



UNIVERSITI PUTRA MALAYSIA

**MEDIA RICHNESS, SOCIAL INFLUENCES AND ELECTRONIC
MAIL IN THE WORKPLACE**

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FBMK 2000 3

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By

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**Thesis Submitted in Fulfilment of Requirements for the
Degree of Masters of Science in the Faculty Of Modern
Languages And Communication
Universiti Putra Malaysia**

August 2000



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirements for the degree of Master of Science

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Social constructivist perspectives propose that communication technology is not objective, rather, it is a joint product of technological features and social interaction. Based on the above-mentioned perspectives, this study was designed to answer several research questions. The questions were (1) do people from the eastern culture perceive e-mail richness rating the same as the western people do; (2) is it true that co-workers, supervisors and medium expertise factors do contribute in the e-mail use and usefulness assessments of their peers; and (3) to what extent those factors influence individual's use and assessments of e-mail.

The general objective of this study is to yield an empirical assessments of co-workers' and supervisors' influence on media assessments and use behaviour. The hypotheses presented were drawn based on the shared

premises of three major streams of structuration perspectives, namely Structuration, symbolic interaction extension to Media Richness Theory, and Social Influence.

The population of the study consisted of academic and non-academic staffs in UPM. Five faculties and one institute were randomly selected, and the Computer Centre provided 353 names of individual e-mail users of these faculties and institute. Self-administered questionnaires were sent to the all 353 users, but only 218 were usable. This study used survey method to collect data. Self-administered questionnaires were personally sent and collected by enumerators. All data were gathered and coded using Statistical Package for Social Sciences (SPSS 7.5). The statistical analyses used include frequency, percentage, mean, standard deviation, Pearson's correlation and, single and multiple regression analysis.

The results showed that (1) media richness perception showed significance difference between eastern and western culture, (2) keyboard skills was significant antecedent to e-mail richness perception, and (3) social influences from co-workers and supervisors contributed significantly towards e-mail use and usefulness assessments of their peers. As a conclusion, it is very important to consider both technological features and social interaction in planning, implementing and maintaining the use of communication technology in organization.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

**PENGKAYAAN MEDIA, PENGARUH SOSIAL, DAN MEL
ELEKTRONIK DI TEMPAT KERJA**

Oleh

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Ogos 2000

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Perspektif daripada '*Social Constructivist*' mencadangkan bahawa teknologi komunikasi bukanlah sesuatu yang bersifat objektif semata-mata, sebaliknya ianya adalah gabungan daripada unsur-unsur teknologi dan interaksi sosial. Berdasarkan kepada perspektif di atas, kajian ini telah dijalankan untuk menjawab beberapa soalan kajian: (1) adakah masyarakat timur mempunyai tanggapan tahap pengkayaan media yang sama dengan masyarakat barat; (2) benarkah penyelia dan rakan sekerja mempengaruhi penggunaan dan tanggapan keberkesanaan mel elektronik rakan-rakan mereka; dan (3) sejauh manakah pengaruh tersebut berjaya mempengaruhi penggunaan dan tanggapan keberkesanan mel elektronik seseorang individu.

Objektif umum kajian ini ialah untuk menjalankan kajian empirikal terhadap kesan pengaruh penyelia dan rakan sekerja terhadap penggunaan dan tanggapan keberkesanan mel elektronik. Hipotesis kajian adalah berdasarkan kepada tiga cabang utama dalam perspektif *structuration* iaitu *Structuration*, Teori Pengkayaan Media dan Pengaruh Sosial.

Populasi kajian terdiri daripada staf akademik dan bukan akademik di UPM. Lima fakulti dan satu institut telah dipilih secara rawak. Pusat Komputer telah menyediakan senarai nama seramai 353 pengguna mel elektronik UPM daripada fakulti dan insititut tersebut. Metodologi tinjauan digunakan untuk mengumpul data. Sejumlah 353 pengguna telah dihantar borang soalan, tetapi hanya 218 sahaja yang boleh digunakan. Data diproses menggunakan *Statistical Package for Social Science (SPSS 7.5)*. Antara kaedah analisis yang digunakan ialah frekuensi, peratus, min, sisihan piawai, Korelasi Pearson dan Analisis Regresi.

Hasil kajian menunjukkan bahawa (1) terdapat perbezaan antara masyarakat timur dan barat dalam memberi persepsi terhadap pengkayaan media, (2) kemahiran menggunakan papan kekunci adalah signifikan dalam mempengaruhi persepsi kekayaan media, dan (3) penyelia dan rakan sekerja mempengaruhi penggunaan dan tanggapan kebergunaan mel elektronik rakan-rakan mereka. Sebagai kesimpulan, adalah amat penting untuk mengambilkira faktor unsur-unsur teknologi dan unsur-unsur interaksi sosial dalam merangka, mengamalkan dan meneruskan penggunaan teknologi komunikasi yang berkesan di sesebuah organisasi.

