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Challenge of SMEs Managers: Satisfaction with the Communication Media

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Abstract

The aim of this study is to examine the relationship between media usage of managers and communication satisfaction in Small and Medium tourism Enterprises. A conceptual model that hypothesizes the managers prefer to use media that are high in richness, and media usage will affect communication satisfaction in the firms, is tested. In addition, the model portrayed age factor as the moderating variable in manager's communication satisfaction in firms. The data from 78 tourism managers was used to test the model on seven popular media in use. It was found that there are differences in the media usage and communication satisfaction between the media that are high in richness and media that are low in richness. The findings suggest that the model is plausible in explaining how different factors combine to affect the satisfaction of managers with the new generation of communication technologies. The results also show that Age plays a moderator role for some of the investigated media.

Keywords: Media; SMEs; Satisfaction; Tourism

Introduction

The information age has had a dramatic impact on our society, and this has been felt both positively and negatively [1]. New technologies have shaped an evolution in inter-organizational interactions and have presented as opportunities for smaller firms to reduce communication costs and to make the negotiation processes richer and wider. Today's business challenges such as focusing on customers, competing globally, and improving stakeholders satisfaction are being driven and aided by modern communication technologies, negotiation tactics, and changes in social trends. Also, one of the main concerns about today companies is that the traditional managerial echelon, better to say social mechanics are lost. Many researchers considered communication media as a solution to these challenges [2,3].

Communication media have a vital role to all functions and procedures of Small and Medium Enterprises (SMEs). It is no longer an option for SMEs to ignore the modern communication technologies and take a 'wait and see' attitude in the context that is changing per moment. Iacovou et al. [4] stated that a major reason that SMEs become technology-based firms and use e-communication is due to external pressure. Broadly defined, pressure from trading partners and customers seemed to be the logical reason for adoption of modern communication technologies. To be practically meaningful, specific aspects of the organizational importance of communication are necessary. To identify these aspects and their correlates, researchers must of necessity be selective in their approaches to communication in firms.

An interesting question is how the media usage can affect the satisfaction of CEOs in tourism SMEs. It should be noted that the decision to continue communicating with a partner is dependent on the level of satisfaction with the information exchange that occur with that partner. Instant Messaging (IM), written letters, e-mail, phone, Video Conferencing (VC), and answering machine are popular means of communication within the SMEs. Face-to-face communication on the other hand, is still the primary means of communication for SMEs managers in developing countries for reasons such as the limited availability of financial, human, and physical resources, and simply because it is easier to share personal issues and emotions via a face-to-face medium.

As far as the tourism industry is concerned, the growing interest in tourism development is paralleled within the European Union by a switch from large organizations to small firms, because this new approach introduces greater flexibility in the tourism sector. The World Tourism Organization predicts one billionth international arrivals in the year 2012. On average, tourism is expected to grow faster than other economic sectors. Over 30 different industrial components have been identified to serve travelers that explain the industry's heterogeneity.

The number of SME employees varies according to the agency providing the definition. In a European wide context, a SME is defined in employment terms as a company with a workforce less than 250 employees, a definition that embraces readily the importance of tourism businesses in Europe. The US Small Business Administration uses a cut-off of fewer than 500 employees. Harrison et al. [5] and Iacovou et al. [4] utilized a cut-off of fewer than 200 employees. For this study we have used "less than 250 employees" according to the European Union (EU) definition. Therefore, tourism industry of Tehran metropolitan area, capital of Iran, was chosen, because Iran, as a developing country, represents an interesting context of a country in transition that has made significant growth toward technology adoption. Tourism SMEs are service-based; therefore communication media play an important role in the internal commitments and process improvements. However, no researches have been undertaken concerning satisfaction in tourism small businesses of developing countries. In this sense, the aim of the current study is to investigate whether using communication media affects satisfaction in the Iranian tourism firms? Moreover, is there any difference in the communication media use and media satisfaction between the media that are high in richness and low in richness?

