



THE UNIVERSITY OF
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Graduate School of Education

Doctor of Education (Ed.D.) Research Proposal

PROFILES OF HIGH-PERFORMING FEMALE CALL CENTRE AGENTS

Candidate: Mr. David Kwok

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Supervisor:

Dr. Elaine Chapman

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ABSTRACT

The call centre industry is one of the most rapidly growing in the developed world today. While the success of call centers will depend on a multitude of factors, the efficacy of call center agents are of primary concern. Despite this, little research has been done to identify predictors of high performance in call center agents. Studies have shown that call centres are high-pressure, stressful work environments, characterized by routine work, lack of control over work, intense electronic performance monitoring, meeting of performance targets, high turnover, and absenteeism. Not only are call agents expected to be knowledgeable in the range of products, services and systems offered by the companies for whom they work, they are also required to remain calm under the pressure of a continuous stream of customer calls, and in dealing with irate customers in a friendly, positive, and tactful attitude. Further, they need to be well organized and able to locate and process relevant information quickly.

The aim of this research will be to (a) investigate how selected demographic variables (age, level of education, and level of experience) predict the job performance of female call agents; (b) examine how personal characteristics (emotional intelligence, self-directed learning readiness, and self-efficacy) predict the job performance of call agents; and (c) profile high performing call agents in terms of demographic variables and personal characteristics. To address these aims, a sample of female call agents ($n = 195$) who attend training at one call centre in Singapore will be invited to complete a demographic questionnaire and three established instruments: the *Self-Directed Learning Readiness Scale*, the *Mayer-Salovey-Caruso Emotional Intelligence Test*, and the *Personal Efficacy Beliefs Scale*. The performance index will be based on ratings from the performance appraisal records of the call agents. A range of techniques will be used to examine relationships between performance, demographic variables, and personal characteristics, on the basis of these instrument scores. These will include descriptive statistics, multiple regression/path analysis, cluster analysis, and analysis of variance. By establishing the characteristics that predict high performance in call center agents, the findings of the study may have important implications for the selection, recruitment, training, and development practices used in call centers across the globe.

INTRODUCTION

The call centre industry is one of the most rapidly growing in the developed world today (Staples, Dalrymple & Phipps, 2001). Call centres are employed in diverse industries, including financial services, insurance, retail, information technology, and telecommunications. Internationally, it is estimated that approximately 3% of the US workforce is employed in call centres, while in the UK, the call centre industry is growing at a reported 50% annually (Call Center News, 2002). In the Asia Pacific, it is predicted that over the next few years, the region will represent an estimated 33% of the total global GDP, making it the fastest growing, emerging market in the world (callcentres.net, 2003). At present, the combined call centre market in the Asia Pacific region is valued at US\$15.6 billion, and is predicted to grow some 15% in the next few years (Poon, 2004).

In Singapore, the matured call centre market is predicted to gross US\$166 million in revenues by 2006 from US\$68 million in 2001, growing at a 21% annual rate during this period (Tang, 2002). It is estimated that 250 organizations operate call centres in Singapore, with the market having approximately 325 call centres operating 10,000 seats (callcentres.net, 2003). The rapid growth of these call centres, both locally and in the region, can be attributed to the liberalization of the industries, increased call centre outsourcing or offshoring opportunities coming from countries such as Britain and the USA, the development and increased adoption rates of mobile phones and wireless data technology, and the lowering cost of long distance calls due to emerging technologies. As call centres become increasingly important for customer relationship management, call agents will become increasingly critical, as they serve as the link between companies and customers.

CHALLENGES FACED BY CALL CENTRE AGENTS

The work of call agents is fairly prescribed. A call centre agent responds to incoming calls by providing customers with detailed product and procedural information, processing customer transactions, and attending to customer queries and complaints in a responsive, accurate and timely manner, in accordance with specified service standards (Frankel, Tam, Korczynski &

Shire, 1998). Not only are call agents expected to be knowledgeable in a range of products, services, and systems for processing customer transactions, they are required to possess customer service skills, remain calm under the pressure of a continuous stream of customer calls, and deal with irate customers in a friendly, positive and tactful attitude. Call agents also need to be well organized, and able to locate information quickly in e-knowledge management portals and customer management systems. Further, they need to be able to process relevant information quickly, so that customers' queries are handled promptly and in a manner that is consistent with company procedures and policies.

