

BUSINESS PROFESSIONALS' REFLECTIVE PRACTICE
IN THE WORKPLACE

by

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ABSTRACT

The purpose of the study was to examine the relationship between workplace learning and reflective practice. The study offers a quantitative contribution to the literature of both workplace learning and reflection while offering a specific strategy, incidental learning, for executives to build learning organizations. Two instruments, the Small Business Workplace Learning Survey (SBWLS) and Critical Reflective Practice Questionnaire (CRPQ), were used to test the correlation between workplace learning and reflective practice among Michigan business professionals.

The findings revealed a significant relationship between incidental learning and reflection. Additionally, there was a strong correlation between the different types of workplace learning. Workplace learning includes formal, informal and incidental learning. Informal learning has been highlighted in research and practice as the area where professionals learn most. Incidental learning, a byproduct of informal learning, correlates significantly to reflection in this study. Through reflective practice, executive leaders can help cultivate greater learning experiences by helping to aid in increasing informal learning. Executive leaders must cultivate learning organizations to compete in a global economy. Leaders who use interpersonal skills to help professionals learn more from everyday incidents will increase the learning taking place in their organizations.

DEDICATION

This dissertation is dedicated to my biggest cheerleader and best friend; my husband Norman. Norman, and my three children Kyla, Rhyan and Norman Jr., are the greatest motivation and support a person could have. I am so blessed to be a member of Team Hurns who made the ultimate sacrifices for me to complete this work. I told Norman my dreams and they became his too. This dissertation is our dream realized. I pray that the entire team dreams bigger dreams because of what we did together.

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TABLE OF CONTENTS

LIST OF TABLES	xi
CHAPTER I: SIGNIFICANCE AND PURPOSE OF THE STUDY.....	1
Introduction	1
Statement of the Problem	1
Purpose of the Study	2
Definition of Terms	2
Significance.....	4
The Learning Organization.....	5
Workplace Learning	6
Reflective Practice	8
Workplace Learning in Practice.....	9
Research Questions	10
Delimitations and Limitations	10
Summary	11
CHAPTER II: LITERATURE REVIEW	13
Experiential Learning.....	13
Experiential Learning Theory Critique.....	14
Summary.....	16

Action Learning.....	16
Theories of Action	18
Summary.....	20
Workplace Learning.....	20
Informal/Incidental Learning.....	23
Practical Research.....	24
Research Philosophy.....	25
Reflective Practice.....	26
The Reflective Practitioner	27
Reflection: A Model	28
Reflection Critique	30
Summary.....	31
Reflection in the Workplace	32
CHAPTER III: METHODOLOGY	34
Research Design.....	35
Sample and Setting.....	36
Instrumentation.....	36
The Small Business Workplace Learning Survey (SBWLS)	37
Reliability and Validity.....	37

The Critical Reflective Practice Questionnaire (CRPQ)	38
Reliability and Validity	39
Demographics	40
Recruitment	40
Data Collection and Management	41
Pilot Study	41
Ethical Considerations	44
Hypothesis Testing	45
CHAPTER IV: RESULTS AND DISCUSSION	46
Sample Demographics	46
Research Questions & Analysis	48
Research Question One	48
Research Question Two	49
Assessment of the Validity and Reliability of the Instruments	51
CHAPTER V: IMPLICATIONS AND CONCLUSIONS	53
Findings and Discussion	55
Move Learning to the Boardroom	56
Ford Motor Company Case Study	57
Developing Reflective Practitioners	59

Public Policy and Education Sector Implications.....	60
Research Contributions	61
Implications for Future Research	61
Study Limitations	62
Concluding Remarks	63
References.....	64
Appendix A: Research Survey Instrument	72
Appendix B: Consent to Participate.....	77
Appendix C: Solicitation Letter	78

LIST OF TABLES

Table 1	Comparison of Factor Analysis for SBWLS Studies	43
Table 2	Summary of Sample Demographics	47
Table 3	Types of Learning Correlated to Reflections.....	49
Table 4	Inter-correlations of Learning Types of Learning	50
Table 5	Learning Types; Summary of Range and Means.....	51
Table 6	Cronbach's alpha for Instruments and Learning Types.....	52

CHAPTER I: SIGNIFICANCE AND PURPOSE OF THE STUDY

Introduction

Individual leaders and organizations must continuously learn in order to survive in the ever-changing global environment. Effective leaders are required to build learning organizations in today's competitive marketplace. They must be able to generate and acquire knowledge and use that information to modify their behavior and continuously learn. In addition, there is a need to provide strategies for executive leaders to motivate learning in professionals across the organization.

This study researched learning from the perspective of the individual professional in order to develop practical strategies for executive leaders to cultivate learning organizations. While the learning organization has provided a vision for the modern organization, the idea lacks the specificity required to direct daily actions to promote learning. Management development is anchored in the workplace and the practice of management provides fruitful learning opportunities. Research steeped in the workplace and focused on professionals can provide the type of direction required to bring learning into daily practice.

Statement of the Problem

To build learning organizations, executive leaders need practical strategies. The learning organization has been proposed as the modern organizational structure that will garner competitive advantage for organizations (Cohen & Sproull, 1996; Pavlica, Holman, & Thorpe, 1998; Senge, 2006), but it has been seen as a panacea without tactics

for execution. Organizational leadership depends upon learning as a competency. Executive leaders must know how to cultivate learning in the workplace and which practices can aid in the learning process.