Theoretical background

It was defined that satisfaction could be measured as a participant's overall evaluation of the media use; including technology characteristics and social contact (Dolen et al. [6]. Canning and Hanmer-Lioyd [7] noted that satisfaction is partly determined by the manager's judgment of an exchange partner which was formed from the experience

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of dealing with an exchange partner in the series of negotiation, commitment, and execution phases. Researchers have found that satisfaction with the communication varies with a lot of elements. Among researchers looking exclusively at dyads, some have shown satisfaction to vary with the medium (Kinney & Watson, [8]), the task-medium interaction, Suh, [9], the task process, Topi et al. [10], and the person's perceptions of his or her partner [11]. Broadly defined, there are a lot of environmental, psychological, and personal factors that influence communication satisfaction in SMEs. According to the literature review, among the most important environmental factors are technology, age, and gender. The psychological factors are open communication, group, social contacts, and communication behavior. Also, the personal factors are trust, past experiences, and feedback.

Technology attributes have a strong effect on Computer-Mediated Communication (CMC) satisfaction [6], and are considered important structural features that influence satisfaction [12]. Dobholkar [13] suggests five perceived technology attributes that are important to both parties: control, enjoyment, reliability, speed, and ease of use. It is important that a participant feels the medium gives him/her control over the process of information exchange. Enjoyment is the extent to which participants feel that medium is fun and entertaining. Reliability is the extent to which participants feel that using medium works well. Speed is the extent to which people feel that using media quicken the process of information exchange. Ease of use is the lack of effort and complexity in using media. Communication satisfaction changes as a function of an individual's age. Old adults were found to have a lower level of communication dissatisfaction than young adults [14]. Hofstede [15] suggested that developing a gender-based theory on communication satisfaction including national-cultural moderators will be necessary in the near future.

Goris [16] suggested that open and motivating communication may produce high levels of performance and satisfaction in the organization. Integrative communication behavior facilitates the creation of trust between the parties and reduces uncertainty to reach win/win agreements and is therefore better able to satisfy the interests of the parties (Alder et al. [17]. In addition, due to the communication media satisfaction between the participants, SMEs must build trust among the end users of the media. Building trust requires frequent [18] and high-quality communications [19]. It will be intriguing to note that computer experiences such as typing skills and background knowledge are important predictors of perceptions of media richness, and lead to more satisfaction with the media. Based on the Goris [16] and Appelbaum et al. [20] findings, communication without receiving feedback appears to be increasing dissatisfaction. (Table 1) shows the literature orientation among researchers of communication and media satisfaction.

Media Richness Theory guides researchers in focusing on task equivocality and the capacity of a medium to convey information. The richness of the modern communication tools is far removed from the text-only interface. Multimedia technologies allow the full impact of

vision and sound to be utilized. Media richness conveys the ability to interlink a variety of topics, render them less ambiguous and accelerate learning [21]. In this sense, the best traditional aspect to look at the media in SMEs is by media differences. To understand the special characteristics within each section, it is important to distinguish many dimensions, which cut across the different media sectors and is not the aim of this research. (Table 2) shows the most usable media in tourism SMEs of developing countries in terms of study framework.

