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School Heads' Attitude and Competence Towards Information and Communications Technology

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Abstract

This quantitative study determined the relationship between the school heads' attitude towards Information and Communications Technology (ICT) and their competence in the said subject. Thirteen (13) school heads in Kiamba 1 District, Kiamba, Sarangani, Philippines were the respondents of the study. A series of frequency distribution, weighted mean, and Pearson r correlation coefficient were used to determine the attitude, competence, and the relationship between the two, in relation to ICT. Said statistical tools determined that the overall attitude of school heads towards ICT was neutral ($\bar{x} = 3.31$). The school heads are also competent in terms of ICT ($\bar{x} = 3.18$). It was also determined that there is a significant relationship between the school heads' attitude and competence in ICT.

1. Introduction

The education at present evolves as much as technology nowadays. Technology not only aids the teachers, but the community and the country as well. Technology delivers advanced, of not upgraded level of learning to school-age children.

As expected from school, school heads are expected to be at the peak of their knowledge when it comes to technology, or is more known in the educational setting as Information and Communications Technology (ICT). The school head's ability to utilize, comprehend, develop, and create through technology entails their superiority in the subject. In terms of the educational setup, the school heads are supposed to teach the teachers in their school of these knowledge in order to expect high-calibrating teachers who are technology-specialists if not tech-savvy.

Through regular monitoring on the school heads of Kiamba 1 District, the school heads' responses through the rigid use of technology in a non-physical environment were almost negative. The supervisor's notes through observation showed the school heads' dilemma over the prevalence of the use of technology as the time goes by.

It then became the initiative of the supervisor to conduct a study to determine the school heads' attitude towards ICT and identify factors that affect their attitude and competence towards ICT and develop a useable program course to enhance their motivation and attitude towards ICT.

Moreover, this study sought answers to these questions:
1. What is the attitude of school heads of Kiamba 1 district in terms of ICT?
2. What is the competence level of school heads of Kiamba 1 district in terms of ICT?
3. Is there a significant relationship between the attitude of the school heads and their competence in ICT?

2. Methodology

This qualitative research was conducted in Kiamba 1 District, Kiamba, Sarangani. The participants were all 13 school heads in the district.

The questionnaire utilized was adopted from Papaioannou and Charalambous (2011) [8]. The questionnaire was divided into two parts: (a) the attitude of school heads towards ICT and (b) the school heads' competence in ICT.

This study utilized the weighted mean, standard deviation, Pearson r correlation coefficient as statistical tools to gather and interpret the results of this study. The following Likert Scale (1932) is used in the interpretation of the school heads' attitude towards ICT.

Table 1

Range	Interpretation
4.20 – 5.00	Positive
3.40 – 4.19	Somewhat positive
2.60 – 3.39	Neutral
1.80 – 2.59	Somewhat negative
1.0 – 1.79	Negative

To interpret the school heads' competence in ICT, the following Likert Scale (1932) is used:

Table 1

Range	Interpretation
4.20 – 5.00	Extremely Competent
3.40 – 4.19	Very Competent
2.60 – 3.39	Competent
1.80 – 2.59	Needs Improvement
1.0 – 1.79	Needs Significant Development

3. Results
The survey-questionnaire and responses from the School Head's Attitude towards ICT are presented through Factor Analysis. Table 3 presents the result and interpretation of the data gathered.

Table 3: Attitude of School Heads of Kiamba 1 District in terms of ICT

S. No	Indicators	Weighted Mean	Interpretation
1	The school heads' attitude on learning about computers and technology.	3.37	Neutral
2	The school heads' attitude on learning how to use computers and the technology.	3.34	Neutral
3	The school heads' attitude on using computers and other product of technology.	3.24	Neutral
4	The school heads' attitude on the influence of computers and technology at work.	3.41	Somewhat Positive
	Overall Mean	3.31	Neutral

N = 13

As seen in Table 3, the school heads have somewhat positive attitude towards ICT in terms of its influence at work ($\bar{x}$ = 3.41). They have neutral attitude towards other factors such as learning about computers and technology ($\bar{x}$ = 3.37), learning how to use computers and the technology ($\bar{x}$ = 3.34), and using computers and other products of technology ($\bar{x}$ = 3.24).
Overall mean indicates that the school heads have neutral attitude towards ICT in general aspect related to their major functions ($\bar{x}$ = 3.31). This implies that the school heads have a general attitude in ICT that is neither negative nor positive.

Table 4: Competence of School Heads of Kiamba 1 District in terms of ICT

S. No	Indicators	Weighted Mean	Interpretation
1	The school head can join communities, subscribe to relevant mailing lists and online journals.	3.67	Very competent
2	The school head can review new and existing software for education.	3.00	Competent
3	The school head can recommend useful and credible websites to colleagues.	3.07	Competent
4	The school head can follow online tutorials or online degree program.	3.27	Competent
5	The school head can actively participate in online forums and discussions.	3.13	Competent
6	The school head can publish (formal/informal) research on the use of ICT in education.	3.33	Competent
7	The school head can share lesson plans and teaching materials through course websites.	2.73	Competent
	Overall Mean	3.18	Competent

N=13

Results from Table 4 indicate that the school heads are competent in terms of technology. Moreover, they are very competent in terms or joining communities, subscribing to relevant mailing lists and online journals ($\bar{x}$ = 3.67). Among other indicators, however, the school heads had a remarkably low weighted mean in terms of sharing lesson plans and teaching materials through course websites ($\bar{x}$ = 2.73), although it still is interpreted as a competent.
Overall mean ($\bar{x}$ = 3.18) also indicates that the school heads are overall competent in the use of technology. This implies that the school heads are competent in terms of knowing, using, and understanding the impact of technology in their roles in the school.