Numerous studies have shown that call centres are high-pressure and stressful work environments, characterized by highly routine work, lack of control, intensity of electronic performance monitoring, meeting of performance targets, high turnover, and absenteeism (Holman, 2002, 2003; Holdsworth & Cartwright, 2002; Callaghan & Thompson, 2002). Under these working conditions, training call agents is a challenging endeavour. This is compounded by the fact that when call service levels fall below specified targets, allocated time for training and coaching is usually compromised. In recent years, a handful of studies has appeared on a range of "people issues" related to call agents such as emotional dissonance (Lewig & Dollard, 2003); empowerment, stress and job satisfaction (Holdsworth & Cartwright, 2003); recruitment, selection, and training (Callaghan & Thomson, 2002) and training and job mobility (Sieben & Grip, 2003).

So far, however, little attention has been paid to developing profiles of call agents based on personal characteristics and demographic factors. This is surprising, given that more than 65% of the costs in the modern call centre are attributed to staffing, and that the call centre industry is currently suffering from retention problems (Higgs, 2003). Hence, it is important that organizations come to a realization of the impact of emotional and psychological demands of call centre work on their employees. The present study aims to fill an important gap in the growing literature on employees within the call centre setting. By establishing profiles of high- and low-performing call agents, the study may help organizations to optimize the effectiveness and well-being of their employees, and, in turn, to reduce the costs of high agent turnover.

LITERATURE REVIEW

Demographic variables that affect call agent performance

Within the call centre literature, few studies have been conducted to identify demographic factors that predict call agent performance. In one recent study, however, Higgs (2004) found a significant relationship between age and performance in a sample of 289 call agents working in the UK. In this study, older call agents demonstrated better customer service skills than younger call agents, although there was no significant relationship between level of experience and job performance. In an earlier study, Moshavi and Terborg (2002) found no performance differences between temporary and regular call agents, contrary to expectations. Performance of call agents was measured by a survey of three areas: the knowledgeability of staff, the friendliness/courtesy of staff, and overall satisfaction with the service encounter.

Personal Characteristics

Emotional Intelligence

Call agents are required to regulate their emotions on an ongoing basis at work. It is not unusual to experience constant abuse from angry customers, and in these situations, call agents must maintain excellent customer service standards and adherence to the organizational value of satisfying customers. In recent years, many studies related to the “emotional demands” of call centre jobs have emerged in the literature. These studies have looked specifically at factors that may impact performance in call agents such as emotion regulation (Totterdell & Holman, 2003), emotional exhaustion (Witt, Andrews & Carlson, 2004), and emotional dissonance (Lewig & Dollard, 2003). Indeed, in one recent study, Bardzil and Slaski (2003) argued that emotional intelligence is a key competency of call agents.

The concept of emotional intelligence (EI) gained popular attention among academics and corporate organizations through the work of Goleman (1995), who defined EI as a composite of abilities such as “being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratifications; to regulate one’s mood and keep distress from swamping the

ability to think; to empathize and to hope” (p. 34). However, EI was first used by Salovey and Mayer (1990), who defined the construct as “the ability to monitor one’s feelings and emotions, to discriminate among them, and use this information to guide one’s thinking and actions” (p. 189). Importantly, they found that individuals differ in how skilled they are at recognizing, understanding, and using emotional information. Salovey, Bedell, Detweiler and Mayer (2000) contended that a person’s success in life depends on their ability to reason about emotional experiences, and to use emotions to augment their cognitive skills.

Goleman (1998) reported that EI is twice as important as technical skills and IQ for success in jobs at all levels. He suggested that EI plays an increasingly important role at higher levels in the organization, with differences between ‘star performers’ and average ones in senior positions being more attributable to EI factors than cognitive abilities. Many studies have suggested that individuals who exhibit high levels of emotional intelligence are more likely to experience performance-related success than those who exhibit lower emotional intelligence (e.g., Fox & Spector, 2000; George, 2000; Goleman, 1995).

