APPLICATION OF THEORIES, PRINCIPLES AND METHODS OF ADULT LEARNING FOR MANAGERS TO IMPROVE WORKPLACE REACTIONS TO LEARNING, KNOWLEDGE AND PERFORMANCE

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A DISSERTATION

in

Work-Based Learning Leadership

Presented to the Faculties of the University of Pennsylvania
in Partial Fulfillment of the Requirements for the
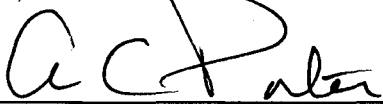Degree of Doctor in Education

2010

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Application of Theories, Principles and Methods of Adult Learning for Managers

to Improve Workplace Reactions to Learning, Knowledge and Performance

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E. Joseph Steier, III

Dedication

This dissertation is dedicated to my deceased father, Elmer J. Steier, Jr, who believed that education can change the world, to my wife, Sony, who has always been a true partner in helping my dreams come true and to my four beautiful children, who have brought me the motivation to see my big talk become a reality!

Acknowledgements

ABSTRACT

APPLICATION OF THEORIES, PRINCIPLES AND METHODS OF ADULT

LEARNING FOR MANAGERS TO IMPROVE WORKPLACE REACTIONS TO

LEARNING, KNOWLEDGE AND PERFORMANCE

E. Joseph Steier, III

Dissertation Supervisor: Henry May

The objective of this dissertation was to explore the concept that

knowledge and application of theories, principles and methods of adult learning

to teaching may be a core management competency needed for companies to

improve employee reaction to learning, knowledge transfer and behavior as well

as engagement, retention and profitability. Currently, the projected outcomes

linking workplace learning to organizational performance through increased

employee engagement, competency and empowerment are often not achieved

(Awbrey, Feurig & Kontoghiorghes, 2005). The literature review and conceptual

framework for this dissertation centered on the growing research termed

"leaders as teachers" and further defined teaching competencies for leaders

through a set of adult learning theories, principles and methods. The

application of this idea was tested through the creation and deployment of

Signature Healthcare's educational training program for managers, which

included web-based modules and activities linked to principles and methods of

adult learning, learning styles, facilitation versus traditional teaching, effective

teaching methods, improved communication, establishment of learning cohorts,

and application and demonstration of teaching skills. To assess its impact on improving workplace learning and performance within the subject organization, a randomized experiment was conducted in which individual and organizational performance was evaluated using Donald Kirkpatrick's Four-Level evaluation system as the theoretical framework (D.L. Kirkpatrick & Kirkpatrick, 2006). The researcher examined how the new teaching competency for managers impacted the reactions to learning (Level 1), knowledge transfer (Level 2), key individual behaviors (Level 3), and collective operational performance including employee engagement, retention, and overall company profitability (Level 4) when managers deployed this new teaching competency within the normal course of business in the workplace.

This competency extended from the formal training situations to all activities of daily business. Having this teaching competency eliminated the dependency on corporate for training materials and directives, which reduced costs. Further, the trainers improved their performance over time. Training that incorporated the new competency improved participant reaction to training, increased knowledge transfer, changed employee behavior to reduce resident falls, and positively affected aspects of employee engagement. Employee retention improved and when extrapolated to the entire organization, a cost savings of $1.9M could be realized.

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

List of Tables

Chapter 1

Introduction

Many organizations believe successful workplace learning may be the most or only important competitive advantage that remains (Awbrey, Feurig & Kontoghiorghes, 2005). Experts attribute this to several factors, such as shorter employment cycles, growing shortage of skilled employees, growing globalization, and technology advancements (Matthews, 1999). In today's workplace, corporate learning functions are expected to align with changing strategies, to meet both current and future human capital needs and to provide greater value at lower costs as fiscal and competitive pressures continue to increase.

Despite this realization, many organizations do not achieve the projected results in critical outcomes linking "learning to action," thus failing to produce increased employee engagement, competency, skills, product/service innovation, or stakeholder professional development (Awbrey, Feurig & Kontoghiorghes, 2005). It is often the case that corporate education, training and learning programs show less than desired results with minimal impact on stakeholder engagement and performance with much of the recent research seeing the disconnect widening between learning functions and evolving company needs (Friedman, 2007). Many studies suggest that this gap exists at many organizations as viewed by C-level executives and corporate learning leaders alike (Meister & Brakeley, 2004; O'Driscoll, Sugrue, & Vona, 2005).

1

The less than projected results from learning functions are one of the most critical issues facing many organizations (Meister & Brakeley, 2004) and the subject organization is no different. With extensive and constantly changing US healthcare regulations combined with a very proprietary strategic approach to operations that is centered in innovation and change management, Signature Healthcare has a significant training budget that consists of mainly internal personnel and resources. The company spent over $8M during fiscal year 2008 with resourcing including both full time corporate and field learning staff. There was consistent pressure to produce new, relevant content to meet both the rate of strategic change and regulatory directed change, while the company is attempting to succeed as a learning organization. With approximately 4% of operating costs estimated to be spent on education and training, the organization had expected greater improvement in regulatory survey results; more efficient management competency to meet challenging strategic goals, improved operational performance, an increase in stakeholder engagement and consistent reduction in risk exposure from multiple sources. Despite steady improvement, there has not been progress at the speed or level that the Senior Team and the Board had expected from such a large expenditure. This may be due in part to corporate learning leaders not being given sufficient exposure to the needs of the enterprise, and therefore they could not effectively identify and address them.

Most recent research highlights many failures within the learning function that contribute to less than expected results, while other studies argue that lack of access by learning leaders to the strategic business negatively impacts results. From a more proactive perspective, this study examines an initiative to help management better understand how they and their organization actually learn and then apply this new knowledge through effective teaching approaches to their stakeholders. In short, does a teaching function informed by theories, principles and methods of learning for managers produce better practices and outcomes for the organization?

This dissertation will examine research that supports the utilization of principles and methods of adult learning as a teaching competency management solution to reduce this performance gap and designs that incorporate an instructor certification program. Prior research may not have considered the lack of understanding by management teams of how both they and their organizations learn. This may pose an even bigger problem than strategic alignment.

One additional, but major challenge today is the lack of empirical evidence about the complex processes required to maximize successful workplace learning and its related performance. Based upon the emerging research from workplace learning, there may be multiple possibilities to improving performance. It may require the use of combined solutions in the same setting, but the research supports the introduction of adult learning

theories, principles and methods as a body of knowledge that could develop into a new manager's teaching competency that could positively impact the performance of workplace learning (Betof, 2009).

Following these ideas, this research focuses on evaluation of a corporate teaching program grounded in theories of adult learning and facilitation methods in which new knowledge is first transferred to managers through a modular based certification program. This certification process is intended to build a new teaching competency for managers and the study will assess how this new knowledge and competency impacts the organization on certain key metrics such as stakeholder engagement, balanced scorecard operational performance and other outcomes identified through Donald Kirkpatrick's Level 4 Evaluation System (D.L. Kirkpatrick & Kirkpatrick, 2006).

As seen from the literature review, the use of theories, principles and methods of adult learning as a teaching competency for managers in successful workplace learning may suffer from limited empirical research. Much of the literature has been more theoretical or from narrow slices of specialized professions that only assessed the short term learning impact using subjective methods without a rigorous examination of potential organizational impact. Such research is needed to validate any potential widespread use within management structures. This study will provide comprehensive, rigorous empirical evidence in the applicable use of theories, principles and methods of adult learning to create teaching competency for internal management teams

4

and organizations. The research paradigm can be summarized in that the more we know about how people learn, the better we are able to structure activities that resonate with those learners with whom we work (Merriam, 2008).

The proposed solution will integrate Baumgartner, Caffarella and Merriam's (2007) suggestion that learning is broken down into two elements; a process that creates change within the individual and a process to infuse change into the organization. This dissertation will address and incorporate both elements into the research study. Second, the certification program will incorporate nine key principles of adult learning linked to the unique nature of how people learn that will attempt to create a comprehensive teaching competency that could improve workplace learning and be tested through key performance measures (Pine & Horn, 2006). Lastly, the use of teaching methods, developed within the most current approaches to the theories of adult learning in the manager's certification program, will provide a framework to convert learning from traditional classroom lecture, to facilitation, group learning and transformational learning.

This research study will validate the potential positive impact on workplace learning results for several key reasons. First, managers may better understand how their employees (learners) actually learn through participation. Second, the manager within the study group may understand how to prepare and create an environment for each interaction to maximize the learner engagement while finally addressing interdisciplinary teams that are the key to

quality in today's healthcare environment. Third, the facilitator and the learner will see education adjusted to meet their specific learning styles and needs creating stronger motivators to learn. Lastly, the learner will have a new level of involvement in learning being facilitated verses being taught in a traditional lecture manner (Pine & Horn, 2006).

This infusion of new knowledge regarding theories, principles and methods of learning into a teaching competency through the certification process for managers could establish a basic learning framework for the workplace and a new management competency; education facilitation. This could provide additional understanding of what defines "teaching competency" but has been hard to validate as a defined competency within the management level of an organization. In this study, this practitioner will examine the roots of theories of adult learning and the evolution into one of the most important bodies of knowledge for managers to incorporate into teaching competency for their respective skill set and for organizations who want to impact the entire environment within the work place. This research project provides key information about workplace learning that supplies insights into today's challenging environments that could aide managers in applying the new management competency to workplace learning in a meaningful way (Cappelli, 2008).

Problem Statement

Training in Signature Healthcare was deemed ineffective when measured against desired outcomes projected by senior SHC management (Steier, 2009). According to the head of education and 23 senior leaders, the factors contributing to the situation were: no over-arching educational philosophy, non standardized approaches and methods to training, a lack of preparation and training for instructors, little buy-in from senior leadership as to benefits, forms, methods and target audience regarding education, a company culture that largely ignores education, and no consistent/meaningful measurement of training results (J. P. Barimo, personal communication, June 17, 2009).

Research Questions

The three key research questions addressed in this study are as follows:

1. At the completion of the manager training, what is the competence level of the managers regarding adult learning theories, principles and methods for delivering workplace learning?

2. By providing managers with knowledge of learning theories, principles and methods, to deliver education and training to their employees directly, how do the reactions to training, knowledge gains, and operational performance of learners change?

3. By providing knowledge of learning theories, principles and methods to managers and training them to implement these principals and methods in their own training programs, how does business performance change in terms of employee engagement, retention, and overall company profitability?

Chapter 2

Conceptual Framework and Supporting Literature

Despite the increasing importance of utilizing learning principles, theories and methods in successful teaching, many organizations are ignoring or avoiding the use of the principles, theories and methods while struggling with the execution of this important internal process. This results in declining employee engagement and organizational sustainability (Awbrey, Feurig & Kontoghiorghes, 2005). Throughout the comprehensive literature review of workplace learning from the beginning to most recent developments, coupled with the history and evolution of andragogy, both areas of growing research establish similar parameters for how manager's could facilitate learning, structure learning, adjust learning styles, and engage the learner to improve workplace learning .

In light of the ongoing evolution of learning theories and workplace learning, this study will show the relevance of theories of adult learning, principles and methods as a teaching competency in today's workplace and why it should be considered as an option to improve one of the most challenging times in workplace learning's changing history. The relationship between andragogy, pedagogy, and other learning theories led to a conclusion that theories of adult learning, principles and methods as new knowledge for all organizational managers could positively impact the results of work-based learning for many companies.

In the literature review that follows, this writer will explore adult learning theory, evolutionary theories and their expansion, individual learning styles, optimizing learning environments and the history of workplace theory and training. From this review, the idea that knowledge and application of learning theories, principles and methods may create a new management core competency needed for companies to improve learners' knowledge and job performance. This will become the foundation of the study that will look at creating a positive reaction to learning, increasing topic knowledge and business performance enhancement in terms of employee engagement and retention and overall company profitability.

Major Themes in Relevant Literature and Historical Events

Adult learning theories is a multidimensional body of knowledge that is evolving as fast as the research is published (Merriam, 2008). Learning is involved in both personal development and changes in behavior and attitudes. With so many environmental changes in the workplace, this research looks beyond the capacity of the individual learner and explores relationships among the organizational components of the entire company (Senge, 1991).

Most of what is known today regarding how adults learn started with Malcolm Knowles, an American Adult Educator, who had spent his entire professional life in various educational leadership roles, which helped him indentify key differences in how children and adults learn. His first works mainly

addressed informal learning. His body of work helped define the rise of the Adult Education movement in America (Smith, 2002).

Some confusion has been present since the beginning, because Knowles did not found the concept of andragogy. The word was established by Alexander Kapp, a German educator over 150 years ago and was introduced to America by Eduard Lindeman in the late 1920's and had only been sporadically used until Knowles' time (Smith, 2002). The original focus was on social movements linked to the theorists, however, Knowles wanted to establish andragogy as an educational model for adults clearly making a break from previous uses. However, it was Knowles who famously adapted the concept to a new body of knowledge around Humanist Learning Theory, which today is known widely as adult learning theory. Andragogy is defined as the art and science of helping adults learn based upon critical assumptions about the differences between children and adults as learners (Knowles, 1980). The reason for the high level of interest was that andragogy was first positioned by Knowles (1968) in opposition to the much older, pedagogy, defined as the art of being a teacher with roots in the Greek language meaning to lead a child.

Further, the assumptions underlying the adult learning theory or "andragogy" are (Knowles, 1980):

1. Adults need to know the relevance of the material before undertaking to learn it.

2. Adults prefer to take responsibility for their decisions and desire to be viewed as self-directed.

3. Adults accumulate a greater volume of experience, which represents a rich resource for learning and necessitates individualization of learning strategies.

4. Adults become ready to learn in order to cope with real life situations.

5. Adults have a task-centered orientation to learning.

6. Adults can work collaboratively and in dialogue with others in order to maintain mutual trust and respect to shape and deepen understanding.

7. While adults are responsive to some external motivators, their most potent motivators are internal.

Baumgartner, Caffarella and Merriam (2007) suggest that it is not clear whether Knowles had presented a theory of learning or a theory of teaching, whether adult learning was different from child learning, and whether there was a theory at all; perhaps these were just principles of good practice.

Today, educational research agrees that adults do continue their education beyond completion of their school years. This can be formal or informal, work-based or personal. Either way, adults continue to learn and educate themselves. Due to this critical human process, theories of adult learning have been widely analyzed, researched, modified and adopted, becoming the primary model of adult learning for nearly thirty years with much additional advancement (Merriam, 2008).

Baumgartner, Caffarella and Merriam's comprehensive guide to adult learning theories (2007) offers an extensive map and conceptual framework for understanding and using adult learning theories by providing a three part typology: nature of adult learner, context within which they learn, and learning processes that engage adults. However, the four-lens model built off their work, added a key lens from the educator perspective as an important lens to understand and apply adult learning theory in the real world that did not exist previously. This lens deals with teacher beliefs and assumptions, teaching style, philosophical orientation, and internal approach to adult learning theories and how this will impact the throughput of this concept in real world use (Kiely, Sandmann & Truluck, 2004). This initial understanding of adult learning helped create the cardinal teaching principles that are considered both methods and principles of adult learning research today and need to be considered for any workplace learning program (Puliyel, Puliyel & Puliyel, 1999).

Expansion of Learning Theories

Merriam (2008) points to three keys to transformational learning: experience, critical reflection and individual development, which are all clearly grounded in adult learning theory. The aspect of experience is an important consideration in creating an effective learning opportunity. The learning opportunity needs to be relevant and applicable to a person's set of experiences.

Critical reflection is important to transformational learning and self-directed learning. Reflection/think time is yet another essential principle to creating an effective learning experience for adults. Adult learners need time to integrate the ramifications of the learning experience to their reality and responsibilities. The third key to transformational learning according to Merriam is the ability to think critically, which is essential to affecting a transformation; it is itself developmental (2008). If development is a key to transformational learning, then an effective adult learning opportunity needs to be created that will take personal development into consideration. Because workplace learning using adult learning theories needed to establish the necessary motivation to meet the above requirements, the facilitator must tap into the learner's most teachable moments (Merriam, 2008).

The Learning Styles of the Individual Learner

A further development in adult learning was David Kolb's Learning Cycle and Experiential Learning Theory (ELT) developed in 1984 which "was informed by the work of John Dewey, Kurt Lewin, and Jean Piaget" having major influence on educational processes (Kolb, 1984). The ELT model outlines two related approaches toward grasping experience: concrete experience and abstract conceptualization and reflective observation and active experimentation. According to Kolb's model, the ideal learning process engages all of these modes in response to situational demands. In order for learning to be effective, all of these approaches must be incorporated. This

14

model gave rise to the Learning Style Inventory (LSI), an assessment method used to determine an individual's learning style. A learner may exhibit a preference for one of the four styles - accommodating, converging, diverging and assimilating – depending on the learner's approach to learning via the experiential learning theory model (Merriam, 2008).

This creates a foundation upon which teachers can build in interacting with students, considering possible strategies for accommodating learning styles, and establishing an environment for student involvement in the learning process. Last, it provides a class summary so students with similar learning styles can be grouped together. This can be highly effective in formal workplace learning (Merriam, 2008).

Similar to Kolb, Neil Fleming created the VARK Model which is one of the most common and widely-used categorizations of the various types of learning styles. This model provided a relatively easy way for managers to effectively facilitate learning for the diverse employee base including, auditory learners, reading/writing-preference learners and Kinesthetic and tactile learners. Fleming claimed that visual learners have a preference for seeing, thinking in pictures, using visual aids, such as, overhead slides, diagrams and handouts. Auditory learners best learn through listening lectures, discussions, tapes, etc. and tactile/kinesthetic learners prefer to learn via experience— moving, touching, and doing (active exploration of the world, science projects; experiments, etc.) This model could be incorporated into a knowledge program

so managers would learn to create content in all three ways for both current application and future utilization and have the learner choose their appropriate learning style. Knowledge of learning styles should improve learning and may improve workplace performance (VARK: A guide to learning styles, 2009).

Learning Practices, Physical Environments and Mental Conditions

For most of the 20th century, adult learning was considered a cognitive process linked to information, converted to knowledge, so that behavioral change can be observed (Merriam, 2008). However, the research began to look more broadly to include context of learning and considered how emotions, spiritual, body, physical space and environmental conditions impacted adult learning. These types of inquiries included neuroscience research and also highlighted changes in the brain structure during learning interventions (LI). This showed that learning is strengthened with emotive, sensory, and kinesthetic experiences. Today's research is more focused on the environment in which learning takes place that can have a positive impact on the workplace (Merriam, 2008).

Current research and growing literature highlights that knowledge is being generated in new and emergent settings that are more democratic and characterized by greater epistemic and social diversity than has been true of traditional centers of the past. Because facilitators and learners must find new ways to relate to each other, which will challenge previous traditional assumptions, the learning demands associated with generating this kind of

knowledge requires the skills of adult educators (Yorks, 2005). This approach involves the full engagement of the educator as a co-inquirer with other learners, which facilitates intense inquiry and knowledge creation. Because of the changing conversations facilitators hear when using this practice, literature recommends the utilization of various methods including the Johari window and the ladder of inference that can harvest learning (Yorks, 2005).

Just to highlight certain possible techniques, the Johari Window helps learners differentiate between "what they know they know" and "what they think they know" and "what they know they do not know." (Johari Window, 2009) The ladder of inference differentiates between what they observed, heard, or experienced linking the meanings to either cause of possibility. These types of processes can help the facilitator create an effective environment despite many learner dynamics and challenges (Yorks, 2005). The philosophy of co-inquiry is about the space and the utilization of adult learning practices that can make this operational in the workplace.

Given the above, organizations need to step up safe space for engaging open inquiry, which is a recurring theme in both theories of adult learning and literature on knowledge creation processes for creating transformational learning. Pilot research looks very favorable when this safe space is established and these processes are utilized. There is great hope for more empirical evidence in future studies, but the limited research did highlight the following; showed reduction in learner stress and aggression, behavior

17

problems were reduced in occupational work, claims of social injustice were reduced in the workplace, and employee satisfaction was increased (Yorks, 2005).

The model of practitioner-based collaborative action inquiry is located at the intersection of adult learning theory and social learning theory. This approach can establish learning practices to create the social space necessary to generate new knowledge and high-level problem solving. This model embodies three core principles of adult learning practice: learning from experience, cycles of reflection and action, and self-directed learning (Yorks, 2005).

These learning practices validated and enhanced one of the key principles of adult learning theory in that new learning is more effective when related to previous experiences. Brain-based research has documented when storing new sensory input, the brain looks for connections to earlier information and without this relationship, little if anything is retained (Lamoreaux & Taylor, 2008). This, coupled with practitioner research, received increased attention in education literature and adult education in general, which made workplace use more possible.

Through goals set in the workplace and the activity of problem solving through social interaction to meet those goals in each setting, employees constructed knowledge (Billet, 1998). Because this construction of knowledge is mediated by the indirect and direct guidance provided by each particular

workplace setting, many of these workplaces have different goals, thus differing activities. One can conclude that both the construction and reinforcement of knowledge is likely to be different even in the same business model or same industry.

Moreover, research linked to Vygotsky's Theory of the Zone of Proximal Development holds that individual development can be maximized through close guidance of a more expert other (Vygotsky, 1978). This expert other provides scaffolding, which enhanced the prospect of learning through a process of guided discovery and joint problem solving acting as a coach, mentor, or teacher. This expert other is already showing means to achieve these challenging workplace goals through proximal guidance and indirect and informal contributions that without this assistance by the expert other could not be accomplished by the learner on their own (Billett, 2008).

The managers with teaching competencies and awareness about the sociocultural impact of each respective workplace can become the "expert other" that helps drive better results. Equally or even more important, it is proposed that the knowledge secured will be more or less transferable across settings in which the same sociocultural practice is conducted which further validates why this practitioner believes this competency must be on site and standardized in each company operation. Increasing the transference of workplace knowledge to multiple locations would have a major impact on how efficiently an organization can grow (Billett, 1998).

In addition, managers and supervisors must now increasingly take on the role of trainer, facilitator, coach, or teacher. Indeed this change in the role of managers is so profound that it could be a paradigm shift (Beckett, 2000). This change in the in the role of the educator must be coupled with a change in mindset and performance. Specifically, educators must adopt the philosophy that to change the behaviors of learners, which is critical, they must change the learner's thinking. This will not be accomplished merely by presenting facts, figures and information. According to Kotter, who has researched and published extensively in the field of personal and organizational change, how the learner feels about the teacher, content, setting and total experience may shift their thinking more significantly (Kotter, 2002). The work of Kotter underscores the importance of the inter-personal aspects of teaching and learning, together with the importance of the learner's reaction to educational experiences.

Furthermore, all organizations include experience and activities, but adult learning facilitation has been ignored as an organizational process and this needs attention in its own right. This paper highlights why adult learning theories, practices and methods could be one potential solution to increase management knowledge to make this shift happen (Beckett, 2000).

History of Workplace Learning and Training

Workplace Learning Definitions and Concepts

For clarification purposes, a broad definition will be employed: the way in which individuals or groups acquire, interpret, reorganize, change or assimilate a related cluster of information, skills, and feelings. The primary concept to be explained in the preceding information is the way in which people construct meaning in their personal and shared organizational lives via workplace learning. Further, workplace learning refers to the processes and outcomes of learning that individual employees and groups of employees undertake under the auspices of a particular workplace. This highlights the concepts of environment, culture and specific training and teaching techniques and competencies. Last, workplace learning is described as a sustained and high leverage development of employees in line with organizational business outcomes (Matthews, 1999). While learning can be seen as its own reward outside of the workplace, it must be tied to performance, strategies and business goals and objectives. These definitions and concepts will establish the framework for investigation and solution generation within this dissertation.

