

# Motivation for Using Microcomputers

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## INTRODUCTION

Information technology implementation is an intervention we make in order to improve the effectiveness and efficiency of a sociotechnical system. Using microcomputers to help individuals perform their jobs and tasks is one of the most important actions we take when implementing this technology effectively. Information systems effectiveness has been extensively studied using, mainly, user satisfaction and quality of information constructs to evaluate users' acceptability (Iivari & Ervasti, 1994; Ives et al., 1983; Neumann & Segev, 1979). However, sometimes, the result of this intervention is not successful and may even generate difficulties related to people participation in the process. This leaves us with a question: What motivates individuals to use microcomputer technology in their daily activities?

Theorists and empirical researchers have been trying to understand the relevant motivators for the implementation and use of computer technology based on the idea that people make an effort if an activity is enjoyable or offers external rewards (Igarria et al., 1996; Schwartz, 1983). They have been aiming to find out how individuals feel motivated to work with computers, and what motivates them to use computers in their daily activities.

## BACKGROUND

Computer and information technology usage is determined by intrinsic as well as extrinsic motivation (Deci, 1975; Igarria et al., 1996). The main driving forces considered in the literature as motivators for computer and information technology adoption are perceived usefulness, perceived ease of use, and perceived enjoyment (Davis, 1986, 1989; Igarria et al., 1996). However, it is known that some individuals create personal obstructions to using technology (Pirsig, 1981), particularly, microcomputer technology (Igarria & Parasuraman, 1989; Martocchio, 1994). They resist microcomputers usage and experience anxiety when they have to deal with them. We present results found in previous studies for relations and comparisons among the motivational forces above (Dias, 1998a, 1998b, 2002; Dias et al., 2002). The results presented here, all statistically significant at  $p < 0.05$ , were based on constructs measured using the instrument developed in Dias (1998a) and presented in the Appendix.

## MAIN MOTIVATIONAL FORCES

Figure 1 shows the results for the relationships among perceived enjoyment, perceived ease of use, and perceived usefulness found in Dias (1998a). The author focused on the motivators perceived usefulness, perceived ease of use, and perceived enjoyment. The aim was to find out how Brazilian operations managers felt about using computer technology in their workplaces, how the perceived usefulness of computers is affected by ease of use and users' enjoyment in working with them, and how to find opportunities to act according to this acquired knowledge, in order to increase the quality of microcomputer technology usage in organizations. In his study, the author emphasized the relationships among these perceived motivators for using microcomputer technology. The impact of the motivators on systems usage or microcomputer adoption was considered to be beyond the scope of his research.

The path analysis model used was based on the natural precedence of intrinsic motivational factors over extrinsic motivational factors, as proposed by the Freudian theory of psychoanalysis (Freud, 1976).

The data for that study were gathered using a questionnaire administered personally to 79 Executive MBA students at a Brazilian university. Respondents held managerial positions in 55 companies, ranging from small firms to large corporations, located in Rio de Janeiro. The average age of respondents was 36, and they had an average of 11 years working experience. All of the participants were college graduates. Managers said they used microcomputer technology mainly because they perceived it as a useful tool to increase the quality of their work, to accomplish tasks more quickly, and to increase the productivity of their jobs.

Figure 2 shows results of a model in which computer anxiety and enjoyment were considered as antecedent variables to ease of use and usefulness (Dias, 1998b). We found that managers who were more anxious about computer technology tended to find it more difficult to use. On the other hand, enjoyment had a positive direct effect on ease of use and usefulness, as stated before.

In a study made at a private university located in Rio de Janeiro, with data gathered from 336 undergraduate computer information systems students, Dias et al. (2002) tested the influence of some antecedent variables on enjoyment, ease of use, and usefulness. They found that (a) the fact that a student worked part-time in an area related to information

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Figure 1. Relationships among enjoyment, ease of use, and usefulness

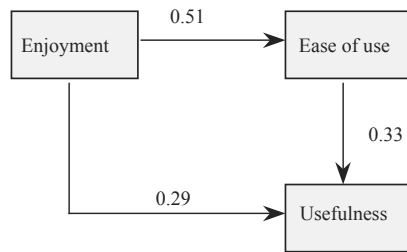


Figure 2. Anxiety and enjoyment as antecedent variables

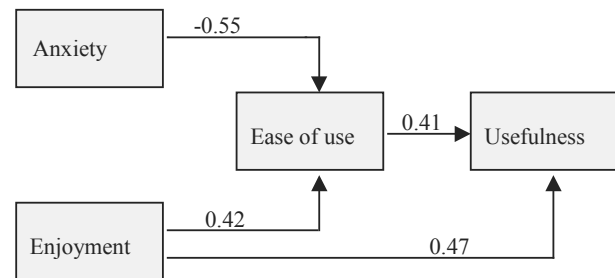
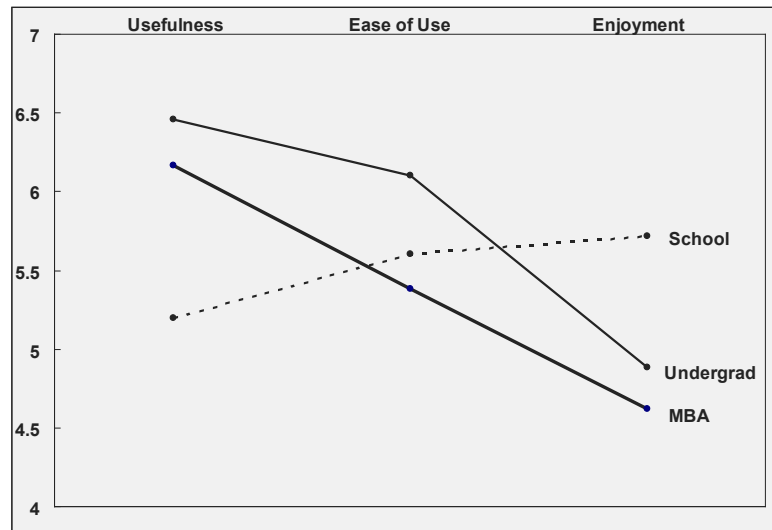


Figure 3. Motivation level for graduate, undergraduate, and elementary school students



technology positively influenced his or her perception of how easy it was to use microcomputers; (b) enjoyment with microcomputers seemed to decrease as students attained seniority in the university; and (c) older students perceived greater usefulness for microcomputers.

Level of education and age have shown influence on microcomputer attitudes (Igbaria & Parasuraman, 1989). Dias (2002) did a study on the motivation for using microcomputers among different classes of users. He aimed at finding out how graduate, undergraduate, and elementary school students, which represent very specific strata of educational level and age, would differ on the motivational factors examined here. The data for his study were gathered as follows:

- Fifty-three Executive MBA students of a leading Brazilian public university: The average age of respondents was 36, and they had an average of 11 years working

experience, all participants were managers and had a college degree.

- Forty-six students aiming for degrees in Business Administration at a private university located in Rio de Janeiro: The average age of respondents was 22.
- Thirty-nine elementary schools students enrolled in the fourth to eighth grades of private (82%) and public schools located in the city of Rio de Janeiro: The students used microcomputers regularly at school, at home, or at relatives' homes.

Factor analysis confirmed that the statements for usefulness, ease of use, and enjoyment constituted three distinct perception constructs for the three classes of users. It confirmed the existence of three factors that accounted for 63.5% of the total variance in the 138 interviewees.

Figure 3 shows the motivational profile for graduate, undergraduate, and elementary school students on the usage of microcomputers.

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