Researchers of call centres have identified a range of skills and characteristic relationships that may contribute to the effective performance of call agents, which appear to have many similarities to the construct of emotional intelligence, including empathy, interpersonal skills, pressure tolerance and stress resistance (Lash & Ury, 1994; Webster, 1998; Jarman et al., 1998). For example, Higgs (2004) attempted to examine the relationship between emotional intelligence (EI) and performance in 289 UK call agents. The sample was chosen to ensure variations in age, tenure, and appraisal performance ratings. The results showed that overall EI, as measured by the EIQ-G instrument developed by Delewicz and Higgs (2000), was significantly related to agent performance. Five of the seven EI elements, namely conscientiousness, self-awareness, resilience, motivation and interpersonal sensitivity, were highly correlated with performance. Interestingly, a negative relationship was found between intuitiveness and performance. Higgs attributed this result to the extensive use of scripts and standard operating procedures in the call centre, which may restrict call agents with high levels of intuitiveness from achieving effective performance.

Self-Directed Learning

Despite the unique challenges faced in training call centre agents, little research has been done on the factors that impact learning in call centre environments. Previous research studies in this area have focused on factors such as learning strategies (Holman, Epitropaki & Fernie, 2001) and learning-related outcomes on skills utilization and self-efficacy (Holman & Wall, 2002).

Self-directed learning has been widely researched and found to be a major factor in the education of adult learners (Long, 1992). The definition of self-directed learning varies throughout the literature. Related terms used to describe self-directed learning include self-education, self-planned learning, self-teaching, self-learning, self-regulated learning, and independent study (Knowles, 1975; Hiemstra, 1994; Long, 2000).

Knowles (1975) described the term self-directed learning as “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (p. 18). Furthermore, he suggested that when an individual takes the initiative for their own learning process, the whole process is enhanced as opposed to those who passively wait to be taught.

Brockett and Hiemstra (1991) reported that self-directed learning is a broad term and it compasses such factors as “the learner taking responsibility for planning, implementing, and evaluating learning,” as well as “personality characteristics that predispose one towards accepting responsibility for one’s thoughts and actions as a learner” (p. 29).

Even though the above definitions by Knowles (1975) and Brockett and Hiemstra (1991) vary, they are similar in their description of the learner assuming control of the learning situation. This is a core idea foundational to the understanding of self-directed learning.

Long (1990) identified three conceptual dimensions of self-directed learning: the sociological, pedagogical and psychological. He contended that much of the discussion related to self-

directed learning has focused on sociological and pedagogical issues. He noted that the psychological (cognitive) dimension has been generally ignored, stating that “critical dimension in self-directed learning is not the sociological variable, nor is it the pedagogical factor: the main distinction is the psychological variable” (p.332). Long (1990) concluded that “psychological self-directedness, or psychological control is the necessary and sufficient cause for self-directed learning’ (p.333), and added that “self-directed learning, if preferred, occurs only when the learner primarily controls the learning (cognitive) processes” (p.334).

Self-directed learning has proven valuable in understanding adult learning because it is believed to enhance creativity, discourage blind acceptance of existing knowledge, encourage the use of brainstorming for what is personally important and consistent with personal values, and help learners to adapt to rapidly changing environments (Ramsey & Couch, 1994). Knowle’s (1984) model on andragogy suggests that adults should generally be capable of engaging in self-directed learning. Further, many educators in adult education consider that a major part of their role as facilitators involves helping adults ‘learn how to learn’ and continue to learn in a self-directed learning environment (Smith, 1992; Caffarella, 1993). However, not all adults prefer or are comfortable with the notion of self-directed learning (Candy, 1991; Richey, 1991; Ellsworth, 1992). Some tend to be more self-directed than others, and some prefer or reject self-directed learning in different situations (Kerka, 1994; Darbyshire, 1993).

