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Information Technology: An Assessment of Multinational Management Perceptions

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Abstract

This paper investigates the knowledge, familiarity level, and sources of knowledge about information technology of Korean business managers working in a large multinational corporation. Often academic research is limited in that students are used as surrogates for managers or business professionals. This paper extends earlier student-based research to business professionals to assess information literacy. Specifically, descriptive results concerning managers' familiarity level with technology, including the Internet, sources of knowledge about information technology, and the comfort level performing certain technology related tasks are presented.

Introduction

In the fast-paced world of technology, it is imperative to investigate the level of knowledge and understanding of existing technology. In addition, since technology is moving society toward a true global village, an assessment of international literacy is crucial. As communication and decision making technology advances, global partners need to understand the level of technology usage and knowledge to ensure beneficial relationships. To this end, twenty-two Korean business managers were surveyed to assess their level of computer literacy.

The 22 managers were from 6 divisions of a large multinational corporation. All indicated working in a different department. Examples of departments included MIS, R&D, sales, accounting, public relations, tax and accounting, and systems engineering. Titles of the respondents included assistant manager, general manager, chief of branch office, director, engineering manager, team leader, assistant senior manager, and senior manager. Respondents were participating in a five-week Global Leadership workshop during the summer of 1997. The respondents indicated an average of 16 years of business experience. Of the 22, over 50% had been using a computer for more than 2 years while only 6 reported using a computer for less than one year. Approximately 70% reported use of the Internet while approximately 80% reported personally owning a personal computer. Eighty percent also reported owning a notebook computer. However, only 10% reported subscribing to on-line Internet access through an Internet access provider.

Table 1. Information Technology Familiarity

Item	Mean	St. Dev
PC	6.27	1.39
Windows	5.86	1.81
Fax Machine	5.73	1.96
E-Mail	5.45	1.92
Computer Games	5.09	1.63
Word Processors	5.05	1.73
Internet	5.05	1.94
Spreadsheets	4.95	2.01
Modem	4.68	2.03
Local Area Networks	4.68	2.59
Cellular Telephone	4.50	2.11
CD ROM	4.36	1.99
Multimedia	4.09	2.22
Graphics	3.82	1.92
Databases	3.77	1.97
Pager	3.68	2.42
Search Engines	2.77	2.37
Desktop Publishing	2.77	2.20
Statistics Packages	2.05	1.25
Communication Packages	1.91	1.23
Voice Mail	1.64	.58

Familiarity Level

To access the familiarity with certain types of information technology, a 7-point scale was used. The options for the scale included "have never heard of", "have heard of, but have not used", "have used a little", "I use a few times per year", "I use about once a month", "I use weekly", and "I use daily". Jones and Berry (1995) used a similar instrument to investigate student knowledge about information technology.

As shown in Table 1, the Korean business managers indicated using several of the items about once a month (indicated by an average response of 5 or above). It was not surprising that respondents were most familiar with PCs and Windows since most indicated owning a PC or laptop. Study participants also had a high familiarity level with fax machines and electronic mail. The managers seemed to be least familiar with voice mail,

communication packages, statistics packages, desktop publishing packages, and search engines (all had mean values of less than 3, indicating little or no use of the technology). The more surprising response is the relatively low response for search engines.

Table 2. Source of IT Knowledge

Source	Mean	St. Dev.
Newspapers/Magazines	5.68	1.49
Work	5.5	1.54
News on TV	5.32	1.36
Friends/Colleagues	5.05	1.46
Textbooks	4.91	1.90
Class	4.5	1.85
TV Shows/Movies	4.00	1.41

Sources of Knowledge

Using a 7-point Likert scale ranging from "strongly disagree" to "strongly agree", the managers were asked where they hear about new information technology. As shown in Table 2, it appears these managers receive their information about new technology most often from newspapers/magazines. This is not surprising considering the large number of trade journals devoted to the area of information technology. Second, the results suggested that managers receive information about technology from work followed closely by news on TV. The two items that were reported as sources of knowledge with the lowest mean score were classes and TV shows/movies.

Table 3. Comfort Level Performing Tasks

Item	Mean	St. Dev.
Selecting Options from Menu	6.05	1.25
Copying File/Disk	5.45	1.22
Deleting Files/Data	5.36	1.4
Printing Output to a Printer	5.23	1.63
Sending Electronic Mail	5.23	1.41
Formatting a Disk	5.18	1.5
Changing Disk Drives	5.18	1.92
Using a PC	5.14	1.61
Forwarding Mail	5.09	1.38
Changing Directories	4.91	1.63
Printing Information from Internet	4.73	1.20
Surfing the Internet	4.45	1.79
Downloading Data	4.41	1.40
FTPing to other sites	4.18	1.47
Teaching Yourself Software	4.05	1.59
Installing New Software	4.0	1.72
Buying Computer Equipment	3.86	1.58
Gophering	3.59	1.59
Participating in Electronic Discussion Groups	3.14	1.32

Comfort Level

Using the same 7-point Likert scale for the sources of knowledge, respondents indicated how comfortable they felt completing certain tasks. The tasks and the reported mean values are shown in Table 3. It was not surprising that the managers felt most comfortable selecting options from a menu, copying files/disks, deleting files, and printing, considering the high level of Windows understanding. The items that ranked low in comfort level included buying computer equipment, gophering, and participating in electronic discussion groups.

Table 4. Internet Familiarity

Item	Mean	St. Dev.
Internet	5.32	1.89
Electronic Mail	5	2.09
Yahoo	4.64	2.30
Http://	4.59	2.4
Netscape	4.45	2.3
World Wide Web	3.95	2.55
Microsoft Internet Explorer	3.5	2.22
JPEG	2.09	1.97
Usenet Newsgroups	2.05	1.65
Gopher	2.0	1.15
GIF	1.95	1.59
CompuServe	1.91	1.6
FTP	1.82	1.14
Finger	1.77	1.31
URL	1.68	1.39
Telnet	1.55	.67
America On-Line	1.45	.86
Listservers	1.45	.60
Prodigy	1.36	.79

Internet Knowledge

Because of the growing importance of the Internet, several questions were asked to determine the level of knowledge about Internet-related technology. Results are shown in Table 4. As indicated, the responses were generally low compared to other forms of technology (see Table 1). The respondents did not seem to use much of the internet-related technology. Of the 19 items listed, 12 had a mean score of less than 3, indicating the respondents had heard of the technology, but had never used it. Of the 12, most are considered to be the more advanced technologies related to the Internet.

Summary and Future Study

Even though this paper has a small sample size and is still in progress, the results do provide insight and interesting findings that can prove useful in continued analysis of this data and development of future research projects. Technology literacy needs to be studied from an international point of view; this project is a starting point for such research.

References

Jones, Mary and Ron Berry (1995), "Information Technology: An Assessment of Student Perceptions," *Journal of Computer Information Systems*, Vol. XXXV, Number 4, pp. 28 - 32.