INDIVIDUAL INNOVATION ACCEPTANCE: AN INTRINSIC MOTIVATION PERSPECTIVE AND THE ROLE OF TRUST

A Thesis

Submitted to the Graduate Faculty of the
University of South Alabama
in partial fulfillment of the
requirement for the degree of

Master of Science

In

Information Science

by
James Chadwick Howell
B.S., University of South Alabama, 1994
M.B.A., University of South Alabama, 1997
December 2003

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UNIVERSITY OF SOUTH ALABAMA
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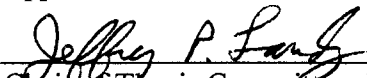requirement for the degree of

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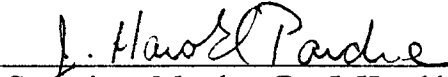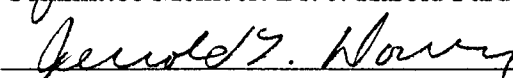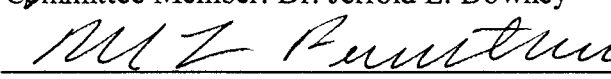
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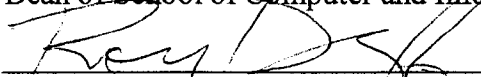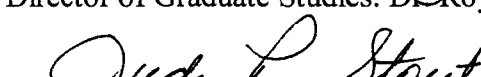
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Dedicated to my wife, Kristine.

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ABSTRACT

Howell, James Chadwick, M.S., University of South Alabama, December 2003. Individual Innovation Acceptance: An Intrinsic Motivation Perspective and the Role of Trust. Chair of Committee: Jeffrey P. Landry, Ph.D.

One of the most significant challenges organizations face when implementing an innovative technology is resistance from individuals within the organization. This study examines how the implementation environment affects the intrinsic motivation of individuals within an organization to accept an innovation.

Incorporating the theory of psychological needs, from the field of motivational psychology, the research model predicts that implementation efforts by organization management can have unintended negative consequences due to the opposing nature of the psychological needs for competence and self-determination. Further, the model integrates interpersonal trust and its role in ameliorating the negative consequences of innovation implementation efforts.

An experiment involving students was used to test the validity of the research model. Statistical analysis indicated partial support. The antecedents of intrinsic motivation were supported as predicted. The results also support the moderating influence of interpersonal trust on the relationship between an innovation promoter's implementation intensity and an individual's perception of competence with regard to the innovation.

CHAPTER 1

INTRODUCTION

1.1 Background

While it may seem logical that a new tool designed to help individuals perform their

jobs more effectively would be enthusiastically embraced, research has shown that

individuals respond to new technology in a number of ways ranging from enthusiastic

acceptance to malicious sabotage (Dowling 1981); and for an organization that may

have invested millions in up-front expenses, poor technology utilization can mean a

projected return on investment that remains unrealized. This study applies research

from the fields of motivational and social psychology to improve our understanding of

the phenomenon of technological innovation acceptance.

1.2 Research Question

From an examination of the literature on the various strategies that managers use to

implement IT innovations, an apparent contradiction appears. Some studies

demonstrate that vigorous management encouragement is critical to innovation

acceptance (Iivari 1996). Other studies, however, indicate that such activities can

actually discourage the use of an innovation (Green and Hevner 2000). How can

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management encouragement both promote and impede innovation acceptance? This apparent contradiction led to the following research question:

How does intensity of effort by management to encourage innovation acceptance affect the motivation of the individual within the organization to adopt the innovation?

Examining innovation implementation literature from a psychological needs perspective, much of the theory focuses on the need for competence [eg. Davis' (1989) Technology Acceptance Model and its focus on ease of use and usefulness] without considering the need for self-determination. This study proposes that both are important to motivation because lack of support for either can sabotage an implementation. Using a psychological needs framework, the proposed model is more inclusive of the various phenomena surrounding the implementation process, namely interpersonal factors, such as trust, which can limit the potential for innovation adoption.

This study hypothesizes that managers should focus their efforts on developing intrinsically motivated acceptance behavior. Certainly it is possible for an organization to coerce - extrinsically motivate - a person into, at least nominally, using an innovation through rewards, punishments, and monitoring; but research into more participatory styles of management has shown that there are significant, negative, long-term consequences of management based solely upon extrinsic motivators. Extrinsically motivated behavior is associated with perceptions of pressure and tension; intrinsically motivated behavior, however, is associated with excitement and enjoyment (Deci 1975). Equally important, and especially relevant to technological innovation, which often

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entails significant learning barriers, is the association between intrinsic motivation and learning, particularly conceptual learning (Deci and Ryan, 1985).

1.3 Expected Contribution

This research develops a model to describe the interaction of the managerially controlled implementation environment with individual psychological factors. The goal of the model is to help understand and predict individual innovation acceptance. The model builds upon concepts from the field of motivational and social psychology and innovation acceptance; however it differs from mainstream models of individual acceptance, such as the Technology Acceptance Model (Davis 1989) based upon the Theory of Reasoned Action (Fishbein and Ajzen 1975), in that it is not founded upon expectancy-based cognitive theories. The research model described herein is instead founded upon "needs-based" motivational psychology (eg. Maslow 1943) and is concerned with not only the direction, but also the source of behavioral energy.

Practical outcomes involve clearer insight for organizational leaders into the forces that affect innovation acceptance. Specific guidelines are produced, as warranted, which can be applied to increase the likelihood that a new IT innovation will be accepted.

CHAPTER 2

LITERATURE REVIEW

This study flows from various streams of research within the fields of social and motivational psychology and IT adoption. Particularly, theories of intrinsic and extrinsic motivation and interpersonal trust are invoked as a basis for the research model. The following sections will further develop the foundational constructs and explain their relationships.

2.1 Intrinsic Motivation

The concept of intrinsic motivation evolved from the recognition by psychologists that there were certain types of behavior which could not adequately be explained by models that relied on extrinsic reinforcement. These behaviors - primarily expressions of exploratory curiosity or creativity - were presumed to be energized and rewarded by mechanisms within, or intrinsic to, the individual. For example, someone might stop on the sidewalk to examine an odd looking insect, or spend an afternoon painting a scenic landscape; the rewards for these behaviors are inherent to the activity themselves. Deci and Ryan (1985, 43) defined intrinsic motivation as "the innate, natural propensity to engage one's interests and exercise one's capacities, and in so doing, to seek and conquer optimal challenges". The hallmark of an intrinsically

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motivated activity is excitement and enjoyment in the absence of any external reward contingency. Stated differently, if an individual is engaging in an activity primary in order to get something else, then that behavior is not intrinsically motivated.

2.2 Need for Competence

It has been theorized that the energy for intrinsically motivated behavior comes from a strong inherent need of the individual to effectively interact with his or her environment – the need to experience competence (White 1959). Perceived competence can be defined as the perception that one is capable of producing desired outcomes and avoiding negative outcomes (adapted from Deci and Ryan 1985).

Indeed, it has been proposed that the need for competence is the primary and most persistent element of human behavior, with physiological drives, such as hunger, periodically interrupting this lifelong quest for competence (Woodworth 1958). This hypothesis is related to Darwinist philosophies – greater environmental effectiveness leads to greater survivability - as White (1959, 326) explained:

> "Under primitive conditions survival must depend quite heavily upon achieved competence. We should expect to find things so arranged as to favor and maximize this achievement. Particularly in the case of man, where so little is provided innately and so much has to be learned through experience, we should expect to find a highly advantageous arrangement of securing a steady cumulative learning about the properties of the environment and the extent of possible transactions."

2.3 Need for Self-Determination

Self-Determination can be defined as the perception of choice in the initiation, maintenance, and regulation of an activity (adapted from Connell and Wellborn 1991).

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"Stated differently, self-determination is the capacity to choose and to have those choices, rather than reinforcement contingencies, drives, or any other forces or pressures, be the determinants of one's actions" (Deci and Ryan 1985, 38) . It is theorized that people have an innate need to make meaningful choices about the direction of their lives. To the extent a person perceives the cause of his or her actions to be external to him or her; he or she will lose intrinsic motivation for that associated activity because it diminishes his or her overall sense of self-determination (Deci and Ryan 1985).

The construct of self-determination is related to and supported by the Theory of Reactance as proposed by Jack W. Brehm (1966). This theory states that individuals resist any attempt perceived to be limiting to his or her sense of freedom. As Brehm explains,

> "It is reasonable to assume, then, that if a person's behavioral freedom is reduced or threatened with reduction, he will become motivationally aroused. This arousal would presumably be directed against any further loss of freedom and it would also be directed toward the re-establishment of whatever freedom had already been lost or threatened" (Brehm 1966, 2).

This effect can also be understood in terms of operant conditioning (Skinner 1966). If an individual associates an activity with a negative stimulus - reduction of self-determination, feelings of being controlled, loss of freedom – he or she will be less likely to engage in that activity in the future.