As cited by Guglielmino and Guglielmino (1994), interests in self-directed learning within business and industry have escalated recently due to unprecedented rates of technological and societal change, requiring increased flexibility and continuous learning, and trends toward self-directed teams in the workplace. Research within this field has consistently demonstrated a positive relationship between readiness for self-directed learning and job performance (Guglielmino & Guglielmino, 1982; Roberts, 1986; Durr, 1992). These studies also reported significantly stronger relationships for individuals whose jobs involved a high degree of change and/or higher levels of creativity and problem solving skills.

Self-Efficacy

Based on social-cognitive theory, Bandura (1986) defined self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performance” (p. 391). Although knowledge and skills play critical roles in the choices people make and the courses of action they pursue, Bandura (1997) postulated that people’s levels of motivation, affective states, and actions are based more on what they believe than on what is objectively true. Self-efficacy is a dynamic construct that changes over time as new information and experiences are acquired.

Individuals tend to prefer tasks that they feel competent to complete, and to avoid those that they feel are beyond their competence (Kear, 2000; Pajares, 2002). Motivation is also enhanced if individuals perceive that they are making progress in learning. As individuals work on tasks and become more skillful, they in turn maintain high levels of self-efficacy for performing well. Bandura and Cervone (1996) studied influences of self evaluation/satisfaction level, self-efficacy and self-set goals on task motivation. They found that self-efficacy was a powerful predictor of levels of personal goals, as well as of overall motivation.

According to Bandura (1991), self-efficacy beliefs are the most central and pervasive influence on the choices people make, their goals, the amount of effort they apply to a particular task, how long they persevere at a task in the face of failure or difficulty, the amount of stress they experience, and the degree to which they are susceptible to depression. This is important because, as noted earlier, call centres are high pressure and stressful work environments. Therefore, enhancing self-efficacy of the call agents may be one factor that contributes to an improvement in their job performance.

Further, adult learners need to view themselves as able to learn on their own. Ellsworth (1992) and Jones (1994) noted that self-confidence was an almost necessary factor for engaging in self-directed learning. If individuals perceive themselves to be competent and confident in their skills and knowledge, they will be willing to undertake information problem-solving activities, and will more easily become self-directed learners (Kurbanoglu, 2003). Otherwise, it is more

likely that they will avoid and hesitate in efforts to solve problems, preferring to pass the problems onto someone else.

The higher a person's sense of self-efficacy, the greater the effort, persistence, and resilience they are likely to exhibit in approaching challenging tasks (Pajares, 2002; Kear, 2000). Persistence and resilience are two factors crucial for information problem solving, self-regulated learning, and lifelong learning (Kurbanoglu, 2003). The key to active involvement in lifelong learning is seen as the acquisition of skills and attitudes, often closely linked to the concept of self-directed learning (Kreber, Cranton & Allen, 2000). Research also indicates that an individual's sense of self-efficacy is related to achievement goals (Braten & Olaussen, 1998; Pajares, Britner & Valiante, 2000), goal setting (Loke & Latham, 1990), self-regulation (Joo, Bong & Choi, 2000; Malpass, O'Neil & Hocevar, 1999), attributions (Chase, 2001; Sherman, 2002) and volition (Garcia, McCann, Turner & Rosker, 1998). These variables describe the extent to which individuals are active participants in their own learning, which are common characteristics found in self-directed learners.

In an organizational context, self-efficacy has been found to be significantly related to work-related performance in areas such as life-insurance sales (Barling & Beattie, 1983), faculty research productivity (Taylor, Locke, Lee & Gist, 1984), adaptability to technology (Hill, Smith & Mann, 1987), and performance of general managers of international joint ventures (Geringer & Frayne, 1993). In a meta-analysis of 114 studies, Stajkovic and Luthans (1998) reported a corrected weighted average correlation of 0.38 between self-efficacy and work-related performance. When self-efficacy is enhanced, performance increases (Gist, Schwoerer & Rosen, 1989). So far, however, little attention has been paid to investigating self-efficacy and work-related performance in the call centre setting.

