy Act of 2012 (RA No. 10173) and its implementing rules and regulations, while management practices were examined using indicators such as collecting personal data, processing personal data, and sharing personal data. Through simple random selection, a survey questionnaire was distributed to SLSU staff, including teaching and non-teaching personnel. Three hundred eight (308) participants completed the survey, which was used for the data analysis using frequency, percentage, mean, t-test, ANOVA, and correlation. Based on the statistical result, in overall, the employees of SLSU previously read and somehow understood the statement of RA No. 10173 with a mean of 3.19. Moreover, the overall management practices of the employees toward data privacy were excellent. On the other hand, comparing the respondents' awareness and management practices when grouped according to the profile, among all the categories, only length of service significantly differed in management practices. Furthermore, there is a strong correlation between university employees' awareness of the Data Privacy Act and their data management practices, indicating that employees' great management practices are due to their knowledge of the Data Privacy Act. This study suggests that in order to adhere to the principles of good governance, the university may utilize this result for policy and the development of a data privacy manual.

Keywords: Data privacy, Good governance, Manual, Management practices, Policy.

1. Introduction

Data protection works to protect an individual's right to privacy. It refers to the technical and regulatory framework in place to secure personal data from unauthorized, inadvertent, or malicious use. Data protection thus includes measures for data collection, data access, data transport, and data conservation. Data privacy is crucial at every government organization, including the state university, because they collect and exchange information from stakeholders. Because of the massive amount of data sharing that occurs in an academic setting, it is vital that the university ensure that staff adhere to the Data Privacy Act in order to impose conscientious behavior.

A study about the National Government Agency's compliance with data privacy was conducted by Pitogo [1] and it was found that some of the national governments were only partially compliant with Republic Act No. 10173. In the same study, challenges were encountered in the compliance of R.A. No. 10173, to wit: lack of awareness, wait-and-see attitude, and time and resource constraints. The R.A. No. 10173 of the Philippines, or Data Privacy Act of 2012, is a law that protects individuals personal information in both government and private settings. It was enacted on August 15, 2012, and the implementing rules and regulations were promulgated on August 24, 2016 [2]. According to Earp and

Payton [3] the right to privacy is not absolute and is typically determined by the context and the need for it. Moreover, university cultures sometimes tarnish the sacredness of privacy. Although RA 10173 protects students' privacy rights regarding sensitive information, student data is nevertheless susceptible because academic departments must handle and distribute it. Campus security, financial information, advising of students, admissions, and the registrar's office are among the administrative divisions that have improved. Regarding the transfer and sharing of student information in electronic form, there are many privacy issues that both academic administrators and students have. The increasing use of electronic student records has demonstrated the potential to improve departmental information exchange in higher education. The effectiveness of university privacy regulations must be maintained due to the ease of access to and exchange of electronic student data. When it comes to violations of student privacy and data, university staff who create, maintain, use, and transmit student information are probably more informed than the general public. Given the general increase in people's concern for privacy, institutions need to ensure that there is a good relationship between their privacy policies and workers' attitudes and behaviors.

The state acknowledges the critical role of information and communications technology in nation-building and its inherent obligation to ensure that personal information in government and private sector information and communications systems is protected. This is in accordance with RA No. 10173, which states that it is the policy of the state to protect the fundamental human right to privacy and communication while ensuring the free flow of information to promote innovation and growth. The purpose of the Data Privacy Act is to shield citizens' private information from being shared without authorization. The purpose of this study project was to evaluate the level of knowledge of university personnel about data protection and their procedures in managing data from both internal and external clients, as the institution does not have a data protection manual.

1.1. Objectives

The proposed research aims to determine the data level of awareness on data privacy and the data management practices in SLSU that will serve as baseline data for development of data privacy manual.

1. To determine the profile of university personnel in terms of:
    a. Age
    b. Gender
    c. Educational Attainment
    d. Academic Rank
    e. Length of Service
    f. Training Attended on Data Privacy
2. To determine the level of awareness of university personnel on Data Privacy Act in terms of:
    a. Scope of Application
    b. Data Privacy Principles
    c. Lawful Processing of Personal Data
    d. Security Measures for Protection of Personal Data
    e. Security of Sensitive Personal Information in Government
    f. Rights of Data Subject
    g. Data Breach Notification
    h. Rules on Accountability
    i. Penalties
3. To determine the data management practices of the university in terms of:
    a. Collecting Personal Data
    b. Using and Processing Data
    c. Sharing Personal Data

4. To determine the significant relationship between awareness on data privacy act and data management practices of university personnel.
5. To determine the significant difference of the awareness on data privacy act and data management practices when grouped according to the profile.

