Attitudes toward ICT of Law Enforcement Officers:
A Case of the Royal Malaysia Police

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Abstract

One of the primary characteristics of policing of the next century will be the proliferation of technology as an important component of law enforcement. The successful law enforcer or policeman of the future will be marked by an ability to incorporate and directly apply a wide range of technology in their interactions with the public. More than simple data access, policing technology is increasingly being used as a means by which the police and the public interact. The overall objective of this study is to measure the attitudes of the Royal Malaysia Police workforce towards the use of information and communication technologies in policing and then ascertain the relationship between these attitudes and the policeman's job experience and productivity. With a response rate of 77.67% from the 600 questionnaires sent to 14 identified police headquarters throughout Malaysia, the results showed mediocre attitudes toward ICT and working with computers relative to usefulness, confidence, liking and anxiety. The findings of the study will outline important managerial implications related to introducing and implementing new technology uses within law enforcement personnel in Malaysia.

Keywords: Computer attitudes, police, law enforcement, ICT, computer usage.

1. Introduction

With the growing penetration of ICT technology, attention tends to shift from readiness to usage of ICT for different purposes. Most enterprises today use computers, and Internet access of enterprises including the public sector particularly in law enforcement.

As the Royal Malaysia Police or PDRM enters the twenty-first century it is also being called upon to reinvent itself in order to better respond to a rapidly changing environment and new challenges. Dramatic changes in demography; intense and sustained urbanization; massive immigration; rapid development of residential areas adjacent to ever-growing urban centers; continuous advances in technology, especially information and communication technology; globalization; increasing sophistication of crime; rise in transnational crime; perceptions of widespread and mounting corruption in the police force; expanding civil society including proliferation of non-government organizations; rise in public expectations and demands for transparency and accountability; and greater consciousness of human rights; are placing increasing pressure and challenges upon PDRM to adapt, modernize and enhance its services and performance. A key challenge for the organization is to regain the good image it enjoyed during the period of the 1960s to 1980s, an image that has been seriously undermined in the last decade due to mounting public perceptions of corruption and abuse of power in PDRM [1]

2. Background

The Royal Malaysia Police (PDRM) has a long and distinguished history. While the Malay Sultanates established various institutions to perform rudimentary police functions, in particular enforcement of the law and maintenance of peace, the beginnings of a modern police force can be traced back to 1807 with the introduction of the "Charter of Justice" in Penang. The Charter established a Court of Justice and clear the laws enforced by the Police. A second Charter was issued in 1825 when British colonial rule extended from Penang to Singapore and Melaka. Police forces were organized in all three Straits Settlements under the British.The Royal Malaysia Police saw some of its finest years during the Emergency period of 1948-1960 and thereafter, when the Communist Party of Malaya (CPM) launched its armed bid to take over power in the country. The police force was rapidly expanded, growing seven-fold in strength to 161,281 personnel at the height of the Emergency in 1950. It consisted then of 31,164 regular police, 44,117 special police and 86,000 auxiliary police. As the authority responsible for internal security and public order, the police bore the brunt of the counter-insurgency campaign, assisted by the military in deep jungle operations.

The period saw the establishment of several important components in the Federation of Malaya Police. One was the Special Branch, which was the body responsible for intelligence gathering. It quickly gained international recognition as a quality intelligence service. The other was a para-military police force to engage the insurgents in deep jungle guerrilla warfare. It was first named the Flying

Squad, then the Jungle Squad, and finally Jungle Companies. An off-shoot was the VAT 69, trained along the lines of the British Special Air Service. Another unit that gained fame was the Senoi Praaq, comprised of Orang Asli. Besides these, the Special Constabulary, Auxiliary Police and Auxiliary Women were also established. The Auxiliary Police were later renamed Police Volunteer Corps [1].

3. Significance of Research

The new millennium and Vision 2020 bespoke of computers being part of our daily existence. The Information Era or Knowledge Economy (K-economy) requires everybody to computer literate and computer competent. In his speech at the 1993 International Conference on Trade and Investment, then Prime Minister of Malaysia, Dato' Seri Dr. Mahathir Mohamad stated that the establishment of a competitive economy must mean, among other things:-

- An economy that is technologically proficient, fully able to acquire, adapt, innovate and adopt the latest in modern technology and to keep up with it;

- An economy driven by brain-power, skills and diligence in possession of a wealth of information, and able to utilize it.