2.4 Extrinsic Motivation

Extrinsic motivation can be defined as the psychological energy for an activity that is based upon the contingency of an external reward which is inherently separate from the

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activity itself. Research suggests that the primary antecedent of self-determination with regard to a particular activity is the extent to which the individual perceives extrinsic motivators to engage in the activity (Deci and Ryan 1985). In other words, the more pressure a person feels to engage in an activity, the less freedom he or she feels in the choice.

Self-determination is closely related to the idea of perceived locus of causality, particularly the idea of internal versus external perceived locus of causality (Heider 1958, deCharms 1968). If an individual perceives that the causal force of his or her behavior is external to him or her, he or she is described as perceiving an external locus of causality with regard to that behavior; stated differently, the person believes that the reason he or she behaved in a certain way is because of some outside force. The reverse is true for perceived internal locus of causality; the person believes that the reason they acted a certain way is because of his or her own volition. Deci and Ryan (1985) theorize that individuals have a basic need to perceive an internal locus of causality for their actions.

CHAPTER 3

RESEARCH MODEL

Although the proposed model could be generalized with wide application in various

fields, the scope of the research model (see Figure 3-1) focuses on individual,

information technology-related, innovation acceptance within an organization. The

following sections develop the constructs of the research model beginning with the

ultimate dependent variable – enthusiastic (intrinsically motivated) acceptance.
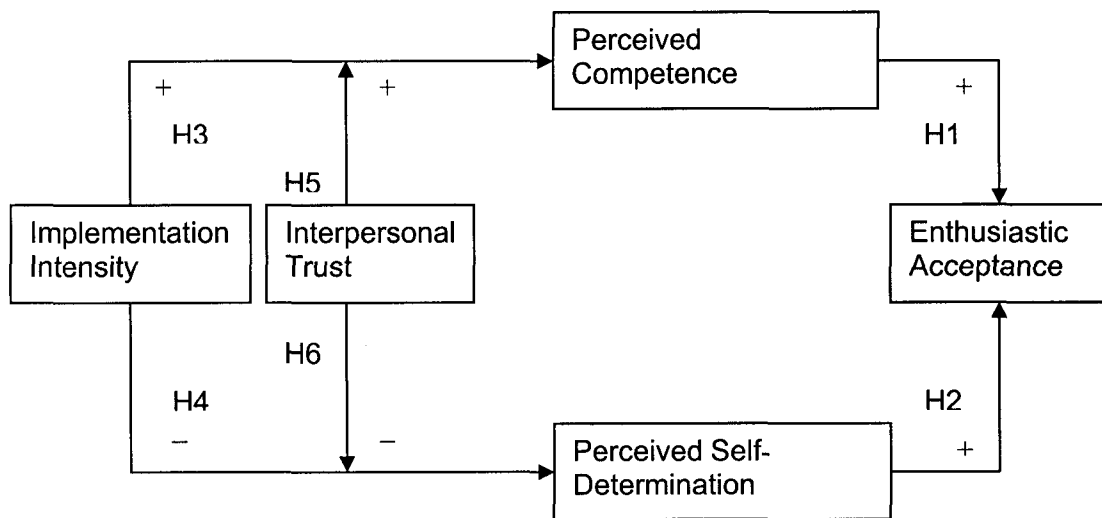
Figure 3-1: Research Model

3.1 Enthusiastic Acceptance

Enthusiastic acceptance of an innovation can be understood as the degree to which use of an innovation elicits feelings of enjoyment, excitement, and intrinsic satisfaction. Various studies have made a strong case that "acceptance" is more than a binary variable – accept or reject. Although the decision to adopt an innovation *nominally* is often made at the executive level of an organization, the user of the innovation may never go beyond *nominal* acceptance. It has been proposed that there are at least six distinct stages of innovation acceptance ranging from "initiation" – the tentative exploratory phase – to "infusion" – where the potential of the innovation is fully recognized (Cooper and Zmud 1990).

The relationships hypothesized in this study are expected to be valid for all stages of the acceptance process; however, intrinsic motivation may be of greatest importance in achieving the final stage of acceptance – infusion. This ultimate level of acceptance has been described as – "embedding an IT application deeply and comprehensively within an individual's or organization's work systems" (Saga and Zmud 1994, 79). Indeed, infusion may be the most important stage of acceptance in terms of achieving competitive advantage because it is at this stage that users find new, unexpected uses for the innovation. The characteristics associated with infusion include: extended use, integrative use, and emergent use (Saga and Zmud 1994). These characteristics correspond with the characteristics of intrinsically motivated behavior – persistence (Deci and Ryan 1985), flexibility (McGraw and McCullers 1979), and creativity (Amabile 1983). It seems reasonable, therefore, to conclude that an organization is more likely to achieve greater levels of innovation acceptance when individuals within

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the organization are intrinsically motivated to adopt the innovation – when they are enthusiastically acceptant of the innovation.

It may be argued that motivation to accept innovations within an organizational (i.e. work) setting could never be truly intrinsic because employee behavior is usually tied to monetary compensation – an external reward. However, what Hertzberg's Two-Factor Theory of Motivation explains is that external rewards such as money are only "hygiene factors"; they only provide the foundation for the "real motivators" (Luthans 1998).

3.2 Perceived Competence

Perceived competence, in terms of innovation acceptance, can be understood as - the perception that one is capable of using the innovation as intended and that the innovation will enhance one's sense of overall adequacy and mastery. Humans have an inherent need to feel competent in our interactions with our environment; therefore in the context of innovation acceptance, the extent to which the individual perceives that use of the innovation will enhance his or her sense of competence, he or she will be intrinsically motivated to accept the innovation. This hypothesis corresponds with, and is supported by, other models of innovation acceptance such as the Technology Acceptance Model, which rely on cognitive models of behavior. These models have demonstrated that the perceived usefulness and ease of use of an innovation is directly and strongly related to innovation acceptance (Davis, Bagozzi, and Warshaw 1989). However, it is important to note the concept of competence as conceived in this study is not limited to perceptions of effectiveness at completing work related tasks, although

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this is certainly an important part of an individual's overall sense of competence. This theoretical foundation leads to the first hypothesis:

> **H1:** The level of enthusiasm that the individual adopter will perceive regarding use of the innovation is directly related to the individual's perception of competence with regard to use of the innovation.

3.3 Perceived Self-Determination

Perceived Self-Determination, in terms of innovation acceptance, can be defined as the perception that one has freedom in choosing when and how to use an innovation. The more external pressure a person perceives to accept an innovation, the less freedom he or she feels in the choice, and the less attractive the innovation becomes. Several studies have found a significant connection between perceived voluntariness of use and innovation acceptance (Agarwal and Prasad 1997, Green and Hevner 2000, Moore and Benbasat 1991). Extrinsic motivators can be in the form of potential rewards or other contingencies.

> **H2:** The level of enthusiasm that the individual will perceive with regard to use of the innovation is directly related to the individual's perception of self-determination with regard to use of the innovation.

3.4 Implementation Intensity

This study applies the concept that, in general, perceived competence with regard to an activity is enhanced through the encouraging efforts of an influential other. For example, if someone is encouraged by a friend to read an interesting book, he or she is

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more likely to anticipate greater competence with regard to reading the book. In other words, he or she will have greater confidence that the book is within his or her level of literacy, that the book is aligned with his or her interests, and that the book will increase his or her understanding of the subject.

Intrinsic motivation theory (Deci and Ryan 1985) posits that the encouragement of an influential other generally acts to reduce perceived self-determination, indirectly, by increasing perceptions of extrinsic motivators. Using the previous example, after his or her friend recommends the book the individual would likely perceive less voluntariness in reading the book – a reduction in his or her sense of self-determination. He or she may attribute the causal force for his or her behavior – reading the book - to a source external to himself or herself – the friend's influence – and not to an internal decision. The research model uses the construct "implementation intensity" to describe this influence in an organizational setting and with regard to an IT innovation.

Implementation intensity can be defined as the amount of effort and the extent of activities undertaken by management for the purpose of encouraging innovation use (adapted from Landry 1999, Saga and Zmud 1994). It is hypothesized that management implementation tactics, such as training and encouraging, can not only increase the individual's perception of competence with regard to the innovation, but can also reduce, indirectly through perception of extrinsic motivators, his or her perception of self-determination. This proposed relationship somewhat addresses the conundrum which inspired this study, that is – how can management support for an innovation both encourage and discourage innovation acceptance?

H3: The implementation intensity of the innovation is <u>directly</u> related to the level of perceived competence with regard to use of the innovation.

H4: The implementation intensity of the innovation is <u>inversely</u> related to the level of perceived self-determination with regard to use of the innovation.

The model proposes both a positive and negative effect of implementation intensity on enthusiastic acceptance. Implementation intensity positively influences competence, but negatively influences self-determination. Green and Hevner (2000) touched upon the idea when they proposed that individuals would respond more favorably to innovation if given greater control of the process of implementation. What their model did not recognize, but what the results of their study indicated, was that people have a need for competence at least as much as self-determination and that by giving them too much freedom over how the innovation was to be used they undermined their feelings of competence by asking them to make decisions about which they did not feel capable. A certain level of structure and associated feedback seems to be necessary for the enhancement of competence (Deci and Ryan 1985) particularly when innovations are complex, such as the software process innovations (SPI) studied by Green and Hevner (2000).