According to Murthy & Kerr [22], Synchronicity is the extent to which the communication media allows individuals to work together on the same activity at the same time; i.e. have shared focus. For example, when we talk about face-to-face communication, the sender of the message can simultaneously receive the acknowledgement of the message based on the receiver's willing. As indicated in the previous section, the uniqueness of this research lies in its effort of exploring the satisfaction with the communication media in the context of tourism SMEs. Within the previous explained elements of satisfaction, this study focused on technology and media characteristics. It has already been found that participants in face-to-face teams will be more satisfied with the team experience and with the medium than participants in CMC teams [22]. Simon [2] indicated a greater preference for the medium among participants working face-to-face or through videoconferencing than among those connected through instant messaging. Also, it was found that participants in the audio condition reported lower levels of satisfaction with that medium than did those with either the text-based system or the video system [9]. Thus, successful completion of a task through a medium does not imply satisfaction with that medium. In other words, this is expected satisfaction levels to be the lowest among those communicators using e-mail, IM, and phone than communicators using face-to-face and videoconferencing. Founding on media satisfaction indicates that participants have been less satisfied with text-based electronic media (e.g. Olaniran [23]; Sproull & Kiesler, [24], probably because of the lower level of physiological arousal that accompanies the use of these media. Other researchers have found that satisfaction relates to the ease of use of a medium. That is, communication through a system that requires the person to type is more effortful and less satisfying [23]. The reason the medium that provided the quickest way for task completion (i.e. audio) is also the least satisfying is that participant prefer using phone and other text-based media because of their attraction to working with 'state-of-the-art' technologies. Studies have indicated that communication participants prefer media that are high in richness when working on the negotiation task (e.g. Suh, [9]; [25]. Managers in the competitive contexts are more accurate in communication based on visual information because it gives negotiators an opportunity to focus behavioral cues in detail. Here, based on the past literature, the conceptual model and hypotheses is presented (see Figure 1).

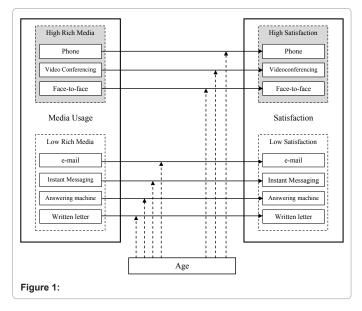
Based on the above arguments, the key question being investigated here is whether medium usage among CEOs tourism SMEs affect

Satisfaction items	Source of literature
Perception of partner(s)	Kiesler et al. [11], Rubin & Brown [51], Pruitt [52], Adler et al. [17], Murthy & Kerr [22], Watson et al. [53], Dennis & Gallupe [54], Forsyth [55]
Task and Interaction	Suh [9], Valacich et al. [25], Topi et al. [10], Stewart & Pavlou [56], Goris [16]
Trust	Staples [18]a, Jensen [19], Nilles [57]
Media and Technology	Simon [2], Olaniran [23], Sproull & Kiesler [24], Kinney & Watson [8], Dolen et al. [6], Dennis & Garfield [12], DeSanctis & Poole [58], Dabholkar [16], Kahai & Cooper [59], Forsyth [55]
Environmental, Psychological, and Personal factors	Bates & Cleese [35], Simon [2], Chen & King [14], Goris [16], Appelbaum et al. [20], Hofstede [15], Pornsakulvanich et al. [60]

Table 1: Literature Trend.

Media	Richness	Technology	Synchronicity
Telephone	High	Vocal	Synchronous
Video Conferencing	High	Visual	Synchronous
Face-to-face	High	Visual	Synchronous
E-mail	Low	Text-based	Asynchronous
Instant Messaging	Low	Text-based	Synchronous
Written letters	Low	Text-based	Asynchronous
Answering machine	Low	Vocal	Asynchronous

Table 2: Media characteristics



satisfaction with the medium. Below are the questions (Q) and hypotheses (H) of this study:

H1. It was hypothesized that CEOs prefer to use media that are high in richness than media that are low in richness.

H2. It was hypothesized that using the media that are high in richness has more satisfaction than media that are low in richness.

H3. It was hypothesized that media usage will affect satisfaction with the media in the firm.

H4. It was hypothesized that the age plays a role of moderator in satisfaction with the media of CEO in the firms.