2. Literature Review

Study about National Government Agency 's Compliance on Data Privacy was conducted by Pitogo [1] it was found out that the some of the national governments were partially compliant with the Republic Act No. 10173. In the same study, challenges were encountered in the compliance of R.A No. 10173; to wit: lack of awareness, wait-and-see attitude, and time and resource constraints. The R.A. No. 10173 of the Philippines or Data Privacy Act of 2012 is law that protects individual's personal information in both government and private, It was enacted on August 15, 2012 and the implementing rules and regulations was promulgated on August 24, 2016 [2].

The proliferation of new technologies and ubiquitous computing has far-reaching implications for the issue of student privacy with regard to organizational practices. An association that focuses on university advancements brought about by information technologies aims to educate users and implement regulations to avoid risky behaviors involving personal information, even though many disagree about what should be done to defend individual privacy [3]. These criteria are expressed in organizational privacy regulations, but the goals can seem at odds since staff members are unaware of their responsibilities to protect student privacy and information.

Smith, et al. [4] developed techniques to identify and measure the key components of privacy concerns in response to the need for validated instruments for measuring people's worries about organizational activities. In light of the public's concerns and the new technologies being introduced to university settings, we investigated how university staff assess their organizations' practices using these tried-and-true methods. As colleges continue to transition towards ubiquitous computing environments, it may be helpful to the sector to understand the attitudes of employees who have regular access to personal information in order to develop stronger privacy protection policies. The study indicates that organizations, particularly academic ones, are worried about privacy and how technology could support or undermine people's ability to keep information safe [5].

3. Materials & Methods

3.1. Research Design

This research employed quantitative method specifically utilizing the correlational study design. By means of this method, the researchers described the level of awareness on data privacy of university personnel, such as the scope of application, data privacy principles, lawful processing of personal data, security measures for protection of personal data, security of sensitive personal information in government, rights of data subjects, data breach notification, rules on accountability, and penalties. Also, it described the data management practices of the university in terms of collecting personal data, using and processing data, and sharing personal data. Moreover, it tested the comparison of awareness and management practices on the profiles of the respondents. Furthermore, the correlational method tested the relationship between awareness of the Data Privacy Act and data management practices.

3.2. Respondents of the Study

Three hundred eight (308) were randomly selected among the university personnel (teaching and non-teaching) as the respondents of this study. The employees work in the SLSU year 2021-2023.

3.3. Research Instrument

The researchers constructed a self-made questionnaire for the gathering, which underwent a reliability test. The instrument was first validated by the five faculty members and experts from private universities. After which, it was classified into three areas. The first part is the demographic profile. The second part is the awareness of data privacy. And the third part is the management practices.

3.4. The Statistical Analysis of Data

The researchers personally administered and retrieved the questionnaire from the respondents. Data was tabulated and tallied using Excel and computed by the statistician using the statistical package for social sciences (SPSS) software, and descriptive and inferential statistics were applied. In obtaining the demographic profile, the researcher made use of frequency counts and percentages. Then, to identify the level of awareness of data privacy and the extent of data management practices among university personnel, the weighted mean of each item was determined with the corresponding standard deviation. Pearson's correlation coefficient was calculated using SPSS and was used to ascertain the relationships between awareness of data privacy and management practices. Furthermore, an ANOVA, T-test, Mann-Whitney test, and Kruskal-Wallis test were used to analyze the comparison of the level of awareness of data privacy and management practices based on the profiles of the respondents.

The following scale was used in the evaluation to determine the level of awareness of data privacy and the extent of data management practices:

Table 1.
Scale on level of awareness on data privacy.

Rating scale	Limits of scale	Qualitative description
4	$3.25 - 4.0$	Fully aware
3	$2.50 - 3.24$	Aware
2	$1.75 - 2.49$	Somewhat aware
1	$1.0 - 1.74$	Unaware

Table 2.
Scale on the extent management practices.