3.5 Interpersonal Trust

Trust is relevant to the proposed model because of research that indicates that although the efforts of an influential other tend to increase perceived competence and decrease perceived autonomy, their impact depends upon the extent to which the influence is perceived as "controlling" or "informational" (Deci and Ryan 1985). In

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the context of innovation acceptance, external influence takes the form of implementation activities, such as training and monetary incentives. The research model proposes that these activities tend to increase perceived competence and decrease perceived autonomy in the innovation adopter, but their impact is moderated by the extent to which they are perceived as controlling or informational (Deci and Ryan 1985). Trust, as it relates to innovation acceptance, can be defined as the willingness of the potential innovation adopter to be vulnerable to the influence of the innovation promoter based upon the perceived ability, integrity, and benevolence of the innovation promoter (adapted from Mayer, Davis, and Schoorman 1995).

One aspect of Attribution Theory explains that the way we react to other's behavior depends upon the assumptions we make about their motivations and intentions (Heider 1958). Heider theorized that attribution is a strategy intended to impose a degree of order and predictability on our perceived environment. This study proposes that a lack of trust for an individual may lead us to assume the worst about their intentions and interpret their influence on us as controlling. If however, the level of trust is high, then we are more likely to assume that the individual intends us good and that his or her influence is beneficial and useful.

This dynamic can be explored within the context of the Mayer, Davis and Schoorman (1995) model of interpersonal dyadic trust. Examining the proposed relationships from the perspective of their model seems useful for a better understanding of the role of trust.

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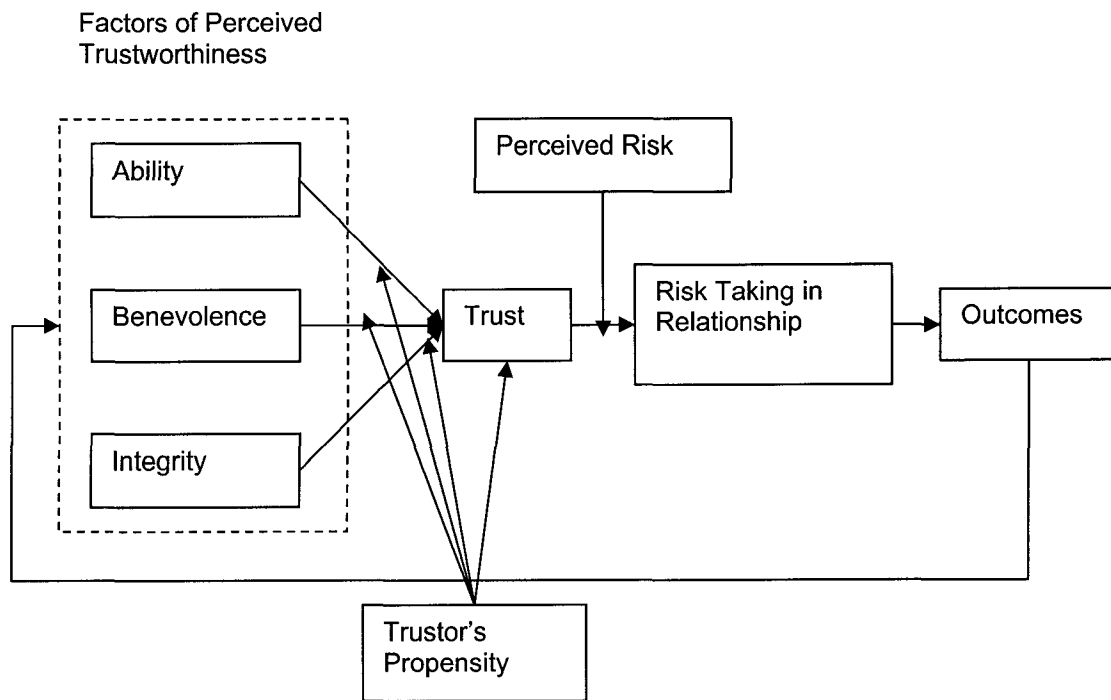
Figure 3-2: Mayer, Davis, and Schoorman Model of Trust (1995)

The three antecedents of trust, as proposed by Mayer et al. (1995) are reviewed in

the context of psychological needs beginning with benevolence. To the extent the

individual being influenced perceives a high level of benevolence - goodwill on the part

of the influencer - he or she is more likely to perceive his or her intentions as

informational rather than controlling and the more likely that he or she will be willing to

become vulnerable – to accept risk in the situation. Risk and vulnerability seem

especially relevant to the current study because the individual in this situation perceives

risk to his or her sense of self-determination by allowing himself or herself to be

influenced. The individual may trust that the message they are receiving from the

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influencer is not intended to control or manipulate them, but is genuinely useful and informational.

For the same reasons, a similar relationship exists for integrity. To the extent that the individual perceives the influencer's integrity as unacceptable, he or she will be more likely to protect his or her own sense of self-determination by refusing to engage in the activity being encouraged.

Unlike benevolence and integrity, perceptions of ability relate directly to perceived competence. It is proposed that if an individual perceives the ability of the influencer to be high, relative to the situational domain, he or she will be more likely to perceive that the activity will enhance their own sense of competence and will thus be more willing to risk their perception of self-competence by attempting the activity – risking failure.

The proposed model, therefore, hypothesizes that if a high level of interpersonal trust exists between the influencer and the individual being influenced, then the message of the influencer will be primarily perceived as informational, as useful guidance; perceived competence will exhibit a significant increase while decreases to perceived self-determination will be suppressed. This effect will have the ultimate impact of strengthening intrinsic motivation to accept the innovation.

If, however, trust is low, then the model predicts that the influence will primarily be perceived as controlling. Perceived self-determination will decrease significantly while increases to perceived competence will be suppressed. This effect will have the ultimate impact of weakening intrinsic motivation to accept the innovation.

In the context of the research model, the person being influenced is the potential innovation adopter, and the person attempting to influence him or her to adopt the

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innovation is the member of management most closely associated with the innovation implementation effort such as an innovation champion (Beath 1991) or a change agent (E. Rogers 1995).

H5: Interpersonal trust moderates the relationship between implementation intensity and perceived competence.

If, however, interpersonal trust is low, then the model predicts that the influence will primarily be perceived as controlling. Under these circumstances, perceived self-determination will decrease significantly while increases to perceived competence will be suppressed.

H6: Interpersonal trust moderates the relationship between implementation intensity and perceived self-determination.

Although Deci and Ryan (1985) do not propose a moderating effect per se, their theories imply such a relationship by emphasizing the importance of trust in shaping the perceptions of the individual being influenced regarding the intentions of the individual attempting to influence him or her.

While this model assumes a dyadic relationship between an individual adopter and an individual promoter, it seems important to recognize that within an organizational context it may be difficult to distinguish between trust in the organization and trust in the individual. Indeed, one study demonstrated significant correlation between trust for the organization and trust for the supervisor (Tan 2000). Innovative behavior, however, was only linked to trust for the supervisor.

Also, it must be acknowledged that this study (like many others in this area) adopts a "pro-innovation bias" (E. Rogers 1995). It is assumed that the innovation has a real

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relative advantage – the extent to which an innovation is an improvement over the technology it replaces (E. Rogers 1995) – and should be adopted.

CHAPTER 4

RESEARCH METHODOLOGY

An experiment was conducted as a means of collecting data to test the validity of the research model. The independent variables – implementation intensity and interpersonal trust – were manipulated through hypothetical scenarios presented to experiment participants. The values of the dependent variables – perceived competence, perceived self-determination, and enthusiastic acceptance - were measured using a questionnaire (see Table 4-1 for detailed construct definitions and operationalizations).

4.1 Sample Population

The test subjects included undergraduate and graduate students enrolled in classes in the School of Computer and Information Sciences (CIS) during the Fall Semester of 2003. Classes in which the majority of students were majoring in a computer related professional program of study were selected with the goal of soliciting students who intended upon a career in computer and information sciences. While the implications of the study are intended to be directed at professional organizations, students enrolled in the School of CIS were considered appropriate surrogates for the technologically savvy

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modern workforce, and the dynamics of the collegiate environment were considered
sufficiently similar to the corporate environment so as to justify generalizations.

4.2 The Innovation

A technical certification program was chosen as the IT related innovation for
inclusion in the test scenarios. It was decided that this type of curriculum based
certification program was of sufficient novelty to be considered a technological
innovation. It was also chosen because it seems appropriate to the domain of the
sample population and in an effort to add realism to the study. Another factor
considered was the organizational complexity of the innovation (Leonard-Barton 1988).
The innovation needed to be complex enough to justify an intense implementation effort
which is a key construct of the model.

Although, initially, a real world company with an existing innovative product was
considered to be the focus of the experiment, it was recognized that using a real
company and a real innovation presented a danger of a confounding bias based upon the
subject's previous experience. Choosing a generic innovation also allowed greater
freedom in scenario construction and eliminated any ethical concerns.