Workplace Learning Theory and Research

Interest in workplace learning stems from various sources. Fields of study now include adult education, higher education, cultural anthropology, organizational theory, innovation studies, industrial economics, management studies and vocational studies. They also stem from a variety of perspectives

21

(behaviorist, interpretivist, cognitivist critical theory), from different lenses and points of view (management, learner/teacher, organizational, practitioner) and from many different environments (public, private, service, manufacturing, healthcare, knowledge based, virtual, classroom, institutional). Research may be somewhat confusing and overwhelming for many business organizations that may struggle with interpretation and application (Nicolaides & Yorks 2005). This research has thus created a staggering array of both models and approaches further complicating organizations' best approach to implementation. Even cultural ethnography, a field that started reviewing the study of human societies, now studies the internal culture of organizations and how learning structures impact them. Other groups come from the field of sociology about the workplace and industrial psychology which examines the workplace environments and how that impacts the practice of learning (Billett, 1998).

With so many experts from so many fields digging into workplace learning, many organizations are struggling with what models will produce the expected results and research continues to provide additional confusion. Based upon the literature review, empirical evidence is lacking in key area's of understanding, even though research has deepened and intensified, it does not lend itself to well mapped academic discipline or research methodologies due to unique complexities, multi-faceted relationships to other factors, different

research conceptions and many evolving views of what workplace learning is (Nicolaides & Yorks 2005).

Either way, both organizational leaders and theorists increasingly view learning as a key element in developing and maintaining competitive advantage in organizations (Awbrey, Feurig & Kontoghiorghes, 2005). With this thought in mind, research and additional literature provided directions that organizations should take regarding environmental conditions, organizational structures and individual characteristics that may be enhanced with a strong foundation linked to adult learning theory. Two pressing issues today around workplace learning are, first, how people solve workplace problems through learning and second, how particular groups of workers learn (Fenwick, 2008). The acknowledgement that key focuses are equally interested in how groups learn seems to validate the need for strong transformational learning that could be based in adult learning methods that foster group interaction, peer to peer education, etc.

The key learning processes being reviewed are teaching skills, pre and post support, training plans, needs analysis, organization structure, coaching, human resources and development. Most of the debate is learner centered versus teacher centered, with adult learning focusing on learner centered environment, which is a break from some academic settings and many traditional training approaches.

Another mindset change that is required from the traditional training approach, is that of the longer, the deeper, the more intense the training, the

better. "Information overload" is a term popularized by Alvin Toffler (1970) that refers to the difficulty a person can have understanding an issue and making decisions and choices that can be caused by the presence of too much and/or competing information. Toffler's explanation of it in his bestselling book "Future Shock" presents information overload as the Information Age's version of sensory overload. Therefore, teachers and learners may do well to adopt a "less is more" philosophy and embrace quality of teaching and learning over quantity.

As more research was completed on work-based learning, it seemed that the more rapidly the workplace was changing, the more we needed to agree on not just what workplace learning is, but what learning really is. Learning can refer to skill acquisition, personal transformation, collective empowerment, or a host of other options. Learning is viewed as the ongoing refinement of practices and emerging knowledge embodied in the specific action of a particular community (Fenwick, 2008). However, in some definitions, the term workplace learning has been limited to individual change, with organizational learning reserved for groups defined in this practitioner's definitions. However, in this dissertation, workplace learning will consider both the individual and the collective groups.

Workplace Learning Development

Today, workplace learning has expanded to a new and integrative epistemology of practice centered on the lifelong learner in the workplace,

structured by mapped experience (Beckett & Hager, 2000). The research highlights that workplace education emerges from the four following areas that all seem grounded in learning theories, principles and methods: the contingent, the practical, the process and the particular.

Arguably, workplace learning is a different educational process than universal knowledge or traditional academic education for a multitude of reasons. Based upon the above criteria, research provides some evidence that adult learning theories could be one of the most effective frameworks to meet the dynamic workplace-learning environment today while allowing the learner to come alive again. This learning may come from many sources, experiences, and is both informal and formal. The learning being examined is often embedded in everyday practices, action and conversation as an organic process through observation that is always migrating throughout an organization. The research also highlights that the learning context, the learning reason, the learning process, the learning outcomes, and sustained development are all key issues that support the manager's knowledge of these learning fundamentals and may positively impact organizational success if consistently applied (Fenwick, 2008).

The Environment and Conditions for Workplace Learning

A conducive environment, defined in adult learning methods, should be present for most individuals to effectively learn. This pertains mainly to how the individuals view themselves and their relationship to others within the

organization and is also grounded in adult learning theories as well with both methods and principles linked to Holliday's five conditions: self, personal meaning, action, collegiality and empowerment (Holliday, 2009). Holliday believes these conditions are equally important for school or organizational settings and to Knowles' adult learning theory principles and methods assumptions within the workplace-learning environment (Holliday, 2009).

Features of Workplace Learning

Workplace learning has certain key features, which distinguish it from other types of learning that adult learning theory appears to adequately address (Cappelli, 2008). The key features are that workplace learning is: collaborative, occurs in political and economic context, is cognitively different from learning in schools and utilizes the power of multiple learners. Adult learning theories emphasize that people enjoy functioning interdependently and that group outcomes tend to be superior to individual products (Pine & Horn, 2006).

Most of workplace learning is about change that may be behavioral, attitudinal, or cognitive requiring additional flexibility by the educator to meet the three areas of change. This may be more challenging than other types of learning. Learning research has identified three critical elements of workplace learning: the painful nature of behavior change, individual problems that must be addressed, and styles that must be accommodated. Management awareness can increase the potential to meet the required change mentioned above (Pine & Horn, 2006).

The learning paradigm will always impact the styles and the types of learning used. The paradigm is really about how people learn and what type of learning is considered by each respective organization. Carr and Kemmis (1986) established three key paradigms of learning: technical, interpretative, and strategic which all require a different application of teaching that increased the challenges of successful workplace learning. Unfortunately, technical is still the most dominant today. It mainly focuses on specified skills to meet tasks, which may not address the discovery of meaning, systems understanding, nor provide the self-reflection time to internalize the learning. The interpretative paradigm requires interaction by the learner, which is more cognitive in nature, resulting in personal judgment and understanding that Senge mentioned as a key to any successful learning organization (Senge, 1992). Lastly, the strategic paradigm, which requires critical examination and auditing of assumptions between both the learner and the teacher, can be achieved through facilitation over traditional lecture because the learner needs both empowering self direction and the safe environment to deeply examine assumptions (Cappelli, 2008). According to many learning theories, learning happens when the individual is responsible for the learning (Pine & Horn, 2006).

Attitudes and Mindsets Needed for Work Based Learning

In today's workplace, a deep shift is needed at all levels to establish a positive attitude to thematic approaches regarding lifelong learning as well as an improved approach to work based learning. Knowing change is part of the

equation, we now look at Pamela Matthews, who argued that both the individual and organizations must change their beliefs and mindsets about the topic for most of them to become successful and adult learning theories may help establish the critical lenses and framework to mitigate other externalities that other methods may not be able to remove. Matthews looked at the change in necessary mindsets and highlights that: workplace learning focus must be greater than the fear of change and managements' understanding of environmental conditions and the power of group dynamics (Matthews, 1999).

This can be very challenging to standardize and assess without an established body of knowledge for all managers to better understand the necessary mindsets (Matthews, 1999). With the new research diversity, we can see that the workplace learning process has major impact on the identity of the individual within the workplace (Matthews, 1999). This is a critical element for an individual within their work group and influences how they will position and respond in the workplace. Once again, the safe environment, coupled with the knowledge of learning theories, principles and methods may be some of the best approaches to overcome these challenging trends that other methods may not adequately address (Matthews, 1999).

Evaluating Workplace Learning

Evaluating workplace learning often includes measurement of the reactions of participants in training activities (Betof, 2009). This type of evaluation is commonly referred to as the "smiley face". However, it is more

aptly identified as a level one evaluation according to Kirkpatrick and Kirkpatrick (2006). The information obtained provides insights into how the learner feels about the education experience and may indicate increased or decreased enthusiasm in such further activity.

While the above information is useful, it may be more beneficial to understand how much and what kinds of knowledge the learner obtained. This is accomplished by performing a level two evaluation in the Kirkpatrick system. It is common practice to use pre and post tests to ascertain participant knowledge levels and gains in knowledge.

In many organizations, levels' one and two evaluations comprise the assessment of workplace learning. However, behavioral change may be more important as a measure of the effectiveness of workplace learning (Brinckerhoff, 2001). This is especially true in the light of critical outcomes linking learning to action: increased employee engagement, competency and performance are often not achieved, but critical to an organizations' success. In order to identify behavior changes as a result of workplace learning, a level three evaluation in the Kirkpatrick system is in order.

If the behavioral change were successful, then an improvement in outcomes would be expected. Frequently thought of as the bottom line, Kirkpatrick's level four measures the success of the program in terms that managers and executives can understand: increased production, improved quality, decreased costs, reduced frequency of accidents, increased sales, and

even higher profits or return on investment. From a business and organizational perspective, this is the overall reason for a training program, yet level four results are not typically addressed. Determining results in financial terms is difficult to measure, and is hard to link directly with training (Kirkpatrick & Kirkpatrick, 2006). From the above, it appears that a comprehensive evaluation of workplace learning would include the implementation of all four levels of Kirkpatrick's evaluation system.

Chapter 3

Research Methodology

This section presents the purpose, study environment overview, subjects, research design, selected learning interventions, data collection, and analytical models.

Purpose

This study will focus on the creation, implementation and delivery of a certification program developed based on learning theories, principles and methods of adult learning creating a teaching competency for managers. This certification program is intended to improve the current delivery of workplace learning by managers within Signature Healthcare, eliminate the need for outside educators and increase the positive reaction to learning, topic knowledge and business performance enhancement in terms of employee engagement and retention of employees at all levels and overall company profitability.

Study Environment Overview

This is a multi-level study involving managers and employees at 66 sites within a mid size healthcare organization, Signature Healthcare, LLC, a top 10 post acute provider in the US healthcare system. The subject sites are 66 homogenous locations throughout seven states that are in the exact same business with the same operating variables including business classification and license, operating systems, similar allocated resources and business

metrics. The multi-level aspect allows the researcher to view the individuals as well as the facilities as a whole in order to take into account differences between sites when outcome measures are collected from individual employees.

Participants

The Healthcare Educator Series will be delivered to the lead manager, called "the Administrator," from 15 randomly selected sites in a 30-hour face-to-face training. With the lead manager utilizing the new teaching competency to immediately train two other key leaders within the fifteen randomly selected facilities. The week-long training program will be administered by the head of the education department. At the end of the training period, three key managers from each of these fifteen individual locations will receive the certification intervention. The three facility managers are the administrator, the director of nursing and the rehabilitation service manager.

Signature Healthcare has facilities in both rural and urban settings, short and long term residents, specialty clinical programs and a diverse employee base highlighted by diverse educational backgrounds, religious preferences, and sociocultural identities that include more than 11,000 full time stakeholders. See Tables 1 and 2 for the specific demographics for the randomly assigned facilities.

Table 1

Subject Demographics - Treatment Group

Rural/Urban	Bed Size	Rating Based on Bed Size	Geographic Location
Urban	120	Large	Florida
Rural	60	Medium	Kentucky
Urban	100	Medium	Tennessee
Urban	120	Large	Florida
Urban	98	Medium	Kentucky
Rural	50	Small	Kentucky
Urban	128	Large	Kentucky
Rural	140	Large	Tennessee
Rural	130	Large	Kentucky
Rural	69	Medium	Tennessee
Rural	120	Large	Maryland
Rural	100	Medium	Tennessee
Urban	150	Large	Tennessee
Rural	100	Medium	Tennessee
Urban	165	Large	Tennessee

Table 2

Subject Demographics - Control Group

Rural/Urban	Bed Size	Rating Based on Bed Size	Geographic Location
Rural	120	Large	Florida
Rural	144	Large	Florida
Rural	52	Medium	Kentucky
Rural	121	Large	Tennessee
Rural	120	Large	Florida
Rural	154	Large	Tennessee
Rural	154	Large	Tennessee
Rural	180	Large	Tennessee
Rural	104	Medium	Florida
Rural	140	Large	Maryland
Rural	120	Large	Tennessee
Rural	151	Large	Kentucky
Rural	120	Large	Tennessee
Rural	180	Large	Florida
Rural	106	Medium	Kentucky
Rural	56	Medium	Kentucky
Rural	121	Large	Kentucky
Rural	157	Large	Tennessee
Rural	138	Large	Tennessee
Rural	115	Medium	Tennessee
Rural	60	Medium	Florida
Rural	133	Large	Tennessee
Rural	120	Large	Kentucky
Rural	180	Large	Florida
Urban	117	Medium	Florida
Urban	171	Large	Georgia
Urban	107	Medium	Florida
Urban	124	Large	Tennessee
Urban	50	Small	Kentucky
Urban	66	Medium	Alabama
Urban	120	Large	Florida
Urban	92	Medium	Kentucky
Urban	105	Medium	Florida
Urban	115	Medium	Maryland
Urban	110	Medium	Kentucky
Urban	140	Large	Tennessee
Urban	75	Medium	Pennsylvania
Urban	60	Medium	Florida
Urban	120	Large	Tennessee
Urban	94	Medium	Tennessee
Urban	120	Large	Florida
Urban	154	Large	Georgia
Urban	120	Large	Florida
Urban	107	Medium	Florida
Urban	214	Large	Florida
Urban	164	Large	Florida
Urban	103	Medium	Florida

Research Design

Treatment Design

The design of the current study is a randomized Treatment design

assessing a new knowledge intervention developed based on learning theories,

methods and practices of adult learning. This design is generally considered

the most rigorous of the evaluation methodologies. With this randomized

design, the 15 Treatment locations that will receive intervention will be

compared to the remaining 51 locations (i.e., the Control Group). The random

assignment will be assessed by the researcher prior to the delivery of the

intervention to verify randomness and representativeness to support the

equivalence of Treatment and Control Groups. With the current design model,

a statistical power analysis showed that the sample size would yield 90% power

to detect a small effect of .20 standard deviation given 150 employees in each

of 15 Treatment and 51 Control sites, an intra-class correlation of 5%, and a

pre-test/post-test correlation of .50. If the sites were less homogeneous than

expected, with an intra-class correlation of 10%, this sample size would yield

84% power to detect a small effect of .25 standard deviations. For the analyses

involving aggregate site-level data only, the sample of 15 Treatment and 51

Control sites would yield 86% power to detect a moderate effect of .40 standard

deviations. These power analysis results show that the study design and

sample size yield a reasonably good ability to detect and substantiate potential

effects of the adult learning theory intervention.

By randomly assigning the intervention among eligible beneficiaries, the assignment process itself creates comparable Treatment and Control Groups that are statistically equivalent to one another, given appropriate sample sizes. This is a very powerful design because the Treatment and Control Groups generated through random assignment are free from selection bias. The main benefit of this technique is the simplicity in interpreting results - the program impact on the outcome being evaluated can be measured by the difference between the mean outcomes of the Treatment Group and the Control Group.

The independent variable being manipulated is the delivery of the Healthcare Educator Series. The intervention consists of five individual modules that require a manager to take the voice-over power point programs with both pre and post tests collected from each of the 45 participants. The participants must successfully pass the modules to earn the certification validating that each manager has the skills and knowledge to understand theories of adult learning, principles and methods and their use in the workplace. During the intervention, the managers are required to provide a critique of others' presentations to see how other managers or trainers supported or violated the use of these methods which requires the learner to think about the appropriate application of the five modules used in the workplace around them. After two successful critiques, the learner must create and deliver a 10-minute presentation on a key organizational learning initiative that is actually delivered by the manager to a group where the principles,

methods and theories of adult learning are clearly applied for the manager to receive the certification score of at least 4.0 on a 5.0 scale (see Appendix I). In addition, the program calls for 30 hours of face-to-face training over a three-day period to be provided to the Treatment Group. Day one will provide an overview, roles and responsibilities, key aspects of learning theories and information regarding emotional and multiple intelligences. Day two will focus on teaching methods and techniques. Day three will emphasize presentations and best practices (see Appendix II).

To elaborate on the principles of the Healthcare Educator Series, this researcher needed to change the thinking of the managers in order to change their actions. Therefore, the healthcare educator training intervention for the 15 randomly selected managers was designed to focus primarily on two issues: The first was to explain the principles of how adults learn best, based on various theories of learning and the second was to provide the methods and approaches to training and learning to obtain the desired organizational results. It should be noted that all managers in the organization receive ongoing training and instruction from the Education Department so that those receiving this particular training would not feel any differently than those who did not participate in this particular program. As a result of this intervention, the managers will understand the rationale behind the principles of adult learning and be able to utilize training methods based upon these principles in order to improve workplace reactions to learning, knowledge and performance. The

intervention will feature a discussion of the following mental models/educational perspectives of how adults learn and perform best, based on various theories discussed in the literature review.

In terms of readiness to learn, readiness develops from life tasks and problems. People will be ready to learn based upon how much opportunity they have had. Those who have been sheltered and given assignments to do and never told why, just told to do it, are not going to be as ready to learn.

Orientation to learning is task or problem centered. Why should someone who is pushing a broom care about what happens in finance and vise versa? Well, if we don't keep the doors open, we don't have jobs. So if the place is dirty, if the place looks run down, it's not clean, then potential residents may not even walk through the door; that's the financial impact of sweeping and cleaning all the way up to if the finance department is not doing their job then the end result could be that that prospective resident is not going to stay with us or even enter the building. In terms of motivation, internal incentives and curiosity are the keys to motivation. Getting the person to buy into why something is important. Getting them to see the relevance, getting them to push themselves harder than we can; not saying that external rewards like praise and money are not important, but for the biggest impact, motivation has to come from within.

In terms of climate, the learner centered model looks more at the informal, mutually respectful, consensual, collaborative and supporting aspects.

Planning; primarily the teacher used to do it. Now it's participative; that is, one has an agenda but it is a fluid agenda. It's an agenda that can be modified, it is going to change based on who your audience is and what their needs are. If you have 20 new employees, you are not going to teach them the same way you would teach those who have 20 years of experience.

Diagnosis of needs is primarily by mutual assent. In the learner centered model, we need to find out exactly what the person needs or where they think they are. Setting of goals has moved from the teacher setting them to the group setting them. Designing a learning plan has changed from the syllabus to having learning projects, learning teams and learning content in terms of where that group is.

Learning activities used to be transmittal techniques and assigned reading, now inquiry projects, independent study and experimental techniques are preferred. Evaluation was primarily by the teacher or trainer, now it is more driven by mutual assessment of collected evidence from the group.

The following nine principles of learning were developed from the work of Pine and Horn (2006) and from the review of the literature undertaken in this dissertation. Each will be discussed and demonstrated by the participating managers during the course of training.

1. Learning is an internal process. Many traditional educators believe that learning comes from the outside, but this training will explore that learning is

more internal than external. Therefore, the training will focus on the concept of learner centered as opposed to teacher centered.

2. Learning is the discovery of meaning. The main theme here is the discovery of personal meaning and relevance. If it does not matter to the learners' lives, to their jobs, what they are involved in, then it is not going to be effective and not going to result in behavior change, which is what is needed. People more readily internalize and implement things that are relevant. How many times have you gone to a training or a workshop and have been inundated by theories with no practical application and you walk out saying, "Wow that was interesting, it was fun or whatever but it wasn't practical". You are probably not going change the way you do things and therefore you may not achieve important organizational goals and objectives. Learning requires the exploration of ideas in relation to the self and to the community. Many times when setting up workshops, one looks at what does the State say we have to have or the Feds or the organization, but for true learning to occur, we have to see what matters to the learners. Consequently, the role of facilitator versus traditional educator is emphasized.

3. Learning is a consequence of experience. Adult learners do not come to the table as blank slates, they come with experiences; the good, the bad and the ugly. It is up to the facilitator or trainer to discover that experience and to use it effectively in the learning situation. Training can help health workers feel responsible for analyzing the data they collect. This is a very important

40

concept.   First, look at what is different; the individual needs to be involved in the data collection. If the worker and/or learner is not part of the learning process and it is top down, then they do not have any ownership, they do not see the relevance. But if they are part of the data collection, then there is more relevance and meaning to them. If they are involved in the analyzing, interpretation and application of data there is going to be greater buy in and ownership on the part of the learner which may lead to improved knowledge and performance.

4. Learning involves cooperation and collaboration. Adult learning comes more from working with others, and working toward a goal than it does as a single process. Cooperative approaches are enabling. People learn to define goals, plan and interact in a group. Training should offer opportunities to share and collaborate on problem solving because that is the way people will do it on their own. If they are doing it right or the most efficiently they are going to their peers, bosses and/or those working around them and trying to work together to learn from each other to get a job done.

5. Learning is evolutionary, a slow process. In order for someone to truly understand and make learning a part of them, they must change their actions; the facilitator must change their mind/thinking. For this to occur, facilitators must look for teachable moments. The facilitator must provide the learner a template for learning and then make sure that the environment is supportive and provides the opportunity for the person to truly learn. Behavioral change is

how the facilitator is ultimately going to be measured. It is great that at the end of the training the individual can parrot back key phrases; can understand and relate key concepts. The bottom line is, with that information, what do they do with it? Are they changing their documentation; their resident interaction? Are they changing their peer interaction? Are they changing the way they work in their groups? If not, the facilitator has not been effective.

6. Behavior change can be painful. Learning is sometimes a grueling process because the learner has to give up their comfortable ways. The facilitator must establish a culture in which the learners understand that they learn from their mistakes.

7. The learner is a rich resource. Many times facilitators and teachers believe that they are the source of knowledge, that they have the keys and that they have the information. They forget that the people sitting in front of them sometimes have more experience than they do, sometimes have better insights and shame on them if they cannot unlock what they see, unlock all that knowledge that is in that person. Learning situations need to enable people to become open to themselves; to challenge themselves, to draw upon their personal collection of data and to share that data in a cooperative interaction to maximize learning.

8. Learning is emotional and intellectual. Individual problems must be addressed. People own ideas; they are a reflection of who they are. Therefore,

the facilitator must be careful and sensitive. Regardless of the purpose of a group, it cannot be effectively accomplished when other things get in the way.

9. Individuals have unique learning styles. It is very important to realize and to remember that one size does not fit all when it comes to learning. Learners need to recognize the approaches they ordinarily use so that they can become more effective in problem solving. Again, getting people to become comfortable and challenge themselves. Asking why? Why do I do this? Do I do this because this was how I was taught? Am I doing this because it is the way it has always been? Am I doing it this way because someone told me to? Let's explore that. If it's not the best and most effective and efficient way then it should be changed.

It is intended that all the principles learned will be utilized by the managers in each facility whether training, formally educating, mentoring or just helping out another person. As people become more aware of how they learn and experience new models, they define and modify their personal styles so that they can incorporate these models into their behavior.

Some of the first objectives of the intervention are to introduce and teach the concept of facilitation and then to demonstrate effective facilitation techniques and skills. Many people are very comfortable with the concept of teaching being very traditional education. This is quite different. The researcher believes that when the managers become facilitators they will become more

impactful to the learning process. The following information highlights the definitions and competencies regarding facilitation as applied in this study.

A facilitator is someone who is going to look at the process of learning with the mindset that they are not the "sage on the stage"; that learning does not come from them and is not imparted to the learner. They are the guide on the side. The learner has a great deal of information and it is the facilitator's responsibility to identify that knowledge and be able to apply it to the learning situation.

How do facilitators do it? First, a facilitator is neutral and objective and has no decision-making authority. This is a major change in how the facilitators look at themselves as a group leader or as the workshop head. Facilitators provide structure and focus to the groups so they can meet their goals, solve their problems and allow them to find their own solutions to issues and challenges. Facilitators are the catalyst; the group is the primary mover. The facilitator must model respect for all comments and points of view. The facilitator must keep the group focused, on task and on time. This is one of the most important duties of the facilitator. Finally, they must build group commitment and ownership of results.

