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## ISSUES OF END-USERS COMPUTING TRAINING IN HONG KONG

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### ABSTRACT

This paper examines the practices of end-user computing training programs in Hong Kong. A questionnaire survey is employed and sample are selected from companies that are highly committed in computerization. Our results show that the tutorials, courses, and lectures are most significant training methods that are used in Hong Kong. In addition, factors affecting the provisions of end-user training are budgets, long-term human resource planning, complexity of works, demands from end-users, and training quality.

### INTRODUCTION

To survive in today's business world, a company needs to identify its competitive strategy. A common practice of such strategy is to promote computerization. It is undoubtedly that the success factor of the latter application is strongly dependent on its users' acceptance towards the computing system [12]. One factor that guarantees a high acceptance rate of a computer system is to provide a well-planned training program for end-users.

In general, there are four sources of end-users computing training are offered [1]: software houses, higher institutions or affiliated associations, individual company and self-learned mode. The learning modes of these four sources can be dominated by seven instructions: i) tutorials, ii) courses, lectures or seminars, iii) computer-aided instruction, iv) interactive training manual, v) resident expert (i.e. users initiated the tutorial techniques), vi) help commands from software packages, and vii) external training programs. Nelson and Cheney (1987) examined these seven techniques in terms of two measurements: quantity (i.e. total amount of time spends in training) and quality. In the first term, it was reported that the learning modes of manuals, tutorials and help commands received lesser attention than other remaining techniques. The resident-expert technique ranked superior in both quantity and quality measures; while computer-aided technique and help commands had the lowest score of quality measure. In addition, the latter paper further concluded that self-training method was the dominant source of training and higher institution is the most valuable way in providing end-user training in computer skills - such as Word processors, dBase and Lotus 1-2-3.

Relevant literature examining end-user training method had stated substantially different views on the ranking significant factors affecting the effectiveness of offering end-users computing training. These factors include: i) budget constraints [6,12,14], ii) business strategy [3,10,13], iii) human resource development [4,7,14], iv) management supports [4,10,13,14], v) complexity of works [6,9,11], vi) demand of users [9,10,11,12,13], vii) computer anxiety [3], viii) training quality [3,4,8,10,12], ix) impartial staff knowledge [3,5], x) post-training support [10,13,14], xi) motivation [4].

The main purpose of this paper is to examine the practice of end-user computing training in Hong Kong. In particular, we are interested in determining i) a preference list of end-user training methods from tutorials, courses, lectures, seminars, program instructions, use of manual methods, and resident expert, ii) relevant factors relate to provision of end-user training, iii) obstacles factors in training, and iv) its general practices. In next section, we will review the methodology that was being used for this project, this is followed by reviewing its finding in section 3.

### METHODOLOGY

#### Questionnaires

A questionnaire survey method is used. The contents of questionnaires consists of three main sections. The first section comprises of seven questions which are related to the preference level of aforementioned training methods in a Likert scale of one to seven; where scale "1" indicates the most preference method. The second part constituted by 11 questions in determining the significant factors in providing training programs for end-users. Questions in this section were based on scale 1 to 5, with scale "1" as the most significant factor. The third and fourth set of questions were used to collect relevant practice and information of participants. The first two sets of questionnaires were mainly based on the materials extracted from literature that outlined in above sections.

#### Sampling and Data Collection

A mail questionnaires survey method was employed as a tool for data collection. Sixty set of questionnaires were sent out to the managerial level of EDP departments or provision of end-users training staff. Samples were randomly selected from the "1991 Computer Directory of Hong Kong" on the account that these companies are highly committed to computerization. SAS software was employed to analyze the data set.

**RESULTS**

**Profile of Respondents**

There are 29 set of questionnaires were returned which representing 48% of response rate, and 24 were only useable (i.e. 40% of response rate). The office position of respondents are ranging from Training Officers/Managers to General Managers. The sizes of employees and EDP staff from our sample were ranging from 100 to 30,000 and 10 to 1,000, respectively. The usage of PCs in these organizations has at least 100 units to more than 3000 units. Firms that are using mini or main-frame computer have between 100 to 10,000 terminals. The types of packages that are commonly used in these firms are Word processors, Spreadsheets, Graphic design, application software and accounting software. 83.33% of these companies are required their staff possess a minimum computer knowledge in their recruitment exercises. The level of knowledgeable of their staff in specific software and strategic application packages were respectively reported as 41.67% and 16.67%.