4.3 Experiment Design

The experiment was organized into four treatment groups. The independent
variables of trust and implementation intensity were manipulated to generate four
unique hypothetical scenarios – (1) high trust, high intensity; (2) low trust, high
intensity; (3) high trust, low intensity; and (4) low trust, low intensity.

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Trust was manipulated in the scenario by assigning attributes associated with trust to the individual responsible for "spearheading" the implementation effort and who would, therefore, be the primary focus of trust. The attributes of trust that were manipulated in the hypothetical scenarios – ability, integrity, and benevolence – are taken from the Mayer, et al (1995) model of interpersonal trust. In the high trust scenario, the innovation promoter was treated as having knowledge and skills within the domain of the innovation that would imply a high degree of ability. He was described and assigned behaviors that would imply a high degree of integrity and benevolence. In the low trust, or mistrust, scenario the innovation promoter was treated as lacking ability and assigned behaviors that would imply a low degree of integrity and benevolence. Implementation intensity was manipulated by adjusting the number and extent of implementation activities. The high intensity scenario included such activities as training, technical support, and encouragement (salesmanship) (see Appendix A Questionnaire Manipulations). Manipulation checks were included to assess the effectiveness of the manipulation.

The participants were asked to read the hypothetical scenarios and to predict how they would respond in the environment described by completing an accompanying questionnaire. The questionnaire items were crafted as statements to which the respondent would indicate his or her level of agreement. The items were designed to measure the participants' perceptions of competence, self-determination, and enthusiastic acceptance with regard to the innovation. Their reactions were recorded using a seven point Likert scale with the extremes indicated as "Strongly Agree" and "Strongly Disagree" (See Appendix B Questionnaire Items).

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4.4 Pilot Studies

Manipulation checks within the initial pilot questionnaire indicated that the manipulations of trust and intensity within the scenarios were ineffective. The participants did not consistently indicate that they experienced the intended manipulations, particularly the low trust and low intensity variations.

The second pilot study attempted to ascertain whether or not modifications to the instrument were effective. As compared to the initial pilot data, manipulations for perceived trust and perceived intensity appeared to be strengthened.

Analysis of the second pilot study demonstrated that the revisions were effective; nearly all (7 of 9) participants in the second pilot study accurately identified with the intended manipulation. Also, the second pilot group demonstrated a high level of comprehension of the survey questions. The survey instructed the participants to leave blank any "confusing or ambiguous" questions, however only one question (of 180) was left blank.

Although the sample size of the second pilot study was too small for statistical analysis and too limited to reasonably draw any conclusions about the study's hypotheses, the results were generally in-line with predicted outcomes, which was encouraging. The results of the second pilot study indicated that the survey instrument was adequate and collection of the rest of the sample data was warranted.

4.5 Ethical Considerations

No coercive measures were employed to induce participation in this study. Students were instructed that their cooperation was not required, but would be appreciated should

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they choose to participate. Students were allowed to participate anonymously. Written

consent was obtained from each participant (see Appendix D for consent form).

Table 4 -1 Research Model Constructs Defined and Operationalized

Construct	Definition	Operationalization
Implementation Intensity	The amount of effort and extent of activities undertaken by management for the purpose of encouraging innovation use (adapted from Landry, 1999 and Saga and Zmud, 1994).	The number and extent of innovation activities assigned to each experimental scenario.
Perceived Competence	The perception that one is capable of using the innovation as intended and that the innovation will enhance one's sense of overall adequacy and mastery.	The subject's reported perceptions of competence in using the innovation given the implementation scenario.
Perceived Self-Determination	The perception that one has freedom in choosing when and how to use an innovation.	The subject's reported perceptions of voluntariness in choosing when and how to use the innovation given the implementation scenario.
Enthusiastic acceptance	The degree to which use of an innovation elicits feelings of enjoyment, excitement, and intrinsic satisfaction.	The subject's reported perceptions of enjoyment, excitement, and intrinsic satisfaction given the implementation scenario.
Interpersonal Trust	The willingness of the potential innovation adopter to be vulnerable to the influence of the innovation promoter based upon the perceived ability, integrity, and benevolence of the innovation promoter (adapted from Mayer, Davis, and Schoorman, 1995).	Manipulated in each scenario by assigning an innovation implementer who would be expected to elicit high (or low) levels of trust based upon perceptions of ability, integrity, and benevolence.

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CHAPTER 5

DATA ANALYSIS

5.1 Description of the Sample Data Set

Of the 85 eligible students solicited to participate in the experiment, 82 successfully completed the questionnaire. The manipulation check indicated that in over 95% of the subjects the "trust" manipulation was perceived as intended; the participants responded that they viewed the innovation promoter as "trustworthy" in the high trust manipulations and "untrustworthy" in the low trust manipulations.

The "intensity" manipulation was successful only in approximately 80% of the questionnaires. Although the failure of approximately twenty percent of the subjects to properly identify the "intensity" manipulation raises some concerns as to the validity of their responses, informal discussions revealed some potential confusion regarding the terms "mild" and "intense" due to various connotative associations. For example, one participant mentioned that "intense" implied something "bad". However, due to the extreme nature of the manipulation it is assumed that participants were experiencing the manipulation as intended although some may not have recognized the appropriate response. For this reason, and due to the desire to preserve the maximum size of the data set, their responses have been included for analysis. (See Chapter 6 for discussion of alternatives to adjectives "mild" and "intense" in future research).

5.2 Factor and Reliability Analysis

The model defines three dependent variables – perceived competence, perceived

self-determination, and enthusiastic acceptance. A "principle components", factor

analysis was used to evaluate construct validity of the model. The "knee" of the Scree

Plot (Figure 5-1) indicates between two and four factors. Factor analysis identified four

factors with an eigenvalue greater than 1.0.
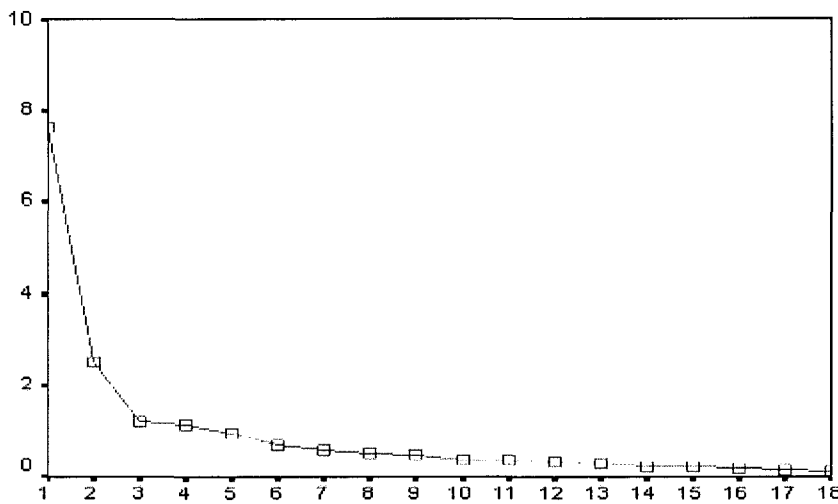
Figure 5-1: Scree Plot

Analysis of the rotated factor matrix (Table 5-1, associated factors are highlighted)

indicates that the survey items intended to measure perceived competence and

enthusiastic acceptance track as one factor. This typically indicates that the items are

measuring a single underlying phenomenon; however, when the self-determination

items are excluded factor analysis does indicate distinctiveness of the two constructs –

perceived competence and enthusiastic acceptance. Because of this finding and because

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the items were carefully crafted based upon strong theoretical support, further analysis

treats them as distinct variables. Also, the relatively small sample size (n=82) may

have limited the ability to distinguish among the variables, especially considering that

the statistics literature suggests that there be five or up to 20 subjects per item required

(Stevens 1996, 372) for reliable factors. That would put the number of subjects needed

as between 90 and 320.

Table 5-1: Rotated Factor Matrix

	Factor		
	1	2	3
EA3	**.910**	.167	.089
EA6	**.897**	.022	.200
EA1	**.817**	.141	.145
COMP4	**.802**	-.065	.109
EA2	**.779**	.115	.209
COMP3	**.743**	.008	.118
EA4	**.732**	.095	.040
COMP2	**.729**	-.045	.119
COMP1	**.640**	-.027	.129
EA5	**.548**	-.014	.158
COMP6	**.528**	-.010	.109
COMP5	**.485**	-.123	.196
SD3	.115	**.842**	.029
SD2	-.072	**.656**	-.091
SD4	.162	**.593**	.323
SD1	-.102	**.560**	.145
SD5	.299	.097	**.949**
SD6	.335	.309	**.597**

Factor analysis clearly distinguishes perceived self-determination as a unique

construct; however two of the survey items (SD5 and SD6) display a divergent pattern.

These two questions deal with the perceived flexibility aspect of self-determination and

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suggest a distinct construct as compared to the other items which deal primarily with the perceived social pressure aspects of self-determination.