As part of this intervention, the researcher has identified several characteristics of effective learning environments; these are the attributes that the managers must demonstrate and incorporate into their presentations: free and open communication, confrontation, acceptance, respect, self-revelation,

cooperation and collaboration. If the managers can incorporate these attributes into the learning situation, the learner will be much more effective and the outcome much more positive.

In addition to the independent variable previously described, there are several dependent variables being measured. These include the reactions to learning, the individual impact on knowledge (pre and post tests), key desired individual behavioral changes and any impact on collective operational performance to include an engagement analysis that will be performed as well as a review of corporate data regarding retention and profitability.

This research can best be described as "applied" in that it is oriented as solving a practical problem and testing a theory that may impact business practices. Outcome data will be reported numerically; therefore, the investigation will be quantitative.

Donald Kirkpatrick's Evaluation Framework Four Level Evaluation model will provide this study's evaluation framework (J.P. Orlando, personal communication, 2009). Kirkpatrick's model is based upon the premise that training programs can be evaluated and related across four levels (D.L. Kirkpatrick & Kirkpatrick, 2006). Level 1 (Reaction) measures how program participants feel about various aspects of the program, what program participants valued, liked best, least and ideas for improvement. In Kirkpatrick's Four Level Evaluation model, level 2 (Learning) measures the knowledge acquired, skills developed or improved, and/or attitudes changed as a result of

the program. The overall intent of data gathering at this level is in regards to "What has the learner learned?" In Kirkpatrick's model, level 3 (Behavior or Application of the Learning) measures the extent to which changes in participant behavior occur because of the training program. The intent of data gathering at this level is to answer the question, "Has the student applied the skill learned?" Level 4 (Impact) measures the extent to which a learning initiative has contributed to business objectives, priorities and strategy. The overall intent of data gathering at this level is in regards to "What benefit has the organization derived?" This level of evaluation is most commonly requested at the executive level, and Kirkpatrick contends that Level 4 results are largely a by product of the success of the previous levels. Typical measures captured at this level include, but are not limited to changes in productivity, revenue, quality, time, efficiency, customer satisfaction and employee engagement (D.L. Kirkpatrick & Kirkpatrick, 2006).

Data Collection

The organization has retained an independent third party firm, which has a national reputation in both survey and knowledge testing, to collect several key instruments from all 66 locations in an effort to capture the highest level of data integrity possible. This organization will oversee both reaction and knowledge testing to ensure independence and accuracy for each location within the organization. Tight protocols were established by the organization and the independent third party for field execution, because the organization

has decentralized operations and a high level of participation was a critical goal. Operational highlights include the following: each instrument is distributed by an administrative assistant while directions are read out loud by a non-administrative employee, the instruments are filled out with dark pencil marking the appropriate box by the respective employee, then the instruments are collected and inserted into a large envelope with pre paid stamping to be mailed to the independent organization for compilation and scoring.

The two separate learning interventions can each receive reaction scores for both training topics for all employees that total 20,572 surveys returned. However, an estimated 10,000 reaction scores by individual employees are anticipated assuming 50% participation can be generated. The reason for the lower estimate is due to three shifts per day, limited transportation for many unskilled stakeholders who will be active participants and this optional education was delivered mainly during first shift, which is the highest ratio of staffing serving during this 7am to 3pm period.

Participant's reactions to the training (i.e., Kirkpatrick's Level 1) will be captured at the time of the intervention through a feedback instrument administered at each location (see Appendix III). A single reaction score will be obtained for each participant with the first four questions focused solely on the subject's reaction to the teacher, while the second set of questions, five through 14, will be primarily focused on the effectiveness of the learning intervention.

This combined with both pre and post tests (Kirkpatrick Level 2) for both learning interventions assessing knowledge transfer by individual employee the study will be able to assess the success or failure of Level 1 and Level 2 for both interventions (see Appendix IV). The pre and post tests were pilot tested and validated by an internal administration to over 50 home office employees producing a reliability score of .75, which was deemed sufficient for this research. With each employee actually taking the tests related to each topic/intervention, the researcher estimates 25,000 actual knowledge tests (11,000 employees multiplied by 4 tests and 60% expected participation) as part of this random study.

This is one of the largest samples of line staff or non-exempt employee base in any random quantitative research study. The design was intended to better understand how employees deemed "not knowledgeable" workers might view learning when delivered from their respective management, how they might acquire new knowledge both from their basic job responsibilities (LI 2) and outside their domain that has nothing to do with technical job skills (LI 1) in two separate and different methods; single intervention (LI 1) and single intervention combined with multiple in same time period (LI 2), and the impact of this learning may have on their respective desired behaviors (LI 2), and the impact related to the overall performance in the workplace as single entity and an aggregate organization.

With only Level 1 and Level 2 evaluation systems, the researcher would have over 36,000 pieces of information filled out, thus creating a very large quantitative database for analysis and review and potentially future research that provides a platform for both multi and single level analysis.

Data on participant's behavior (i.e., Kirkpatrick's Level 3) will be gathered using the company's balanced scorecard system from all locations. This system tracks over 100 operating statistics, but for level 3 only, we will be compiling adverse incidents determined as falls that are a federal requirement to be reported on a monthly basis without exception. Senior Management selected and defined desired behaviors in a measurable way that the study can adequately assess both, the positive behavioral change through frequency or the reduction of resident falls when adult learning theory, principles and methods were utilized by management teams compared to the Control Group. The company will look at falls 45 days prior to the learning intervention and 45-days post the intervention to assess whether positive and desired behavioral changes occurred related to the second Learning Intervention.

In order to address Kirkpatrick's Level 4 (i.e., Results), the study will assess the following data metrics during the period:

   i. Engagement – Signature Healthcare administered an employee engagement survey with 88% participation in July 2009 for an established baseline. The company re-administered the same engagement survey in late February 2010 to assess any material

49

change in scores among all 66 locations. Changes in engagement

for Treatment and Control sites were analyzed to estimate effects

of the managers' new teaching competency through the

specialized training. This 12 question survey designed around the

Gallup Q12 will review individual data, aggregate data from each

location, and consolidated data while closely examine two specific

items (Q10 & Q12) considered paramount to employee

development and employee learning in order to assess the impact

of this new management competency on employee engagement.

ii.   Operational Performance – Signature Healthcare maintains a

massive database of both financial and operational performance

so the baseline prior to the intervention is already established in

two closely monitored critical success factors; retention and

profitability. This database will provide historical and post-

intervention data to analyze changes in profitability and retention

among all 66 locations. The profitability test will be defined as

Earnings Before Interest, Taxes, Depreciation and Amortization

(EBITDA) the last month prior to the intervention (October 2009

which is a 31 day month) compared to March 2010 which is also a

31 day month immediately following the second learning

intervention to assess potential impact on the company's bottom-

line.

The analysis of retention data will look closely at a twelve-month period, seven months prior to the intervention to establish a historical base line and five months of trends during the intervention to see if one of healthcare most important critical success factor can be impacted. This statistic is regarded as one of the primary drivers of healthcare quality in the US due to extensive training requirements, inter-disciplinary team delivery systems and institutional knowledge of organization protocols and system (Note: link to reference if we can find it). Equally important, the research study wanted to select key metrics that have multi-million dollar impacts on the organization because the study also sought to assess economic impact. As expected, the company tracks retention as a critical success factor on its monthly balance scorecard system. Retention is defined as "the percentage of employees in current full time active status, working greater than 64 hours per a two week pay period, on the most recent payroll, that have been employed for greater than 365 days since their original start date". The importance of this business metric cannot be overstated because each new employee in this organization takes approximately 60 to 75 days to understand systematic approaches, protocols, resident needs, and build relations with other staff as part of an inter-disciplinary approach to long term care.

Previous analyses of trend in retention suggested that the retention rate for the studied organization has been increasing on a quarterly basis for 5 straight quarters This steady improvement throughout the entire organization

was exciting to see at a time when many others companies are dropping due to uncertainty and pending rate cuts. Despite having only 10 quarters of operations since inception, the company senior teams strategic plans included the following; brand focus, improvement in benefits, material capital reinvested into resident environments, and additional investment into the transition to a learning organization. With so many new inputs for the organization, the company forecasts these investments would create a slow steady increase on retention based upon the positive execution of strategy to meet the company mission and vision. With this in mind, times series analysis was used to review the changes in retention rates for treatment and control sites over a longer period of time based upon the factors detailed above.

Selected Learning Interventions

Senior management selected two Learning Interventions to be delivered in a normal course of business to all 66 locations, with sessions in the 15 treatment sites to be conducted by administrators recently trained in adult learning theory and pedagogy. After three meetings with top management and board discussions, the two topics were selected due to the importance to the strategic direction of the organization during a challenging industry period due to uncertainty and an organizational goal to mitigate risk in high liability areas. The organizational leaders' selection of the two learning interventions (LI) provided two different learning contents (technical and non-technical), two different learning approaches (single and multiple interventions for the study to

help the entire organization understand how our line staff sees management based teachers versus specialized outside trainers, how they would rate training effectiveness when single and multiple interventions are deployed, and how knowledge transfer occurs outside the domain of tacit knowledge, how it is impacted when they receive one intervention only or how the knowledge transfer might be impacted if combined with other learning opportunities. LI 1 – Scenario Planning was totally outside of their job scope and would have minimal impact on their current technical skills while the other, LI 2 (Escorted Dining for Falls Reduction) was a refresher course that is deemed a standard and required annual in-service in most long term settings today.

Learning Intervention #1 – Scenario Planning to Better Operational Strategy During Uncertain Times. This learning module goal is to increase each employee's understanding of the company's strategic choices and decisions under multiple scenarios of healthcare reform, economic uncertainty, and technical industry changes related to skilled nursing business. The Senior Leaders selected this because they believed these are the most massive changes the industry has faced since the implementation of a new payment system in 1999 or the introduction of OBRA in 1987, which started strict federal oversight.

The learning goal was to increase base employees' understanding of strategic direction and strategic options for the organization because many leaders believed the Signature employee base was similar to many other mid

size companies where research highlights that only an estimated 6% of employees at unit level and non exempt status actually understand what their companies strategic direction is and why. (Note: link to actual research). For each respective student the organization hoped to reduce individual fear about job security, increase trust toward corporate decision-making, and provide pre-signals for employees so as events unfolded over the 12 month period the actions would not be misunderstood. The company believed this could positively impact individual engagement at a critical time as well as increase understanding of strategy to improve performance for the organization, and increase retention through transparency at all levels of the organization.

An analysis outline of Learning Intervention #1 Scenario Planning and Intervention for Kirkpatrick Level 1 labeled as "Participants Training Reaction to the Teacher" is below:

    i. Delivery Date – October 2009

    ii. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

    iii. Learning Subjects – All employees at all 66 locations

    iv. Instruments – Participant Survey

    v. Time Period (Duration) – Immediate Evaluation

    vi. Measurement – Kirkpatrick's Level 1 – Teacher Capabilities

vii. Analysis Method – Multi Level (both facility unit level results an Treatment and Control results)

viii. Impact Analysis Method – Evaluation Method – comparison between chance of scoring a 4 (excellent) verses scoring less than 4 (not excellent)

ix. Statistical Method – Logistic Regression

x. Reliability – Validated by Cronbach's Alpha

xi. Final Measurement – Odds Ratio

Several aspects of the analysis outline require elaboration. The survey utilized in this study to rate presenter performance and training was the same one used in this organization the past three years, which allows for comparison and contrast of results. The survey questions were taken from a national survey company with a significant history of Kirkpatrick's Level 1 compliance. The ratings scale is from 1-4, corresponding to poor, fair, good and excellent, respectively. The survey consists of 14 questions. Questions 1-4 focus on the present/presenting team, while questions 5-14 pertain to the training delivery. These questions deal with relevance, application to job and function within the workplace, as well as, change in knowledge, skills and performance (see Appendix III).

The teacher capabilities relate to the knowledge and skills the individual possessed as a result of participating in the 30-hour training. This course focused on improving communication, utilizing teaching methods shown to

improve adult learning, creating learning environments' associated with best educational practices and establishing learning cohorts which emphasized collaboration and peer-to-peer instruction. In order to complete the training, the participant needs to achieve a 3.0 or higher out of 4.0 on an individually taught lesson that incorporates the training program's key principles and methods and meets the same standards for a team presentation (see Appendix II).

The survey results will be analyzed using a multi-level approach. In this way, the performance of people in the facilities can be compared after clustering is taken into account. This yields results which are less prone to Type I error (false positives) than if a single level analysis were conducted. Logistic regression will be applied since the response variable is dichotomous (i.e., two categories: excellent vs. less than excellent). Further, since the survey results will identify whether a presenter/team is rated as excellent or not excellent, an odds ratio will be calculated. This ratio will inform as to the likelihood an individual has of being rated excellent as opposed to anything else. One purpose of the training is to create superior teachers and being rated as excellent rather than less than excellent, would confirm the value of the training.

The analysis of Learning Intervention #1 – Scenario Planning for Kirkpatrick Level 2 labeled as Level of Knowledge Transfer is outlined below:

xii. Delivery Date – October 2009

xiii. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

xiv. Learning Subjects – All employees at all 66 locations

xv. Instruments – Pre and Post Tests for the Scenario Planning Intervention

xvi. Time Period (Duration) – Immediate Evaluation

xvii. Measurement – Kirkpatrick's Level 2 – Knowledge Transfer based upon change between pre and post tests

xviii. Analysis Method – Multi Level

xix. Impact Analysis Method – Evaluation Method – change in correct answers from pre to post tests

xx. Statistical Method – Linear Regression

xxi. Final Measurement – change in mean that is statistically significant or not

xxii. Reliability – validated by Cronbach's Alpha

As seen in the previous analysis outline as well as those to follow, elaboration of several key elements is necessary. This section is concerned with the knowledge transfer obtained, while it is customary for this organization as well as many others to employ a pre-test/post-test to assess the transfer of knowledge, this researcher designed questions that incorporated application, and integration of information as opposed to the more traditional format of

identification and definition. This departure in questioning may better support behavior and performance changes with are anticipated in this study.

The reliability of the pre-test will be analyzed using Crombach's alpha statistic. Cronbach's alpha of 0.70 or better shows that items measure the same construct. Cronbach's alpha scores below 0.70 are typically too unreliable for most purposes.

The results of pre-test and post- test performance will be analyzed using the multi-level linear regression. Linear regression was chosen since it is well suited as a model of cause and effect and this study is attempting to see if there is any relationship between training and knowledge transfer.

Learning Intervention 1 – Scenario Planning will affect Level 3 – Behavioral change related to this intervention. According to the American Marketing Association (2008), only 8% of staff understands the organizations' plan and participates in it's development. Therefore, it is anticipated that participation in the Scenario Planning Session will change the thinking of the participants while at the same time improving their involvement. This behavior change could be reflected in improved employee retention. It should be noted that employee retention describes the individual's action/behavior to remain with as opposed to leaving the organization. This metric reflects what percentage of employees are still employed with the organization one year after their date of hire.

Learning Intervention #1 (LI1) – Scenario Planning impact will be analyzed for Kirkpatrick Level 4 results based upon one underlying assumption; the more employees understand a company's strategic direction related to external factors the more engaged they might become. Based upon this assumption (link to research) the researcher will analyze employee engagement scores between two periods: one, prior to the training, and second, several months after the training.

xxiii. Delivery Date – October 2009

xxiv. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

xxv. Learning Subjects – All employees at all 66 locations

xxvi. Instruments – Employee Engagements survey's

xxvii. Time Period (Duration) – 7 months, July 2009 survey results and February 2010 survey results

xxviii. Measurement – Kirkpatrick's Level 4 – Employee engagement responses between two groups' Controlled and Treatment

xxix. Analysis Method – Single Level

xxx. Impact Analysis Method – Evaluation Criteria – difference in proportion engaged / not engaged between Treatment and Controlled group

xxxi.   Impact Analysis – Logistic Regression

xxxii. Effect Size – odds ratio for employee engagement deemed significant or not.

xxxiii. Reliability – none

xxxiv. Special Analysis – Q10 and Q12 that are grounded in employee development and workplace learning that will be assessed individually to better understand the impact of the new teaching competency for managers

This analysis outline centers on the possibility of employee engagement being affected by the training. Any change in this dimension would reflect what Kirkpatrick calls Level 4. Level 4 addresses what benefit the organization has derived from any activity. The instrument chosen to measure employee engagement is the SHC Employee Engagement Survey, the same one used during the past two years, which allows for comparison and contrast of results. This survey looks at many of the same conditions found in the Gallup Q12 and other well known employee engagement measures.

Betof (2009) and others have made the case that creating leaders as teachers, that is training leaders in educational principles and techniques, has a positive impact on employee retention, engagement and profitability. This study seeks to better quantify the impact on these aspects of business using a specific training program based on theories, principles and methods of adult learning.

Learning Intervention #2 –Escorted Dining: Falls Reduction Program designed to mitigate organizational risk based upon most desired behavior. This learning module's goal is to increase key desired behaviors of the individual employees throughout the organization. This module selects one desired behavior (reduction in falls) to see how a company-wide learning intervention will impact both short and long term behavior to better understand how to reduce risk in an organization as a whole. The Treatment Group combined the second learning intervention with a half day of several other learning interventions that the researcher did not study but were selected by the teachers as important to their unit's future performance because the managers providing additional education could further increase engagement and satisfaction. The Control Group delivered in standard fashion with it being a single intervention on the day of scheduled monthly in-service. While this departure from the research plan compromises the ability of the experiment to produce valid estimates of the impacts of the learning theory training program, this does provide the researcher with an opportunity to better understand of how non-exempt employees view traditional learning verses a multiple learning experience, and how knowledge is transfer impacted.

With Escorted Dining/Falls Reduction as a topic that has been historically an annual in-service due to regulatory requirements the learning design questions here begs how the learner sees multiple interventions and how is knowledge transfer impacted when employees receive multiple interventions

61

during the same time period. With mundane or redundant topics that are critical to any organization are they more effective when combined with other interventions in an effort to increase employee engagement.

An analysis outline of Learning Intervention #2 and the second Intervention for Kirkpatrick Level 1 labeled as "Participants Training Reaction to the Teacher" is below:

xxxv. Delivery Date – November 2009

xxxvi. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

xxxvii. Learning Subjects – All employees at all 66 locations

xxxviii. Instruments – Participant Survey

xxxix. Time Period (Duration) – Immediate Evaluation

xl. Measurement – Kirkpatrick's Level 1 – Teacher Capabilities

xli. Analysis Method – Multi Level

xlii. Impact Analysis Method – Evaluation Method – comparison between chance of scoring a 4 (excellent) verses scoring less than 4 (not excellent)

xliii. Statistical Method – Logistic Regression

xliv. Reliability – Validated by Cronbach's Alpha

xlv. Final Measurement – Odds Ratio

This outline analysis introduces the plan to measure and analyze participant reaction to training for Activity 2, Escorted Dining (see Appendix V), and identify any changes in the evaluation results (Kirkpatrick Level 1) within and between the two groups from the first activity. It is important to see if either group's presenters improve, remain the same or decrease in terms of audience reaction. Similarly, how the two groups compare to each other is of note. Statistical Treatments and rational for choice remain the same as those previously identified for Kirkpatrick Level 1 analysis.

The analysis of Learning Intervention #2 – Escorted Dining for Kirkpatrick Level 2 labeled as Level of Knowledge Transfer is below:

xlvi. Delivery Date – November 2009

xlvii. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

xlviii. Learning Subjects – All employees at all 66 locations

xlix. Instruments – Pre and Post Tests for the Scenario Planning Intervention

l. Time Period (Duration) – Immediate Evaluation

li. Measurement – Kirkpatrick's Level 2 – Knowledge Transfer based upon change between pre and post tests

lii. Analysis Method – Multi Level

liii. Impact Analysis Method – Evaluation Method – change in number of correct answers from pre to post tests

liv. Statistical Method – Linear Regression

lv. Final Measurement – mean change determined to be statistical significant or not

lvi. Reliability – validated by Cronbach's Alpha

Similar to the above outline analysis, this one describes the process to measure and analyze the transfer of knowledge (Kirkpatrick Level 2) in the second activity, Escorted Dining, and identify then differences in the participant's performance on pre and post tests within and between the groups. Statistical Treatments and rational for choices remain the same as those previously identified for Kirkpatrick's Level 2 analysis.

Unlike Learning Intervention and Topic #1 – Scenario Planning, Learning Intervention #2 – Escorted Dining will be evaluated using Kirkpatrick Level 3 system in an effort to determine did this intervention establish any statistically valid behavior change determined as an increase in "desired behaviors" by the employees who care for the residents outlined by:

lvii. Delivery Date – December 2009

lviii. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

lix. Learning Subjects – All employees at all 66 locations

lx.   Instruments – Balanced Scorecard Facility Reports

lxi.   Time Period (Duration) – 45 days prior to the Intervention and 45 days after the intervention

lxii.   Measurement –# of falls after the Learning Intervention by Controlled and Treatment Groups

lxiii.   Analysis Method – Single level

lxiv.   Impact Analysis Method – Evaluation Method – difference in average number of falls per site between Control and Treatment Groups

lxv.   Statistical Method – Negative Binomial Regression

lxvi.   Final Measurement – difference in mean # of falls determined as statistically significant or not

lxvii.   Reliability – none

For the data on number of falls, a negative binomial model is used to model count data. In this case, the researcher is counting the number of falls at each facility. Because the number of falls tends to be small and there is little variance in the number of falls across facilities, the negative binomial model fits these data better than a standard regression model for count data. Moreover, reduction in falls would support Kirkpatrick's Level 3 in that a change in behavior occurred on the part of the staff that resulted in an outcome change.

In Learning Intervention and Topic #2 – there were very limited ways to determine Level 4 impact based upon the short duration of time and the length

of time between financial impact related to a fall with injury due to risk assessment, initial valuation of financial risk and accruing of actual expense related to the fall. The length of the period ranges from 6 to 12 months historically. Based upon these business assumptions the researcher concluded that approximately $337,500 could be saved on an annual basis with the reduction in the number of falls.

However, with the Treatment Group receiving specialized training related to many learning theories including formal and informal, environmental conditions to establish safe space for learning maximization, and the ability to design learning within various methods to improve workplace learning results. The researcher assumes the potential new management competency named "teaching capabilities" could have significant impact on key business metrics that drive the operations of the skilled nursing industry with the two most important being profitability and employee retention, with this assumption in mind, the researcher understands a significant change to key business metrics would not most likely be related to one single intervention or just the aggregate impact of both interventions but more likely the impact of the manager who received the specialized training utilized of the new competency in normal course of business because he or she would be aware of the new options to deliver information or solve problems in the workplace. Here is the data analysis method for each Level 4 evaluation process as outlined below starting with employee retention:

lxviii. Delivery Date – throughout study

lxix. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

lxx. Learning Subjects – All employees at all 66 locations

lxxi. Instruments – Balanced Scorecard Facility Reports

lxxii. Time Period (Duration) – 12 months, 7 months prior to the intervention and 5 months following the intervention (October 2009 through February 2010)

lxxiii. Measurement – interrupted time series model

lxxiv. Analysis Method – interrupted time series model

lxxv. Impact Analysis Method – Evaluation Method – difference in trend over extended time period to determine impact

lxxvi. Statistical Method – interrupted time series

lxxvii. Final Measurement – change in retention percentage as statistically valid or not

lxxviii. Reliability – none

This analysis outline identifies retention as another area in which changes would reflect Kirkpatrick's Level 4 impacts. Of interest here, is the Balanced Scorecard Facility Report. This organization uses this tool to keep track of the execution of activities by employees and to monitor the consequences of these actions. This scorecard, like that described by Kaplan

and Norton (1996), is designed to translate the organization's vision into operational goals, to communicate the vision, and link it to individual performance, to provide internal and external benchmarks to evaluate performance and to obtain feedback and a just strategy accordingly. In this analysis, the scorecard provides pre and post-treatment data on employee retention, which is then analyzed with an interrupted time series model. This model compares trends over time before and after the treatment for both the treatment and control groups in order to test whether the a change in the outcome trend was different for the treatment sites (e.g., the treatment group may show greater improvements in outcomes than before the intervention, and the control group may show no change in trends).