In the Name of Allah, the Beneficient, the Merciful

ACKNOWLEDGEMENTS

**Alhamdulillah with the Grace of the Almighty I have today achieved
success in completing this study**

I take this opportunity to convey my deepest gratitude to my supervisor, Dr. Ezhar Tamam in guiding me throughout this study. My special thanks too, to Yang Mulia Dr. Raja Ahmad Tajuddin Shah and Assoc. Prof. Dr. Musa Abu Hassan who had provided comments and suggestions.

To my beloved father, Hj. Bidin bin Mat and to my beloved mother, Hajjah Hamidah Mohd Sutan, thanks for being there. No words can explain my gratefulness of your presence and support. To all at home, thanks.

My deepest appreciation and love to my husband, Mohd Fuad Mahadi bin Yaakob for the moral support and encouragement in this study.

Deepest regard to all academic and non-academic staffs of the Faculty of Educational Studies, Faculty of Modern Languages and Communication, Faculty of Veterinary Medicine and Animal Science, Faculty of Forestry,

Faculty of Food Science and Biotechnology, and Institute for Distance and Learning (IDEAL) in providing me the necessary information.

Dearest Saidatul, Enisar and Jusang, thank you for granting me your precious time to listen and understand.

I owe the success of this study to all the above

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LIST OF ABBREVIATIONS

CAD	-	Computer-Aided Design
CAE	-	Computer-Aided Engineering
CAM	-	Computer-Aided Manufacturing
CSL	-	Civil Service Link
E-mail	-	Electronic Mail
GDSS	-	Group Decision Support System
HDI	-	Human Development Index
IDEAL	-	Institute of Distance Learning
IRC	-	Internet Relay Chat
ISDN	-	Intergrated Services Digital Network
IT	-	Information Technology
JARING	-	Joint Advanced Research Integrated Networking
KLCC	-	Kuala Lumpur City Centre
KLIA	-	Kuala Lumpur International Airport
MacNet	-	Malaysia Cargo Network
MAS	-	Malaysia Airlines System
MEASAT	-	Malaysia East Asia Satellite
MIMOS	-	The Malaysian Institute of Microelectronics System
MISC	-	The Malaysian International Shipping Corporation
MNCs	-	Multinational Corporations

MOSTE	-	National Industry Technology Action Plan
NEP	-	New Economic Policy
NITC	-	The National Information Technology Council
OPP1	-	The First Outline Perspective Plan
OPP2	-	The Second Outline Perspective Plan
PALMOILIS	-	Palm Oil Information On-line Service
PSN	-	Public Services Network
R&D	-	Research and Development
SI	-	Social Influence
SIRIM	-	Standards and Industrial Research Institute of Malaysia
SPM	-	Sijil Pelajaran Malaysia
SRP	-	Sijil Rendah Pelajaran Malaysia
UPM	-	Universiti Putra Malaysia
VLSI	-	Very Large-Scale Intergrated Circuit

CHAPTER 1

INTRODUCTION

This chapter introduces the background and basic ideas of this study, and they are organised under the following topics: 1) background of problem, 2) statement of research problems, 3) objectives of study, and 4) significance of study.

Background of Problem

Individual's attitude, values, and behaviour are shaped in important ways by the social world in which that individual resides, and this has been shown in many communication and psychology research. The key understanding what researchers mean by social influence here is the concept of social norm. Influence relates to the processes whereby people agree or disagree about appropriate behaviour, and thus form, maintain or change social norms and social conditions. Recent theory and research on communication media use in organizations have focused substantial attention on the social construction of communication technology in the workplace. Social constructivist theories of communication technology in organizations propose that interactions with social agents influence technology-related cognition and behaviour.

Social constructivist approaches have drawn from several diverse theoretical underpinnings and related premises. The most basic are from Mead (1934), Simmel (1946), Rose (1962), and Bandura (1978) who stressed the importance of others in acquiring and selecting behaviour.

Later came “social information processing theory” (Salancik and Pfeffer, 1978), “structural symbolic interactionism” (Stryker and Statham, 1985), “social learning theory” (Fulk, Schmitz, and Steinfield, 1990), Giddens’s “structuration theory” (Giddens, 1979; Orlikowski, 1992; Poole and DeSanctis, 1990), and related premises of “self-organising systems theory” (Contractor and Seibold, 1993).