Furthermore, the Prime Minister continued by saying that, "The structural transformation envisaged by Vision 2020 means also that human resource and labor must continuously be upgraded in order to meet the needs of the higher value-added and technology-oriented sectors. This upgrading process will require the combined efforts of both the Government and private sectors. This is the reason why the Government today is focusing seriously on education as an industry rather than merely as a basic social facility provided by the Government. Educational and training services will contribute towards economic growth even as they cater to the nation's manpower needs." This is also at par with the Ministry of Education's mission statement which is "to develop a world class quality education system which will realize the full potential of the individual and fulfill the aspiration of the Malaysian nation" it is best that students at UiTM Shah Alam, have a better attitude towards learning about and working with computers. Therefore, by undertaking this research, we hope to identify certain traits, criteria and characteristics that would help the students, faculty, UiTM and, eventually the nation know

which are the weak areas that we should focus on in order to achieve the goals of Vision 2020.

The government has also visualized a computer for every home in Malaysia. With Moore's Law coming true to form, buying a computer should no longer be a financial constraint. According to Moore's Law, computers will become faster, cheaper, and smaller. With computers having invaded nearly every area of our lives, it is impossible not to choose a career without using a computer to work with.

According to Keinschrod, Kruk, and Turner [2], "the impact of the computer on society is as significant as that of the first printing press". Kinzer, Sherwood, and Bransford [3] suggested that computers could be used to improve learning in the classroom by providing practice and feedback in mathematics, spelling, and word identification. Computers can also be used to simulate a laboratory in science or chemistry. They can be used to keep track of students' progress or to gain access to national computerized networks, which contain information that is not available in the school library.

Sullivan [4] stated that without knowledge of computer's purpose and its benefits, an individual may show signs of anxiety, reduced job performance, and increased job insecurity. Anxiety toward computer use is expected to be negatively related with computer skills, such as low anxiety toward computer use should be related to higher computer skill and high anxiety with lower computer skill [5].

Thus, the purpose of this study was to gather information concerning the attitudes of the Royal Malaysian Police workforce toward learning about and working with information and communication technologies (ICT). Specifically, this study will identify attitudes such as usefulness, confidence, liking and anxiety when using computers relative to age, education, gender, and computer experiences. The findings from this study would be relevant as one of the sources of reference for policy makers and top management of the RMP in order to improve the current computer competency of the police officers so as to determine the needs, trends and training in computer usage.

4. Findings

The survey instrument used for this research was the 1998 version of the Survey of Attitudes Toward Learning About and Working with Computers developed by Prof. Brenda H. Loyd and Dr. Clarice P. Gressard [6]. The survey instrument was divided into two parts where Part A was on the demographic

profiles of the respondents and, Part B was on ICT attitudes, that is, 40 statements measured on a Likert scale of 1-4 were structured around the four attitudes of usefulness, confidence, liking and anxiety. The scales were: strongly agree, slightly agree, slightly disagree, and strongly disagree. Also, fifty percent of the questions were positively worded and the rest were worded negatively.

Six hundred (600) questionnaires were mailed or hand delivered to 14 police units throughout Malaysia. The response rate was 77.67% or 466 completed questionnaires were returned. The gender distribution of the respondents are shown in Table 1.

Table 1: Gender Distribution of Respondents

Gender	Frequency	Percent
Male	289	62
Female	167	35.8
Missing	10	2.15
Total	**466**	**99.9**

Next, the computer experience of respondents are shown in Table 2.

Table 2: Respondents' Computer Experience

Length of Computer Experience	Freq.	Percent	Cumulative Percent
<1 week	24	5.2	5.2
1wk-1mth	32	6.9	12.1
1-6mth	47	10.1	22.2
6mth-1yr	35	7.5	29.7
>1yr	**298**	**63.9**	94
Did Not Answer	28	6	100
Total	**464**	**99.6**	
Missing 99	2	0.4	
Grand Total	**466**	**100**	

The educational background of the respondents is the third demographic variable surveyed and this is shown in Table 3.

Table 3: Respondents' Educational Level

Education Level	Frequency	%
SPM (High School)	296	63.5
Diploma (Assoc. Degree)	78	16.7
Bachelor	69	14.8
Master	9	1.9

PhD	1	0.2
Total	**453**	**97.2**

For this research, the four attitudes measured and analyzed as part of the replication of Loyd and Gressards' 1984 survey questionnaire are usefulness, confidence, liking and anxiety. From Tables 4 and 5, the valid responses from a total of 466 attitudes' scores tabulated are: 459 for usefulness, 457 for confidence, 461 for liking and, 459 for anxiety. The remaining numbers are listed as missing.

The four attitudes – usefulness, confidence, liking and anxiety are later analyzed as subscores of attitudes. The mean differences for these subscores are shown in Table 5.When listed according to highest to lowest, usefulness was 25.21, confidence was 24.37, liking was 24.20 and, anxiety was 23.52.