Lastly, the researcher will analysis financial performance as another Level 4 evaluation impact validated by EBITDA (earnings before interest, taxes, depreciation, and amortization) as part of the study outlined below. Knowing it is only a six-month study, material EBITDA changes may be unlikely but any change would have dramatic impact on the company's overall economic valuation;

lxxix. Delivery Date – throughout study

lxxx. Teachers – Facility management (administrator, director of nursing and rehabilitation service manager) at each respective location

lxxxi. Learning Subjects – All employees at all 66 locations

lxxxii. Instruments – Balanced Scorecard Facility Reports

lxxxiii. Time Period (Duration) – 2 periods (October 2009 which is 31 day period prior to intervention and March 31 which is 31 day period after the intervention)

lxxxiv. Measurement –change in EBITDA between the two periods by the Controlled and Treatment Groups

lxxxv. Analysis Method – Single method

lxxxvi. Impact Analysis Method – Evaluation Method – difference in mean EBITDA between Control and Treatment Groups

lxxxvii. Statistical Method – Linear Regression

lxxxviii. Final Measurement – change in EBITDA amount determined as statically significant or not

lxxxix. Reliability – none

This final analysis outline closes out the evaluation of information related to Kirkpatrick's Level 4 with an analysis of EBITDA. EBITDA allows the organization to analyze the performance of operations while eliminating all non-operating and non-recurring items or other non-recurring costs. This tool is especially useful for this organization which has grown year-over-year because it reflects whether the growth was profitable and to what extent. The next chapter will report the results of the data analyses.

Chapter 4

Results

The purpose of the study was to assess the impact on improving workplace learning and performance within the subject organization. A randomized experiment was conducted in which individual and organizational performance was evaluated using Donald Kirkpatrick's Four-Level evaluation system as the theoretical framework. The researcher examined how the new teaching competency for managers impacted the reactions to learning (Level 1), the individual impact on knowledge transfer by comparing performance on pre and post tests when the new teaching competency is utilized (Level 2), changes in key individual behaviors (Level 3), when learning is delivered utilizing adult learning theory, practices, and methods, and impacts on collective operational performance including employee engagement, retention, and overall company profitability (Level 4) when managers deploy this new teaching competency within the normal course of business in the workplace. The results will be presented in a manner consistent with the activity outline presented in Chapter 3.

Quantitative Data Overview

Evaluation Results for Learning Intervention #1

Participation

Within the first learning intervention, the organization collected 4,779 surveys completed by employees out of a total of 10,286, which was a 46%

return. There were 14 facilities who completed and mailed in the survey after the initial deadline that were still accepted and out 66 facilities, only three (3) were not received, which yielded a 96% facility participation rate. The Treatment Group had 100% facility participation.

The 15 Treatment facilities completed 1,343 surveys out of an employee base of 2,080 for 63% participation rate which was 21% higher than the 51 facility Control Group who received 3,465 completed surveys out of an employee base of 8,206.

Instructor Evaluation

The impact analysis focused on the research question, "does teaching performance statistically improve when 'healthcare educator series' training is applied"? It was analyzed and interpreted utilizing logistic regression because there were two outcomes that are categorical in nature. This approach established an odds ratio based upon two different outcomes: first, did the trainer/educator receive an excellent score (=4) or second, did the trainer/educator receive less than an excellent score (<4). An odds ratio is a measure of the effect size describing the strength of association between two binary variables (e.g., excellent vs. not; treatment vs. control).

Questions 1-4 (see Appendix II) determined the effectiveness of the trainer/educator from the survey instrument in terms of trainer knowledge, presentation skills, organization, and responsiveness, to the trainees. The Treatment Group compared to Control Group odds ratio was determined to be

1.64 for the four question aggregation Q1 earned the highest odds ratio at 1.85 highlighting the Treatment Group trainer/educator's grasp of the subject matter in the eyes of the trainees. While Q4 earned the lowest odds ratio of 1.51 which asks did the trainer/educator respond effectively to trainees/employees? The lower ratio may highlight the complications of delivering a challenging topic grounded in potential healthcare reform with a percentage of uncertainty build in by learning design.

The odds ratio of 1.64 means that there is a 64% greater chance that a manager delivering employee training who received the healthcare educator series training will receive a score of 4, labeled excellent, than a manager who delivers training without the new competency in regards to overall trainer effectiveness which is statistically material in potential impact for others. The P-Value is .0218, which is statistically significant at the 95% level.

Training Evaluation

Questions Q5 – Q14 (see Appendix II) determined the effectiveness of the training in regards to learning design, learning styles deployed and program structure by the trainer/educator from the survey instrument. The Treatment Group compared to the Control Group odds ratio was determined to be 1.47 for the ten question aggregation with Q6 earning the highest odds ratio at 1.71 which asked "did the training meet my expectations." Q11 earned the lowest odds ratio of 1.25 which asked about "pace of training". The odds ratio of 1.47 means that there is a 47% more likely chance that a manager delivering

employee training who received the healthcare educator series training will receive a score of 4 labeled excellent than a manager who delivers training without the new competency. The ratio was statistically significant based upon a low P-value of .049 which is statistically significant at the 95% level.

Level 1 Kirkpatrick – Aggregation of Odds Ratio for all 14 Questions

The application of the odds ratio to the aggregate of all 14 questions resulted in a ratio of 1.50, meaning there is a 50% chance that the Treatment Group would earn an excellent rating by the employees over the Control Group. The P-Value is .0372, which is statistically significant at the 95% level.

Kirkpatrick Level 2 – Level of Knowledge Transfer

In determining impact analysis of knowledge transfer, the researcher utilized Kirkpatrick Level II as the evaluation method based on the design where each student was provided a pre-test prior to the Learning Intervention and a post test immediately after. The researcher collected the number of correct answers on each pre-test for both Treatment and Control Groups that established a base mean or score for both groups. Equally important, the researcher collected the number of correct answers on each of the post test scores for both Treatment and Control Groups that established a base mean or score for both groups.

To further assess the results of this learning intervention, there was an additional T-Test providing a comparison of means of the number correct pre-test scores from both the Treatment and Control Group to the means of the

number correct post test scores for the same respective groups to see the change in mean related primarily to the healthcare educator training series on managers in the Treatment Group.

In determining the impact of the healthcare educator series program on the participants' success of knowledge transfer, the researcher performed a multilevel linear regression, establishing a comparison of means of the correct pre-test and correct post-test responses from the Control Group to the Treatment Group, after correcting for clustering of employees within facilities.

Participation

Prior to this start of the Learning Intervention, the organization collected 4,922 pre-tests completed by employees out of a total of 10,286 full time employees which was 48% of the total employees completed the pre-test. There were 14 facilities that completed and mailed the tests after the initial deadline that were still accepted out of the total 66 facilities that resulted in a 94% participation rate.

Instrument Reliability on Learning Intervention #1 Pre and Post Tests

The pre and post tests were piloted with an independent group of 54 individuals at the company's corporate office for reliability. This generated a Cronbach's Alpha of .749, which established this instruments reliability at a minimal level prior to field implementation.

Immediately after this Learning Intervention, the organization collected 5,467 post-tests completed by employees out of a total of 10,286 full time employee's yielded 53% participation rate.

After the data was accumulated from the individual employees throughout the entire organization another reliability test was run, generating a Cronbach's Alpha of .85, which established this instrument's reliability level as good.

Impact Analysis Results on Learning Intervention #1 – Scenario Planning - Knowledge Transfer (Kirkpatrick Level II)

Table 3

Control vs. Treatment Group - Intervention I Level II
Group Statistics

	Test Code	N	Mean	Std. Deviation	Std. Error Mean
Number Correct	Pre	1337	10.96	3.319	0.091
	Post	1343	16.8	3.285	0.09

For group statistics, the Treatment Group earned a 10.96 mean number correct score with a standard deviation of 3.319 on the pre-test while the Control Group generated an 11.38 mean number correct score with a standard deviation of 3.723. The difference scores between the two groups on the pre-test did not attain statistical significance with a P-value of .3535, confirming that the treatment and control groups were not significantly different prior to the intervention.

The Treatment Group earned a 16.80 mean number correct score with a standard deviation of 3.285 on the post-test while the Control Group generated

75

a 16.63 mean number correct score with a standard deviation of 3.596 on the

same test. The change in mean for the Treatment Group was a 5.84 increase

in number of correct answers after the learning intervention, while the change in

mean for the Control Group was a 5.25 increase in correct answers after the

learning intervention. The Treatment Group increased their mean by just over

one half of a question or transferred knowledge, which corresponds to a

knowledge gain 11% larger than that of the Control Group.

Table 4

Solution for Fixed Effects - Pre/Post Level II

Effect	Estimate	Standard Error	DF	t Value	Pr > ltl
Intercept	11.2628	0.2285	58	49.29	<.0001
Treatment	-0.4222	0.455	9796	-0.93	0.3535
Post test	5.2697	0.07755	9796	67.96	<.0001
Treatment/Post test	0.5739	0.1482	9796	3.87	0.0001

This 11% positive change in mean by the Treatment Group over the

Control Group was statistically significant (see Table 4) earning a p-value of

.001 which is significant at the 99% level. This improved performance by the

employees can be attributed to the special training for managers validating the

impact of teaching competency helping, in this case, improved knowledge

transfer for students.

Impact Analysis Results on Learning Intervention #1 – based upon

Kirkpatrick Level III Evaluation System (behavioral change)

The intervention did not have behavioral change in the design because

the scenario planning module was in response to pending healthcare reform

and the recession that had decimated many of our employees' families. The educational goal was to increase trust in organizational decision making and reduce fear related to job security. However, behavioral change will be analyzed in the second intervention as a key assumption in its impact on the organization and the related employees.

Impact Analysis Results on Learning Intervention #1 – Critical Success Factor for Industry Performance – Staff Retention (Kirkpatrick Level IV)

Learning Intervention 1 – Scenario Planning's educational goal was to increase the staff employees' understanding of what the companies' options and strategy should be and to reduce fear and uncertainty around all of the healthcare reform noise that was dominating every Signature hallway. If the learning design did increase trust of the company's strategic plans or reduce fear that regardless of the outcome the organization already made plans to protect their employees with built-in contingency plans if needed. With these design thoughts in mind almost 8 months ago, the study selected retention as the best barometer of this first learning intervention because if fears are eased and trust is raised the premise is employees will be more committed and ultimately stay longer with the company (see Table 5).

To assess impact to a key business driver that is considered critical to quality in the long term care industry the researcher selected an interrupted time series analysis given the intangible equity in even small changes within this business metric. This statistical selection ties into Kirkpatrick's model

ideology to assess business results in Level IV related to the training of the new competency. The difference between the two groups within the time series model was used to assess business impact.

This statistical method relies on a dependent variable's (retention) relationship to an independent variable (new training) that can be evaluated over an extended period of time with or without using random assignment. In this study, the researcher is examining changes in retention patterns for six months prior to the first Intervention and three months after this intervention, comparing treatment and control facilities, and providing consecutive points before and the after the intervention is introduced.

The study time period included information from the company's balance scorecard from March 2009 to October 2010 (7 month period) through November to February 2010 (5 month period) immediately after the intervention occurred.

Table 6

Solution for Fixed Effects - Retention

Effect	Group	Estimate	Standard Error	DF	t Value	Pr > ItI
Intercept		0.6861	0.0314	64	21.85	<.0001
Month		0.004052	0.00281	64	1.44	0.1542
Group	Control	-0.02735	103552	592	-0.77	0.4417
Group	Experimental	0	.	.	.	.
Month*Group	Control	-0.00161	0.003097	592	-0.52	0.6039
Month*Group	Experimental	0	.	.	.	.
Treatment		-0.00731	0.004781	592	-1.53	0.1267
Month*Treatment		0.009542	0.001522	592	6.27	<.0001

The data analysis highlights five important factors as a result of utilizing the times series method:

78

1. The expected retention rate in October 2009 was determined to be 69% based upon the 7 month of prior data

2. There was a small, but non-statistical improvement in the retention rate for the Control Group over the 12 month period from March 2009 to February 2010

3. Regarding the historical pre-intervention retention rate between the two groups (Treatment and Control), there was no significant difference between Treatment and Control Groups

4. The estimated effect of the treatment on the time series intercept was not significant. Therefore, there was no evidence of a significant, instantaneous and persistent shift (i.e. – one time bump) in retention rate after the start of the intervention for the Control Group

5. In Treatment sites, there was a significant increase in the rate of improvement in retention after the start of the intervention equal to almost 1% per month (0.95%) with a low P-value of .001 showing statistical significance at the 99% level.

The times series method validates that the organization is making many positive changes to its culture that is impacting their employee base in a favorable way. The Board of the company believes that an increasing retention rate and higher engagement levels are the primary drivers of future profitability and higher economic value. With this positive change in the Treatment Group, the researcher can conclude that a learning company that teaches complex

topics to line staff, deemed unskilled, can create a new competitive advantage that is rare in today's business climate and can strengthen the company's stability at a critical point in time.

Learning Intervention #2 – Escorted Dining – a Falls Reduction Program

The second Learning Intervention will be assessed for the following key portions of the study:

a. Level 1 Kirkpatrick – Reaction to Teacher (survey)

b. Level 2 Kirkpatrick – Knowledge Transfer (pre and post tests)

c. Level 3 Kirkpatrick – Behavioral Change (change in falls)

d. Level 4 Kirkpatrick – Business Impact (cost savings from fall reduction)

This intervention included three instruments collected for a quantitative analysis: a 14 question survey to assess Level 1, Kirkpatrick evaluation, a 20 question pre-test instrument delivered prior to learning, and a 20 question post test instrument delivered immediately after the learning to assess Level 2 Kirkpatrick impact, and QIS data from Medicare for residents falls by facility for a 3 month period to assess change in volume.

Participation

The 15 Treatment Groups completed 1,176 surveys out of an employee base of 2,080 for 57% participation rate which was 17% higher than the 51 facility Control Group who received 3,292 completed survey's out of an employee base of 8,206.

Prior to this Learning Intervention, the organization collected 4,771 pre-tests completed by employees out of a total of 10,286 full time employees which was 46% of the total employees. There were 3 facilities that completed and mailed the tests after the initial deadline that were still accepted.

Immediately after this Learning Intervention, the organization collected 4,662 post-tests completed by employees out of a total of 10,286 full time employees which was 45% of the total employees. There were 3 facilities that completed and mailed the tests after the initial deadline that were still accepted. There were 1,291 pre-tests completed by the Treatment Group which constitutes a 62% participation rate compared to 3,480 pre-tests completed by the Control Group which is approximately 42% for this respective group. There was 20% difference in participation between the two groups that will be discussed in Chapter 5.

There were a total of 4,662 total post-tests completed out of 10,286 total stakeholders for 45% participation rate for all stakeholders. There were 1,277 post-tests completed by the Treatment Group which constitutes a 61% participation rate compared to 3,385 post-tests completed by the Control Group, which is approximately 41% for this respective group. There was a 20% difference in participation between the two groups. This difference will be discussed in Chapter 5.

Instrument Reliability on Learning Intervention #2 Pre and Post Tests

The pre and post tests were piloted with an independent group of 55 individuals at the company's corporate office for reliability. This generated a Cronbach's Alpha of .81, which established this instruments' reliability at a good level prior to field implementation.

After the data was accumulated from the individual employees throughout the entire organization another reliability test was run, generating a Cronbach's Alpha of .88 or 88%, which validated this instrument's reliability as good.

Kirkpatrick Level 1 Evaluation Impact – Participants Training Reaction to the Educator

The impact analysis for the research question, "does teaching performance statistically improve when 'healthcare educator series' training is implemented that was developed in adult learning theory, methods, and applications" as a teaching competency for managers, is interpreted utilizing logistic regression and an odds ratio because there were two outcomes that were categorical in nature. One, did the trainer/educator receive an excellent score (=4) or two, did the trainer/educator receive less than an excellent score (<4). An odds ratio is a measure of effect size as a descriptive statistic describing the strength of association between two binary variables (e.g., excellent vs. not; treatment vs. control).

Table 8

Reaction Survey Q 1-4 - Level I Intervention II
Analysis of GEE Parameter Estimates
Empirical Standard Error Estimates

Parameter	Estimate	Standard Error	95% Confidence Limits		Z	Pr > I Z I
Intercept	0.7625	0.1368	0.4944	1.0306	5.57	<.0001
Treatment	0.5125	0.2129	0.0951	0.9298	2.41	0.0161

Questions 1-4 (see Table 8) determined the effectiveness of the trainer/educator from the survey instrument in terms of trainer knowledge, presentation skills, organization, and responsiveness, to the trainees. The Treatment Group versus Control Group odds ratio was determined to be 1.67 for the four question aggregation. Q4 earned the highest odds ratio at 1.77 highlighting the Treatment Group was more open to questions by cohorts and the responses were considered very appropriate for the trainees in the learning program. While Q3 earned the lowest odds ratio of 1.61 which asks was the trainer/educator well organized. The reduced score may highlight the lack of confidence to deliver learning in new ways that were just learned but not tested historically.

The aggregate of 1.67 odds ratio means that there is a 67% greater likelihood that a manager delivering employee training who received the healthcare educator series training will receive a score of 4, labeled excellent, than a manager who delivered training without the new competency in regards to overall trainer effectiveness, which is statistically material in potential impact for others. The P-Value is .0161, which is statistically significant at the 95%

level. This was a slightly larger odds ratio compared to that from the first

learning intervention.

Table 9

Reaction Survey Q5 - 14 - Level I Intervention II
Analysis of GEE Parameter Estimates
Empirical Standard Error Estimates

Parameter	Estimate	Standard Error	95% Confidence Limits		Z	Pr > I Z L
Intercept	0.4219	0.1143	0.1979	0.6459	3.69	0.0002
Treatment	0.5595	0.1852	0.1966	0.9223	3.02	0.0025

In analyzing Q5 – Q14 (see Table 9) determined the effectiveness of the

training in regards to learning design, learning styles deployed and program

structure by the trainer/educator from the survey instrument. The Treatment

Group versus Control Group odds ratio was determined to be 1.75 for the ten

question aggregation with Q14 earning the highest odds ratio at 1.91 which

asked were the facilities conducive to learning, highlighting the educator was

keenly aware of the environmental conditions that are conducive to group

learning. Q7 and Q8 earned the lowest odds ratio of 1.32 which asks about

class participation and relevancy to the actual job because scenario planning is

not technically relevant to actual job duties for many and participation may have

been lower than projected because the Learning Intervention was new to most

trainees.

The odds ratio of 1.75 means that there is a 75% greater likelihood that a

manager delivering employee training who received the healthcare educator

series training will receive a score of 4, labeled excellent, than a manager who

delivered the training without the new competency. The P-Value is .0025, which is statistically significant at the 99% level. This is 52% larger than the odds ratio from the first learning intervention.

Level 1 Kirkpatrick for Learning Intervention #2 – Escorted Dining/Falls Reduction– Aggregation of Odds Ratio for all 14 Questions

Combining the individual results from all 14 questions, the aggregate odds ratio was 1.72 meaning there was a 72% chance that the Treatment Group would earn an excellent rating by the employees over the Controlled Group. The P-Value is .0038, which is statistically significant at the 99% level. This was a 22% increase in the odds ratio from the first Learning Intervention to the second.

Impact Analysis Results on Learning Intervention #2 – Knowledge Transfer (Kirkpatrick Level II)

There were a total of 4,771 total pre-tests completed out of 10,286 total stakeholders for 47% participation rate for all stakeholders. There were 1,276 pre-tests completed by the Treatment Group which constitutes a 61% participation rate compared to 3,383 pre-tests completed by the Control Group which is approximately 41% for this respective group. There was 20% difference in participation between the two groups that will be discussed in Chapter 5 (see Table 7).

Table 10

Control vs. Experimental - Intervention II Level II
Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-Test Score	Experimental	1291	11.51	3.059	0.085
	Control	3480	11.47	3.312	0.056

For group statistics, the Treatment Group earned an 11.51 mean with a

Standard Deviation of 3.059 on the Pre-Test while the Control Group generated

an 11.47 mean with a Standard Deviation of 3.312. The difference scores

between the two groups was not statistically significant given a P-value of .93,

which is substantially higher than the .05 requirement for significance,

suggesting that the treatment and control groups were not different prior to the

intervention.

For group statistics, the Treatment Group earned a 14.662 mean with a

standard deviation of 3.118 on the post-test while the Control Group generated

a 15.67 mean with a standard deviation of 3.027 on the same test. The change

in the mean for the Treatment Group was a 3.13 increase in correct answers

after the learning intervention, while the change in mean for the Control Group

was a 4.20 increase in correct answers after the Learning Intervention. The

Treatment Group increased their mean by over 1 question less than the Control

Group. In other words, the Treatment Group transferred knowledge at 25%

less effective rate.

This negative change in mean at a lower level by the Treatment Group over the Control Group was statistically significant at the 99% level, earning a p-value of .001.

The increase from LI 1 to LI 2 in the odds ratio was 50% over the first learning intervention for both teacher effectiveness and training effectiveness combined with a less successful knowledge transfer that will be discussed in detail in Chapter 5.

Impact Analysis Results on Behavioral Change (Kirkpatrick Level III) –

To assess the behavioral change by the line staff employee base related solely to the second learning intervention, falls reduction program called Escorted Dining, the researcher examined the number of falls and fractures for two periods (January 2010 and March 2010). The first period, January 2010, was prior to the second learning intervention, which provided individual facility data for number of falls. The second period, March 2010, was the month after the learning intervention and tracked the same data. Both periods are 31 days.

In the long term care industry, each licensed facility must report resident falls as part of the Medicare program through the MDS resident reporting requirements that are filled out by the inter-disciplinary team at each respective facility.

In the last 31 day month prior to intervention, (January 2010), the company reported 155 total falls for all 66 facilities which was a facility average of 2.35 falls per location. The range of individual facility falls varied by locations

that had zero falls up to the highest being eight falls. Prior to the intervention, the Treatment Group had a 2.87 individual facility average, while the Control Group had a 2.20 individual facility average. The difference between the two groups was .67 (just over a half of a fall difference) was not statistically significant.

When comparing number of falls in January to falls in March, a negative binomial regression analysis showed that facilities in the Treatment Group had an additional 56% reduction in the number of falls per facility, after Controlling for the number of residents in each facility. This Treatment effect was marginally statistically significant, with a p-value of 0.08.

The exceptional results may have established a potential relationship between "good teaching" equals "good engagement" and could translate into "better business results". This reduction in falls that was observed in this study, if annualized, would translate to Kirkpatrick Level IV business impact because 3% to 5% of all resident falls turn into serious injury and approximately half of those become a malpractice lawsuit that costs the study company an average $78,000 per suit filed. Based upon this one month result, if annualized, the company would save approximately 4.1 million dollars.