Rating scale	Limits of scale	Qualitative description
4	$3.25 - 4.0$	Strongly agree
3	$2.50 - 3.24$	Agree
2	$1.75 - 2.49$	Disagree
1	$1.0 - 1.74$	Strongly disagree

3.5. Ethical Consideration

The researchers observed the following during the conduct of this research study: strict compliance was observed in the management of conflicts of interest; compliance with data privacy; informed consent; data storage; data privacy and data dissemination; and incentives and compensation to respondents. And the researchers followed the protocols in distributing and retrieving the questionnaire.

Table 3.
Frequency distribution of the respondents according to age.

Age category	Frequency	Percentage
Young adult (18-30 years old)	131	42.5%
Middle adult (31-45 years old)	93	30.2%
Late adult (46-65 years old)	84	27.3%
Total	308	100%

4. Result and Discussion

4.1. Profile of the Respondents

Table 3 shows that 42.5% (n = 131) were young adults, which represents the majority of respondents, while late adults have 27.3% (n = 84), which has the lowest percentage. This indicates that the majority of the workforce at SLSU comprises young adults. According to Bird [6] in the report for the ADB, the Philippine workforce is relatively young, with 45% of the population below the age of 24. Moreover, PSA [7] reports that youth have a 90.01 percent employment rate in the Philippines.

Table 4.
Frequency distribution of the respondents according to gender.

Gender category	Frequency	Percentage
Male	128	41.6%
Female	174	56.5%
Non-binary	4	1.3%
Other	2	0.6%

Table 4 demonstrates that females make up the bulk of the respondents, accounting for 56.5% (n = 174), 41.6% (n = 128) were male, and 1.3% were non-binary. However, two (.6%) respondents do not belong to the gender category reflected in Table 4. Although the majority of the workforce at SLSU is female, this result is in contrast to Philippine Statistics Authority data on labor force participation rate (LFPR) (2020), where only 34.5 percent of women participated in the labor force, compared to 54.8 percent of their male counterparts.

Table 5.
Frequency distribution of the respondents according to educational attainment.

Educational attainment category	Frequency	Percentage
Undergraduate	179	58.1%
Master's degree holder	95	30.8%
Doctorate degree holder	34	11%
Total	308	100%

Table 5 demonstrates that undergraduates make up the bulk of the respondents, accounting for 58.1% (n = 179), while doctorate degree holders got the lowest percentage of 11% (n = 34). The result indicates that the majority of the university personnel have an undergraduate degree, and a few have a doctorate degree. In the report by Commission on Higher Education (CHED) [8] 42 percent of faculty members hold bachelor degrees, and only 23 percent have doctorate degrees. This report is consistent with the current result of the study, which shows that the majority of university employees hold bachelor degrees.

Table 6.
Frequency distribution of the respondents according to length of service.

Length of service category	Frequency	Percentage
5 years and below	153	49.7%
6-10 years	58	18.8%
11-15 years	32	10.4%
16-20 years	17	5.5%
21-25 years	13	4.2%
26-30 years	14	4.5%
31-35 years	13	4.2%
36-40 years	6	1.9%
41 years and above	2	.6%

Total	308	100%

Table 6 shows that the majority of the respondents' length of service was 5 years and below, accounting for 49.7% (n = 153). However, 41 years and older got the lowest percentage of .6% (n = 2). This data indicates that most of the SLSU employees have only been working for quite some time at the institution.

Table 7.
Frequency distribution of the respondents according to employment.

Employment	Frequency	Percentage
Teaching	216	70.1%
Non-teaching	92	29.9%
Total	308	100%

Table 7 shows that teaching accounts for the bulk of respondents, accounting for 70.1% (n = 216). On the other hand, non-teaching has 29.9% (n = 92), which has the lowest percentage. The results indicate that the majority of SLSU employees are teaching personnel.

Table 8.
Frequency distribution of the respondents according employment status.

Employment status	Frequency	Percentage
COSI	105	34.1%
JO (Job order)	71	23.1%
Regular	132	42.9%
Total	308	100%

Based on table 8, the majority of the employment status was that of regular employees, accounting for 42.9% (n = 132), while job orders got the least percentage, which was 23.1% (n = 71). The data indicates that the majority of SLSU personnel are not regulars because there are only a few items available in the institution. The employees in the SLSU that are in the rank-in file are job orders or contracts of service instructors.

Table 9.
Frequency distribution of the respondents according office/station/college.