Due to the small sample size, a second factor analysis was performed on just those 12 items that loaded together as one factor. This second factor analysis resulted in loadings that closely matched the intended factors. Because of the reliability of all self-determination items as a group (0.7386), and because of the understanding that the divergent items measure a theoretically consistent aspect of self-determination, and as a result of the second factor analysis and considering the small sample size, it was decided to keep the items together as one factor for further analysis. Items of all three variables display moderate to high levels of internal consistency as indicated by Cronbach's Alpha reliability analysis (see Table 5-2).

Table 5-2: Reliability Coefficient Analysis

Construct	Cronbach's alpha	Number of Items
Competence	.86	6
Self-Determination	.74	6
Enthusiastic Acceptance	.91	6

Table 5-3: Summary of Treatment Group Means

Experimental Treatment Group	Number of Subjects Receiving Treatment	Mean Competence	Mean Self-Determination	Mean Enthusiastic Acceptance
High Intensity High Trust	19	5.7	4.9	5.1
High Intensity Low Trust	22	4.9	5.2	4.4
Low Intensity High Trust	21	5.4	5.5	4.9
Low Intensity Low Trust	20	4.5	5.2	4.2
n	82			

5.3 Testing Hypothesis 1 and 2

Although the variance between means was minimal, scores ranging from 4.2 to 5.7 (see Table 5-3), there was enough variance to produce significant support for hypotheses 1 and 2. Multiple regression analysis was used to test the proposed model for the relationships between perceived competence, perceived self-determination, and enthusiastic acceptance as hypothesized in H1 and H2. Analysis did not indicate that multi-collinearity was significant among variables. A normal distribution of the data is assumed. Significance determined at the 0.05 level.

The results indicated significant support for the model with an adjusted R square of 0.67 (significance .000) or 67% of the variance in enthusiastic acceptance explained by perceived competence and perceived self-determination. With a beta coefficient of .777 and a .000 level of significance, the relationship between perceived competence and enthusiastic acceptance, H1, was clearly supported. H2, the relationship between

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perceived self-determination and enthusiastic acceptance, was also supported with a

beta coefficient of .151 and a .023 level of significance.

5.4 Testing Hypotheses 3, 4, 5, and 6

Hypotheses 3 through 6 were tested using the General Linear Model (multivariate

ANOVA, SPSS 11.5). The proposed relationships between implementation intensity,

trust, and perceived competence were examined (see Table 5-4). Significance

determined at the 0.05 level.

Table 5-4: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	COMPMEAN	18.59(a)	3	6.20	7.17	.000
	SDMEAN	3.36(b)	3	1.12	1.06	.371
Intercept	COMPMEAN	2138.63	1	2138.63	2476.00	.000
	SDMEAN	2214.86	1	2214.86	2099.51	.000
INTENSIT	COMPMEAN	3.05	1	3.05	3.54	.064
	SDMEAN	1.77	1	1.77	1.68	.199
INTENSIT * TRUST	COMPMEAN	16.16	2	8.08	9.36	.000
	SDMEAN	1.65	2	.83	.78	.461
Error	COMPMEAN	67.37	78	.86		
	SDMEAN	82.29	78	1.06		
Total	COMPMEAN	2222.52	82			
	SDMEAN	2312.81	82			
Corrected Total	COMPMEAN	85.96	81			
	SDMEAN	85.64	81			

a R Squared = .216 (Adjusted R Squared = .186)
b R Squared = .039 (Adjusted R Squared = .002)

The only significant relationship sustained was that of implementation intensity as moderated by trust on perceived competence (significance .000). Therefore, H3, intensity directly influences competence, is not supported; H5, intensity moderated by trust influences competence, is supported. Further analysis of variance revealed no significant relationship between implementation intensity and enthusiastic acceptance thus supporting the mediating role of interpersonal trust.

Figures 5-2 and 5-3 graphically illustrate the statistical analysis. Figure 5-2 demonstrates how the graph would appear if H3 and H5 were strongly supported. Figure 5-3 shows the actual results of the data collected. A moderating effect of trust on intensity would be demonstrated by a significant difference in the slope of the high trust manipulation versus the low trust manipulation as seen in Figure 5-2. However, examining the actual results in Figure 5-3, there is obviously only minimal difference in slope with trust acting primarily in an additive manner rather than a moderating one.

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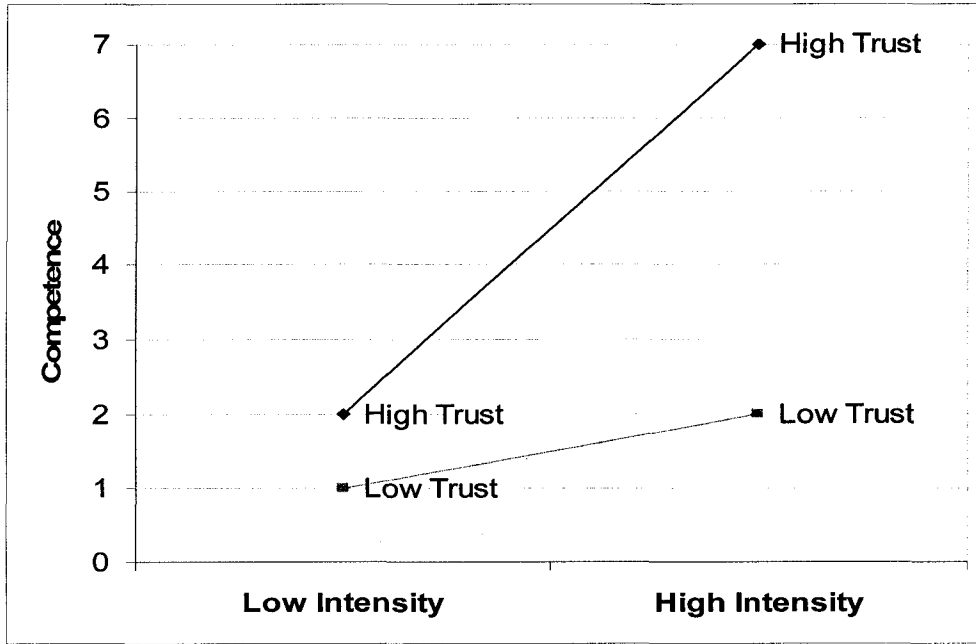
Figure 5-2: Role of Trust on Perceived Competence, Hypothesized Results
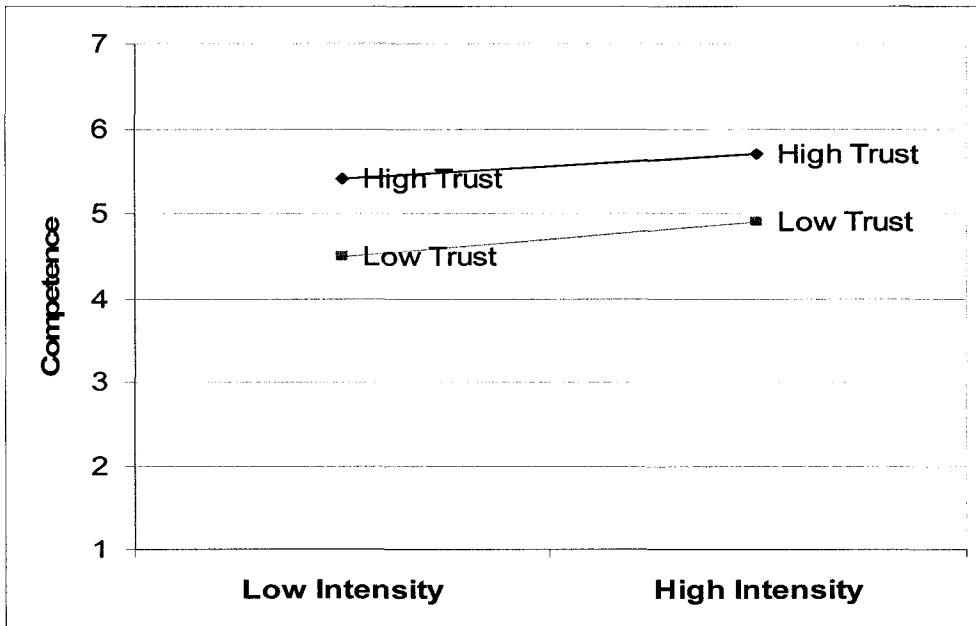
Figure 5-3: Role of Trust on Perceived Competence, Actual Results

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The relationships between implementation intensity, trust, and perceived self-determination were analyzed using the General Linear Model (Multivariate ANOVA) (see Table 5-4). Neither H4, implementation intensity influences self-determination, nor H6, implementation intensity moderated by trust influences intensity, were supported.