Summary of Results for Learning Interventions Impact Analyses

The results of Learning Interventions 1 and 2 indicated the following. First, the manager who received the healthcare educator series scored higher on positive reaction from employees as teachers than managers in the same

organization who did not receive the Treatment by 50%. Secondly, the Treatment Group continued this trend and actually increased the difference over the Control Group by an additional 50% when they attempted to teach a second time based upon survey data from employees who attended the learning interventions. Third, when managers who were trained as teachers for the first time taught using a single learning intervention, they increased knowledge transfer by 11% over the Control Group who did not receive the Treatment. However, when the trained managers who learned to teach combined learning interventions in the study with additional topics, they actually reduced the knowledge transfer by 25% despite earning very a higher favorable reaction that was 75% higher than the Control Group managers. Fourth, within the second learning intervention, the Treatment Group had greater impact than the Control Group in facilitating desired behavioral change at a greater speed than the managers who did not receive the training. Fifth, the infusion of teaching competency into top facility-based managers impacted their respective retention rates in a positive way that was significantly valid even in a short period of time. It also impacted facility engagement scores in a positive way that was not statistically significant in this study.

Level IV Kirkpatrick Evaluation of Business Results – Level of Facility Engagement

The organization administered their first version of a company-wide engagement analysis that was complete in March, 2009 (see Table 11) and the

organization's second was administrated and completed in March 2010. The company has utilized a similar sequence of questions to the Gallup Q12, but there were key changes in various questions that the organization believed needed to be revised to increase applicability to the respective industry.

In the first analysis, the company scored a consolidated average of 3.8 with a 95% participation rate through the entire organization.

With the engagement legend defining engaged at 4.0 to 5.0, not engaged 3.0 to 3.9, and actively disengaged 0.0 to 2.9, the organization's engagement survey highlighted that 64% of facilities were engaged (scoring 4.0 or above), and 21%of facilities were not engaged (scoring between 3.0 and 3.9) and 15% were actively disengaged.

As a relatively young organization that is less than three years old, the company has continued to infuse improved education and learning for stakeholders, invested millions back into operations to improve quality of life for the residents, improved vendor strategic partnerships, and invested capital into the branding of the organization. With these improving factors, the senior team forecasted this key business metric would steadily climb annually to the top in the industry. The organization is very excited about the near 10% increase in employee engagement in less than a year of duration going from 3.8 to over 4.1.

When this researcher examined differences between the Treatment Group and the Control Group, several positive trends were noted:

1. The Treatment Group 2010 facility scores were 4.08, which was almost one half or .05 higher than the Control Group 2010 facility scores which was computed at 4.03. However, the P-value of .6441 made the positive factor not statistically significant

2. The Treatment Group had a larger percentage of individual facilities over the 4.0 threshold than the Control Group – 62% vs. 48% increase in engagement scores that were more positive than the Control Group

3. The Treatment Group employees scored higher than the Control Group employees on the 2 key questions (question 10 and question 12) that pertained to professional development and learning

    a. On question 10 – Treatment Group employees scored 4.0 compared to 3.9 for Control Group employees

    b. On question 12 – Treatment Group employees scored 4.2 compared to 4.0 for Control Group employees.

    c. On question 10, the Treatment Group employees were 18% more likely to rate themselves engaged than the Control Group employees (P-value = .4763)

    d. On question 12, the Treatment Group employees were 25% more likely to rate themselves engaged than the Control Group employees. (P-value =.3396)

The overall increase in the company wide engagement is a positive trend for the entire organization and certain aspects and factors in the Treatment

Group appear to be more favorable if maintained. However, all positive trends and improvements in the Treatment Group employees and facilities over the Control Group employees and facilities as a multi-level analysis all have P-value greater than .05 making all positive trends not statistically significant in these analyses.

Level IV Kirkpatrick Evaluation of Business Results – Level of Operating Cash Flow Monthly (termed EBITDA)

In analyzing the EBITDA of the subject company, we reviewed the results from 3 individual and consecutive quarters starting with quarter 1 (period ended September 30, 2009) which is the last full quarter of operations before the study started, the 2nd quarter (which started Oct 1 2009 and ended Dec 31, 2009) which was the full quarter of operational results when the study launched and 3rd quarter (which started January 1, 2009 and ended March 31, 2010) the last reporting period before the study was ended (see Table 12).

The Treatment Group reported an EBITDA of 2,725,553 for the 15 facility group for the 1st quarter prior to the study commencement which established an EBITDA quarterly average of 181,704 compared to a total EBITDA of 7,140,732 for the 51 facility total for the Control Group which established an EBITDA quarterly average of 140,014. The differences between the two groups were 41,690 (insignificant or significant).

For the 1st reporting period during the study, Quarter 2, the Treatment Group reported an EBITDA of 3,262,370 for the 15 facility group which increased the

EBITDA quarterly average to 217,491 a 19.7% increase in the first reporting period while the Control Group reported an EBITDA of 6,600,023 for the same period which decreased their quarterly average to 129,412 a decrease of -7.6%. The difference between the Treatment and Control Group was a total of 88,079 per location which was deemed statistically insignificant.

Table 13

Q1 EBITDA Treatment Group

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8259.283	28856.376		.286	.776
	Q1EBITDA	.865	.132	.632	6.576	.000
	TREATMENT	52005.892	46910.680	.107	1.109	.272

Table 14

Q2 EBITDA Treatment Group

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	87491.726	24071.676		3.635	.001
	Q1EBITDA	.365	.142	.370	2.562	.013
	Q2EBITDA	.120	.105	.166	1.143	.257
	TREATMENT	-56869.310	39486.577	-.161	-1.440	.155

For the 2nd reporting period during the study, Quarter 2, the Treatment Group reported an EBITDA of 1,845,870 for the 15 facility group which was decreased the EBITDA quarterly average to 123,058 a 32% drop from the 1st

quarter (prior to the study) and a drop of 82% when compared to the second quarter while the Control Group reported an EBITDA of 7,860,888for the same period which established a quarterly average of 154,135 an increase of 10% from the 1st quarter (prior to the study) and a 19% increase when compared to the 2nd quarter. The difference between the Treatment and Control Group was a total of 31,077 per location which was deemed statistically insignificant. The material fluctuation in the EBITDA will be discussed in Chapter 5 as the study explains the industry business model in more detail to shed some light on this significant swings in just three quarters for individual facilities, the two groups, and company as a whole (see Table 12).

Chapter 5

Discussion, Conclusions, and Implications for Future Research

The purpose of the study was to establish teaching as a management competency and to assess the application of theories, principles and methods of adult learning for managers to improve workplace reactions to learning, knowledge and performance. A randomized experiment was conducted in which individual and organizational performance was evaluated using Donald Kirkpatrick's Four-Level evaluation system as the theoretical framework. The researcher examined how the new teaching competency for managers impacted the reactions to learning (Level 1), the individual impact on knowledge transfer by comparing performance on pre and post tests when the new teaching competency is utilized (Level 2), changes in key individual behaviors (Level 3), when learning is delivered utilizing adult learning theory, practices, and methods, and impacts on collective operational performance including employee engagement, retention, and overall company profitability (Level 4) when managers deploy this new teaching competency within the normal course of business in the workplace.

Before discussing the three research questions that were the focus of this eight month investigation and deciding what conclusions can be substantiated, the researcher will highlight some important points that were part of the design itself that speak to the uniqueness and importance of such a research endeavor.

First, the random design was critical to understanding what impact, if any, could teaching competency for managers have on the workplace in approximately six months. The first critical point of random design was that many of these participants may not have had prior experience with workplace learning, believed in it as a potential business competitive advantage or would qualify in pre-selection to be deemed likely to embrace or flourish as a learning leader or teacher. Specifically, there were no pre-requisites, managers did not volunteer and, were not selected based on their educational background or prior teaching experience. These managers were representative of managers in this organization and possibly those in the industry.

As with most companies that are relatively new (less than three years old) and are attempting to become a learning organization, there are many aspects related to strategic planning, learning investments, new innovation, and historical experiences that the entire company at all levels must be involved with in order to succeed. The first learning intervention that dealt with scenario planning was the organization's first major attempt to present more than job skill training, corporate updates or policy compliance. This study showed that all levels of staff can effectively participate and benefit from information aligned with the company's strategy and direction. It is important to note that, in the long term health care industry, most staff is deemed unskilled employees, working in housekeeping, certified nursing assistants, and dietary fields with an hourly pay rate that is just above minimum wage. The line staff was the focus of

the study, not the so-called "knowledge stakeholders". The point was to think about how any low margin and regulated industry can do a better job educating and involving the line staff. Equally important, this industry is bombarded with both frivolous and devastating lawsuits due to the emotional connection to the elderly that force a more preventive, defensive approach to both business and education. With these constraints and limits, much of the industry's education is focused on the knowledge workforce with minimal resources available for the line staff. What remains for the line staff is mostly informal peer to peer knowledge transfers with great variation or ineffective in-services, primarily for legal compliance. This study provided a learning solution that could reach a large employee base in a different and more effective way. It was interesting to see how this learning approach around managers actually attempting to teach line staff could impact an organization in such a short period. To see movement in retention and engagement by using this new approach is encouraging. All organizations should reach out to this group with effective learning designs to shift how they might see the world differently and change their thinking and subsequently their actions that can lead to improvement in performance that is reflected in an organization's business metrics. The results of this study indicated that providing the teaching competency to managers can provide sustainable positive reaction to learning in the workplace.

This study set out to solve problems that not only occurred within this organization, but also in the healthcare industry. Much of the research

reviewed was qualitative or anecdotal in nature. This organization and many other businesses require information that is quantitative and can be applied. The results of this investigation satisfied this requirement. Without a randomized controlled design with strong quantitative analysis there would have been countless confounding variables preventing good causal inference. It would have been impossible to see what "improved teaching" yielded or earned with statistical significance, as the primary driver in the change of performance required for an early stage learning company. The challenge to prove impact is difficult because learning is usually imbedded throughout the organization in so many formal and informal ways.

Another design feature of this study was that the Control Group of facilities was dependent on Corporate for training content and materials as they have always been. However, in this case the materials were highly influenced by education best practices, since it was important for all the employees to understand and apply the information. The format included a video message from the CEO as to purpose and importance (clear communication). The power point presentation was designed by a graphic artist and the VP of Corporate Learning. Also, detailed talking points accompanied each slide (consistent message). The Control Group that had received an average of 3.0 out of 4.0 on the audience evaluation surveys during the past year now earned a 3.6 which was a 15% improvement. This result suggested that if an organization utilizes a

corporate dependency model for training, the results can be improved by utilizing principles and methods of adult learning.

In addition, there were several personnel issues that occurred in the Treatment Group that the researcher validated that were at a higher frequency than in the Control Group based upon the researcher's knowledge of the leaders in the individual locations throughout the organization. This comment pertains to two CEO's in the Treatment Group who had medical problems in the first quarter of 2010. They were long term stakeholders requiring leave of absences for medical reasons. Also the CEO/Administrator resigned at two locations for professional development, and two other CEO/Administrators had major unplanned surgeries that required extended breaks. With six locations in flux out of 15, this level of absence or change was much higher than what the researcher was aware of in the Control Group. Also, there was a seasonality factor that in random selection may have impacted the EBITDA Level IV analysis because Florida, which is approximately 40% of the company's annual profitability, generates almost half of this cash flow during a four month period from December through March due to the material influx of the seasonal population. There were only two facilities in the Treatment Group that operate in Florida out of the 20 total.

Finally, as the President and CEO of the company in the study, I never sent an email about the project, mentioned the study with any details, or contacted the buildings about why we introduced two company wide learning

interventions for the first time within 90 days of each other. The execution of the study was under the direction of the education department specifically the Vice President of Corporate Learning. This would be the normal routing of such an activity. It was a strange feeling as a senior manager to just let go and watch and record. So many times I wanted to ask questions like why they missed deadlines, why did they resign during the study or why some teams could not follow directions, or why some appeared to do such a poor job with the training or congratulating facilities that really did it right, but I could not until the study was totally complete. To all of the 66 locations and an 11,000 employee base, it just looked like another corporate initiative. The researcher needed to let go and observe the results while reflecting on why the workplace learning world is the way it is and how it can be improved by this study.

The following section addresses the three critical questions related to the hypotheses that one potential way to improve workplace learning is through an infusion of a new teaching competency into the management level through a new specialized training as a cultural shift to in sourcing education, transferring ownership back to the management suite, and potentially shift the level of engagement and retention of the employees.

Addressing the Research Questions

1. At the completion of the manager training, what is the competence level of the managers regarding adult learning theories, principles and methods for delivering workplace learning?

In order to answer this question it is important to see the progression of knowledge attained and skills demonstrated that contributed to the managers' competence regarding delivery of workplace learning. Competence is divided into technical, general and performance aspects.

In terms of technical competence, the managers completed the five web-based modules for the Healthcare Educator Series which focused on principles and methods of adult learning, learning styles, facilitation versus traditional teaching, effective power points and methods of instruction, and evaluation of learning. The average pre-test scores for the five modules were 44% with a range of 20% to 60%. The average post-test score was 93% with a range of 80% -100%. The baseline average for providing comments based on adult learning principles and methods for presentations that were rated as good to excellent was three and for those rated fair to poor, was two. After the training, the average comment for each was 10. While a presentation skills baseline was not established, each manager was able to present a 10 minute talk regarding a topic of importance to the organization individually and in a group of three at a level of 3.0 out of 4.0 or higher. The average score was 3.25 for individual performance and 3.30 for team delivery as determined by the VP of Corporate Learning.

In terms of general competence, this study's findings support that managers have the capacity to grasp the new competency in a timely and efficient manner based upon the Kirkpatrick Level 1 positive results. The

training program that the researcher constructed was high impact in the learning design, with relevant content, that facilitated the initial application to the facility. The healthcare educator series program was a 30 hour course over a three day period with quick application for field use.

In terms of performance competence, starting with the first learning intervention – Scenario Planning, the results from the Level 1 Kirkpatrick analysis indicated that the Treatment Group managers did obtain the necessary competency to improve teaching by their first learning intervention which was statistically proven by the 50% higher odds ratio than the Control Group. The odds ratio means that the likelihood that the new teacher earning excellent versus not earning excellent was 50% greater than when compared to untrained mangers.

The use of the teacher training that utilized theories, principles and methods of adult learning provided an immediate competency transfer to the manager substantiated by the successful odds ratio that includes both the employees reaction to the teacher (questions 1 through 4) and reactions to the training design, training materials, and training environments (questions 5 through 14).

The training appeared to provide teaching competencies to managers based upon a detailed review of the results of the questions one through four from the employee survey where the Treatment Group earned an average of 1.66 or +66% odds ratio. These four questions focused on the teacher's

knowledge of the subject, presentation skills, and organization of materials and relationship with learners. The teacher effectiveness was higher in first intervention than the aggregate +50% odds ratio for all 14 survey questions which combined teaching effectiveness with training effectiveness.

One of the critical breakthroughs on this first intervention was the result of question one earning a 1.84 or +84% odds ratio, "instructor was knowledgeable of the subject" suggesting that when a manager understands how to utilize new knowledge in a teaching framework, the perceived knowledge level of the educator increases, even for a complex topic.

The new competency, defined as "the ability to teach", validated how quickly the managers who received the special training could teach complex content, such as, scenario planning as the first learning intervention which looked at contingency planning, organizational strategy, and business fundamentals. Given that this complex topic that would rarely be delivered to non skilled employees, it is noteworthy that Treatment managers immediately taught the complex content well according to the participants' evaluations and outperformed the Control Group managers in almost all categories.

The key point here is, each of the 66 facility managers knows the company strategy as part of their base job design and all facility teams had attended strategy sessions, watched podcasts, and contributed opinions in strategic option discussions, but teaching something complex can still be a challenging endeavor. Even with similar knowledge levels by the majority of

managers, the employees/ learners perceived a very different level of knowledge verified by the dramatic difference in question #1, which verified the competency but equally important, the appearance of improved knowledge levels is an important point for all managers. Teaching may enhance the view of how employees perceive the managers' knowledge level or said another way, the manager may appear more knowledgeable to the respective employees which could have other positive outcomes that were not part of the study.

With such a high rating on teaching effectiveness (at a 1.66 odds ratio) in Learning Intervention #1, the odds ratio was not as high on training effectiveness (Questions 5 to 14) dropping 19% to an odds ratio of 1.47. This result could mean the new teacher may have focused more on their individual knowledge of the subject and the organization of content more than the environmental conditions or the facilitation of the subject.

The researcher expected the scores to be less in training effectiveness because scenario planning may appear to have less impact on job performance or relevance to job duties of the individual. This intervention was designed to impact retention or engagement that are primary business drivers not day to day technical skills by reducing fear due to uncertainty or trust through communication.

Along these same lines, in assessing teaching competency related to establishing training effectiveness, the Treatment managers scored their lowest scores on the first intervention in the learners' view of "the pace of training" by

104

scoring a 1.25 or +25% odd ratio which is the lowest score of the 14. As an inexperienced teacher, the managers' goal was to keep the facilitation of this intervention at 1 hour or less and they may have struggled to meet the time goal because of the complexity of the topic and the number of employee questions that might have occurred. This thought stems from the fact that the Treatment Group did score a high 1.71 or +71% odds ratio on the training meeting the learning expectations. More practice time in the healthcare educator series or practice time before they started the intervention would be potential ways to improve the teaching competency more efficiently and effectively.

The positive odds ratio of +50% mentioned above for the first Intervention for both teacher effectiveness and training effectiveness actually increased materially to +75% by the second intervention. This showed that the manager had the competency after attending the healthcare educator series and it may have grown when they actually used it. Stated another way, the competency was self-sustaining. The study acknowledges that each intervention was designed for different reasons causing the content to vary in difficulty. For example, this second intervention was based upon an escorted dining program that was designed to reduce falls based upon basic content linked to job skills and interdisciplinary communication. This intervention could be considered more relevant to the employees' skills and duties than the first. The employees' prior education and facility in-services, regardless of employer,

would include falls prevention programs but this intervention was a different version with more communication than traditional approaches.

An important result in the second intervention is that teacher effectiveness discussed above related to Q1 through Q4 actually remained very consistent increasing from +66% odds ratio to +68% on the second which is an improvement but not a material change. However, the big breakthrough on the second is, the training effectiveness related to Q5 through Q14 increased from +47% on the first intervention to over +74% on the second which could mean that the Treatment managers, as new teachers, quickly learn about environmental conditions, improve interaction and participation efficiently and begin to convert from the "sage on the stage, to the guide on the side" at a reasonable speed.

The biggest improvements were in Q12 through Q14 where the odds ratio averaged almost +80% which is approximately a 100% improvement from the first intervention. These questions primarily deal with facilitation skills. For example, Q12 – "did exercises contribute to learning", Q13 – "were training materials effective", and Q14 – "facilities conducive to learning" all show the progress in the Treatment Group that begs the question "do new teachers that gain initial competency, learn successful facilitation quickly" which is why the study selected adult learning theory, practices, and methods with a underlying belief that facilitation is more powerful than a traditional teaching session.

Since managers appeared to be somewhat ready day one, the next result is the appearance that this new teaching competency may grow with frequent use and immediate experience and/or may fluctuate based upon content variation in difficulty. This study shows a quick ramp up that was validated by the 50% improvement or increase in the odds ratio from +50% to +75% from the first to the second learning intervention demonstrated by the Treatment Group (from +50% to +75%).

The first Learning Intervention – Scenario Planning was developed with much more complex content and would be deemed more challenging to teach. With the lower odds ratio generated on the first Learning Intervention of +50% verses +75% on the second, it appears that managers who are just starting to learn teaching competencies may perform less favorably when the content is more complex in nature than basic content like that utilized in the second Intervention. With such a large difference in odds ratio between the two, further examinations in future studies may be needed.

It was difficult to determine what relationship or key factor made the largest difference between the two different odds ratios: the ability for the managers to improve teaching competency quickly as they gained experience or the potential improvement when content is more basic in nature.

One conclusion, based upon the data in the study is that teaching competency grounded in adult learning theory can be taught to managers in a cost effective and timely manner that will be received well by the employees

who might work for them. This may provide an excellent model for delivering learning in decentralized operations when either an organization cannot cost effectively outsource the required learning or the company's resources are too scarce in a low margin industry.

Having Treatment Group employees respond more favorably to the manager (teacher) and training (learning) than what the Control Group demonstrated could have intangible value in relations with management, view of facility leadership, or could force managers to take a more empowering role as a leader because being a teacher may require a higher personal risk than other obligations.

The concept of teaching competency grounded in adult learning for managers has tangible and quantitative impact that will be fully covered in answering the next 2 research questions. The study does not want to discount the organizational impact or related throughput that could come out of employees believing that either the teaching or training is more effective. Employees could have a different emotional connection to management or the organization long term because the learners see more potential for professional development because of this that could go well beyond the study.

2. By providing managers with knowledge of learning theories, principles and methods, to deliver education and training to their employees directly, how do the reactions to training, knowledge gains, and operational performance of learners change?

In order to answer the second question the researcher will being with the first learning intervention as a single event. This first event delivered a +50% improvement in odds ratio for the Treatment Group that was significant in today's workplace and showed that the training worked as evaluated by Level 1 Kirkpatrick. This favorable reaction by the employees was important in that the manager may have become a better teacher, but does it really improve knowledge transfer. In this study, the first intervention revealed a knowledge transfer that was an 11% increase above the Control Group, which is material and significant as evaluated by Level II Kirkpatrick. The researcher provides the analogy that 11% represents a letter grade higher in a regular educational program. Recall, this was a single learning intervention. Therefore, the question is, if the improved reaction to teachers is 50% higher combined with a 11% increase in knowledge transfer for single interventions could they both continue to increase with future learning interventions.

As detailed and related in research question number one, the learners responded more favorably when a manager presented training after the Healthcare Educator Series as an educator than as a manager even when the content was identical. This delta in favorable learner reaction began strong at a +50% odds ratio and increased another 50% on the second intervention to +75% odds ratio which demonstrated how fast a trained individual can really became an effective teacher over a relatively short period or the potential impact on the change in content levels will enhance or reduce the impact.

The positive reaction to the learning interventions by the Treatment Group over the Control Group grew quickly between the first and second interventions and may have been impacted by content change between complex and simple substantiated how the Healthcare Educator Series brought material teaching competency to the Treatment Group that seem to answer our first research question.

There may be a connection between the positive reaction to the teacher and training by the students or employees and the positive increase in knowledge transfer that suggests the importance of the relationship between student and teacher in workplace learning. This supposition is premised on the theory that the more learners are engaged and see both the trainer and training as relevant and supportive, the more they may learn. This relationship regardless of how quickly it grows or expands helps answer the second question that on a single learning intervention employees/learners who rate a teacher positively appear to not just see a better teacher in front of them but they actually learn more because they believe the content is credible and the teacher appears to be a subject matter expert who helps them become more successful and knowledgeable.

For any decentralized operation with low technology capabilities and minimal operating margins, the new workplace learning option would allow the organization to cost effectively train managers to be adequate teachers who can receive favorable scores from their own respective employees as well as

outperform non-trained managers in knowledge transfer on any single learning intervention provides a new workplace learning option for any highly regulated industry that is constantly changing due to excess regulations or is decentralized and low tech to reach line staff effectively. Moreover, this training allowed the manager to permeate all aspects of daily business with principles and methods of adult learning, which moved training from the classroom to the hallways and bedsides in the facilities.

One of the most surprising results from the study related to the second research question. This occurred in the second learning intervention which analyzed Kirkpatrick Level II test results. During the first learning intervention, the study demonstrated that the Treatment Group transferred knowledge 11% better than the Control Group. However, in the second intervention, knowledge transfer was 25% less for the Treatment Group. It should be noted that in the second intervention the Treatment managers wanted to test if a single intervention was combined with multiple learning activities, how much would workplace learning experience be enhanced. This is a prevalent workplace learning training method because business organizations are always trying to maximize the training dollars invested by adding additional Learning Interventions to expand the length and content covered in almost all training periods or any session. Slogans, such as, "Biggest Bang for the Buck" and "More is Better", were routinely heard in this organization. This approach addressed this common held training strategy.