Office/Station/College	Frequency	Percentage
CAS	44	14.3%
PPF	11	3.6%
CTE-LS	23	7.5%
CEN	29	9.4%
CTE	12	3.9%
Extension services	4	1.3%
CIT	10	3.2%
CAM	10	3.2%
CABHA	16	5.2%
Accounting office	6	1.9%
RMO	1	.3%
Quality assurance	2	.6%
Instruction	1	.3%
Internal audit services	2	.6%
OP	3	1.0%
Admin Staff	1	.3%
CAG	2	.6%
OIAA	3	1.0%
AFA	2	.6%
BAO	3	1.0%

PDO	6	1.9%
GAD	3	1.0%
OSAS	10	3.2%
GS	1	.3%
Library	5	1.6%
OVP-REPDI	1	.3%
SLSU Tayabas	14	4.5%
SLSU Lucena	21	6.8%
SLSU JGE	31	10.1%
SLSU Infanta	10	3.2%
SLSU Tiaong	17	5.5%
Budget	1	.3%
Total	308	100%

Table 9 shows that 14.3% (n = 31) of the respondents were CAS, which represents the majority of respondents. On the other side, RMO, Instruction, Admin Staff, GS, and Budget are the least respondents, accounting for 3.3% (n = 1). These results indicate that most of the respondents are from the College of Arts and Science because this college serves all the general education subjects of every program in the university in which it houses the faculty members who are teaching general education subjects.

Table 10.
Frequency distribution of the respondents according the attended training on data privacy.

Attended training on data privacy	Frequency	Percentage
Yes	99	32.1%
No	209	67.9%
Total	308	100%

Table 10 demonstrates that the majority of the respondents did not attend training on data privacy, accounting for 67.9% (n = 209), while 32.1% (n = 99) respondents answered that they attended the training on data privacy. This data indicates that training on data privacy shall be provided to the SLSU personnel, as the majority of the respondents were not able to attend data privacy training.

Table 11.
Overall descriptive results on level of awareness of university personnel on data privacy act.

Data privacy act	Mean	Std. deviation	Scale response
Scope of application	3.1851	0.70324	A
Data privacy principles	2.8539	0.84639	A
Lawful processing of personal data	3.2987	0.64607	FA
Security measures of protection of personal data	3.3237	0.66078	FA
Rules on accountability	3.0893	0.80470	A
Rights of data subject	3.1948	0.71992	A
Data breach notification	3.1201	0.77534	A
Penalties	2.5727	0.92849	A
Weighted average mean	3.19	0.831	A

4.2. Level of Awareness on Data Privacy Act
Table 11 presents the overall descriptive findings on the degree of awareness of university employees who are "aware," of the data privacy act with a mean of 3.19 (SD =.831). Additionally, the respondents are "fully aware" of the lawful processing of personal data with a mean of 3.29 (SD =.646) for data privacy principles and 3.32 (SD =.660) for lawful processing of personal data. This indicates that the majority of respondents had read and comprehended, in some way, the provisions of the DPA. On the other hand, the result is inconsistent with the number of respondents who attended training on DPA; it was notably indicated that the majority were not able to attend training on data privacy, but

still, most of the respondents were aware of the provisions of the DPA. The result of the current study is consistent with the study of Magnaye [9] which concludes that the employees in the government, particularly in the LGU, have an adequate level of awareness of information security, which is part of the DPA.

In addition, the majority of the respondents were aware of data privacy and somehow effectively managed the data of the university from its data subject to deliver better and more efficient services to its clientele. By doing so, the university can leverage data, minimise the waste of resources, and improve public services [10].

Table 12.
Overall descriptive results on data management practices.

Data management practices	Std. deviation	Mean	Scale response
Collecting personal data	0.618	3.48	SA
Using and processing data	0.658	3.41	SA
Sharing personal data	0.664	3.40	SA
Weighted average mean	0.646	3.43	SA

4.2. Extent of Data Management Practices

The overall descriptive result of data management practices is shown in Table 21; the WAM for the three variables is 3.43 (SD =.646), indicating that the university's data management practices were properly put into place to safeguard the privacy of the data subject. The results indicate that SLSU personnel have properly managed data in order to provide good service to their clients. This result may also indicate how efficient the university is in providing services, particularly in collecting, using, processing, and sharing data. According to Odigwe, et al. [11] data management practices have a significant influence on educational effectiveness. Thus, the result of the current study implies that proper data management practices improve the quality of services that the university provides.

Table 13.
Comparison of the respondent's awareness on Data Privacy Act when grouped according to age.