**Preference on Training Methods**

Data that are related to the four training methods was tabulated in Table 1. These data set were evaluated under an one-tailed t-test with  $t_{23,0.1} = -1.319$ . The  $H_0 = 4$  indicates that these factors are not significantly important, whereas  $H_a$  (i.e.  $t < -1.319$ ) is thus otherwise. It is clear that only the first three factors (i.e. tutorial, courses and lectures) were relevant to our study as their values of t-values are less than -1.319 (which are denoted by "\*" in Table 1). Amongst to these three modes, courses rank the highest, and follows by lectures and tutorials.

**TABLE 1: Seven Training Methods**

	<u>MEAN</u>	<u>STD.DEV.</u>	<u>t-test</u>
Tutorials	2.833	1.633	-3.501*
Courses	2.417	1.442	-5.378*
Lectures	2.583	1.586	-4.377*
Seminars	4.417	1.792	1.140
Programmed			
Instructions	4.458	1.719	1.305
Manuals	4.625	1.907	1.305
Resident Expert	5.33	2.239	2.917

**Preference on Modes of Training Programs**

All respondents were keen in providing users manuals (87.50%) and self-learned software packages (62.50%) for their staff. It was reported that internal training programs are preferred (with 62.50%) over the external one. In the first type of service, companies are welcome their staff to engage of self-learner mode. There are only 37.50% of respondents provide learning aids - such as video/disk training packages - for their staff. Internal training offers by training officers was reported as 37.50%. Training modes for the remaining group are either learned from their colleagues or self-learned software packages.

The most preference mode of external training programs are services provided by software vendors (45.83%) and courses/lecturers offered by software-houses or affiliated associations (37.50%). The first mode is well accepted by most companies because it is included when a software package is procured. Companies that are committed to the latter practice is normally provided an allowance for their staff - ranging from HK\$600 to HK\$1,500 or 75% to 100% of tuition fees. Contracted trainers is the least favor mode of external training programs (16.67%) in our study. The general reasons for different preference of modes for training programs were outlined in Table 2.

**TABLE 2: Reasons to Training Program Selection**

<u>Self-training</u>	<u>Internal Training</u>	<u>External Training</u>
Cost saving	Cost effectiveness	Urgent needs
Sufficiency	Company policy	Lack of EDP support
PC software	Heavy demands	Mini- or Main-frame requirement
	Specific requirement	Degree of Intensity
	More effective	Software complexity

**Factors Affecting Provision of Training Programs**

Table 3 presents the results on the factors that affecting the provision of training programs for end-users. Again, we were examining this result under an one-tailed t-test with  $t_{23,0.1} = -1.319$ . The  $H_0$  of this test is 3 which indicates that factors in this group were not significantly important, whereas  $H_a$  (i.e.  $t < -1.319$ ) is thus otherwise. Five out of 11 factors were significant to our result and were indicated by "\*" in the Table 3. The important of these factors were in the ranking order of budgets, demand from users, complexity of works, training quality, and long-term human resource planning with mean values of 2.125, 2.458, 2.667, 2.833 and 2.708, respectively.

**TABLE 3: Provision of Training Programs**

<u>Factors</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>t-test</u>
Budgets	2.125	1.296	-3.308*
Business Strategy	3.000	1.216	0.000
Human Resource Planning	2.708	1.160	-1.233*
Management Support	3.402	1.160	0.177
Motivation	3.125	0.797	0.768
Complexity of Works	2.667	0.817	-1.998*
Demand from Users	2.458	0.977	-2.718*
Computer Anxiety	3.458	0.932	2.409
Training Quality	2.833	1.090	-0.752*
Impartial Staff Knowledge	3.500	0.834	2.937
Post-training Support	3.375	1.096	1.676

**Obstacles in Providing End-user Training**

Table 4 compares factors that prevent companies to provide training programs for their staff. The cost associates with training program is the most relevant factor, and followed by high labor turnover rate. It was reviewed that factors such as difficulty in hiring tutors, computing training stress

and cost of unjustified training program were rated as impartially different.