Bandura (1997) suggested that emotions, particularly the awareness and control of emotions, play an important role in the self-efficacy development process. Gundlach, Martinko and Douglas (2003) postulated a model suggesting that emotional intelligence should have an impact on self-efficacy through its influence on causal reasoning processes. In addition to being a potentially important variable in itself for predicting job performance of call agents, self-

efficacy may also be an important mediator of the effects of other variables such as emotional intelligence and self-directed learning readiness on job performance. For example, it is quite possible that agents with high levels of emotional intelligence will perform better partly because having high emotional intelligence leads to a higher sense of self-efficacy.

CONTRIBUTION TO KNOWLEDGE

The number of agents working in the call centres throughout the world is growing rapidly (Armistead et al., 2002). Research has indicated that the job characteristics of call agents differ significantly from those of traditional jobs, in that they are high in emotional demand and stress (Lewig & Dollard, 2003). By implication, call agents should need to demonstrate self-management skills and the ability to learn quickly (Frenkel et al., 1999), as well as having a high level of self-confidence in approaching their work (Holman & Wall, 2002). These relationships, however, have not yet been tested empirically. It is clearly in the interests of call centres to know the kinds of characteristics that will predict high and low performance in centre agents, for purposes of selection, recruitment, training and development of call agents. By establishing profiles of high and low performing agents, this research will have significant practical contributions in the human resource field, as well as addressing theoretical issues associated with the relationships amongst the variables examined.

STUDY AIMS AND RATIONALE

The call centre in this study has recently launched two major computer systems on customer contact management and billing systems. Faced with the anxiety of learning how to operate these systems effectively and, at the same time, acquiring information associated with the proliferation of new and complex products and services, call agents can no longer rely on training alone to stay abreast of the new and changing information and to manage customers who demand to have immediate answers to their enquiries. Despite the fact that much work and effort has been put into training, the call agents are still not coping well with their work and lack confidence, resulting in numerous billing errors and customer complaints.

A major concern of management in call centres is to identify overall profiles of characteristics that are typical of high and low performing call agents, which may contribute to the effective selection, recruitment, training, and development of call agents. As this is a relatively new area, however, there is little existing evidence on the relationships among these variables and their relationship to the job performance of call agents. From the literature review, there are many possible combinations of factors that may affect job performance in call agents. In general, these fall into two major categories: demographic factors and personal characteristics.

This study will examine the relationships between a number of demographic factors such as age, education, and level of experience, and job performance in call agents. As noted above, only a handful of studies have been done to examine these links within call centers to date.

Further, given that call agents must operate in increasingly unstable environments that require high levels of flexibility and adaptability, fostering self-direction and high levels of self-efficacy in call agents may be of primary importance (Robotham, 1995). Therefore, a second goal of the study was to examine how self-directed learning and self-efficacy predict job performance in call agents.

Another challenge faced in the call centre is managing 'people issues', including high staff attrition, lack of motivation, stress, and emotional dissonance among call agents. Thus, the final goal of this study was to contribute to, and close an important gap in, the existing literature in this field by examining relationships between emotional intelligence and job performance in call centres, and to assess self-efficacy as a potential mediating factor in these relationships.

RESEARCH QUESTIONS

From the review of literature above, the following general research questions were generated:

1. To what extent do selected demographic variables predict job performance in call centre agents?

Subquestions implicit in this general question will be:

- 1a. To what extent does age predict job performance in call centre agents?
- 1b. To what extent does level of education predict job performance in call centre agents?
- 1c. To what extent does level of experience predict job performance in call centre agents?

2. To what extent do emotional intelligence, self-directed learning readiness, and self-efficacy predict job performance in call centre agents?

Corresponding subquestions will be:

- 2a. What are the direct relationships between emotional intelligence, self-directed learning readiness, and job performance?
- 2b. What are the direct relationships between self-efficacy and job performance?
- 2c. What are the indirect relationships between emotional intelligence, self-directed learning readiness, and job performance, as mediated by self-efficacy? For example, is it plausible that higher levels of emotional intelligence lead to better job performance *because* call agents with higher emotional intelligence tend to be more confident than others?