Again, graphical analysis helps to illustrate the statistical findings. Figure 5-4 demonstrates how the graph would appear if H4 and H6 were strongly supported. Examining Figure 5-5, a graph of the actual results, it is obvious that neither manipulation - trust nor intensity - had much of an effect upon perceived self-determination. Table 5-4 and Figure 5-6 summarize the support for the various hypotheses.
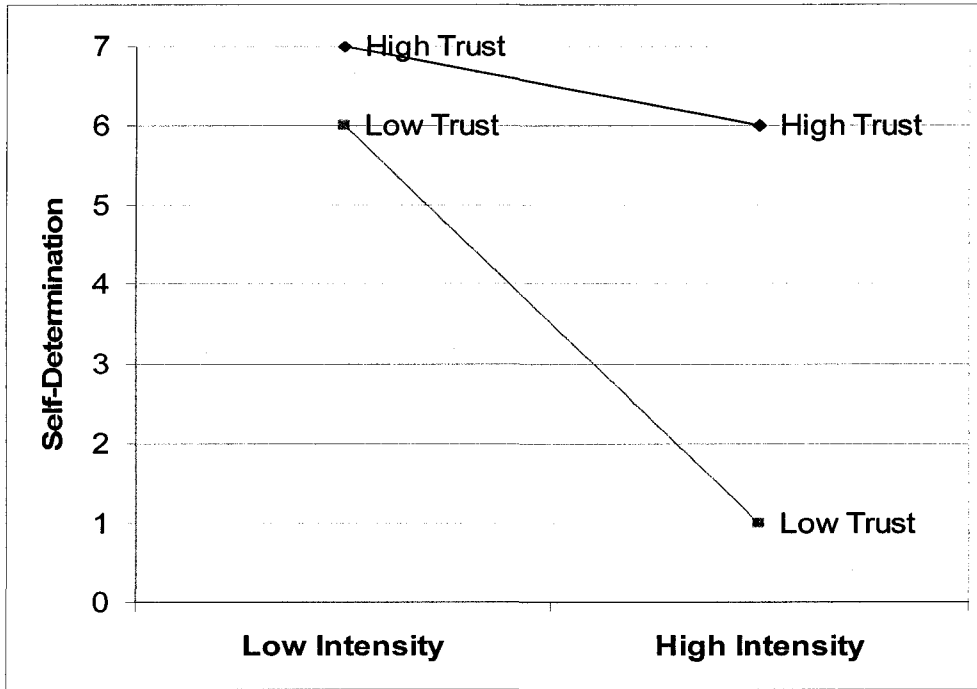
Figure 5-4: Role of Trust on Self-Determination, Hypothesized Results
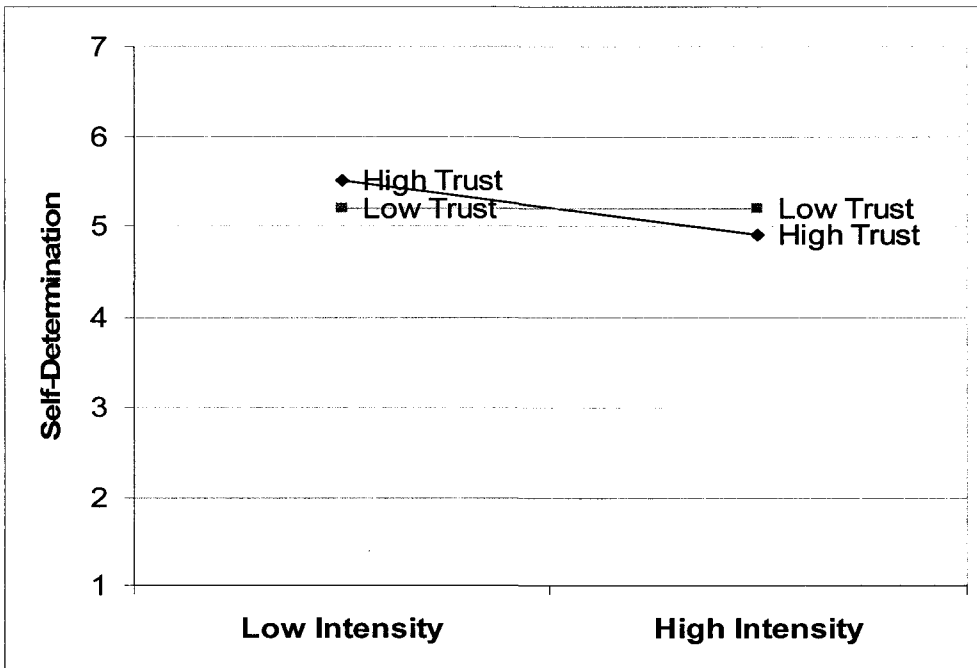
Figure 5-5: Role of Trust on Self-Determination, Actual Results

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Table 5-5: Summary of Hypothesis Support

Hypothesis	Supported?	Significance (p-value)
H1	Yes	.000
H2	Yes	.023
H3	No	.064
H4	No	.199
H5	Yes	.000
H6	No	.461
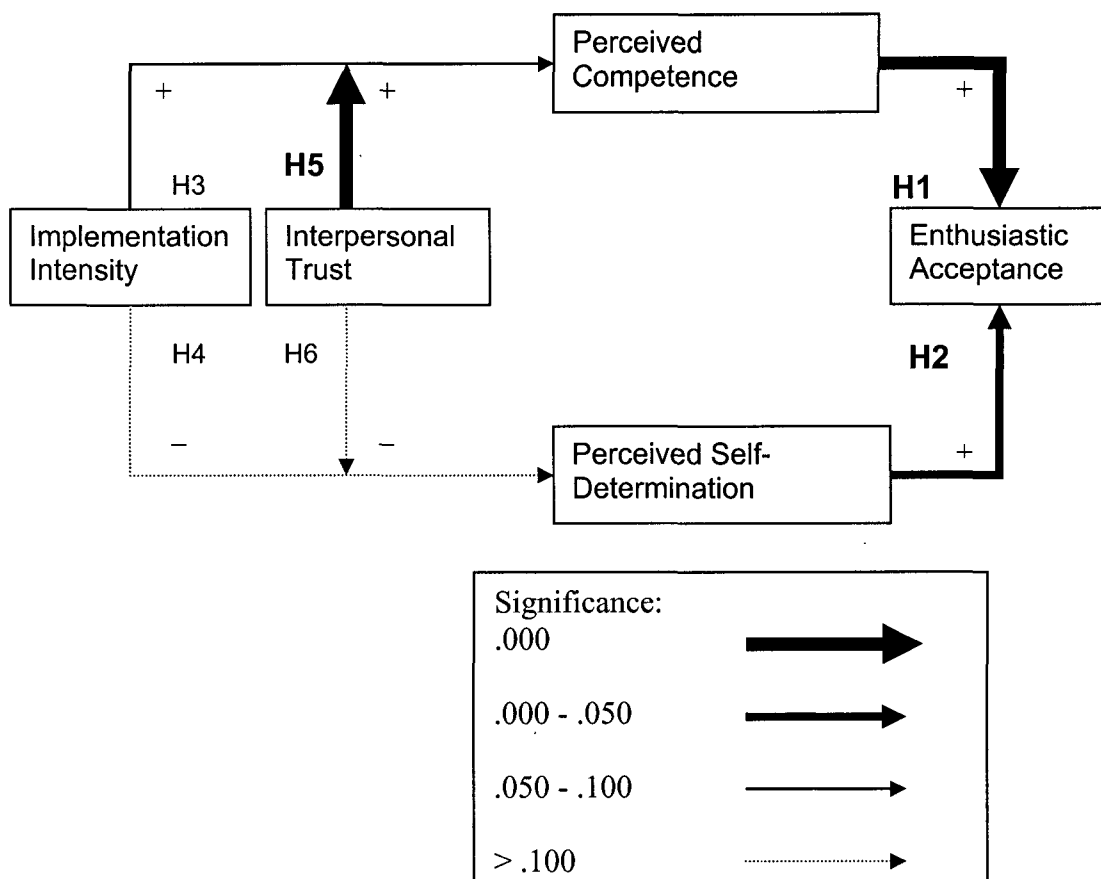
Figure 5-6: Summary of Hypothesis Support

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CHAPTER 6

DISCUSSION OF RESULTS

6.1 Antecedents of Enthusiastic Acceptance

The findings of the study indicate that perceptions of competence and self-determination both have substantial influence on the intrinsic motivation of the individual to accept an innovation. This suggests that the underlying theory regarding the antecedents of intrinsic motivation is applicable and useful within the context of individual IT innovation acceptance behavior.

6.2 Moderating Effect of Trust

Data analysis only found support for the moderating effects of trust with regard to the effect of implementation intensity on perceived competence. The effect of trust on the relationship between implementation intensity and self-determination was insubstantial.

6.3 Hypotheses Not Supported

It is unclear as to why hypotheses H3, H4, and H5 were not supported. Each was built upon substantive theory, especially H3 and H4 – the idea that the efforts of an influential other generally act to increase perceived competence and decrease perceived

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self-determination. It is possible that the artificiality of the experiment as designed was inadequate to stimulate realistic responses from the participants. There may have been other factors at work influencing the participants' responses which the experiment did not consider or include. Also, a larger sample size may have improved the results; several of the predicted relationships trended in the predicted direction but were not significant.