Age category	N	Mean	SD	F-value	Sig.
Young adult (18-20 years old)	131	3.0739	0.61980		
Middle adult (31-45 years old)	93	2.9970	0.64499	0.810	0.446
Late adult (46-65 years old)	84	2.9684	0.64330		
Total	308	3.0219	0.63352		

4.3. Comparison on the Level of Awareness on Data Privacy Act and Data Management Practices

Table 13 suggests that there is no significant difference in awareness of the Data Privacy Act among the different age categories (young adults, middle adults, and late adults). This implies that regardless of age, awareness on the Data Privacy Act remains the same. In essence, the data presented in Table 13 does not show a statistically significant difference in awareness of the Data Privacy Act among young adults, middle adults, and late adults. This could have implications for policy-making, educational campaigns, or targeting awareness efforts, indicating that a one-size-fits-all approach based on age categories may not be necessary or effective in this context

Though the results showed no significant differences in the awareness of the Data Privacy Act among SLSU employees when age was considered. In contrast to the study of Zeissig, et al. [12] older data subjects significantly differed in their awareness of privacy issues and their ability to protect data compared to younger respondents.

Table 14.
Comparison of the respondent's awareness on data privacy act when grouped according sex.

	Gender	N	Mean	Std. deviation	t	Sig. (2-tailed)	Effect size (Cohen's d)
Awareness on data privacy act	Male	128	2.9648	0.67298	-1.226	0.221	0.63517
	Female	174	3.0555	0.60592			

Table 14 compares the awareness scores of males and females regarding the Data Privacy Act. The mean awareness on data privacy for female is higher compared to male respondents. The t-value of -1.226 with an associated p-value of .221 indicates that the mean difference is not statistically significant at the conventional significance level of .05. The effect size of .63517 indicates a medium-sized difference between males and females in terms of their awareness scores. On the other hand, Weinberger, et al. [13] concluded that there is a gap between men and women in how they protect their identities and personal information.

Table 15.
Comparison of the respondent's awareness on Data Privacy Act when grouped according to educational attainment.

Educational Attainment	N	Mean	Std. deviation	F-value	Sig.	VI
Undergraduate	179	2.9931	0.62306			
Master's degree holder	95	3.0355	0.64822	0.751	0.473	NS
Doctorate degree holder	34	3.1354	0.65158			
Total	308	3.0219	0.63352			

Table 15 compares the awareness scores of respondents with different educational attainment levels regarding the Data Privacy Act. The F-value of 0.751 suggests that there are no significant differences in awareness scores among the groups. The effect size (VI) of 0.473 indicates the proportion of variance in awareness scores that can be attributed to the differences between educational attainment groups. The result indicates that regardless of the educational background of the employees, the respondents have the same level of awareness. However, Magnaye [9] concluded in the study that the higher the educational attainment of the respondents, the higher their comprehension and awareness on information security.

Table 16.
Comparison of the respondent's awareness on data privacy Act when grouped according to length of service.

	Length of service	N	Mean rank	Kruskal-Wallis H	df	Sig.
Awareness on data privacy act	5 years and below	153	161.17			0.251 (Not significant)
	6-10 years	58	152.58			
	11-15 years	32	154.91			
	16-20 years	17	98.29	10.201	8	
	21-25 years	13	135.73			
	26-30 years	14	173.43			
	31-35 years	13	172.54			
	36-40 years	6	124.00			
	41 years and above	2	135.25			
	Total	308				

Table 16 compares the awareness on data privacy act of respondents in terms of the length of services regarding the Data Privacy Act. The significance value is .251 >.05 significance value. This indicates that there are no differences in the level of awareness of data privacy when the length of service is considered.

Table 17.
Comparison of the respondent's awareness on data privacy act when grouped according to employment category.

	Employment	N	Mean rank	Sum of ranks	Mann-whitney U	Sig.	Interpretation
Awareness on data privacy act	Teaching	216	158.03	34135.00		0.286	NS
	Non-teaching	92	146.21	13451.00	9173		
	Total	308					

Table 17 presents the result of the comparative analysis on Data Privacy Act awareness between teaching and non-teaching respondents. The Mann-Whitney U-test yielded a value of 0.981, with an associated p-value of 0.327. This result indicates that the observed difference is not statistically significant at the 0.05 significance level. The awareness levels appear to be similar between the two groups based on the data analyzed.

Table 18.
Comparison of the respondent's awareness on data privacy act when grouped according to employment status.