Methodology Participants

Participants were CEOs or top managers directly reporting to the CEOs of tourism SMEs. The data was gathered from CEOs via mailed questionnaire from a population of 172 tourism SMEs in Tehran metropolitan area. They were randomly selected from a tourism database of Iranair (www.iranair.com), a national standard source of data about all of Iranian small tourism firms. A total of 78 managers provided complete answers to the questionnaire, giving an effective response rate of 45.34 percent. 53 CEOs were males (67.9%) and 25 were female (32.1%). Over 70% of SMEs were self-employed and 30% of SMEs were family-based businesses and none of SMEs were run by the government. Exactly 68% of SMEs had fewer than 50 employees and 7% had between 50 and 250 employees. Participants ranged in education from non-college education to Ph.D., with 29.5% had no

college experience, 47% received at least 2 years of college or university education, 7% had master degree, and 1% had Ph.D. The average year that computer permeated SMEs was 7.4 years (Median = 8 years). The mean of annual sales of SMEs is 167.700\$ with the minimum of 50.000\$ and maximum of 650.000\$. Based on Thayer and Ray [26] research paper, middle and old age groups have the same communication preferences. Therefore, these two groups were combined. 41 CEOs were young adults (between 15 and 35) and 37 were in the middle and late ages (greater than 35 years old). The mean of CEOs age was 37.98 years old with over 13.24 years of business experiences.

Measure and Questionnaire

From the data gathering and goal aspects, this research is applied survey study. Each participant received a written consent form and was asked to complete a demographic information sheet and a theorybased questionnaire. We combined several instruments that have been developed to assess communication satisfaction such as the Roberts & O'Reilly [27,28] organizational communication instrument, the Akkirman & Harris [29], the Downs & Hazen [30], the Goldhaber & Rogers [31], and the Hecht [32] communication satisfaction instruments. CMC use was measured based on the Cemalcilar et al. [33] suggested technologies. Also, we used some of the most popular media in the tourism context of developing countries. Participants were asked to indicate how often they use noted media in the everyday routine work. A five-point Likert scale (from strongly agree to strongly disagree) was utilized to measure the items about media in use. Lower scores on this scale indicate a stronger preference for communication media in SMEs.

Procedure and Measures

In order to achieve the study goals, the data was gathered from CEOs that had actively taken part in the communication of their firm. All data was gathered over a three week period. To ensure data quality and to enhance response, the research instrument was pre-tested in five SMEs and several adjustments were made before data gathering. Considerable care was taken during the field-based validation of the research instrument to ensure content validity by establishing relevance to practice and elimination of wording problems (such as biased, ambiguous, double meaning or inappropriate items). Also, despite the exploratory nature of this study, several precautions were taken to ensure the validity of the measures used. Many of the recommendations by Carmines & Zeller [34] were followed. To ensure content validity, a thorough survey of the relevant literature was undertaken to understand the important aspects of each major construct and its components, and not to neglect any important dimension. Finally, some of the academic experts authorized the instrument for data gathering. After the final modifications, the questionnaire was mailed to managers including a letter explaining the purpose of the study. High reliability of the instrument was found with Cronbach alpha 0.83 associated with the component measures.

Generalized Linear Model (GLM) was used for data analysis, because the flexibility of the GLM allows handling so many different types of designs that it is difficult to develop simple typologies of the ways in which these designs might differ. Between the designs, paired t-test for media usage difference and satisfaction difference analyses was chosen. Also, linear regression for media usage effect on the satisfaction, and subgrouping strategy for detecting moderating effect were chosen. We shall notice the differences between moderation and mediation effects. A strong analysis of differences is presented in Appendix A and is highly recommended to anyone who is interested in the topic to read it.

Results

Differences

At the outset, the aim of this study is to determine if there are media usage and media satisfaction differences among managers of tourism SMEs. T-test conducted on the data pertaining to media usage and media satisfaction differences to assess hypotheses H1 (which it was predicted that CEOs prefer to use the media that are high in richness than media that are low in richness) and H2 (which it was predicted that using the media that are high in richness has more satisfaction than media that are low in richness). (Table 3) reports the results of t-test on differences in media usage (t = 8.13, p < 0.05) and satisfaction with the media (t = -29.30, p < 0.05).

The results in (Table 3) show that the Media usage (preference for media) and media satisfaction are significantly different across media that are high in richness versus media that are low in richness. Descriptive statistics are presented in (Table 4) indicate that respondents were only slightly satisfied with media that are low in richness. (Table 4) also suggests that managers had a greater use of media that are high in richness. However, we can conclude that the results did support Hypotheses H1 and H2.