Table 5: Significant Relationship of the School Heads' Attitude and Competence in ICT

Variable	Attitude towards ICT		
	Correlation coefficient (r)	p-value	Remarks
Competence	0.9083	0.000017	With significant relationship

Table 5 presented the significant relationship pf the school heads' attitude towards ICT and their competence in ICT. Result showed that there is a positive significant relationship between the school heads' attitude and their competence in ICT (r = 0.9083; p < 0.05).
This implies that the higher the school heads' attitude towards ICT gets, the more competent they become. It further implies that the school heads' competence in ICT is much impacted by their attitude towards it.

4. Discussion
Attitude Towards ICT
Wakhu (2013; Njathi, *et al*. 2018 [6]) emphasized the need for a school head to have positive attitude in ICT which will be useful in encouraging, supporting, and assisting the teachers in using computers in the teaching and learning process. School administrators play a crucial role in mediating the integration of technology into the educational system. Thus, a school head in this situation can either inhibit or facilitate the usage of computers in the classroom. His or her attitude will determine the school's attitude towards technology as well.
Programs for staff development were started, and huge sums of money were spent on putting the essential technical infrastructure in the schools. But without the assistance of the school leader, who must spearhead the school's initiatives and serve as a change agent, such a substantial

drive for innovation, which would unavoidably modify the way that schools operate, could never be accomplished (Murphy & Shipman, 1999; Papaioannou, & Charalambous, 2011) [5, 8]. Naturally, this is only possible if the principle supports the innovation and has a good outlook on it. Actually, whether this idea succeeds or fails will depend on the principal's attitude (Pelgrum, 1993; Papaioannou, & Charalambous, 2011) [9, 8].

In general, establishing ICT integration in the teaching and learning processes depends heavily on principals' good attitudes toward ICT. Pelgrum (1993; Papaioannou, & Charalambous, 2011 [9, 8]) noted that "schools with principals who are more positive about the educational impact of computers tend to emphasize computer integrated learning more than schools with less positive principals." Walsh (2002; Papaioannou, & Charalambous, 2011) [11, 8] emphasizes that ICT integration in schools can only be accomplished if school leaders are fully committed to it over time.

Studies in Nigeria, including those by Jegede, Dibu-Ojerinde, and Ilori (2007) and Mohammad (2012), found that one barrier to ICT adoption for school management was the administrators' attitude toward the technology (Kirui, 2022) [4]. Despite the significance of using ICT in school management, studies conducted all over the world reveal that some principals still hold a negative opinion of its use.

Additionally, a study conducted in Cyprus revealed that school heads (also known as school principals) have generally neutral to positive attitude towards ICT (Papaioannou, & Charalambous, 2011) [8].

Competence in ICT
A number of studies indicate that the majority of school administrators lack the technical skills necessary for ICT usage in school management, which results in a negative attitude toward ICTs. Studies by Obiekwe and Obadigie (2019) [7], Ogachi (2014), and Chepkonga (2015) [2] in Kenya and Nigeria, respectively, showed, for instance, that school administrators lack the fundamental abilities needed "for use of ICT in school management (Kirui, 2022) [8].

Griffin, McGraw, and Care (cited in Al-Khateeb, 2017; Gerona & Bautista, 2022 [3]) also emphasized that the school heads' competence in technology involve digital skills that go beyond simply finding information online and include more complex services and specialized knowledge like problem-solving, sharing, and teamwork with peers. However, it refutes Abraham *et al*. (2019; Gerona & Bautista, 2022 [3])'s claim that the principle has only rudimentary knowledge of ICT in order to set up systems to make organizational procedures gradually more effective, including the work of faculty to supervise and guide the ICT foundation.

Computer proficiency accounted for 54% of the variation in computer use. This result made computer proficiency a significant criterion that might be considered when assessing the degree of computer use (Wei, *et al*., 2016) [12].

Significant Relationship between the Attitude and Competence in ICT
Based on the empirical study conducted by Jegede, at al. (2007; Wei *et al*., 2016 [12]), it was determined that an individual's general computer attitudes and behaviors and ICT competence had a significant positive connection. Furthermore, Wei *et al*. (2016) [12] also emphasized the

significant part of both attitude and competence in ICT to school principals and teachers.

Previous studies showed results that indicated a weakly positive correlation between school principals' attitudes and their perceived computer proficiency (Sa'ari, Wong, & Roslan, 2005; Wei, *et al*., 2016) [10, 12]. Therefore, the researchers asserted that having proficiency with computers is an important asset in addition to having favorable attitudes toward the use of information systems.

5. Conclusions
Given the results and interpretation, it may be concluded that school principals or school heads have neutral to positive attitude towards ICT. Furthermore, they are at the level of competent to very competent in ICT. It may also be concluded that the school heads' attitude towards ICT significantly affects their competence in the said subject. Thus, the more positive the attitude, the more competent they can become, and the negative the attitude, the less competent they become.

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