3. What is the profile of a high performing call agent in terms of both demographic and personal characteristics?

Specific subquestions addressed will be:

- 3a. Which demographic factors (age, level of education and level of experience) and personal characteristics (emotional intelligence, self-directed learning readiness, self-efficacy) combine to produce distinct clusters of call agents? For example, is there a

defined cluster of call agents who have high levels of experience, but low levels of emotional intelligence and self-directed learning, and, if so, what is the average performance of individuals within this cluster?

3b. What are the combinations of demographic and personal characteristics that are associated with high performance among female call agents?

3c. What are the combinations of demographic and personal characteristics which are associated with low performance among female call agents?

METHOD

Sample

Participants will be drawn from a pool of call agents working in the Call Centre of a major telecommunication company in Singapore. Based on a power analysis, a minimum sample size of 195 has been determined (see Cohen, 1998), to detect effects of .20 or more using α levels of .05 (two-tailed tests) with typical levels of sample variability.

Over 90% of the call agents in this centre are female, and are primarily of Chinese, Malay, and Indian descent. Ages range between 22 to 55 years old. The majority of the call agents are from the middle income group, and levels of experience vary from 6 months to 30 years within the organization. In the study, agents on a contract employment of less than 6 months and male employees will be excluded. This will be done to increase the internal validity of the conclusions reached. Limitations to external validity (i.e., generality) that result from this exclusion will be addressed explicitly in the reporting of the results. To maximize the variance of the independent variables, the sample will be drawn from a broad range of call agents across the various enquiry hotlines to ensure sample diversity within these parameters. Assuming an average of 15 participants in each training class, data will be collected over an estimated 16 sessions of training over a period of 4 months.

Instruments

Data will be collected using the following instruments:

(a) Emotional Intelligence Scale: This 33-item self-report scale, developed by Schutte et al. (1998), measures the ability to adaptatively recognize emotion, express emotion, regulate emotion, and harness emotions. The authors used the model and definition of emotional intelligence developed by Salovey and Mayer (1990). Sample items include “I have control over my emotions”, “When I feel a change in emotions, I tend to come up with new ideas” and “I help other people feel better when they are down”. Respondents rate themselves on a scale from 1 (strongly disagree) to 5 (strongly agree).

Schutte et al. (1998) reported internal consistency of .87 to .90 and two weeks test-retest reliability of .78. Evidence of validity includes correlations of emotional intelligence measure with characteristics such as attention to feelings, mood repair, optimism, impulse control, lack of depressed affect (Schutte et al., 1998), emphatic perspective taking, self-monitoring in social situations, closeness and warmth of relationships, and marital satisfaction (Schutte et al., 2001). Evidence of discriminant validity is also reported in a study by Schutte et al. (1998).

The Emotional Intelligence Scale is relatively easy to administer, does not take a lot of time, and has adequate reliability and validity. Hence, the instrument seems to be most appropriate for use in this study.

(b) Self-Directed Readiness Scale (SDLRS): Developed by Guglielmino (1977), this self-report instrument aims to measure the extent to which individuals perceive themselves as possessing skills and attitudes frequently associated with self-directedness in learning. The SDLRS is a 58 item, five-point Likert scale that yields a total score for self-directed readiness which are classified in terms of 8 factors: (1) love for learning, (2) self-concept as an effective learner, (3) tolerance of risk, ambiguity and complexity of learning, (4) creativity, (5) view of learning as a lifelong, beneficial process; (6) initiative in learning, (7) self-understanding and

(8) acceptance of responsibility for one's own learning. Sample items are "I know what I want to learn" and "I love to learn".

The SDLRS is reported to have a .94 Pearson split-half reliability (Brockett and Hiemstra, 1991) and a Cronbach-alpha reliability coefficient of 0.87 (Guglielmino, 1977). Both convergent and divergent validity of the SLDRS were supported in a study conducted by McCune, Guglielmino and Garcia (1990).