Employment status	N	Mean	Std. deviation	F-value	Sig.	VI
COSI	105	3.1220	0.66680			
JO (Job Order)	71	3.0324	0.57223	2.544	0.080	NS
Regular	132	2.9366	0.63021			
Total	308	3.0219	0.63352			

Table 18 presents a comparison of awareness scores among respondents with different employment statuses concerning the Data Privacy Act. The computed F-value of 2.544, with an associated p-value of 0.080, suggests that there is no statistically significant difference in data privacy awareness levels when participants are categorized by employment status.

Table 19.
Comparison of the respondent's data management practices when grouped according to age.

Age	N	Mean	Std. deviation	F-value	Sig.	VI
Young adult (18-20 years old)	131	3.5094	0.54813			
Middle adult (31-45 years old)	93	3.3470	0.51785	2.571	0.078	NS
Late adult (46-65 years old)	84	3.4111	0.54749			
Total	308	3.4335	0.54175			

Table 19 showcases a comparative analysis of respondents' data management practices based on their age groups. The computed F-value of 2.571, with an associated p-value indicates that there is no statistically significant difference in data management practices when participants are stratified by age.

Table 20.
Comparison of the respondent's data management practices when grouped according to sex.

	Gender	N	Mean	Std. deviation	t	Sig. (2-tailed)	Effect size Cohen's d
Management Practices	Male	128	3.4172	0.50767	-0.430	0.667	0.54377
	Female	174	3.4444	0.56883			

Table 21 presents a comparison of respondents' management practices when grouped according to their sex. The analysis generated a t-value of -0.430, with an associated p-value
of 0.667 indicates that this difference is not statistically significant at the conventional significance level of 0.05. The effect size (Cohen's d) of 0.54377 indicates a medium-sized difference between male and female groups in terms of their data management practice practices.

Table 22.
Comparison of the respondent's data management practices when grouped according to educational attainment.

	Educational attainment	N	Mean rank	Kruskall–Wallis H test	Df	P-Value	Interpretation
Management practices	Undergraduate	179	161.79				
	Master's degree holder	95	144.97	2.957	2	.228	Not Significant
	Doctorate degree holder	34	142.75				
	Total	308					

Table 22 compares the management practices of respondents with different educational attainment levels using Kruskal-Wallis test. The H-test of 2.975, educational. a p-value of .228 suggests that there is no significant difference in the data management practices of the respondents when grouped according to educational.

Table 23.
Comparison of the respondent's data management practices when grouped according to length of service.

	Length of service	N	Mean rank	Kruskal-Wallis H	df	Sig.
Management practices	5 years and below	153	171.68			
	6–10 years	58	129.78			
	11–15 years	32	146.77			
	16–20 years	17	130.12	16.395	8	0.037 (Significant)
	21–25 years	13	107.00			
	26–30 years	14	156.64			
	31–35 years	13	163.73			
	36–40 years	6	157.58			
	41 years and above	2	112.75			
	Total	308				

Table 23 presents a comparison of respondents' data management practices when grouped according to their length of service. The Kruskal-Wallis H value of 16.395 indicates that there are significant differences in management practice scores among the length of service groups. The associated p-value of 0.037 is less than the significance level of 0.05, confirming the statistical significance of the differences. Since the majority of the personnel are 5 years of age and below in service, this indicates that they demonstrate higher data management practices.

Table 24.
Comparison of the respondent's data management practices when grouped according to employment category.

	Employment	N	Mean rank	Sum of ranks	Mann-Whitney U-test	P-value	Interpretation
Management practices	Teaching	216	155.31	33546.50	9761.5	.805	NS
	Non-teaching	92	152.60	14039.50			
	Total	308					

Table 24 presents the comparison of the respondents' data management practices when grouped according to their employment category. A non-parametric test, specifically the Mann-Whitney U-test, was utilized to compare the data management practices between two groups.

The Mann-Whitney U-test yielded a value of 9761.6 with a significant level of .805. This result suggests that the data management practices between teaching and non-teaching staff was statistically comparable at the .05 significance level.

Table 25.
Comparison of the respondent's data management practices when grouped according to employment status.