Effect and Moderator

As the next level, the effect of media usage on the media satisfaction (H3) was measured by running a linear regression. The results in (Table 5) show that the media usage affected media satisfaction significantly just for face-to-face (Sig = 0.001), Instant Messaging (Sig = 0.011), e-mail (Sig = 0.039), Answering machine (Sig = 0.000), and written letters (Sig = 0.046) and the results did support Hypothesis H3 just for these media.

Please note that the significance scores just show the media usage effect on the satisfaction, but not the satisfaction or dissatisfaction level. Finally, SCC conducted on the data pertaining to age variable to assess hypotheses H4 (which it was predicted that the age plays a role of moderator in satisfaction with the media of CEO in the firms). The age variable was divided into two groups (young ages and middle/old ages) and for each group SCC was conducted. Results are presented in (Table 6). The results show that the age variable plays a role of moderator significantly just for face-to-face, Instant Messaging, Answering machine, and written letters media.

Conclusion and Discussion

This study was undertaken to explore communication satisfaction among managers of tourism SMEs which operate on a continuous basis. Results have supported the first and second hypotheses, and also support previous researches on media use and satisfaction. With the continuing penetration of IT into organizations, the managers of SMEs have to decide very often, as the best option for achieving firm goals. Therefore, our study brings to the attention of CEOs the importance of choosing the appropriate media in order to achieve more satisfaction and better performance in the future. Communication media in SMEs are two-way streets, but they will take the right type of manager to drive and lead them in ways that will result in measurable and visible benefits to an organization.

The study findings support hypotheses 3 and 4. This is consistent with previous researches that suggest media use differences may affect the satisfaction (Simon,[2]; Murthy & Kerr, [22]; Bates & Cleese, [35]; Olaniran, [23]. Today, most manager's routine activities will fit somewhere into a communication media at one time or another.

Source	Lower	Upper	t	df	Significance
High use-Low use	0.66	1.09	8.13	77	.000*
High satisfaction-Low satisfaction	-2.14	-1.87	-29.30	77	.000*

Notes: *P < 0.05

Table 3: Results of t-test on Media usage and Satisfaction.

Source	Mean	N	Std. deviation
Media use (high richness)	3.06	78	0.611
Media use (low richness)	2.18	78	0.614
Satisfaction (high richness)	4.39	78	0.349
Satisfaction (low richness)	2.38	78	0.601

Table 4: Descriptive results.

Dependent variable	SD. Error	Beta	Significance	
Telephone	0.088	0.016	0.892	
Video Conferencing	0.058	0.062	0.621	
Face-to-face	0.037	0.383	0.001	
E-mail	0.123	0.164	0.039	
Instant Messaging	0.098	0.287	0.011	
Answering Machine	0.112	0.441	0.000	
Written letters	0.125	0.217	0.046	

Table 5: Results of Linear regression on Media usage-Satisfaction relation.

Dependent variable	You	ung age	Middle and Old age		
	Beta	Significant	Beta	Significant	
Telephone	0.016	0.921	0.013	0.939	
Video Conferencing	-0.85	0.637	0.193	0.273	
Face-to-face	0.398	0.010	0.248	0.139	
E-mail	0.285	0.071	0.120	0.486	
Instant Messaging	0.472	0.002	0.121	0.481	
Answering machine	0.460	0.002	0.375	0.022	
Written letters	0.333	0.034	0.053	0.753	

Table 6: Results of SCC: Age variable moderator detection.

Understanding media characteristics will help them to ensure the appropriated communication. For SMEs to achieve growth in an increasingly technologically advanced and borderless world, the conscious use of communication media needs to be marshaled into successful businesses. Today, owners and managers of established firms must seek ways that they can utilize and improve media satisfaction that characterizes the business growth. Until today, so many different things have been said and written about effective communication, but managers should bring it in mind that communication is not longer only associated with personal tactics, but it is in deep dependence with media selection. Also, satisfaction with modern media relates considerably not only to technical issues but also sociability issues such as inattentive interaction. Hoping that the reader remembers that we have already pointed out that there is no one best media and the appropriate media in SMEs varies from one situation to another and one person to another.