**TABLE 4: Obstacles in Providing End-users Training**

Factors	Positive	Negative	Uncertainty
Labor turnover	54.17%	20.83%	25.00%
Stress of staff	29.17%	37.50%	33.33%
Cost too expenses	83.33%	12.50%	4.17%
Difficult to hire trainers	33.33%	54.17%	12.50%
Cost unjustified	45.83%	37.50%	16.67%

### DISCUSSIONS

Our findings reviewed the similar findings of Nelson and Cheney (1987) that tutorials, courses and lectures were the most popular training methods for end-users. However, manuals and program instructions that were proved by Nelson and Cheney as an effective techniques, it is not well received in Hong Kong.

Although literature compiled a list of different factors affecting the provision of end-user training, our results reviewed through the use of t-test shown a different version. Factors such as computer anxiety and management support did not review as significant in our study. This observation is perhaps due to our selected sample. Their profiles were documented in Section 3.1. The reason for such behavior is that these companies are highly committed in computerization and also they are imposed computer knowledge in their staff recruitment exercises. Therefore, these two factors were not significant in our study.

### CONCLUSION

This paper studied the relevant factors of end-user computing training programs in the environment of Hong Kong. It was concluded in this study that the significant training methods are in the sequence of courses, lectures and tutorials. It was further reviewed that high quality of resident training method and long-term development of business strategy were not significant factors but rather emphasis on long-term planning of their human resources. In compare to the development of training programs, it was suggested that internal training program is much preferred than developing external training program.

### References:

- [1] D.H. Benson, "A field study of end-user computing findings and issues", *MIS Quarterly*, 7(4), 35-45, 1983.
- [2] R. Boaden and G. Lockett, "Information technology, information systems and information management R.R. Nelson and P.H. Cheney, "Training Today's Users", *Datamation*, Vol. 33, No. 10, May, 12, pp. 121-122, 1987.
- [3] R.P. Bostrom, L. Olfman, and M.K. Sein, "The importance of learning style in end-user training", *MIS Quarterly*, March, pp. 101-119, 1990.
- [4] C. Chrisman, and B. Beccue, "Training for users as management issue", *Journal of Information System Management*, Summer, pp. 56-62, 1990.
- [5] D.L. Davis and D.F. Davis, "The effect of training techniques and personal characteristics on training end users of information systems", *Journal of Management Information System*, 7(2), pp. 93-110, 1990.
- [6] M. Duncan, "Correctly spelling out needs", *Computerworld*, 23(29), pp. 97, 1989.
- [7] S. Efroymson, "Managing end-user training - Dedicated staff, proper tools solve instruction snags", *Computerworld*, 20(18), pp. 49-54,56,62, 1985.
- [8] M. Hanley, "Technical know-how vs. teaching skills: Training's sticky issue", *Data Management*, 24(5), pp. 14-15,25, 1986.
- [9] R.L. Hayen, W.F. Cook, and G.H. Jecker, "End user training in Office Automation: Matching expectations", *Journal of Systems Management*, March, pp. 7-12, 1990.
- [10] N. Karten, "End-user demand requires new approach to training", *Data Management*, 24(5), pp. 10-12,19, 1986.
- [11] W.N. Ledbetter, J.F. Cox, and C.A. Snyder, "Education, training needs must be assessed before system implementation", *Data Management*, 24(5), May, pp. 16-19, 1986.
- [12] R.R. Nelson and P.H. Cheney, "Training end users: An exploration study", *MIS Quarterly*, December, pp. 547-559, 1987.
- [13] S.H. Rosen, "Integrated planning, communication create successful training", *Data Management*, 24(5), pp. 23-25, 1986.
- [14] E.W. Sokol and J.C. Bulyk, "The truth about training", *Journal of Information System Management*, Fall, pp. 74-77, 1986.