In this second learning intervention, the managers improved their teaching competency over the first intervention by over 50% based upon the reaction from students or they seemed to teach basic content with more student satisfaction. They continued the positive trend in their ability to continue to outperform the non-trained managers from the Control Group and their own original performance from the first intervention in design by which also validates the teaching capabilities growing as teaching experience increases.

Since this intervention was designed by the Treatment Group to teach with other content, it appears that knowledge transfer dropped when multiple topics were included in the same experience even though the participants were more satisfied.

It is interesting that the employees in the Treatment Group tested lower in knowledge transfer under Kirkpatrick Level 2 than the Control Group, but the Treatment Group actually changed their behaviors to the desired action based upon the learning experience at a more favorable level than the Control Group despite the lower knowledge transfer scores.

In testing this learning strategy, this randomized study revealed a potential flaw in this workplace learning approach. Despite the increase in employee satisfaction with both the teaching and training effectiveness in the second intervention detailed above, knowledge transfer dropped by 25% below the Control Group.

A possible explanation for this apparent contradiction may be found in the research and works of Alvin Toffler and John Kotter. Alvin Toffler is an American writer and futurist, known for his works discussing the digital revolution, communication revolution and corporate revolution. "Information overload" is a term popularized by Toffler that refers to the difficulty a person can have understanding an issue and making decisions and choices that can be caused by the presence of too much and/or competing information. The term itself is mentioned in a 1964 book by Bertram Gross, The Managing of Organizations. Toffler's explanation of it in his bestselling book "Future Shock" presents information overload as the Information Age's version of sensory overload, a term that had been introduced in the 1950s (Lindsey, 1959). Sensory overload was thought to cause disorientation and lack of responsiveness. Toffler posited information overload as having the same sorts of effects, but on the higher cognitive functions, writing: "When the individual is plunged into a fast and irregularly changing situation, or a novelty-loaded context ... his predictive accuracy plummets. He can no longer make the reasonably correct assessments on which rational behavior is dependent." (Toffler, 1970, pp.350-351).

The preceding information suggests that the experimental group transferred information less effectively than the control group due to the amount and kinds of additional topics together with the additional time and activities required during the training. However, what about the fact that in spite of

decreased knowledge transfer scores, the experimental group changed their behavior and performed better than the experimental group which led to a significant reduction in resident falls?

The answer to this question may be found in John Kotter's book "The Heart of Change". Kotter's message in this work is that people change what they do less because they are given an analysis or set of facts that shifts their thinking than because they are shown a truth and a heart that influences their feelings. In other words, how the learner feels about or reacts to the training may be more important in changing their behavior than the positively measured transfer of information. The out pouring of testimonials from the participants in the control group acknowledging how inspired, appreciated, involved and a part of things they felt could very well validate the work of Kotter and explain this seemingly contradictory finding.

This study provides another potential breakthrough for workplace learning because the result means there could be a 36% reduction in knowledge transfer (the loss of the 11% gain in intervention one shown above combined with the 25% drop in intervention two knowledge transfer) if organizations try to maintain multiple interventions in the same sessions for line staff employees. This is the most popular method utilized in workplace learning due to time constraints and economic factors.

This result should make organizations reconsider the long learning days that dominate workplace learning and consider converting to short, single

learning interventions that have spurred the interest in new learning concepts such as micro learning, eight minute classes, and space learning as something that the workplace needs to consider implementing in the future for workplace learning (Massie). If knowledge transfer is the main goal, then single, short interval intervention, will yield the best results even if the teacher has to give up some positive reaction scores.

Based upon the more positive responses to both the teacher and training effectiveness in intervention number two, the employees may prefer the concept of multiple interventions and subsequently made more positive behavioral changes than the Control Group. However, despite high satisfaction, the employees actually learned or retained much less in the Treatment Group based upon the immediate results of post test taken.

In terms of establishing behavior change, the Escorted Dining Program was selected because the staff had to change what they were doing in order to reduce the number of falls. With this in mind, the second intervention which focused on falls reduction was based upon an interdisciplinary team approach. Resident falls is one of the highest risk areas in long term care. Many solutions have been implemented by this organization with little to no success. In this study, both the Control and Treatment Groups were successful at reducing resident falls.

Despite the lower knowledge transfer rate of 25% by the Treatment Group, they actually rebounded with 31% reductions in resident falls in the first

month of operations compared to 9% for the Control Group. The company had positive outcomes in both groups that were related to the professional and customized content for this intervention. However, the growing teaching expertise that involved improved communication, relationship building, and working toward a common purpose that was understood by all may have created the difference.

This critical breakthrough comes in direct conflict with the negative knowledge transfer results, but may have some relationship to the increasing engagement that may have improved teamwork between work groups. The positive response to "improved teaching" seen in the day long training that encouraged individual and team participation in a fun filled manner that was viewed by many of the participants as empowering and as a chance to be heard and to understand the "Big Picture" and their part and importance in the organizations success and impact on the lives of the residents.

A nominal statistical analysis indicated that this material reduction in falls was marginally statistically significant in only one month of activity. This is a critical success as a strategic business initiative of the senior team and board because of regulatory reporting, federal survey exposure, family notification, and lawsuit exposure. Understanding that this employee base would typically receive this type of learning as annual re-enforcement as part of an organizational risk management strategy makes the results more dramatic because it would not have been brand new information or new technical skills

for the employees. They may have attended with a skeptical outlook because of potential redundancy and not considered training valuable prior to the actual learning experience.

3   By providing knowledge of learning theories, principles and methods to managers and training them to implement these principals and methods in their own training programs, how does business performance change in terms of employee engagement, retention, and overall company profitability?

The organization took the fundamental steps to become a learning organization almost 2 ½ years ago, which provided the environment and management team support required for the research project. During this transition, the organization infused much new learning into various programs, overhauled many internal schools, opened up new learning centers, and established new national events grounded in creating a learning experience for all management within the organization. Therefore, the researcher expected to see positive changes in the business metrics before the implementation of this study. However, with this study, the researcher anticipated both the Control and Treatment Groups to show improvement with the Treatment Group showing more.

Employee Engagement

The results from employee engagement were detailed in Chapter 4 as a key business driver within the subject organization. This writer reviewed

117

extensive research on how employee engagement is one of the critical keys to operational excellence for companies in competitive industries. In light of this, high employee engagement may be considered a sustainable, competitive advantage. According to the recent survey, comparing employee engagement in 2009 to that in 2010 a 9% overall increase in engagement was noted, (see Table 11)

In current research there are many factors, conditions, and events that will materially impact this aggregate score, but to consider that this potential workplace learning solution could achieve some positive factors does validate nor discount the use of this approach.

Employee Retention

According to the American Marketing Association (2008), only 8% of staff understands the organizations' plan and participates in it's development. Therefore, it was anticipated that participation in the Scenario Planning Session would change the thinking of the participants while at the same time improving their involvement. The underlying assumption was if the employee understood more about the company's strategy and had a voice in decision making and saw how their performance affected the organization then retention would improve. In this study, the impact related to the first learning intervention affected employee retention in a more positive way within the Treatment Group than in the Control Group. Since the study utilized a time series analysis of the retention data, over a rolling one year period, it may be that the difference in

118

employee retention between the Treatment and Control Groups, which approached statistical significance, could attain statistical significance over time. If this occurs, this may have an even greater financial impact than demonstrated in this study. It should be noted that employee retention describes the individual's action/behavior to remain with as opposed to leaving the organization. The retention metric reflects what percentage of employees are still employed with the organization one year after their date of hire even though the study was only for a six month period.

For any long term care industry operator, the steady improvement in employee retention is one of the primary drivers in business metrics that will translate to higher quality outcomes and improved operational performance. With 11,000 employee subjects, a 1% change in employee retention means that 110 employees who are retained would generate an estimated $385,000 annually.

The company's average retention rate has increased approximately 5% which when annualized is $1,925,000 which is very material to an organization the size of the subject company.

While the company is seeing steady progress, it should be noted that the 15 Treatment facilities are improving at a higher level than the Control Group. This was a critical breakthrough because many healthcare organizations believe that an improvement in employee retention will translate to stronger operational performance.

Operating Performance (EBITDA)

To give a brief overview of the business model of the subject organization, the researcher will define as a low margin high fixed costs model so the EBITDA meaning the ability to actually have positive cash flow is the key to survival. The reason that long term care industry is considered a historically a low margin industry with very high fixed costs related to the costs of healthcare compliance so the business cycle fluctuate, can be volatile, and take long term market share shifts in both staff and resident volumes to change EBITDA levels for sustainability periods.

The volume levels of residents and their related payer source are the primary drivers of revenue and ultimately have a high correlation on EBITDA (or operating cash flow) that operates between only 3% to 8% for most chain organizations in this related industry (pulled from reported earning of chain organizations for public traded corporations).

The reason for this business model and low EBITDA % are the high fixed costs that stem from the massive regulations that are required to take accept just one resident or care for one-hundred. The rent for the entire property, the multiple utilities, the insurance requirements, 24 hour nursing support, physician support, etc are all very similar regardless of volume levels with many fixed costs, some semi-variable and very few variable only expenses has made it be a low margin industry.

However, even though the chain organizations have EBITDA margins in similar levels the individual location, any chain organization will have more variation and fluctuations than the aggregate mean EBITDA materially due to resident volume change related to increasing population of short term rehab residents, diversity in payer source with wide swing in operating margins, labor management that challenging to match with patient volume, and any regulatory issues during the reporting period.

Similar to engagement or retention metrics, the organization has been increasing quarterly EBITDA since it's inception in November of 2007 and more importantly increases over prior year same period due to some seasonality factors that consist in long term care. The reason for the steady increase in year over year quarterly EBITDA has been the increase in customer volume, rise in customer acuity, improving vendor economics, lower risk factors, and improved execution of the company business model.

In analyzing the EBITDA of the subject company, we reviewed the results from 3 individual and consecutive quarters starting with quarter 1 (period ended September 30, 2009) which is the last full quarter of operations before the study started, the second quarter (which started Oct 1 2009 and ended Dec 31, 2009) which was the full quarter of operational results when the study launched and 3rd quarter (which started January 1, 2009 and ended March 31, 2010) the last reporting period before the study was ended (see Table 12).

These mixed results were difficult to interpret because positive trends were observed in the Treatment Group during the first quarter in which operating profits (EBITDA) were on a steady rise. Is this related to the workplace learning solution? The researcher is not concluding that this quick positive impact in EBITDA is related to this workplace learning solution.

To the contrary, the researcher concluded that many external factors impacted this industry with the primary one being the hospital census within this service industry and the related market share that each long term care facility can secure. The dramatic shifts in EBITDA between the Treatment and Control Groups from one quarter to the next suggest that there may be many variables at work. Specific limitations in using EBITDA to evaluate the financial impact of learning are provided.

1. The Florida seasonality factor – There are 20 Florida properties included in the 66 total facilities. During the random sampling only two Florida facilities were chosen out of the 20 resulting in a 10% EBITDA contribution. This lower percentage of Florida properties may have impacted the EBITDA because during the first quarter of 2010 (the last quarter of the study) 44% of the company's total EBITDA was generated in Florida. Therefore, the Treatment Group contributed 4.4% of the EBITDA and the Control Group contributed 40%. This disproportionate contribution may have materially affected the EBITDA results.

2. The Treatment Group had six unstable facilities due to unexpected illness (four) and (two) resignations that impacted top historical performers during the second quarter. This substantiates how important it is to have day to day management on site in a low margin, labor intensive industry.

3. The Treatment Group may have had certain facilities that were on a down cycle that hit during the study due to the length of subject organization business cycles that were not expected and could reverse in the next few quarters because operating fundamentals combined with improved teaching competency.

4. The long term care industry internal components such as leadership, retention, engagement, and strategy usually operate in 6 to 12 months cycles and the EBITDA analysis is too short term in nature to have a high correlation to the results of the work based learning solution.

5. The Treatment facilities, leadership teams could have been so distracted by utilizing their new competency in both formal and informal ways within the internal aspects of their respective facilities and could have lost their external marketing focus. This could be a key point in understanding the opportunity costs of any leadership team shifting focus from something core and fundamental to their business that they are good at and trying something that they have no expertise in whatsoever.

6. The nature of the study was to launch the interventions companywide at the same prescribed time. This may have caused internal stress for the Treatment Group because trying to implement the teaching strategies while continuing to run day to day operations may have been overwhelming.

In concluding this randomized, quantitative study that lasted almost 6 months, the evidence and data provided the following points that organizations should consider to impact learning and business performance.

1. Basic teaching competency grounded in adult learning theories, principles and methods can be effectively learned by any manager in a short period of time and integrated into all aspects of daily business.

2. Basic teaching competency for managers can be delivered in a cost effective manner and may grow as managers, who are developing teaching competency, if additional interventions are scheduled in a reasonable time period.

3. Adult learning theory, methods, and practices if developed in a teaching approach, can generate more positive reactions from learners and employees than untrained teachers on both single and multiple interventions.

4. When managers exhibit teaching competency and own learning, they can increase knowledge transfer on single interventions at a significantly higher level than untrained managers.

5. Managers trained as teachers need to be very cautious of combining additional learning interventions in the same event because there is chance knowledge transfer could actually be reduced below the level attained by untrained managers.

6. Learners/employees may react more positively to the teacher/manager when they try multiple learning interventions over single interventions if the design elements include collaboration, empowerment, recognition of efforts and information related to the organizations plan and the employees place in that plan.

7. Teaching competency for managers can impact employee retention in a positive way in a relatively short period of time (6 months) which is a critical finding for organizations that have a large portion of line staff in decentralized locations.

8. Providing teaching competency for managers can impact an organizations goal to improve desired behaviors better than not training managers.

9. When managers embrace teaching there is a potential long term impact to employee engagement that may continue to grow over additional time periods that could be significant.

Limitations of Current Study

While the present study has supplied much useful information about teaching as a core management competency needed for companies to improve

125

employee reaction to learning, knowledge transfer and behavior as well as engagement, retention and profitability, it has several limitations that must be acknowledged.

1. Previous efforts undertaken to establish a culture of learning and a learning organization may have reduced the impact of this study within this organization.

2. Given only than two business quarters to obtain data may have been insufficient time for the impact of the study to produce certain statistically significant results.

3. Given the technological limitations of this organization in terms of infrastructure, hardware and software; data collection was outsourced at a relatively high cost which makes continuation and replication of the study cost prohibitive.

Implications for Future Research

The literature review explored broad areas such as teaching approaches, environmental conditions, learning methods and styles, learning processes and barriers as they relate to work-based learning. From this, several questions emerged which require further research and study. The first is what organizational culture needs to be established in order to best initiate and sustain workplace learning? How should the effects of workplace learning be measured and related to organizational goals and objectives? What specific manager competencies are required in terms of workplace learning to maximize

results? Can a manager's teaching skills and mindset permeate all activities of business life in order to effect employee engagement, productivity and profitability? What specific environmental changes could be made in the workplace that would support and sustain learning? Can knowledge of employee learning styles, emotional intelligence and multiple intelligences improve learning and translate into better performance? With increasing disciplines researching these dynamic areas, there is more literature available regarding how current employees learn on the job. This may be an opportune time to consider potential solutions to improve workplace learning for any organization.

While the above are certainly important areas to explore, based on this study, the researcher would like to see an organization that is similar to where this organization was two years ago, replicate the study. This study was compromised in that educational improvements were made prior to the initiation of this study. Another organization could use the training protocol and methods in a more Controlled manner in order to better gage the impact.

Table 5:   Company-wide Retention for Last Twelve Months

FABTeam	LegalCompanyName	Type	ReportEnding	3/31/2009	4/30/2009	5/31/2009	6/30/2009	7/31/2009	8/31/2009	9/30/2009	10/31/2009	11/30/2009	12/31/2009	1/31/2010	2/28/2010	Period4	Period3	Period2	Period1
Team I	Bluegrass Care and Rehabilitation Center	Nursing-Retention	2/28/2010	22.4	26.1	25.6	29.2	32.8	35.8	37.1	34.7	37	38.5	45.9	49.1	23.9	21.7	36.1	44.3
Team I	Bracken County Nursing & Rehabilitation Center	Nursing-Retention	2/28/2010	60.9	54.2	59.1	54.2	56	52.2	50	52	56	60.9	65.2	68.2	56.5	33.3	54.2	63.6
Team I	Lee County Care & Rehabilitation Center	Nursing-Retention	2/28/2010	69.8	65.6	70.5	68.3	68.9	65.6	69.4	72.1	71.4	74.2	77.6	76.8	69.4	44.3	71	75.9
Team I	Mayfair Manor	Nursing-Retention	2/28/2010	63.9	70	70.3	67.6	70.6	70.6	72.1	74.6	72.3	71.4	72.1	75.4	68.9	47.1	72.3	73.8
Team I	Prestonsburg Health Care Center	Nursing-Retention	2/28/2010	57.7	53.8	50	63	46.9	51.6	53.3	48.1	54.2	58.3	62.5	58.3	53.8	33.3	51.9	58.3
Team I	Riverview Health Care Center	Nursing-Retention	2/28/2010	65.8	58.7	58.1	64.4	66.2	66.7	69.6	69.6	75.8	75.8	78.1	78.5	60.8	43.8	70.6	76.9
Team I	Rockcastle Health & Rehabilitation Center	Nursing-Retention	2/28/2010	59.6	65.3	68.8	72.9	64.8	65.4	75	73.5	72.9	75	74.5	73.3	65.3	45.1	72.9	73.9
Team I	Signature HealthCARE of East Louisville	Nursing-Retention	2/28/2010	62.5	57.6	52.2	53.8	53.2	57.4	56.9	54.9	51.9	51	52	53.1	57.6	35	54.9	52
Team I	Signature HealthCARE of Georgetown	Nursing-Retention	2/28/2010	55.6	55.2	55.6	61.5	57.1	57.7	60	64.3	66.7	74.1	73.1	73.1	55.6	38.5	65.4	73.1
Team I	Signature HealthCARE of Pikeville	Nursing-Retention	2/28/2010	49.1	50.9	50.9	54	51.9	54.5	56.9	56.3	56.3	56.3	54.5	54.8	49.1	35.8	55.1	54.5
Team I	Signature HealthCARE of South Louisville	Nursing-Retention	2/28/2010	55.1	59.6	60.9	59.6	69	65.1	55.1	52.9	53.2	54.3	59.1	56.8	57.4	44.2	53.1	56.8
Team I	Signature HealthCARE of Spencer County	Nursing-Retention	2/28/2010	58.1	54.8	59.7	56.5	55	52.5	52.4	54.7	58.3	55.6	58.3	63.8	56.5	34.4	54.8	58.3
Team I	Signature HealthCARE of Trimble County	Nursing-Retention	2/28/2010	61.3	61.3	64.3	64.3	59.3	57.1	53.8	44.8	44.8	55.6	60	60	60	37	46.4	60
Team II	Harriman Care & Rehabilitation Center	Nursing-Retention	2/28/2010	62.5	63	67.6	70.3	66.7	67.1	64.8	72.1	73.5	75	73.4	75	64.1	43.1	69.6	73.4
Team II	Mountain City Care & Rehabilitation Center	Nursing-Retention	2/28/2010	64.3	68.6	70	79.1	79.1	81.5	80.3	78.3	79.4	82.4	82.9	85.1	67.1	53	79.1	83.8
Team II	Pigeon Forge Care & Rehabilitation Center	Nursing-Retention	2/28/2010	54	54.2	51.1	53.1	60	61.2	60	55.8	51.2	52.3	59.5	63.9	52.1	40.8	55.8	57.5
Team II	Pine Ridge Care & Rehabilitation Center	Nursing-Retention	2/28/2010	81.3	83	87.2	93	86.7	88.1	78.3	75	72.5	70.2	69.6	70.5	83	58.1	75	71.1
Team II	Signature HealthCARE of Cleveland	Nursing-Retention	2/28/2010	62.8	68.3	71.8	61.9	68.3	66.7	64.3	70	68.3	68.3	70	70	65.9	43.9	65.9	70
Team II	Signature HealthCARE of Greeneville	Nursing-Retention	2/28/2010	52.8	54.2	54.9	50.6	48.8	47.6	45.8	46.3	48.1	52	53.4	61.4	53.5	32.5	46.3	55.6
Team II	Signature HealthCARE of Rogersville	Nursing-Retention	2/28/2010	72.1	71.8	73.2	74.3	77.9	74.3	75	71.8	71.8	73.2	75.8	79.7	71.4	50.7	72.9	76.1
Team II	Spring City Care & Rehabilitation Center	Nursing-Retention	2/28/2010	71.2	72.1	68.3	71.7	70.5	75	76.7	79.3	81.5	77.4	75.5	75	70	48.3	78.9	76.9
Team III	Chautauqua Rehabilitation and Nursing Center	Nursing-Retention	2/28/2010	77.3	73.5	76.5	76	74.3	71	70.1	70.4	71.8	72.5	74.3	76.2	76	48.6	70.4	74.5
Team III	Signature HealthCARE at The Courtyard	Nursing-Retention	2/28/2010	71.6	66.3	69.7	70.5	66.3	68.1	66.3	70.8	70	67.4	70.5	71.8	69.7	45.1	69.2	69.3
Team III	Signature HealthCARE of Gainesville	Nursing-Retention	2/28/2010	71.2	63.5	61.5	66.1	68.3	69.4	72.1	66.7	68.9	71.7	72.1	74.6	64.5	45.9	68.9	71.7
Team III	Signature HealthCARE of North Florida	Nursing-Retention	2/28/2010	58.9	61.8	62.2	57.8	58.6	62.6	65.6	72.6	76.3	77.2	71.1	75.6	61	40.2	71.2	74.6
Team III	Signature HealthCARE of Orange Park	Nursing-Retention	2/28/2010	78.9	79.2	79.2	69.7	69.6	71.8	71.4	71.2	72.6	76.1	75	75.3	78.9	47.4	71.6	75
Team III	Surrey Place Care Center	Nursing-Retention	2/28/2010	58.1	60.5	56.8	55.3	57.1	65.2	68.9	64.6	62.5	60.9	64.4	63.4	58.1	40.4	63.8	61.4
Team III	Washington Rehabilitation and Nursing Center	Nursing-Retention	2/28/2010	69.1	71	67.9	69.9	67.8	63.6	68.1	70.3	72.4	72.4	69.6	70.8	69.7	43.6	70.1	71.1
Team IV	Anchor Care & Rehabilitation Center	Nursing-Retention	2/28/2010	87.2	89.3	89.2	89.2	87.2	86.2	87.2	86.9	86	85.9	85.9	89.3	88.1	58.8	87.1	86.9
Team IV	Heritage Park Care and Rehabilitation Center	Nursing-Retention	2/28/2010	84.3	82.9	86.4	85.9	84	83.3	84.5	84.7	84.5	84.1	84.1	84.1	84.1	56.8	84.5	84.1
Team IV	Kenilworth Care & Rehabilitation Center	Nursing-Retention	2/28/2010	75	80.6	79.1	78.1	75.4	74.6	78.1	82.3	80	77.4	77.4	75.4	77.6	50.8	79	77
Team IV	Peninsula Care & Rehabilitation Center	Nursing-Retention	2/28/2010	63.8	65.4	61.2	60.2	58.4	61.8	63.6	67.4	69.9	71.3	71.8	75	63.4	39.8	67.1	71.8
Team IV	Pinellas Park Care & Rehabilitation Center	Nursing-Retention	2/28/2010	83.6	80.3	76.3	75.3	72.8	70.7	75	74.7	74.1	70.2	71.1	75.3	80.3	48.1	73.8	72
Team IV	Signature HealthCARE at College Park	Nursing-Retention	2/28/2010	75.4	73.7	74.6	75.4	75	73.7	72.7	72.2	70.4	76.9	81.6	81.3	75.4	49.1	72.2	79.6
Team IV	Signature HealthCARE of Ormond	Nursing-Retention	2/28/2010	68.4	65.8	71.1	65.9	65.9	73	70.3	66.7	61.5	64.9	65.7	68.4	68.4	46.2	65.8	66.7
Team IV	Signature HealthCARE of Port Charlotte	Nursing-Retention	2/28/2010	85.4	84.4	80.2	80.2	75.5	74.1	74.1	74.5	79.6	81.6	79	79	83.5	50.5	76.2	79.8
Team IV	Winter Park Care & Rehabilitation Center	Nursing-Retention	2/28/2010	72.3	75	82.8	81.3	76.6	76.6	75.4	78.7	74.6	79	82	86.7	76.6	50	76.2	82