This study was based on the premise that an understanding of satisfaction gained by SMEs managers from a media perspective was lacking. While the companies established a paperless environment and created more formalized communication through the use of information technology applications such as e-mail, videoconferencing, and group wares, it might increase satisfaction because it allows focusing on what will provide revenue. In this sense, all the managers must develop mechanisms for media selection to ensure media satisfaction for

anyone involved in the communication. It's no secret that today SMEs need managers who understand the importance of communication and media and who can effectively communicate with technical or non-technical personnel. Today managers, especially entrepreneurs, must turn their focus to anticipating how media technologies can shape and drive the future business outcomes. Future organizations, or today successful SMEs, will see media as a vital ingredient in value creation and communication as a critical task in identifying and executing business strategies. In this sense, this research introduced one of the main aspects of media studies in tourism SMEs. Researchers can benefit from the research results and hence, they can further introduce more factors and investigate their impact in personal communication. Also, this study can be replicated in the context of other countries. This study must help SMEs managers to distinguish between media in the different situations. Communication possesses many determinants and this research introduced the category of satisfaction to capture the different aspects involved in the criteria for communication in SMEs. Also, today managers must become sensitive to the perfect type of communication media to use in different business situations.

Implications and Limitations

Implication for further studies includes exploring other industries, more applicable media such as modern Internet applications, and large companies in this field. There are also some limitations to this study: Firstly, the sample is biased toward small firms. Compared with large firms, they are less willing and able to cooperate in survey research and are often quite reluctant to open the company to a researcher. This conservative behavior keeps response rate low in SME studies. Also, some of managers may ignore answering all the questions in the questionnaire. Secondly, only 78 tourism firms are studied which make it difficult to generalize the findings to the other sectors and further researches should include larger sample sizes with a variety of nontourism operations. Especially in Iran, tourism is a very competitive industry and time in this sector is really matters. In the other words, saving time through using high-richness media is more important than dealing with state-of-the-art low-richness media. The research results are useful for managers' reference and other developing countries, especially for those whose circumstances are similar to those in Iran. Thirdly, the results could be region-specific, because the data came from SMEs in a single Iranian metropolitan area. Finally, a variety of factors has implications for media preference in other researches, and is beyond the scope of this study. These include business experience and annual sales. Future researches in media studies must continue to consider the impact of the psychological factors on the media preference. Besides, authors guess that the results of the future studies will be different in the public, private, and third sector companies. Thus, more studies that include this suggestion would beneficial to the field.

References

- Ariss S (2002) Computer monitoring: benefits and pitfalls facing management. Information & Management 39: 553-558.
- Simon AF (2006) Computer-mediated communication: task performance and satisfaction. J Soc Psychol 146: 349-379.
- Winger A (2005) Face-to-face communication: Is it really necessary in a digitizing world? Bus Horiz 48: 247-253.
- Iacovou AL, Benbasat, I, Dexter A (1995) Electronic data interchange and small organizations: adoption and impact of technology. MIS Quarterly, 465-485.
- Harrison DA, Mykytyn PP, Riemenschneider CK (1997) Executive decisions about adoption of information technology in small business: theory and empirical tests. Information Systems Research 8: 171-195.
- Dolen WM, Dabholkar PA, Ruyter KD (2007) Satisfaction with Online Commercial Group Chat: The Influence of Perceived Technology Attributes,