(c) Personal Efficacy Beliefs Scale (PEBS): This is an eight-item, six-point Likert scale that was previously developed by Riggs (1989), and was chosen for this study to measure self-efficacy. Item responses range from 1 to 6 and are anchored as 1=strongly disagree to 6=strongly agree. Sample items are "I have confidence in my ability to do my job" and "I have all the skills needed to perform my job well". The scale has demonstrated good internal consistency and reliability with Cronbach's alphas ranging from .81 to .87, and high predictive validity with measures of subsequent performance variables (Riggs, 1989).

The following data will also be recorded:

(d) Demographic Profile: Through a short questionnaire, sample characteristics on age, level of education, and years of working experience will be recorded.

(e) Performance Data: This will be obtained from the performance appraisal records at the HR Department of the Call Centre. Performance appraisal ratings will be converted into a 5-point scale, with 1 representing unsatisfactory performance and 5 reflecting outstanding performance.

Procedure

In order to achieve the highest return rate and ensure the quality of data, the questionnaire will be administered by the present researcher to groups of call agents participating in training sessions. The questionnaire will be administered before commencement of the training in the

mornings, where the participants are most alert and disruption to the training is minimal. This will ensure a maximal response rate within the target group in a controlled environment.

Specific instructions detailing the purpose of the study, on how to fill out the questionnaire, and on expected time of completion will be read out to the participants. The researcher will inform participants that participation in this study is entirely voluntarily and that the study is supported by management. Names of participants will not be disclosed, and the completed questionnaires will be kept confidential.

The researcher will be present at the time of the data collection to clarify any questions that may arise. He will also keep a record of the call agents who had previously attended training during each data collection session. This is to avoid a single participant filling in the questionnaire more than once on separate training days.

Secondary data pertaining to the performance scores of the call agents will be obtained with management consent from the performance appraisal records of the call agents who participate in the study.

Data Analysis and Management

After the completed questionnaires are collected, the data will be coded and entered into the Statistical Package for the Social Sciences (SPSS, Version 12.5). Prior to any analysis being performed, all data will be checked both for errors in entry and conformity to assumptions of the tests conducted (e.g., normality, outliers).

To address Research Question One, a multiple linear regression analysis (MRA) will be performed, with performance appraisal scores as the dependent variable, and age, education level, and level of experience as the predictors. A simultaneous entry method will be used, given that there is no basis on which to enter these variables in a particular hierarchical order.

To address Research Question Two, a path analysis will be performed. Path analysis is an extension of multiple linear regression analysis. This method may be used to decompose correlations into direct and indirect effects, corresponding to direct and indirect relationships between the predictor and the outcome variables. Given the research question in this case, a four-panel model will be examined. In this model, demographic characteristics will be entered in Panel I. Subscales of the Emotional Intelligence Test and those of the Self-directed Learning Readiness instrument will be entered in Panel II, followed by scores on the self-efficacy measure (Panel III), and performance appraisal scores (Panel IV). A preliminary conceptual model for this analysis is shown in Figure 1.