Fulk, Schmitz, and Steinfield, (1990); Kling and Gerson, (1977); Sproull and Kiesler, (1988); and Trevino, Daft, and Lengel, (1990) are among scholars who stressed specifically on how individuals evaluate and employ new communication technologies.

Although the underlying dynamics vary, a common theme unites these approaches: Social interaction helps to create shared meanings among situated actors. This interaction facilitates coordinated actions that help to define the uses and outcomes of communication technology in organizations. In this point of view, social constructivist perspectives argue that the individual’s technology-related attitudes and behaviours converge

with those of important communication partners due to shared symbolic systems and/or interpretive schemes that have been forged through interaction. In other words, social interaction in the workplace shapes the creation of shared meanings and that these shared definitions provide an important basis for shared patterns of media selection. This research integrated social influence with the current trend of adoption and use of communication technology in organization. Unlike other research strategies that more often focus on technical advantages and task requirement to explain the adoption and use of new media, this research explicitly model social influence factors and assesses their role in how individuals view and employ one new medium so called electronic mail (e-mail).

In a review of the definition of e-mail, Culnan and Markus (1987) defined electronic media as interactive, computer-mediated technologies that facilitate two-way interpersonal communication among individuals or groups. They suggested that the introduction communication activities in organizations have the potential to influence key aspects of organisational structure and process. Electronic mail also has been defined as "the entry, storage, processing, distribution and reception, from one account to one or more accounts, of digitized text by means of a central computer" (Rice, Grant, Schmitz and Torobin, 1990). While a recent definition (Kettinger and Grover, 1997) views e-mail as a

computer system for the exchange of messages and other information that may include text and numerical data, computer programs, video, graphics and sound. E-mail features apparent to those who have used the medium include asynchronous discussion, data sharing, message composition and possible information overload.

E-mail was chosen because it is one of the best examples of widely used communication technology in Malaysia and is growing in importance. Furthermore, Malaysia has recognised information technology (IT) as a strategic technology for long term development. This is clearly stated in vision 2020 where Malaysia's statement of national goals clearly articulates the country's objective for a developed-nation status while moving towards the creation of an information-rich society (Mohd Azman Shariffadeen, 1995, IT paper no. 8).

To understand e-mail use in organization, we have to first understand its richness perspectives. The media richness model, (Daft and Lengel, 1984) proposes that a primary objective of organizational participants is to reduce ambiguity through media selection. Media richness has been defined in the literature in terms of four objective characteristics. A rich medium is one that allows for communication of multiple cues through multiple channels, language variety, immediate feedback and a high degree of personalness (Daft and Lengel, 1986). However, following the Social Influence (SI)

Model of Technology Use (Fulk, Schmitz, and Steinfield, 1990), media “richness” is posited to be subjective and is influenced by attitudes, statements, and behaviours of others in the workplace.

Statement of Research Problem

The so called “richness imperative” suggests that high-rich media are necessary for the effective handling of equivocal situations, while low-rich media are sufficient for situations that are low in equivocality (Trevino et al., 1990). Thus, with the broader acceptance and general use in recent years of electronic form of communication such as e-mail, it is important to determine where along the richness continuum of richness these new media lie.

Media Richness theory (Daft and Lengel, 1984) has been discussed by many scholars in the West, and some support exists for this model. Few research were by Trevino et al (1987); Trevino, Lengel, Bodensteir, Gerloff, and Muir (1990); and Russ, Daft, and Lengel (1990). However, many theories and models also have been developed to challenge this Media Richness theory and one good example is Social Influence (SI) model of technology use (Fulk, Schmitz, and Steinfield, 1990).

The SI model gives consideration to new media such as e-mail and that many social factors that can influence media selection, communication processes, and outcomes. It believes that the way in which richness has been measured based on its objective characteristics is not sufficient to allow us to truly understand why e-mail and other electronic media are viewed as either rich or lean. . This is supported by some recent studies in the literature that provide evidence where e-mail is perceived by its users to be a richer communication medium that its objective characteristics would indicate (Fulk and Ryu, 1990; Rice and Shook, 1990; Markus, 1988).

As mentioned earlier, many previous studies has treated media richness as an invariant objective features. However, based on the SI model , this present study measures richness as a perceived characteristics that varies across individuals. This is because media properties such as richness are posited to be subjective – influenced to some degree by attitudes, statements, and behaviours of others in the workplace.

However, from where do we get richness perceptions? As proposed by the SI model also, richness perceptions are a function of (a) social influence, and (b) individual differences in medium expertise. Undoubtedly, there are many kinds of social influence and their effects also are vary. Realizing this matter, the study has specified to focus on the effects from supervisors and co-workers' use and assessments of e-mail as selected factors of social