6.4 Academic Contributions

While data analysis alone cannot conclusively support the causal model it does give evidence of the veracity of the underlying theory upon which the model is founded. Although human behavior is extremely complex and resistant to explanation, this study contributes to the body of research in motivational psychology which seeks to understand human behavior on the basis of psychological needs. By applying the motivational theory of psychological needs as it relates to intrinsic motivation to the study of technological innovation acceptance, the thesis adds practical validation to the conceptual theory and expands its relevance.

The study also makes an academic contribution to the field of individual IT adoption. By applying the theory of psychological needs, this study brings perspective to the study of technology adoption behavior and presents a more inclusive framework for further research.

6.5 Practical Contributions

Although broad generalizations cannot be drawn from the outcome of a small and rather limited study, the study does suggest several interesting ideas of a practical nature for organizations.

First, the study suggests that in order for an individual to become enthusiastically supportive of technological innovation, he or she must perceive that accepting the innovation will enhance his or her sense of competence without eroding his or her sense of self-determination. It is important to note that competence, as described in the study, is more than just effective use of the innovation, but also involves the individual's overall perception of personal effectiveness.

Second, the study suggests that trust between the innovation adopter and the innovation promoter can significantly enhance the adopter's sense of competence with regard to the innovation. It is interesting to note that high levels of implementation activities were only substantially effective when combined with high levels of trust. This suggests that an implementation strategy's effectiveness is dependent upon the trustworthiness of its promoter.

6.6 Strengths of Study

The strengths of this study are found in its solid theoretical underpinnings and its experimental controls. The research model is founded upon established theory in social and motivational psychology. The nature of the experiment allowed for the use of strict controls which limited the influence of unknown variables. The experiment has a high

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degree of replicability with standardized protocols for questionnaire administration (see Appendix C).

6.7 Limitations of Study

The study was limited in several areas. Because the study relied upon a relatively small sample of students, it may be somewhat speculative to generalize the results to other populations and circumstances. Also, due to the nature of a controlled experiment, the artificiality of the experimental environment may have influenced the results. It is impossible to be sure that the results are an accurate reflection of the way individuals react in a more natural environment. Because this is essentially a role-playing study, it is possible that the participants won't become deeply involved enough to draw upon their "real" cognitions and emotions (Gould 2002). However, this issue should have been marginalized due to the fact that the elements of the study are relevant to the domain of the student and have a high degree of realism and plausibility.

It may be argued that because the students connected learning the innovation with getting desirable jobs that the enthusiasm captured was not truly intrinsically motivated, but extrinsically motivated by the hope of getting a reward. In response, it is proposed that the high levels of anticipated enjoyment and excitement could not be produced by the potential reward of a job alone. For example, it could be said that the goal and reward for passing the graduate school comprehensive exam is also to ultimately get a high-paying job, however it is doubtful that anyone would anticipate the exam itself to be an enjoyable experience. This study proposes that the enthusiasm the students report is based on the intrinsic need to stretch one's capabilities. It is also important to

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reiterate that the definition of intrinsic motivation chosen for this study is relatively broad in scope - "the innate, natural propensity to engage one's interests and exercise one's capacities, and in so doing, to seek and conquer optimal challenges" (Deci and Ryan 1985, 43).

6.8 Suggestions for Future Research

Future research using the questionnaire instrument developed in this study, should consider altering the manipulation check adjectives from "intense" and "mild" to terms with less connotative meanings. Perhaps a better manipulation check question would be, "Do you believe a great deal of effort is being put forth to encourage and support the use of [name of the innovation]? Yes or No."

Also, future research based upon this model should consider collecting data of a qualitative nature such as case studies, perhaps in an organization recently involved in the adoption of a technological innovation. It may be difficult for individuals to accurately predict their behavior in hypothetical scenarios such as those used in this study; perhaps a historical perspective of events would prove more useful.

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APPENDICES

Appendix A
Questionnaire Manipulations

LOW TRUST MANIPULATION

Assume you are a student at a university and have recently enrolled in an advanced software development course. Your advisor was reluctant to recommend this course and later admitted to you that it was because the instructor is currently on probation due to poor student evaluations. Nevertheless you enrolled because you needed the course to graduate. Your curiosity about the instructor led you to "ask around" about him and you discovered the following:

- He is employed by the University on a temporary (adjunct) basis and has been teaching less than two years. Previously he was employed in the telemarketing industry.
- A search of the newspaper archives revealed that he was arrested a year ago for operating an illegal Ponzi (pyramid) scheme.
- Visiting www.RateMyProfessors.com (a website where college students can leave comments about their teachers) you found the following comments:
    - "Promised the world, but didn't deliver ☹"
    - "Goes ballistic if you don't do just as he wants - avoid him if you can."
    - "Obvious he doesn't know the first thing about IT. Really messed me up."
- You heard a rumor from a trusted friend that he secretly takes "kick-backs" (bribes) from some of the software vendors he promotes in class.

Instructions: Circle the word that best represents your opinion. If you don't understand the question, leave it blank, but please make a note as to what you find confusing or ambiguous.

(1) How would you describe the instructor just mentioned?

Untrustworthy   Trustworthy

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HIGH TRUST MANIPULATION

Assume you are a student at a university and have recently enrolled in an advanced software development course. Your advisor was very enthusiastic about recommending this course because the professor was "among the best" and has been selected three times as "teacher of the year" by students. Your curiosity about the professor led you to "ask around" about him and you discovered the following:

- He is a senior professor and has taught at the University for almost twenty years. During that time he has traveled all over the world as a consultant in the IT industry and has participated in numerous multi-million dollar projects in the public and private sector.
- A search of the newspaper archives revealed that he volunteers his spare time to organize computer literacy programs for the elderly.
- Visiting www.RateMyProfessors.com (a website where college students can leave comments about their teachers) you found the following comments:
    - "This guy really delivers!"
    - "Most patient instructor I've ever had. Met with me on a Sunday afternoon to help me with a problem. Had to get on a waiting list to take his class."
    - "Super smart. Up on all the latest technology. Nice guy. ☺"
- You heard a rumor from a trusted friend that he secretly endowed a special trust to provide scholarships for disabled students.

Instructions: Circle the word that best represents your opinion. If you don't understand the question, leave it blank, but please make a note as to what you find confusing or ambiguous.

(1) How would you describe the instructor just mentioned?

Untrustworthy   Trustworthy

LOW IMPLEMENTATION INTENSITY MANIPULATION

The following is the text of an e-mail message that just arrived from the instructor:

"Students,
I want to make each of you aware that you have the opportunity to earn technical certifications from various IT vendors as an optional part of this course.   The lecture portion of this course covers conceptual and theoretical topics, however if you choose to participate in a special program I've arranged, in addition you will also have the opportunity to obtain technical certifications from selected IT vendors. I call this program the *Technical Preparedness Initiative*. Although there are fees associated with taking the certification exams, I have arranged a special discount for those in the program.

Please understand that I am "stretched thin" with all my other responsibilities so will not have much time to help you. You'll be expected to work relatively independently, so take this into consideration before making a commitment. You will be able to select from several different certification exams. If you want to participate, that's fine; if you don't, that's OK too. There's no rush to decide, just let me know anytime during the term if you would like to become involved."

Instructions: <u>Circle the word</u> that best represents your opinion. If you don't understand the question, leave it blank, but please make a note as to what you find confusing or ambiguous.

(2) How would you describe the instructor's effort in terms of promoting, supporting, and carrying out the new Technical Preparedness Initiative?

<div align="center">

Intense   Mild

</div>

HIGH IMPLEMENTATION INTENSITY MANIPULATION

The following is the text of an e-mail message that just arrived from the instructor:

"Students,
I am excited to tell you about a great opportunity we have this semester. Normally, this course only covers conceptual and theoretical topics, however if you choose to participate in a special, supplemental program I've arranged, in addition you will also have the opportunity to obtain valuable technical certifications from some of the top IT vendors. I call this program the *Technical Preparedness Initiative*. If you choose to participate, you will be required to complete three certifications exams which I have pre-selected.

Although there are minimal fees associated with taking the certification exams, I have arranged a special discount for those in the program. For those of you who volunteer to participate, you will also have the following additional resources to assist you:
- private computer lab (twelve terminals with tutorial software installed)
- weekly scheduled tutoring sessions
- lab assistant certified by vendors
- 24/7 access to me by cell phone
- T-Shirts and other promotional items from vendors
- Access to special bulletin boards and chat rooms
- Invitation to special social and career events hosted by vendors

Education alone isn't enough these days; you've got to have the right technical certifications if you want to get ahead. I'll be arranging one-on-one meetings with each of you to discuss the program further and answer any questions you may have. Again this program is completely optional, but I'm hopeful we will have 100% participation."

Instructions: <u>Circle the word</u> that best represents your opinion. If you don't understand the question, leave it blank, but please make a note as to what you find confusing or ambiguous.

(2) How would you describe the instructor's effort in terms of promoting, supporting, and carrying out the new Technical Preparedness Initiative?