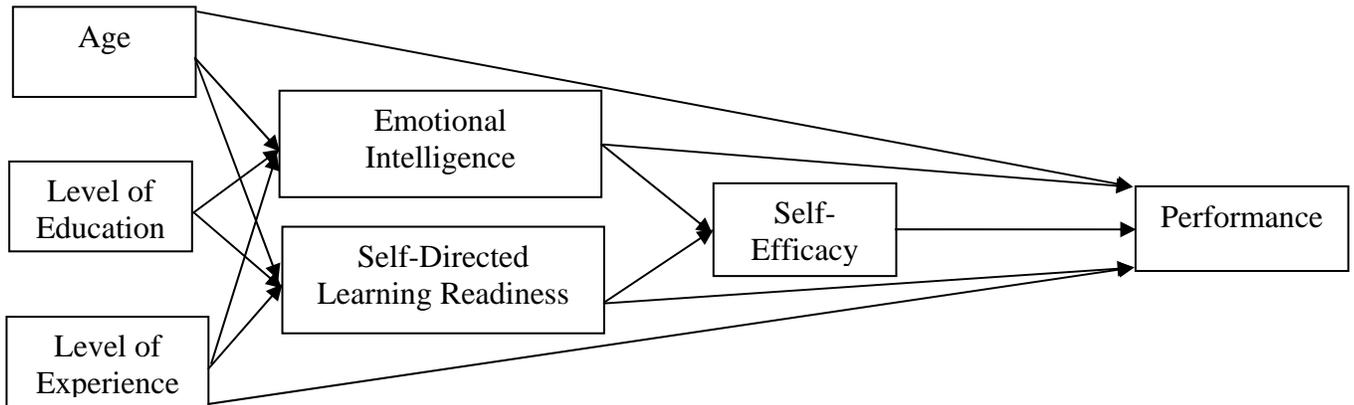


Figure 1: Conceptual diagram of relationships tested in the study

To address Research Question Three, a cluster analysis will be performed. This is a statistical technique that identifies groups of participants whose characteristics are highly correlated within each cluster grouping and relatively uncorrelated between clusters. All demographic and personal variables will be entered, apart from performance scores, to determine whether there appear to be identifiable groups of call agents with particular characteristics. Once the cluster structure of the sample has been established, an analysis of variance (ANOVA) will be performed to determine whether the clusters identified differ significantly in terms of performance. This will help to identify whether there are particular combinations of factors that predict high and low performance among female call agents.

Data Quality and Ethical Considerations

To ensure confidentiality of the participants and the Call Centres, all data will be treated in a manner that protects the confidentiality and anonymity of the participants and organization involved in the study. The information obtained and collated from the research will be coded, and at all times remain the property of the researcher. The information will be stored securely for five years, after which it will be destroyed.

Prior to the data collection, consent will be obtained from the Management of the Call Centre to provide access to study participants and to access the job performance scores of the call agents who participate in the study. A formal written letter that briefly describes the objectives of study, the time commitment, the potential impact, and the potential outcomes of the research will be sent to Management to obtain permission to carry out the research. All participants will also receive information about the study and sign a consent form for their participation.

EFFORTS MADE TO ENSURE NON-DUPLICATION

An extensive search in the literature on previous studies conducted has been undertaken using databases such as ERIC, OVID, Psychlit, UMI ProQuest Digital Dissertation, as well as search engines such as Yahoo and Google. Keywords included emotional intelligence, self-directed learning, self-efficacy, and call centers. While this produced a large collection of readings, relationships between these variables have not been examined thoroughly in call centre settings previously. Furthermore, there was no evidence of studies linking these learning variables to call agents' performance as is proposed in this study.

MAJOR SCHOLARS IN THE FIELD

Professor Lucy M. Guglielmino

College of Education

Department of Educational Leadership

Florida Atlantic University

777 Glades Road

Building 47, Suite 240
Boca Raton, FL 3341-0991

Professor Victor Dulewicz and Professor Malcolm Higgs

Faculty of Human Resource Management & Organizational Behaviour
Henley Management College
Greenlands
Henley-on-Thames
Oxfordshire, RG9 3AU
England

Professor Albert Bandura

Department of Psychology
Stanford University
Building 420, Jordan Hall
Stanford, California 94305-2130

PROPOSED TIMELINE

January 2005

- Submission of 4th Assignment on research proposal

January – March 2005

- Refinement and submission of research proposal

April 2005

- Dissertation Defence

May – June 2005

- Ethics Committee Approval

July – September 2005

- Data Collection
- Finalizing the literature review and methods

October – December 2005

- Data Collection

- Data Analysis

January – March 2006

- Ongoing Analysis
- Write up of the Data Analysis, Conclusion & Recommendation Chapters

April - June 2006

- Submission of first draft of dissertation
- Revision and final submission of dissertation

ESTIMATED COSTS

The project costs will be covered in part by the annual allocation of funds to the candidate from the GSE, and in part by the company in which the study is conducted.

<u>Project Item</u>	<u>Estimated Cost</u>
Purchase of Questionnaires (195 copies)	
1) Self-Directed Learning Readiness Scale	US\$800
2) Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT, V2.0)	US\$850
	<u>US\$1,650</u>

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