FABTeam	LegalCompanyName	Type	ReportEnding	3/31/2009	4/30/2009	5/31/2009	6/30/2009	7/31/2009	8/31/2009	9/30/2009	10/31/2009	11/30/2009	12/31/2009	1/31/2010	2/28/2010	Period4	Period3	Period2	Period1
Team V	Clinton County Care & Rehabilitation Center	Nursing-Retention	2/28/2010	78.8	78.8	81.3	78.8	78.1	80.6	77.4	80.6	87.1	87.1	90	93.3	81.3	50	80.6	90
Team V	Donelson Place Care & Rehabilitation Center	Nursing-Retention	2/28/2010	52.3	55.6	62.7	63.3	55.6	57.4	57.8	62.9	65.6	71	76.7	76.7	56.5	37.7	61.3	75
Team V	Hermitage Care and Rehabilitation Center	Nursing-Retention	2/28/2010	67.3	68	75	70.6	74.5	75	64	67.3	67.3	64.7	67.3	71.7	69.4	46.8	65.3	68.8
Team V	Montgomery Care and Rehabilitation Center	Nursing-Retention	2/28/2010	47.5	48.7	52.9	56.9	56.2	59.7	62.7	66.2	69.7	73.4	69.8	69.4	48.7	38.9	65.7	69.8
Team V	Morgantown Care & Rehabilitation Center	Nursing-Retention	2/28/2010	79.7	83.3	76.1	81.3	70	73.8	70.8	73.1	73.8	72.6	74.2	71.4	79.4	48.5	72.3	72.6
Team V	Pickett Care and Rehabilitation Center	Nursing-Retention	2/28/2010	52.8	52.8	54.1	60.5	58.3	70.3	79.4	81.8	82.8	86.2	89.7	93.1	52.8	41.7	81.3	89.7
Team V	Signature HealthCARE of Columbia	Nursing-Retention	2/28/2010	48.3	48.3	50	55.2	57.1	51.7	47.6	50	49.1	46.3	49	47.3	49.2	35.1	48.3	47.2
Team V	Signature HealthCARE of Erin	Nursing-Retention	2/28/2010	62	60.3	60.3	58.8	58.3	57.7	52.7	56.2	50.6	52.6	52.7	55.7	61.4	38.6	52.7	52.7
Team V	Signature HealthCARE of Fentress County	Nursing-Retention	2/28/2010	73.7	74.5	77.8	86.8	88.7	84.9	86.8	87	82.5	82.1	83	84.6	74.5	56.6	85.2	83
Team V	Signature HealthCARE of Memphis	Nursing-Retention	2/28/2010	76.5	74.6	72.2	71.8	68	66.2	69.3	68	66.7	67.6	71.2	73.2	74.3	45.9	68	70.8
Team V	Standing Stone Care & Rehabilitation Center	Nursing-Retention	2/28/2010	90	90	89.8	90	91.3	93.3	95.5	95.5	95.5	95.3	100	100	89.8	60.9	95.5	100
Team V	Westmoreland Care & Rehabilitation Center	Nursing-Retention	2/28/2010	72.7	68.2	72.7	77.5	80.5	82.9	77.3	73.9	71.7	68.1	68.1	68.1	70.5	53.7	73.3	68.1
Team VI	Chesapeake Shores	Nursing-Retention	2/28/2010	65.4	72.9	76.1	74.5	76.6	76.6	77.1	75.5	69.8	68	71.1	73.3	70.8	52.2	74	71.7
Team VI	Laurelwood Care Center at Elkton	Nursing-Retention	2/28/2010	55.4	59.4	59.4	51.5	50.7	54.4	58.5	55.2	52.8	58.5	69.5	71.2	57.8	34.8	54.4	65.6
Team VI	New Eastwood Care and Rehabilitation Center	Nursing-Retention	2/28/2010	47.7	53.7	56.1	62.2	64.1	64.1	70.3	78.4	72.5	76.3	75.7	81.1	52.4	42.1	73.7	78.4
Team VI	Signature HealthCARE at Mallard Bay	Nursing-Retention	2/28/2010	65.2	65.2	65.2	59.5	61.6	65.7	65.6	61.9	61.2	69.4	68.8	69.8	64.7	40.8	62.5	68.3
Team VII	Four Courts at Cherokee Park	Nursing-Retention	2/28/2010	41.3	39.1	40.5	36.6	38.6	39	43.2	50	45.9	43.6	47.4	54.3	40.9	25.6	46.3	48.6
Team VII	Hanover Health and Rehabilitation at Birmingham	Nursing-Retention	2/28/2010	33.3	33.3	33.3	33.3	41.5	43.6	40.5	37.2	34	34.8	39	43.2	33.3	26.8	36.4	39
Team VII	Signature Healthcare at Saint Francis	Nursing-Retention	2/28/2010	68.8	68.3	66.7	66.7	69.5	66.4	58	52	51.5	53.2	53.3	54.9	68	44.9	53.7	54.1
Team VII	Signature HealthCARE Center of Waterford	Nursing-Retention	2/28/2010	88.4	87.7	88.3	87.1	81.8	84.6	83.1	84.3	85.6	85.6	85	84.8	87.7	56.6	84.3	84.9
Team VII	Signature HealthCARE of Brookwood Gardens	Nursing-Retention	2/28/2010	78.5	83.8	86.3	86.1	85	83.8	87.5	87.7	83.5	82.9	82.7	82.5	83.5	57	85.4	82.7
Team VII	Signature HealthCARE of Buckhead	Nursing-Retention	2/28/2010	29.8	31	34.6	37.8	36.5	33.3	36.6	39.8	46.4	48.8	54.2	63.8	31.7	24.7	40.9	54.9
Team VII	Signature HealthCARE of Marietta	Nursing-Retention	2/28/2010	50	54.1	54.7	49.3	52.1	53	48.6	45.3	42.5	41.7	45.2	48.8	52.5	34.8	45.3	44.6
Team VII	Signature HealthCARE of Palm Beach	Nursing-Retention	2/28/2010	69.3	72.2	71.4	72.9	69.4	67.6	65.4	66.7	65.5	76.8	77.8	77.2	70.8	45.8	65.9	77.5
Team VIII	The Bridge at Bay St. Joe	Nursing-Retention	2/28/2010	71.8	72.4	72.4	77.3	78.4	80.6	79.7	75.3	77	79.5	79.7	80.6	72.4	52.1	77.3	79.5
Team VIII	The Bridge at Monteagle	Nursing-Retention	2/28/2010	64.3	64.7	65.2	56.3	55.3	55.4	56.9	58.3	55.4	55.6	62.5	63.4	63.8	35.5	56.9	60.6
Team VIII	The Bridge at Ridgely	Nursing-Retention	2/28/2010	64.9	64.8	63.6	68.5	67.3	73.5	73.5	72.9	75	74	74	78	63.6	46	72.9	74
Team VIII	The Bridge at Rockwood	Nursing-Retention	2/28/2010	63.8	55.8	59.2	57.7	61.8	59.5	59	60.3	60.5	60.3	58.1	59.2	59.5	40.3	59.7	59.7
Team VIII	The Bridge at South Pittsburg	Nursing-Retention	2/28/2010	45.8	45.2	45	48.3	48.2	49.1	46.8	48.4	47.7	54.7	56.7	60.7	45	32.1	47.6	56.7

129

FABTeam	LegalCompanyName	Type	ReportEnding	3/31/2009	4/30/2009	5/31/2009	6/30/2009	7/31/2009	8/31/2009	9/30/2009	10/31/2009	11/30/2009	12/31/2009	1/31/2010	2/28/2010	Period4	Period3	Period2	Period1
Team I	Consolidated - FAB	Nursing-Retention	2/28/2010	57.1	56.4	57.4	59.2	57.8	57.9	58.6	57.9	59.3	61.6	64.1	64.7	56.5	38.0	58.4	63.2
Team II	Consolidated - FAB	Nursing-Retention	2/28/2010	65.1	66.9	68.0	69.3	69.8	70.2	68.2	68.6	68.3	68.9	70.0	72.6	65.9	46.3	67.9	70.6
Team III	Consolidated - FAB	Nursing-Retention	2/28/2010	69.3	68.0	67.7	66.5	66.0	67.4	68.9	69.5	70.6	71.2	71.0	72.5	68.3	44.5	69.3	71.1
Team IV	Consolidated - FAB	Nursing-Retention	2/28/2010	77.3	77.5	77.9	76.8	74.5	74.9	75.7	76.5	75.6	76.8	77.6	79.4	77.5	50.0	75.8	77.8
Team V	Consolidated - FAB	Nursing-Retention	2/28/2010	66.8	66.9	68.7	71.0	69.7	71.1	70.1	71.9	71.9	72.3	74.3	75.4	67.3	46.2	70.8	74.0
Team VI	Consolidated - FAB	Nursing-Retention	2/28/2010	58.4	62.8	64.2	61.9	63.3	65.2	67.9	67.8	64.1	68.1	71.3	73.9	61.4	42.5	66.2	71.0
Team VII	Consolidated - FAB	Nursing-Retention	2/28/2010	57.4	58.7	59.5	59.3	59.3	58.9	57.9	57.9	56.9	58.4	60.6	63.7	58.6	39.5	57.3	60.8
Team VIII	Consolidated - FAB	Nursing-Retention	2/28/2010	62.1	60.6	61.1	61.6	62.2	63.6	63.2	63.0	63.1	64.8	66.2	68.4	60.9	41.2	62.9	66.1
SCH	Consolidated - SHC	Nursing-Retention	2/28/2010	64.2	64.7	65.6	65.7	65.3	66.1	66.3	66.6	66.2	67.7	69.4	71.3	64.5	43.5	66.1	69.3

CONTROL GROUP RESULTS

	LegalCompanyName	Type	ReportEnding	3/31/2009	4/30/2009	5/31/2009	6/30/2009	7/31/2009	8/31/2009	9/30/2009	10/31/2009	11/30/2009	12/31/2009	1/31/2010	2/28/2010	Period4	Period3	Period2	Period1
Team IV	Anchor Care & Rehabilitation Center	Nursing-Retention	2/28/2010	87.2	89.3	89.2	89.2	87.2	86.2	87.2	86.9	86	85.9	85.9	89.3	88.1	58.8	87.1	86.9
Team VI	Chesapeake Shores	Nursing-Retention	2/28/2010	65.4	72.9	76.1	74.5	76.6	76.6	77.1	75.5	69.8	68	71.1	73.3	70.8	52.2	74	71.7
Team I	Bracken County Nursing & Rehabilitation Cente	Nursing-Retention	2/28/2010	60.9	54.2	59.1	54.2	56	52.2	50	52	56	60.9	65.2	68.2	56.5	33.3	54.2	63.6
Team I	Signature HealthCARE of Spencer County	Nursing-Retention	2/28/2010	58.1	54.8	59.7	56.5	55	52.5	52.4	54.7	58.3	55.6	58.3	63.8	56.5	34.4	54.8	58.3
Team II	Signature HealthCARE of Cleveland	Nursing-Retention	2/28/2010	62.8	68.3	71.8	61.9	68.3	66.7	64.3	70	68.3	68.3	70	70	65.9	43.9	65.9	70
Team V	Signature HealthCARE of Fentress County	Nursing-Retention	2/28/2010	73.7	74.5	77.8	86.8	88.7	84.9	86.8	87	82.5	82.1	83	84.6	74.5	56.6	85.2	83
Team I	Lee County Care & Rehabilitation Center	Nursing-Retention	2/28/2010	69.8	65.6	70.5	68.3	68.9	65.6	69.4	72.1	71.4	74.2	77.6	76.8	69.4	44.3	71	75.9
Team I	Mayfair Manor	Nursing-Retention	2/28/2010	63.9	70	70.3	67.6	70.6	70.6	72.1	74.6	72.3	71.4	72.1	75.4	68.9	47.1	72.3	73.8
Team I	Signature HealthCARE of East Louisville	Nursing-Retention	2/28/2010	62.5	57.6	52.2	53.8	53.2	57.4	56.9	54.9	51.9	51	52	53.1	57.6	35	54.9	52
Team IV	Peninsula Care & Rehabilitation Center	Nursing-Retention	2/28/2010	63.8	65.4	61.2	60.2	58.4	61.8	63.6	67.4	69.9	71.3	71.8	75	63.4	39.8	67.1	71.8
Team V	Pickett Care and Rehabilitation Center	Nursing-Retention	2/28/2010	52.8	52.8	54.1	60.5	58.3	70.3	79.4	81.8	82.8	86.2	89.7	93.1	52.8	41.7	81.3	89.7
Team VII	The Bridge at Ridgely	Nursing-Retention	2/28/2010	64.9	64.8	63.6	68.5	67.3	73.5	73.5	72.9	75	74	74	78	63.6	46	72.9	74
Team II	Signature HealthCARE of Rogersville	Nursing-Retention	2/28/2010	72.1	71.8	73.2	74.3	77.9	74.3	75	71.8	71.8	73.2	75.8	79.7	71.4	50.7	72.9	76.1
Team VIII	The Bridge at South Pittsburg	Nursing-Retention	2/28/2010	45.8	45.2	45	48.3	48.2	49.1	46.8	48.4	47.7	54.7	56.7	60.7	45	32.1	47.6	56.7
Team V	Westmoreland Care & Rehabilitation Center	Nursing-Retention	2/28/2010	72.7	68.2	72.7	77.5	80.5	82.9	77.3	73.9	71.7	68.1	68.1	68.1	70.5	53.7	73.3	68.1
CG	Consolidated - CONTROL GROUP	Nursing-Retention	2/28/2010	65.1	65.0	66.4	66.8	67.7	68.3	68.8	69.6	69.0	69.7	71.4	73.9	65.0	44.6	69.0	71.4

CONTROL GROUP

DBA Operating Name Wave 2	Address	City	State	Zip	# Stakeholders	# Pre-Tests Returned	# Post-Tests Returned	# Evals Returned
Bluegrass Care & Rehabilitation	3576 Pimlico Parkway	Lexington	KY	40517	153	32	35	35
The Bridge at Bay St. Joe	220 9th Street	Port St. Joe	FL	32456	154	91	89	91
Signature HealthCARE of Brookwood Gardens	1990 S. Canal Drive	Homestead	FL	33035	192	69	64	68
Signature HealthCARE of Buckhead	54 Peachtree Park Drive NE	Atlanta	GA	30309	252	72	68	24
Chautauqua Rehabilitation & Nursing Center	785 S. 2nd Street	DeFuniak Springs	FL	32435	233	109	113	97
Clinton County Care & Rehabilitation Center	404 N. Washington Street	Albany	KY	42602	86	34	35	23
Signature HealthCARE at College Park	13755 Golf Club Parkway	Fort Myers	FL	33919	117	16	16	20
Signature HealthCARE of Columbia	1410 Trotwood Avenue	Columbia	TN	38401	136	31	29	24
Signature HealthCARE at The Courtyard	2600 Forest Glen Trail	Marianna	FL	32446	182	140	142	145
Donelson Place Care & Rehabilitation Center	2733 McCampbell Road	Nashville	TN	37214	157	83	87	89
Signature HealthCARE of Erin	278 Rocky Hollow Road	Erin	TN	37061	162	58	63	62
Four Courts at Cherokee Park	2100 Millvale Rd.	Louisville	KY	40202	121	60	68	60
Signature HealthCARE of Georgetown	102 Pocahontas Trail	Georgetown	KY	40324	84	47	47	40
Signature HealthCARE of Greeneville	106 Holt Court	Greeneville	TN	37743	187	51	62	39
Hanover Health and Rehabilitation at Birmingham	39 Hanover Circle	Birmingham	AL	35205	128	53	53	55
Harriman Care & Rehabilitation Center	240 Hannah Rd. P.O. Box 749	Harriman	TN	37748	158	61	57	63
Heritage Park Care and Rehabilitation Center	2302 59th Street West	Bradenton	FL	34209	187	65	64	63
Hermitage Care and Rehabilitation Center	1614 Parish Avenue	Owensboro	KY	42301	148	112	112	112
Kenilworth Care and Rehabilitation Center	3011 Kenilworth Boulevard	Sebring	FL	33870	158	82	82	83
Signature HealthCARE of Orange Park	2029 Professional Center Drive	Orange Park	FL	32073	192	63	63	0
Laurelwood Care Center at Elkton	100 Laurel Drive	Elkton	MD	21921	138	64	55	66
Signature HealthCARE at Mallard Bay	520 Glenburn Avenue	Cambridge	MD	21613	173	91	96	108
Signature HealthCARE of South Louisville	1120 Cristland Road	Louisville	KY	40214	141	80	66	43
Signature HealthCARE of Memphis	1150 Dove Crest Road	Memphis	TN	38134	205	43	40	14
Signature Healthcare at Saint Francis	6007 Park Avenue	Memphis	TN	38119	183	137	136	71
Montgomery Care and Rehab Center	198 Old Farmer Road	Clarksville	TN	37043	228	146	145	147
Morgantown Care & Rehabilitation Center	206 South Warren Street	Morgantown	KY	42261	189	91	92	92
Mountain City Care & Rehabilitation Center	919 Medical Park Drive	Mountain City	TN	37683	149	127	99	132
New Eastwood Care and Rehabilitation Center	2125 Fairview Avenue	Easton	PA	18042	125	15	14	11
Signature HealthCARE of North Florida	1083 Sanders Avenue	Graceville	FL	32440	237	111	109	104
Signature Healthcare of Ormond	103 North Clyde Morris Blvd	Ormond Beach	FL	32174	111	0	0	0
Pigeon Forge Care & Rehabilitation Center	415 Cole Drive	Pigeon Forge	TN	37863	112	69	63	64
Signature HealthCARE of Pikeville	260 South Mayo Trail	Pikeville	KY	41501	129	52	55	55
Pine Ridge Care & Rehabilitation Center	1200 Spruce Lane	Elizabethton	TN	37643	100	57	60	59
Pinellas Park Care and Rehabilitation Center	8701 49th Street North	Pinellas Park	FL	33782	173	99	95	97
Prestonsburg Health Care Center	147 North Highland Avenue	Prestonsburg	KY	41653	78	13	13	14

DBA Operating Name	Address	City	State	Zip	# Stakeholders	# Pre-Tests Returned	# Post-Tests Returned	# Evals Returned
Riverview Health Care Center	79 Sparrow Lane	Prestonsburg	KY	41653	144	76	74	83
Rockcastle Health & Rehabilitation Center	371 W. Main St.	Brodhead	KY	40409	140	82	82	75
The Bridge at Rockwood	5580 Roane State Highway	Rockwood	TN	37854	183	68	54	74
Signature HealthCARE of Marietta	811 Kennesaw Avenue	Marietta	GA	30060	210	92	93	101
Spring City Care and Rehabilitation Center	331 Hinch Street	Spring City	TN	37381	149	87	86	87
Standing Stone Care and Rehabilitation Center	410 West Crawford Avenue	Monterey	TN	38574	121	75	74	74
Surrey Place Care Center	110 Southeast Lee Avenue	Live Oak	FL	32060	112	72	71	74
Signature HealthCARE of Palm Beach	4405 Lakewood Road	Lake Worth	FL	33461	148	42	41	42
The Bridge at Monteagle	26 Second Street, P.O. Box 429	Monteagle	TN	37356	150	118	120	116
Signature HealthCARE of Gainesville	4000 S. W. 20th Avenue	Gainesville	FL	32607	158	107	94	80
Signature HealthCARE of Spencer County	625 Taylorsville Road	Taylorsville	KY	40071	179	88	78	87
Washington Rehabilitation and Nursing Center	879 Usery Road/Post Office Box 91	Chipley	FL	32428	217	27	30	35
Signature HealthCARE Center of Waterford	8333 W. Okeechobee Road	Hialeah Gardens	FL	33016	287	71	55	65
Signature HealthCARE of Port Charlotte	4033 Beaver Lane	Port Charlotte	FL	33952	205	45	46	38
Winter Park Care & Rehabilitation Center	2970 Scarlet Road	Winter Park	FL	32792	145	29	31	30
					8206	3603	3516	3331

TREATMENT GROUP

DBA Operating Name Wave 2	Address	City	State	Zip	# Stakeholders	# Pre-Tests Returned	# Post-Tests Returned	# Evals Returned
Anchor Care and Rehabilitation Center	1515 Port Malabar Blvd NE	Palm Bay	FL	32905	177	126	120	126
Chesapeake Shores	21412 Great Mills Road	Lexington	MD	20653	162	97	97	101
Signature HealthCARE of Trimble County	50 Shepard Lane	Bedford	KY	40006	91	37	35	37
Bracken County Nursing & Rehabilitation Center	5269 Ashbury Road	Augusta	KY	41002	67	40	40	40
Signature HealthCARE of Cleveland	2750 Executive Park	Cleveland	TN	37312	133	93	94	54
Signature HealthCARE of Fentress County	208 Duncan Street North	Jamestown	TN	38556	133	81	81	86
Lee County Care & Rehabilitation Center	249 East Main Street	Beattyville	KY	41311	145	104	104	105
Mayfair Manor	3300 Tates Creek Road	Lexington	KY	40502	145	75	76	79
Signature HealthCARE of East Louisville	2529 Six Mile Lane	Louisville	KY	40220	148	49	49	49
Peninsula Care & Rehabilitation Center	900 Beckett Way	Tarpon Springs	FL	34689	196	131	131	132
Pickett Care and Rehabilitation Center	129 Hillcrest Drive	Byrdstown	TN	38549	95	65	61	64
The Bridge at Ridgely	117 Main Street	Ridgely	TN	38080	114	76	70	71
The Bridge at South Pittsburgh	201 East 10 Street	South Pittsburg	TN	37380	147	97	100	1
Signature HealthCARE of Rogersville	109 Highway 70 North	Rogersville	TN	37857	177	101	101	102
Westmoreland Care & Rehabilitation Center	1559 New Highway 52	Westmoreland	TN	37186	150	119	118	150
					2080	1291	1277	1197