	N	Mean	Std. deviation	F-value	Sig.	VI
COSI	105	3.5263	0.55222	7.768	0.001	S
JO (Job Order)	71	3.5512	0.43687			
Regular	132	3.2965	0.55712			
Total	308	3.4335	0.54175			

Table 25 presents a comparison of respondents' management practices when grouped according to their employment status. able 32 compares the management practices of respondents with different employment statuses. The F-value of 7.768 suggests that there might be some differences in management practice scores among the groups. The associated p-value of 0.001 is less than the significance level of 0.05, indicating that these differences are statistically significant.

Table 26.
Post Hoc tests for employment status.

(I) employment status	(J) employment status	Mean difference (I-J)	Std. error	Sig.
COSI	JO (Job 0rder)	-0.02482	0.08146	0.761
	Regular	0.22988*	0.06933	0.001
JO (Job Order)	COSI	0.02482	0.08146	0.761
	Regular	0.25471*	0.07803	0.001
Regular	COSI	-0.22988*	0.06933	0.001
	JO (Job Order)	-0.25471*	0.07803	0.001

Table 26 presents the post hoc tests for employment status, which are conducted after the initial analysis of variance (ANOVA) to determine specific differences between the employment status (COSI, JO, and Regular). The post hoc tests provide further insights into the specific differences in management practice between the employment status. The results show that there is no statistically significant difference between the COSI and JO (job order) groups, but there are statistically significant differences between the COSI and Regular groups, as well as between the JO (job order) and Regular groups. The result indicates that regular employees of SLSU have better management practices than COSI and JO.

Table 27.
Relationship between awareness on data privacy act and management practices.

		Awareness on data privacy act	Management practices	Collecting personal data	Processing data	Sharing personal data
Awareness on data privacy act	Pearson correlation	1	0.455**	0.418**	0.442**	0.442**
	Sig0. (2-tailed)		0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Scope of application	Pearson correlation	0.752**	0.397**	0.390**	0.390**	0.357**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Data privacy principles	Pearson correlation	0.711**	0.345**	0.326**	0.330**	0.331**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Lawful processing of personal data	Pearson correlation	0.815**	0.384**	0.345**	0.363**	0.391**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Security measures of protection of personal data	Pearson correlation	0.832**	0.386**	0.364**	0.366**	0.375**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Rules on accountability	Pearson Correlation	0.792**	0.346**	0.327**	0.330**	0.333**

	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Rights of data subject	Pearson correlation	0.870**	0.437**	0.402**	0.411**	0.437**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Data breach notification	Pearson correlation	0.808**	0.390**	0.360**	0.378**	0.379**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308
Penalties	Pearson correlation	0.846**	0.347**	0.311**	0.349**	0.334**
	Sig0. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	N	308	308	308	308	308

4.4. Relationship between Awareness on Data Privacy Act and Data Management Practices

Table 27 suggest a that awareness of the Data Privacy Act and data management practices among university personnel are statistically correlated. Higher awareness is associated with better compliance with data privacy principles, lawful processing of personal data, security measures, accountability, data breach notification, and adherence to the rights of data subjects. The results highlight the importance of promoting awareness and understanding of data privacy regulations to ensure proper data management and protection within the university setting. Additionally, it's noteworthy that all dimensions of awareness regarding the Data Privacy Act demonstrate statistically significant correlations with various dimensions of data management practices.

5. Conclusion and Recommendation

The study found that although the majority of respondents did not participate in training or seminars on data privacy, they are generally aware of the DPA and have data management practices in place. Additionally, only employment status and length of service among the profile categories show a discernible variation in data management practices. Since the bulk of the SLSU staff have five years and below in service, it indicates higher data management practices from them. Moreover, the COSI and JO differed in their data management practices compared to regular employees because regular employees are much more aware of the Data Privacy Act and have better data management practices. Based on the level of awareness of DPA and the extent of data management practices, SLSU personnel deliver quality service to their clientele. This study further concludes the relationship between awareness of data privacy and data management practices, which implies that being aware of data privacy could have a positive relationship with good data management practices among SLSU personnel. Awareness of data privacy paved the way to develop good practices articulated in the management process of the university. Thus, these data management practices help the university build excellent service and outstanding governance.

The implication of this study is that awareness of data privacy and proper data management practices will further improve the quality of service provided by the university to its clientele and eventually create a culture towards excellent governance.

Based on the conclusion, this study recommends that the university provide training or a seminar about DPA to further ensure that employees will adhere to the provisions of DPA in providing excellent service to clients and maintaining good governance. Moreover, the university may consider developing a data privacy manual to articulate the practices for the university's processes.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Acknowledgment:

Copyright:

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