Intense   Mild

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Appendix B
Questionnaire Items

QUESTIONNAIRE ITEMS

Section 1: Perceived Competence Statements

Participating in the Technical Preparedness Initiative would help me design and implement quality software applications.

I would be more likely to get a good job as a result of participating in the Technical Preparedness Initiative.

Participating in the Technical Preparedness Initiative would enhance my mastery of software development.

I would feel more confident as a professional as a result of participating in the Technical Preparedness Initiative.

Becoming technically certified would be challenging, but not too difficult by participating in the Technical Preparedness Initiative.

I feel confident I would be able to pass the vendor certification exams on the first try by participating in the Technical Preparedness Initiative.

Items were measured using a seven point Likert scale:

Strongly Disagree	not sure	Strongly Agree
1 2 3	4 5	6 7

Section 2: Perceived Self-Determination Statements

Whether or not to participate in the Technical Preparedness Initiative would be totally up to me.

I would feel free not to participate in Technical Preparedness Initiative.

I would feel pressured to participate in the Technical Preparedness Initiative. *(reverse scored)*

I would feel free to begin participating in the Technical Preparedness Initiative whenever I was ready.

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I would have many options as to how to participate in the Technical Preparedness Initiative.

I would have a lot of flexibility as to how to participate in the Technical Preparedness Initiative.

Items were measured using a seven point Likert scale:

Strongly Disagree		not sure		Strongly Agree		
1	2	3	4	5	6	7

Section 3: Enthusiastic (Intrinsically Motivated) Acceptance Statements

I would enjoy participating in the Technical Preparedness Initiative.

Participating in the Technical Preparedness Initiative would be fun.

I would be excited about participating in the Technical Preparedness Initiative.

I would be willing to continue participating in the Technical Preparedness Initiative even after the class is over.

I would want to participate in the Technical Preparedness Initiative by volunteering to teach special workshops held between semesters.

I would say overall I would be enthusiastic about participating in the Technical Preparedness Initiative.

Items were measured using a seven point Likert scale:

Strongly Disagree		not sure		Strongly Agree		
1	2	3	4	5	6	7

Appendix C
Survey Administration Protocol

Survey Administration Protocol

Title of Research	Innovation Acceptance: An Intrinsic Motivation Perspective and the Role of Trust (master's thesis)
Principle Investigator	James C. Howell, graduate student School of Computer & Information Sciences howell@jaguar1.usouthal.edu (251)604-8097

Instructions to Survey Administrator:

Distribute two copies of the consent form to each potential study participant. After introducing yourself to the group, read the following:

"Each of you should have received two copies of a document with a heading – 'USA Consent to Participate in a Research Study'. Please follow along as I review the material in the document which describes the nature of the research project and your involvement should you choose to participate."

"The title of this research is Innovation Acceptance: An Intrinsic Motivation Perspective and the Role of Trust. It is a master's thesis research project. The principle investigator is James C. Howell, a graduate student in the School of Computer and Information Sciences."

"University guidelines require a signed consent form for research involving human participants. After reading the statements below, please indicate your consent by signing and dating this form. Please feel free to ask questions at any time."

"Thank you for your interest in this research being conducted to support a master's thesis project in the School of CIS. This stage of the research project involves the collection of data from students to test hypothesizes regarding the acceptance of technological innovations. The purpose of this study is to better understand how individuals within organizations react to new technology. You will be asked to answer questions based upon your anticipated reactions to hypothetical scenarios. The individuals and organizations described in these scenarios are purely fictional."

"Participation in this study poses no risk to you whatsoever. Although the information you provide in response to the questionnaire is of a generic, non-sensitive nature, only the fact that you participated in this study will be recorded (by virtue of this consent form). The information you provide will be anonymous. You are not asked to include your name on any of the actual questionnaire documents. No monetary compensation will be given for participation; however this exercise may be a valuable learning experience regarding the methodology of social science research. The results of this study will be presented in a public defense; study participants are invited to attend in order to further enhance their educational experience."

(Survey Administration Protocol, page 2)

"The following is the statement of consent - I certify that I have read and fully understand the procedure as given above and agree to participate as a subject in the research described. Permission is given voluntarily and without coercion or undue influence. It is understood that I may discontinue participation at any time without penalty. I have been given a copy of this consent form."

"This survey is estimated to take no longer than fifteen minutes to complete. Again, there are no penalties if you choose not to take part. Participation is completely voluntary. If you would like to participate, please indicate your consent by signing and dating the consent forms. I will collect one copy; you may keep the other. If anyone has completed this survey in a previous session, you are ineligible to participate in this session. Does anyone have any questions?"

"Unless someone has a question, I will begin exchanging signed consent forms for the survey instrument. Please read the instructions on the survey before you begin. When you have completed the survey, please turn the survey face down or otherwise indicate to me that you are finished, and I will collect the survey. For those of you who choose not to participate, again, this survey should only take about fifteen minutes; any scheduled classroom activities will follow."

Describe below any deviations from the Survey Administration Protocol:

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Appendix D
Informed Consent Document

UNIVERSITY OF SOUTH ALABAMA
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of Research   Innovation Acceptance: An Intrinsic Motivation
Perspective and the Role of Trust (master's thesis)

Principle Investigator   James C. Howell, graduate student
School of Computer & Information Sciences
howell@jaguar1.usouthal.edu   (251)604-8097

Instructions University guidelines require a signed consent form for research involving
human participants. After reading the statements below, please indicate your consent
by signing and dating this form. Please feel free to ask questions at any time.

Purpose and Procedure
Thank you for your interest in this research being conducted to support a master's thesis
project in the School of CIS. This stage of the research project involves the collection
of data from students to test hypothesizes regarding the acceptance of technological
innovations. The purpose of this study is to better understand how individuals within
organizations react to new technology. You will be asked to answer questions based
upon your anticipated reactions to hypothetical scenarios. The individuals and
organizations described in these scenarios are purely fictional.

Potential Risks / Benefits
Participation in this study poses no risk to you whatsoever. Although the information
you provide in response to the questionnaire is of a generic, non-sensitive nature, only
the fact that you participated in this study will be recorded (by virtue of this consent
form). The information you provide will be anonymous. You are not asked to include
your name on any of the actual questionnaire documents. No monetary compensation
will be given for participation; however this exercise may be a valuable learning
experience regarding the methodology of social science research. The results of this
study will be presented in a public defense; study participants are invited to attend in
order to further enhance their educational experience.

Statement of Consent
I certify that I have read and fully understand the procedure as given above and agree to
participate as a subject in the research described. Permission is given voluntarily and
without coercion or undue influence. It is understood that I may discontinue
participation at any time without penalty. I have been given a copy of this consent
form.

_____   _____
Participant's Signature   Date

Appendix E
IRB Approval Letter

UNIVERSITY OF SOUTH ALABAMA

COLLEGE OF MEDICINE
INSTITUTIONAL REVIEW BOARD

INSTITUTIONAL REVIEW BOARD
FWA 00001602

PROTOCOL NUMBER #:	03-199
APPROVAL DATE:	October 8, 2003
EXPIRATION DATE:	October 7, 2004
TITLE OF PROTOCOL:	Innovation acceptance: an intrinsic motivation perspective and the role of trust
PRINCIPAL INVESTIGATOR:	James C. Howell

This panel, operating under the authority of the DHHS Office for Human Research and Protection, assurance number FWA 00001602, has reviewed the following items: 1) protection of the rights and welfare of the human subjects involved; 2) the methods used to secure, and the appropriateness of, informed consent; 3) the risks and potential benefits to the subject. On the basis of this review, we recommend:

(X) Approval	( ) Deferral		(X) Initial review
( ) Denial	( ) Pending;	for the	( ) Renewal
( ) Reactivation	( ) Reinstatement		( ) Amendment/Revision

for this protocol and consent in terms of the University of South Alabama's statement of policy and procedure concerning the use of human subjects in investigation.

The regulations require that the investigator not initiate any changes in the research without prior IRB approval, except where necessary to eliminate immediate hazards to the human subjects, and that all problems involving risks and adverse events be reported to the IRB immediately. Advertisements for recruitment of subjects must receive prior IRB approval. This and subsequent consent forms are approved by the IRB stamp on the last page. You must use copies with the current IRB approval stamp unless written consent has been waived. All subjects must receive a copy of the consent form.

Remarks: Approval with waiver of consent.

Charles Rich IIID, 24
Chair, IRB

8 Oct 03
Date

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BIOGRAPHICAL SKETCH

BIOGRAPHICAL SKETCH

Name of Author: James Chadwick Howell

Place of Birth: Lucedale, Mississippi

Date of Birth: July 26, 1971

Graduate and Undergraduate Schools Attended:
    Mississippi Gulf Coast Community College, Perkinston, Mississippi
    University of South Alabama, Mobile, Alabama

Degrees Awarded:
    Master of Business Administration, 1997
    Bachelor of Arts in English, 1994

Honors:
    Alpha Iota Mu, Information Management Honor Society
    Sigma Tau Delta, English Literature Honor Society