132

Table 11: Company-wide Engagement Analysis 3/2009 - 3/2010

FAB	Facility	Active Count	# of Surveys Completed	2010 % of Participation	2010 Engagement	2009 Engagement
	Experimental Group					
4	Anchor	141	149	105.67%	3.9	3.9
6	Chesapeake Shores	112	89	79.46%	4.0	3.7
1	Bedford	57	53	92.98%	3.9	3.7
1	Augusta	49	51	104.08%	4.3	4.0
2	Cleveland	90	96	106.67%	3.7	3.8
5	Fentress	111	110	99.10%	4.0	4.0
1	Lee County	116	92	79.31%	4.2	3.8
1	Mayfair Manor	116	126	108.62%	3.6	3.7
1	Louisville East	109	112	102.75%	3.8	3.8
4	Peninsula	134	129	96.27%	4.6	3.8
f	Pickett	70	69	98.57%	4.6	3.9
8	Ridgely	109	88	80.73%	3.4	3.7
8	Rivermont	115	115	100.00%	4.2	4.0
2	Rogersville	132	140	106.06%	4.4	4.0
5	Westmoreland	102	106	103.92%	4.7	4.4
	Control Group					
1	Valley View	121	116	95.87%	4.2	3.9
1	Bluegrass	126	112	88.89%	3.5	3.5
1	Georgetown	56	45	80.36%	4.1	4.3
1	Louisville South	102	108	105.88%	3.9	3.8
1	Pikeville	94	93	98.94%	4.3	3.9
1	Prestonsburg	55	54	98.18%	4.0	4.2
1	Riverview	128	120	93.75%	4.2	3.9
1	Rockcastle	106	97	91.51%	3.6	3.6
2	Greenville	133	127	95.49%	4.1	3.9
2	Harriman	129	124	96.12%	3.5	3.9
2	Mountain City	144	147	102.08%	4.5	4.4
2	Pigeon Forge	83	90	108.43%	4.0	3.7
2	Pine Ridge	93	84	90.32%	3.7	4.0
2	Spring City	104	106	101.92%	4.4	4.1
3	Chautauqua	176	168	95.45%	4.5	4.0
3	Courtyard	149	154	103.36%	4.5	3.5
3	Gainesville	122	116	95.08%	3.7	3.7
3	North Florida	220	102	46.36%	3.5	3.6
3	Orange Park	124	119	95.97%	4.0	4.0
3	Surrey	94	91	96.81%	4.1	3.9
3	Washington	192	173	90.10%	3.8	3.5
4	Fort Myers	85	80	94.12%	4.2	3.7
4	Heritage Park	143	103	72.03%	3.7	3.8
4	Kenilworth	117	89	76.07%	3.6	3.6
4	Ormond Beach	75	80	106.67%	4.6	3.8
4	Pinellas	146	137	93.84%	4.4	4.0

4	Port Charlotte	197	179	90.86%	4.1	3.7
4	Winter Park	111	112	100.90%	4.0	3.3
5	Clinton County	60	64	106.67%	4.6	4.0
5	Columbia	122	117	95.90%	4.8	3.5
5	Erin	145	154	106.21%	4.7	3.9
5	Hermitage	108	112	103.70%	4.2	4.0
5	Memphis	137	135	98.54%	4.0	3.6
5	Montgomery	137	144	105.11%	4.8	3.9
5	Morgantown	131	128	97.71%	4.5	3.8
5	Nashville	117	126	107.69%	4.1	3.5
5	Standing Stone	88	95	107.95%	4.7	4.1
6	Laurelwood	124	117	94.35%	3.3	3.3
6	Mallard Bay	138	132	95.65%	3.9	3.7
6	New Eastwood	86	87	101.16%	3.9	3.9
7	Brookwood Gardens	149	131	87.92%	3.8	3.6
7	Buckhead	177	130	73.45%	3.4	3.6
7	Four Courts	90	99	110.00%	3.8	3.6
7	Hanover	83	76	91.57%	3.8	4.0
7	Palm Beach	140	124	88.57%	3.7	4.1
7	Saint Francis	202	196	97.03%	3.5	N/A
7	Shoreham	175	162	92.57%	4.3	3.6
7	Waterford	272	255	93.75%	3.9	3.9
8	Bay St Joe	125	122	97.60%	3.6	3.4
8	Monteagle	123	132	107.32%	4.1	3.7
8	Rockwood	145	144	99.31%	3.6	3.5

FAB	Active Count	# of Surveys Completed	2010 % of Participation	2010 Engagement	2009 Engagement
FAB 1	2351	1179	50.15%	3.9	3.8
FAB 2	2678	914	34.13%	4.1	4.0
FAB 3	1077	923	85.70%	4.1	3.7
FAB 4	4988	1058	21.21%	4.1	3.8
FAB 5	1045	1360	130.14%	4.5	3.9
FAB 6	6240	425	6.81%	3.8	3.7
FAB 7	1288	1173	91.07%	3.8	3.8
FAB 8	393	601	152.93%	3.8	3.6
SHC GRAND TOTAL	8062	7633	94.68%	4.1	3.8

Table 12: SHC Quarterly EBITDA Report

Signature Healthcare, LLC
Quarterly EBITDA Report

DBA NAME	2009 1st Oct-09 ACTUAL	2009 2nd Dec-09 ACTUAL	2010 3rd Mar-10 ACTUAL
Experimental Group			
Anchor Care and Rehabilitation Center	250,256	290,916	148,543
Chesapeake Shores	(2,790)	307,972	143,691
Signature HealthCARE of Trimble County	(28,214)	(31,376)	(31,316)
Bracken County Nursing & Rehabilitation Center	133,815	(8,867)	17,020
Signature HealthCARE of Cleveland	290,661	297,708	269,588
Signature HealthCARE of Fentress County	209,747	342,354	183,393
Lee County Care & Rehabilitation Center	190,980	238,982	83,661
Mayfair Manor	181,926	321,398	67,661
Signature HealthCARE of East Louisville	176,850	323,582	182,599
Peninsula Care & Rehabilitation Center	172,538	174,052	182,649
Pickett Care and Rehabilitation Center	186,673	388,313	98,473
The Bridge at Ridgely	249,078	93,838	61,686
The Bridge at South Pittsburgh	205,203	(36,087)	52,525
Signature HealthCARE of Rogersville	222,538	278,031	205,827
Westmoreland Care & Rehabilitation Center	286,291	281,553	179,870
Total Experimental Group	2,725,553	3,262,370	1,845,870
facility average Exp Group	181,703.54	217,491.31	123,058.03
		19.7%	-43.4%
Control Group			
Bluegrass Care & Rehabilitation	(83,663)	128,120	(43,971)
The Bridge at Bay St. Joe	22,223	(38,459)	121,530
Signature HealthCARE of Brookwood Gardens	131,542	203,731	181,712
Signature HealthCARE of Buckhead	219,049	(316,857)	463,810
Chautauqua Rehabilitation & Nursing Center	283,578	427,758	226,229
Clinton County Care & Rehabilitation Center	116,789	133,765	83,199
Signature HealthCARE at College Park	(133,973)	(73,852)	(6,100)
Signature HealthCARE of Columbia	(89,649)	110,456	109,458
Signature HealthCARE at The Courtyard	246,298	326,119	229,516
Donelson Place Care & Rehabilitation Center	6,022	(241,703)	19,404
Signature HealthCARE of Erin	166,509	111,204	8,252
Four Courts at Cherokee Park	94,468	(58,075)	(45,114)

Signature Healthcare, LLC
Quarterly EBITDA Report

	2009 1st Oct-09 ACTUAL	2009 2nd Dec-09 ACTUAL	2010 3rd Mar-10 ACTUAL
Signature HealthCARE of Georgetown	59,882	71,800	(656)
Signature HealthCARE of Greeneville	379,784	60,132	23,051
Hanover Health and Rehabilitation at Birmingham	(103,464)	(16,079)	(196,234)
Harriman Care & Rehabilitation Center	9,622	(21,128)	106,695
Heritage Park Care and Rehabilitation Center	322,096	202,887	369,478
Hermitage Care and Rehabilitation Center	384,480	256,480	395,780
Kenilworth Care and Rehabilitation Center	(170,521)	(266,426)	195,990
Signature HealthCARE of Orange Park	175,344	250,442	198,203
Laurelwood Care Center at Elkton	(18,153)	68,745	58,737
Signature HealthCARE at Mallard Bay	160,217	291,931	135,018
Signature HealthCARE of South Louisville	169,546	178,584	117,430
Signature HealthCARE of Memphis	190,689	346,307	306,948
Signature Healthcare at Saint Francis	29,308	280,590	505,879
Montgomery Care and Rehab Center	301,304	217,305	178,308
Morgantown Care & Rehabilitation Center	331,563	403,387	219,596
Mountain City Care & Rehabilitation Center	242,206	198,720	112,875
New Eastwood Care and Rehabilitation Center	(115,217)	3,670	(99,049)
Signature HealthCARE of North Florida	194,254	218,772	(37,858)
Signature HealthCARE of Ormond	70,215	246,264	52,560
Pigeon Forge Care & Rehabilitation Center	(43,432)	(332,096)	(18,148)
Signature HealthCARE of Pikeville	198,626	(128,134)	77,170
Pine Ridge Care & Rehabilitation Center	256,975	203,098	187,624
Pinellas Park Care and Rehabilitation Center	254,405	131,361	271,547
Prestonsburg Health Care Center	73,017	140,290	80,482
Riverview Health Care Center	202,551	234,188	189,421
Rockcastle Health & Rehabilitaion Center	189,063	232,416	109,199
The Bridge at Rockwood	334,110	174,258	154,674
Signature HealthCARE of Marietta	47,724	(160,063)	444,080
Spring City Care and Rehabilitation Center	83,318	20,739	215,314
Standing Stone Care and Rehabilitation Center	(3,129)	101,544	54,597
Surrey Place Care Center	96,548	69,661	68,664
Signature HealthCARE of Palm Beach	32,683	94,933	156,708
The Bridge at Monteagle	96,744	(140,421)	134,255
Signature HealthCARE of Gainesville	85,025	210,086	196,161

Signature Healthcare, LLC
Quarterly EBITDA Report

	2009 1st Oct-09 ACTUAL	2009 2nd Dec-09 ACTUAL	2010 3rd Mar-10 ACTUAL
Signature HealthCARE of Spencer County	295,482	138,515	94,522
Washington Rehabilitation and Nursing Center	222,422	267,530	94,814
Signature HealthCARE Center of Waterford	747,562	992,232	456,908
Signature HealthCARE of Port Charlotte	205,256	387,204	654,099
Winter Park Care & Rehabilitation Center	173,434	258,092	248,121
Total Experimental Group	7,140,732	6,600,023	7,860,888
facility average Exp Group	140,014.36	129,412.22	154,135.07
		-7.6%	-19.1%
TOTAL FACILITY EBITDA	9,866,286	9,862,393	9,706,759

137

Adult Learning Certification Series

Module I: Principles and Approaches to Adult Learning

Module II: Learning Styles and Cohort Effects

Module III: Facilitation vs. Teaching

Module IV: Effective Presentation Techniques

Module V: What Do You Want the Learners to Do?

Critiques:

1. Positive Critique of presentation applying adult learning principles

2. Negative Critique of presentation applying adult learning principles

APPENDIX I
Adult Learning Certification Series

FACILITATOR CANDIDATE PRESENTATION EVALUATION

Candidate Name: _____ Assessment Date: _____

Assessor Name: _____

Content:	Disagree				Agree
The material was current	1	2	3	4	5
Showed evidence of sufficient depth of knowledge in subject area	1	2	3	4	5
Presentation was appropriate for the adult learner	1	2	3	4	5
Material was presented logically and clearly	1	2	3	4	5

Platform and Nonverbal Skills:

Credibly introduced self and the material (Oriented audience)	1	2	3	4	5
Spoke in a clear, well-modulated voice? (Speech clear & definite)	1	2	3	4	5
Appeared professional and self-confident in appearance and demeanor (Used body language well: Eye contact, gestures, posture)	1	2	3	4	5
Presentation style lively and energetic (Enthusiasm)	1	2	3	4	5
Used visual aids and/or supplemental materials effectively	1	2	3	4	5

Interaction

Structured presentation to involve the group	1	2	3	4	5
Effectively facilitated the discussion	1	2	3	4	5
Responsive to questions and open to alternate ideas	1	2	3	4	5
Friendly and supportive during presentation	1	2	3	4	5
Managed time effectively	1	2	3	4	5

APPENDIX I
Adult Learning Certification Series

FACILITATOR CANDIDATE PRESENTATION EVALUATION **Page 2**

Interaction Questions:

Does the candidate have a "presence"?   ❏ No   ❏ Yes

Can this candidate develop a rapport/synergy with the audience?   ❏ No   ❏ Yes

Strengths:

_____
_____
_____
_____

Weaknesses:

_____
_____
_____
_____

Final Decision

❏ Reject this candidate   ❏ Accept this candidate with reservation   ❏ Accept this candidate

Comments:

_____
_____
_____
_____

140

APPENDIX II
Healthcare Educator Series

Healthcare Educator Series Agenda

<u>Day 1</u>

<u>Morning Session to begin at 9:00</u>

- Welcome/Overview – Joe Steier and Joe Barimo
                    BREAK

- Signature's Strategic Future Scenarios (Overview) – Joe Steier
                    LUNCH

<u>Afternoon Session</u>

- Roles and Responsibilities of the Healthcare Educator – Joe Barimo
- Emotional Intelligence – Joe Barimo
                    BREAK

- Multiple Intelligences – Joe Barimo
- Becoming a Learning Leader – Resonant Leadership by Annie McKee – Joe Barimo
                    Dinner at Home Office

- Review of Adult Learning Certification
- Adult Learning Certification Presentations

<u>Day 2</u>

<u>Morning Session to begin at 8:00</u>

- Principles and Methods of Effective Teaching – Joe Barimo
                    BREAK

- Resume Principles and Methods of Effective Teaching – Joe Barimo
                    LUNCH - Learning Styles

<u>Afternoon Session</u>

- Principles and Methods of Effective Teaching (Role Play/Activities) – Joe Barimo
- Education & Learner Engagement – Joe Barimo
- Objective and Outcomes – Joe Barimo
- Review
- Presentation Group Work
                    DINNER

<u>Day 3</u>

<u>Morning Session to begin at 8:00</u>

- Overview of Presentations – Q&A – Teaching Your Team
- Presentations
                    LUNCH

<u>Afternoon Session</u>

- Resume Presentations
- Wrap Up

Facility Name:		MO.	DAY	YEAR		CODE

SCENARIO PLANNING TRAINING EVALUATION

- Use a No. 2 pencil or blue or black ink pen only.
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the circle completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form.

Please complete this evaluation by responding to the statements below. Your feedback will assist us in providing quality training. This information will be kept confidential and used only for the purpose of evaluation training.

Instructions: **Please mark the appropriate bubble according to the scale provided.**

	Excellent	Good	Fair	Poor
1. Instructor Delivery				
Instructor was knowledgeable of the subject.	○	○	○	○
Instructor effectively presented the training material.	○	○	○	○
Instructor was well organized.	○	○	○	○
Instructor responded effectively to employees.	○	○	○	○
2. Training Design				
Training objectives were met.	○	○	○	○
Training met my expectations.	○	○	○	○
I benefited from class participation.	○	○	○	○
Training was related to my duties/job assignments.	○	○	○	○
Topics covered will improve my performance.	○	○	○	○
Training was presented in a logical sequence.	○	○	○	○
Pace of training was appropriate.	○	○	○	○
Exercises contributed to learning.	○	○	○	○
Training materials were effective.	○	○	○	○
Facilities were conducive to learning.	○	○	○	○

Facility:

MO DAY YEAR CODE

SCENARIO PLANNING TEST FORM

- Use a No. 2 pencil or blue or black ink pen only.
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the circle completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form.

Pre-Test

Post-Test

1. Traditional forecasting techniques often fail to predict significant changes in the organization's environment, especially when change is rapid or when information is limited. Therefore, one should use which of the following:

   Guesstimates
   Root Cause Analysis
   Scenario Planning
   Porter's 5 Forces Model

2. What percentage of the staff typically knows an organization's plan?

   5
   15
   25
   55

3. The best word to describe healthcare reform is:

   Change
   Chaos
   Politics
   Democrats

4. In order to best survive the threats of lower reimbursement and unexpected challenges in healthcare reform, an organization should:

   Cut positions
   Have a plan
   Increase revenue
   Decrease expenses

5. If the aging population is the fastest growing group in the US and is predicted to be sicker both physically and mentally, then it makes sense that Signature HealthCARE:

   Expand Serenity LTC services
   Expand Therapy services
   None of the above
   Both A and B

6. Given the current Healthcare environment, it is fair to assume:

   Less support for President Obama
   More government involvement and mandates
   Fewer nurses will be needed
   Socialized medicine is coming

7. Given the shortages in qualified medical staff and increasing labor costs, the best response for Signature HealthCARE would be to:

   Increase Recruiting Efforts
   Pay the highest salaries in the industry
   A and B
   Continue to develop and use technology to maximize efficiency and effectiveness

8. When an organization needs to think from the outside-in, the best model to use would be:

   The Scenario Planning Model
   The Porter Model
   The Serenity Model
   The Signature HealthCARE Model

9. If Hospice care is better funded under healthcare reform than the SHC Palliative Care model, the issue for SHC would be one of:

   A new entrant
   Threat of substitute
   All of the above
   None of the above

10. Given what has happened and is happening in healthcare reform, the areas that have the greatest impact in long term care are:

   Tort reform and competitive rivalries
   Utilization and reimbursement
   Regulations and political party
   The President and the Congress

143

11. If reimbursement for long term care is low, but many people require the services, the scenario or situation can best be described as:
- Brutal healthcare
- Utopia healthcare
- Boutique healthcare
- Commodity healthcare

12. Standardizing operating processes can help reduce the following:
- Lawsuits
- Survey tags
- Confusion
- All of the above

13. The purpose of lean can best be stated as:
- Cost cutting
- Downsizing
- Creating value by eliminating waste
- None of the above

14. As companies improve their processes, they should be able to:
- Reduce staff
- Reallocate their productive resources to new value-creating work
- Downsize
- None of the above

15. Because facilities can no longer forecast minutes in the first assessment under MDS 3.0, the best response for us would be:
- Develop weekend therapy programs
- Incorporate LEAN Management
- Cut therapy expenses
- None of the above

16. Rate cut exposure has to do with:
- Effects of interest rate cuts
- Fewer services being offered
- Reduction in reimbursement for services
- None of the above

17. Restorative nursing may be best seen as the link between therapy and nursing because:
- It is aimed at maintaining gains
- It fosters collaboration
- It links interventions to the care plan
- None of the above

18. By working with the resident everyday, the restorative nursing program can best improve a resident's quality of life by maintaining the resident's:
- Morale
- Level of independence
- Medicare status
- None of the above

19. When deciding what program/projects to choose or reject, a facility should:
- Establish majority rule
- Establish objective criteria
- Establish a committee
- None of the above

20. In order to most improve Stakeholder engagement and resident satisfaction, the facility should:
- Provide Chaplain services
- Buy new furniture
- Paint the building
- None of the above

Facility:

"ESCORTED" DINING TEST FORM

- Use a No. 2 pencil or blue or black ink pen only
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the circle completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form

○ Pre-Test

○ Post-Test

CORRECT MARK

MO DAY YEAR CODE

1. The "Escorted" Dining program fits well with restorative nursing because:

(A) It involves nurses and therapists
(B) It coordinates nursing and therapy efforts
(C) It is reimbursed under MDS 3.0
(D) It focuses on functional independence

2. The "Escorted" Dining program would have the greatest effect on which measure that is reported to the State and affects our survey score:

(A) Skin integrity
(B) Falls
(C) Weight loss
(D) Hydration

3. The greatest value of "Escorted" Dining would be its effect on:

(A) Weight loss
(B) Therapy outcomes
(C) Quality of life
(D) None of the above

4. The "Escorted" Dining program would reflect the piece of the Ark of Survival called Clinical Excellence because:

(A) It is a standardized process
(B) It focuses on nursing
(C) It is a major part of MDS 3.0
(D) It requires nurses to improve their skills

5. If the "Escorted" Dining program provides a homelike dining experience and increases resident social skills, the part of the Ark of Survival most affected would be:

(A) Creating 5 star facilities
(B) Establishing comprehensive restorative programs
(C) Establishing new education for all
(D) Making culture change a reality

6. If the "Escorted" Dining program produces a reduction in falls and increases nutritional intake, then which piece of the Ark is most impacted:

(A) Improving behavioral expertise
(B) Establishing clinical excellence
(C) Creating 5 star facilities
(D) None of the above

7. In order to know how successful this program is, each facility must establish:

(A) Objective criteria
(B) Baselines
(C) Clinical standards
(D) All of the above

8. Which 2 areas must be measured in order to see if the project's goals have been satisfied:

(A) MDS and safety
(B) Falls and physical endurance
(C) Socialization and falls
(D) Functional independence and falls

9. The functional level of residents for this program should be established by:

(A) Administration
(B) Therapy
(C) Nursing
(D) Dietary

10. If the program increases the residents' motivation, self-respect and mood then we are most likely to see an improvement in:

(A) Safety awareness
(B) Reduction in Falls
(C) Behavior
(D) Nutritional status

145

11. The "Escorted" Dining program is for residents who:

    (A) Can walk without assistance
    (B) Can walk with assistance
    (C) Can walk with or without assistance
    (D) Can only get around by wheelchair

12. The "Escorted" Dining program would be implemented for at least:

    (A) 1 meal a day
    (B) 2 meals a day
    (C) 3 meals a day
    (D) For snacks only

13. All employees should learn about the "Escorted" Dining program in order to:

    (A) Increase behavioral expertise
    (B) Satisfy MDS 3.0 requirements
    (C) Improve clinical excellence
    (D) Make culture change a reality

14. Having a standardized operating process for the "Escorted" Dining program can help reduce the following:

    (A) Lawsuits
    (B) Survey tags
    (C) Confusion
    (D) All of the above

15. By working with the resident every day in the "Escorted" Dining program, the "Escorted" Dining program can best improve a resident's quality of life by maintaining the resident's:

    (A) Morale
    (B) Level of independence
    (C) Medical status
    (D) None of the above

16. Functional Independence has to do with:

    (A) Being alone
    (B) Doing things without help
    (C) Doing activities of daily living as independently as possible
    (D) None of the above

17. If a resident begins the "Escorted" Dining program only able to walk 5 feet independently but after 30 days can walk 15 feet, then we can say that which of the following has improved:

    (A) Morbidity
    (B) Mobility
    (C) Motility
    (D) None of the above

18. As we improve the processes associated with the "Escorted" Dining program we should be able to:

    (A) Work smarter not harder
    (B) Cut staff
    (C) Downsize
    (D) None of the above

19. The purpose of the "Escorted" Dining program can best be stated as:

    (A) Increasing functional independence
    (B) Establishing restorative nursing
    (C) Cutting therapy expenses
    (D) None of the above

20. Ambulation is the same as:

    (A) Eating
    (B) Drinking
    (C) Walking
    (D) None of the above

"Escorted" Dining

Project Description:

To escort residents who can walk with or without assistance to and from a dining room chair for 2 meals per day to increase their functional independence/mobility and to decrease falls. The value of escorted walking is a key methodology to enhance quality of life.

Benefits of the Program:

- Improves resident:
    * Leg strength
    * Stamina
    * Balance skills and foot position sensation
- Increases resident:
    * Motivation
    * Safety awareness
    * Socialization and social skills
    * Nutritional intake
- Enhances resident:
    * Self-respect
    * Independence
    * Overall dining experience
    * Mood
- Results in Improved:
    * Homelike dining experience
    * QI/QM measures including a reduction in falls

How to:

1. Announce Facility adoption of the program and why to implement.
2. Rehabilitation Team should establish the ambulation abilities of each resident who is currently not ambulating to or into the dining room.
3. In-service staff 2 weeks prior to start of the program:
    a. Introduce to all 3 shifts.
    b. Clarify the advantages to the resident of the program.
    c. Discuss the positive impact for the staff if the resident gains improved ambulation skills.
    d. Note and discuss that pre-meal grooming is an important part of the program.
4. Designate one unit at a time, establishing completion of all units within 30 days of the start date.
5. Process:
    a. Based on therapy recommended functional level, escort residents in to the dining room and seat in designated fine dining chairs.
    b. Park wheelchairs outside of dining room.
    c. Upon completion of the meal, escort back to where wheelchairs are parked or to room.

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