Table 4: Attitudes Subscores

	N	Mean	Std. Deviation
usefulness	459	25.21	2.24
confidence	457	24.37	2.40
liking	461	24.21	2.31
anxiety	459	23.52	2.27

Table 5: Comparison of Means for Attitudes' Subscores

Attitudes	Test Value = 0					
			Sig. (2-tailed)	Mean Diff.	95% Confidence Interval of the Difference	
	t	df			Lower	Upper
usefulness	241.54	458	.000	25.21	25.00	25.41
confidence	220.77	456	.000	24.37	24.15	24.58
liking	224.78	460	.000	24.20	24.00	24.41
anxiety	222.1	458	.000	23.52	23.31	23.73

Discussions on these findings will be elucidated in the following section.

5. Discussions and Conclusion

The discussions and conclusion presented are drawn from the results or findings. As shown from Tables 4 and 5 above, the survey results indicated that the attitude subscores for usefulness, confidence, liking and anxiety have mean scores slightly above average (above 2.00). The difference between the mean scores of each attitude subscore is equals to or less than .1 ($\leq$ 0.1). In general, the attitude subscores showed slight differences but it can be concluded that there is no significant negative attitudes toward

ICT and working with computers of the PDRM personnel.

In addition, it is important to note that all four attitude subsocres fall within the 2.00-3.00 scale (Agree to Disagree), therefore it is safe to say that the respondents are not overly enthusiastic with ICT usage. However, 114 or 24.5% in the age bracket of 46-50 years are the ones that find ICT to be useful.   At the extreme end, the police workforce who are less than 22 years (0.86%) and above 55 years (0.43%) do not find ICT to be useful. It would be very interesting to find out why the future leaders, that is, those who are below 22 years of age do not find ICT to be useful in their daily work.

Also, it was found that there was no difference between gender and attitudes toward computers of the police workforce with respect to computer anxiety, confidence, liking, and usefulness. These were evidenced in the Pearson Chi-square significant values where the four attitudes' alpha levels were above 0.05 where usefulness = 0.94, confidence=0.24, liking=0.22 and anxiety=0.44. Furthermore, the minimum expected cell frequencies for usefulness = 37, confidence=36, liking=37 and anxiety=36 which are >5, therefore, we can be confident that we have not violated one of the main assumptions of chi-square.

Henceforth, in examining the observed cell frequencies, it can be concluded that gender do not show a significant difference for any of the four attitudes, X^2(17, $\underline{N}$=449) = 9.11, p>.05; X^2(19, $\underline{N}$=447) = 22.91, p>.05; X^2(17, $\underline{N}$=451) = 21.22, p>.05; and X^2(16, $\underline{N}$=449) = 16.14, p>.05 respectively.

Furthermore, the tables presented showed that the majority of the respondents are males (62%). Most respondents were in the age groups of 22 years or less and 23 to 25 years, where these groups rated the highest number of respondents who have more than a year's computer experience.   Male respondents are also shown to have less than a week's computer experience compared to their female counterparts.

It is not surprising that the highest number of respondents who do not have experience with computers comes from the age group of 22 or less. Most of them are fresh off secondary school. Before entering the university, they would have to follow a 2-year secondary school education, then sit for their Sijil Pelajaran Malaysia (SPM) or the Malaysian Certificate of Education. Upon being successful in their application for enrolment to the university, they are admitted to their choice of specialized area of study. Therefore, it is clear that some of these students have limited or no experience with computers.

The results also showed that the age group 22 or less and 26-30 did not exhibit positive attitudes with respect to anxiety, confidence, liking and usefulness. However, the overall average scores for this group were not much different compared to the other groups.

To conclude, the top management or leaders of the Royal Malaysia Police (RMP) should lead by example. In any organization, if the leaders do not show good example, the subordinates would emulate them, thus, aggravating the situation. Lederer and Mendelow [7] confirmed that many researches conducted showed that senior management has been the problem preventing effective development of information systems and information technology strategic plans. In fact, obtaining top-management commitment was and is still the prerequisite for success. Bearing that in mind, the following reasons are put forth for RMP to consider in their future quest for effective and efficient policing [8]:

- *Top management lacked awareness of the impact information systems/ information technology (IS/IT) is having generally and did not understand how IS/IT offered strategic advantages. They tended to see 'computers' in purely an operational context – still essentially a data processing era view.*
- *They perceived a credibility gap between the 'hype' of the ICT industry as to what ICT can actually do and how easy it is to do it, given the difficulties their organization had had in delivering the claimed benefits.*
- *Top managers did not view information as a business resource to be managed for long-term benefit. They only appreciated its criticality when they could not get what they needed.*
- *Despite the difficulty in expressing all IS benefits in economic terms, top management still demand to see a financial justification for investments.*
- *Finally, an increasingly apparent problem today, is that top management have become action orientated with a short-term focus that militates against putting much effort into long-term planning, especially of IS/IT.*

7. Acknowledgement

is, the Dean of the Faculty of Administrative Science and Policy Studies, UiTM Shah Alam, Associate Professor Dr. Jasmine Ahmad and, others who were directly or indirectly involved with this research.

8. References

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