- Chat Group Characteristics, and Advisor Communication Style. Journal of Retailing 83: 339-358.
- Canning L, Hanmer-Lioyd S (2002) Modeling the adaptation process in interactive business relationships. J business & industrial marketing 17: 615-636
- Kinney ST, Watson RT (1992) The effect of medium and task on dyadic communication. Proceedings of International Conference on Information Systems (pp. 107-117) Dallas, TX.
- Suh KS (1999) Impact of communication medium on task performance and satisfaction: An examination of Media-Richness Theory. Information & Management 35: 295-312.
- Topi H, Valacich JS, Rao, M T (2002) The effects of personality and media differences on the performance of dyads addressing a cognitive conflict task. Small Group Research 23: 667-701.
- Kiesler S, Zubrow D, Moses AM, Geller V (1985) Affect in computer-mediated communication: An experiment in synchronous terminal-to-terminal discussion. Human Computer Interaction, 1: 31-58.
- Dennis A, Garfield M (2003) The Adoption and Use of GSS in Project Teams: Toward More Participative Processes and Outcomes. MIS Quarterly 27: 289-323
- Dabholkar PA (1996) Consumer Evaluations of New Technology-Based Self-Service Options: An Investigation of Alternative Models of Service Quality. International Journal of Research in Marketing 13: 29-51.
- 14. Chen Y, King BE (2002) Intra- and intergenerational communication satisfaction as a function of an individual's age and age stereotypes. International Journal of Behavioral Development 26: 562-570.
- Hofstede G (1993) Cultural constraints in management theories. Academy of Management Executive 3: 81-94.
- Goris RJ (2007) Effects of satisfaction with communication on the relationship between individual-job congruence and job performance/satisfaction. J Management Development 26: 737-752.
- Adler NJ, Brahm R, Graham JL (1992). Strategy implementation: a comparison
 of face-to-face negotiations in the People's Republic of China and the United
 States. Strategic Management Journal 13: 449-466.
- Staples DS (2001a) A study of remote workers and their differences from nonremote workers. Journal of End User Computing 13: 3-14.
- Jensen M (2003) Organizational communication: a review, Retrieved from: http://agderforskning.no (accessed November 2).
- Appelbaum SH, Adam J, Javery N, Lessard M, Lion J, et al. (2005) A case study analysis of the impact of satisfaction and organizational citizenship on productivity. Management Research News 28: 1-26.
- Daft RL, Lengel RH (1986) Organizational information requirements, media rich-ness, and structural design. Management Science 32: 554-571.
- Murthy US, Kerr DS (2003) Decision making performance of interacting groups: an experimental investigation of the effects of task type and communication mode. Information and management 40: 351-360.
- Olaniran BA (1996) A model of group satisfaction in computer-mediated communication and face-to-face meetings. Behaviour & Information Technology 15: 24-36.
- Sproull LS, Kiesler S (1986) Reducing social context cues: Electronic mail in organizational communication. Management Science 32: 1492-1512.
- Valacich JS, Mennecke BE, Wachter RM, Wheeler BC (1994) Extensions to Media Richness Theory: A test of the task-media fit hypothesis. Proceedings of the Twenty-Seventh Annual Hawaii International Conference on System Sciences 4: 11-20.
- Thayer SE, Ray S (2006) Online communication preferences across age, gender, and duration of Internet use. Cyberpsychol Behav 9: 432-440.
- Roberts KH, O'Reilly CA (1974) Measuring organizational communication. Journal of Applied Psychology 59: 321-326.
- Roberts KH, O'Reilly CA (1979) Some correlations of communication roles in organizations. Academy of Management Journal 22: 42-57.
- Akkirman AD, Harris DL (2005) Organizational communication satisfaction in the virtual workplace. Journal of Management Development 24: 397-409.

- Downs CW, Hazen MD (1977) A factor analytic study of communication satisfaction. Journal of Business Communication 14: 63-74.
- 31. Goldhaber GM, Rogers D (1979) Auditing Organizational Communication Systems: The ICA Audit. Dubuque, Iowa: Kendall-Hunt.
- 32. Hecht M (1978) Measures of communication satisfaction. Human Communication Research 4: 350-368.
- Cemalcilar Z, Falbo T, Stapleton LM (2005) Cyber communication: A new opportunity for international student's adaptation? International Journal of Intercultural Relations 29: 91-110.
- Carmines EG, Zeller RA (1979) Reliability and Validity Assessment. Sage, Newbury Park.
- 35. Bates, B, Cleese J (2001) The human face. New York: DK.
- 36. Vroom VH (1964) Work and Motivation. Wiley, New York, NY.
- 37. Anderson LE, Stone-Romero EF, Tisak J (1996) A comparison of bias and mean squared error in parameter estimates of interaction effects: Moderated Multiple Regression versus Errors-in-Variables Regression. Multivariate behavioral research 31: 69-94.
- 38. Stone EF (1988) Moderator variables in research: a review and analysis of conceptual and methodological issues. In: Rowland, K M., and Ferris, G. R., (Eds.), Research in personnel and human resources management 6, 191-229. Greenwich, CT: JAI Press.
- Baron RM, Kenny DA (1986) The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. J Pers Soc Psychol 51: 1173-1182.
- Sobel ME (1990) Effect analysis and causation in linear structural equation models. Psychometrika 55: 495-515.
- 41. Mackinnon DP, Warsi G, Dwyer JH (1995) A Simulation Study of Mediated Effect Measures. Multivariate Behav Res 30: 41.
- Saunders DR (1956) Moderator variables in prediction. Educational and Psychological Measurement 16: 209-222.
- Cohen J, Cohen P (1983) Applied multiple regression/correlational analysis for the behavioral sciences (2nd Eds.). Hillsdale, NJ: Erlbaum.
- Pedhazur EJ (1982) Multiple regression in behavioral research New York: Holt, Rinehart & Winston.
- Busemeyer JR, Jones LE (1983) Analysis of multiplicative combination rules when causal variables are measured with error. Psychological bulletin 93: 549-562.
- 46. Dunlap WP, Kemery ER (1988) Effects of predictor intercorrelations and

- reliabilities on moderated multiple regression. Organizational behavior and human decision processes 41: 248-258.
- 47. Evans MG (1985) A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. Organizational behavior and human decision processes 36: 305-323.
- Stone EF, Anderson LE (1994) Relative power of Moderated Multiple Regression and the comparison of subgroup correlation coefficients for detecting moderating effects. Journal of applied psychology 79: 354-359.
- Tabachnick BG, Fidell LS (2002) Using Multivariate Analysis. New York: Harner and Row
- Rubin JZ, Brown BR (1975) The social psychology of bargaining and negotiation. New York: Academic Press.
- 51. Pruitt DG (1981) Negotiation Behaviour. Academic Press, New York, NY.
- Watson RT, DeSanctis G, Poole MS (1988) Using a GDSS to facilitate group consensus: some intended and unintended consequences. MIS Quarterly 12: 463-478.
- 53. Dennis AR, Gallupe RB (1993) A history of group support systems empirical research: lessons learned and future directions. In: Jessup, L.M., and Valacich, J.S. (pp. 59–77), Group Support Systems: New Perspectives. Macmillan, New York.
- Forsyth DR (1999) Group Dynamics. Wadsworth Publishing Company, Belmont.
- Stewart D, Pavlou P (2002) From Consumer Response to Active Consumer: Measuring the Effectiveness of Interactive Media. Journal of the Academy of Marketing Science 30: 376-396.
- Nilles J (1998) Managing Telework: Strategies for Managing the Virtual Workforce. Wiley, New York, NY.
- DeSanctis G, Poole MS (1994) Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. Organization Science 5: 121-147
- Kahai SS, Cooper RB (1999) The Effect of Computer-Mediated Communication on Agreement and Acceptance. Journal of Management Information Systems 16: 165-188.
- Pornsakulvanich V, Haridakis P, Rubin AM (2008) The influence of dispositions and Internet motivation on online communication satisfaction and relationship closeness. Computers in human behavior 24: 2292-2310.
- Bledsoe LK (2006) Smoking cessation: an application of theory of planned behavior to understanding progress through stages of change. Addict Behav 31: 1271-1276.