Purpose of the Study

This study evaluated the relationship between workplace learning and reflective practice. Reflection is being studied as a tool to cultivate learning in the workplace. Amplifying reflection as a management practice will add a significant practical strategy for learning at work. *Reflective practice* can serve as a valuable strategy for learning at work.

Definition of Terms

The *learning organization* “is an organization that has enhanced capacity to learn, adapt, and change. It’s an organization in which learning processes are analyzed, monitored, developed, managed, and aligned with improvement and innovation goals” (Gephart, Marsick, Van Buren, & Spiro, 1996). A key distinction has been made between the learning organization as a structural concept and organizational learning as a process. Fernandez defined *organizational learning* as a process based on individual learning within an organization engaged in creating knowledge in order to respond to the changing environment (as cited in Castaneda, 2007). This researcher proposes that the practical implications of the learning organization and organizational learning reside in *workplace learning*. *Workplace learning* includes any learning experience that occurs in the workplace through individuals and groups making sense of information, skills, feelings and experiences (Chiang & Wang, 2008).

Learning organization theory defines leadership as a shared function (Gephart, et al., 1996; Senge, 2006). Schon (1983) focused on the *Reflective Practitioner* and did not delineate levels of management, but proposed that teachers, doctors, lawyers, and managers are all professional practitioners. Professional work is defined by autonomy in decision-making and judgment (Evetts, 2002). For the purpose of this study, the terms *business professional*, *practitioner* and *manager* will be used interchangeably in reference to working individuals with business degrees at all levels of the organization, assuming plans to progress to a level of leadership in the future. Building learning organizations requires executives to understand the ways in which the professionals they lead learn in the workplace.

Reflective practice is being mindful of self during or after professional situations. The professional is using cognitive, behavioral, and affective components to grow, learn and develop (Lawrence, 2009). Reflective practice is action by individuals, which, if connected with workplace learning (experience) can provide professionals with the tools to continuously learn and contribute valuable tacit knowledge to organizations. A key practical outcome of this research for executive leaders is to aid in the development of *reflective learners* who are using their meta-cognitive skills at work. To employ reflective practice, professionals will need to acquire the skills of *reflective learning* and the use of their meta-cognitive skills to consciously prompt themselves to learn and think about how they are learning from workplace experiences.

Significance

Research on specific workplace learning strategies contribute greatly to the progress in actually developing learning organizations. Organizational practices like collaborative work, coaching, mentoring, and debriefing sessions can promote reflection and learning among professionals. Understanding reflection helps frame current management practices into fruitful opportunities to increase workplace learning. In addition, this research is valuable to policy development at the local and national level in workforce development and education. A renewed focus on apprenticeships, cooperative education, and internships may be warranted. Ultimately, the corporate expenditures and emphasis on the types of training and development can be streamlined to more workplace learning practices and further use of reflective practice to reduce as well as leverage expenditures spent on organizational development. While some training and development expenditures can be cut, the use of reflective practice can increase the return on investment from traditional organizational development expenses.

Reflection aids in understanding how individuals learn while serving as a force to drive learning. Focusing the study on business professionals instead of the actual executives will provide analysis of learning in the organization from the source (Argyris, 1992; Argyris & Schon, 1996). Understanding how individual business professionals reflect and learn provides practical strategies for executive leaders.

This research contributes to the body of knowledge on workplace learning and reflection. If organizations are going to reap the promises of the learning organization, attention must be given to individual learning in the workplace and the behaviors that take place internally. There are no easy formulas for cultivating learning; however,

insight into the minds of individual professionals and how they reflect upon their practice will provide a valuable path to the learning organization.

Hewlett's *The Cognitive Leader* painted an attractive vision for the type of leadership necessary in today's hypercompetitive environment. The text focuses on the meta-cognitive skills required for leaders, including notions of self-awareness, instinctive reflection, and control of thinking (Hewlett, 2005). Hewlett posited:

Since individual human learning is the foundation for organizational learning, it is essential to develop working understanding of individual learning, thinking, and the role of communication in knowledge generation prior to tackling organizational knowledge development. All that we are or hope to become is related to knowledge. Our framed experiences, values, expert insights, and intuition provide a context for new experience and learning. The world of knowledge should be viewed as linking individuals to organizations. (p. 21)

The Learning Organization

The learning organization and organizational learning are visionary ideas with broad implications to build competitive advantage and meet the dynamic needs of an ever-changing economy. Although its popularity has peaked among practitioners and researchers, it has become a common term in business language. Senge's book *The Fifth Discipline: The Art and Practice of the Learning Organization* (2006) popularized the concept and introduced the idea to practitioners. However, as the idea of the learning organization has matured, debate about its feasibility has grown.

Grievs (2008) argued that the learning organization is an apolitical, relative, and elusive concept that requires testing through application and should be abandoned. The

learning organization can be viewed as an imaginative idea with promise, but little practicality for application. Senge (1993) even noted that broad ideas on organizational learning, although radical, have had little impact on practice. Much of the commentary Senge (1993) provided regarding the promise of the learning organization is very positive, although he believes the shift will be slow. Grieves (2008), however, noted that little impact has been measured and that more focus needs to be placed on organizational learning, which is more process-oriented.

Consistency has been established regarding the characteristics and dimensions of the construct as well as how to define learning organizations (Gephart et al., 1996; Goh, 2001). However, there is still little evidence of learning embedded in daily business practices or how executive leaders engage the workplace. Theorists have begun to frame appropriate direction for future research (Mumford, 1992; Rebelo & Gomes, 2008; Smith, 2008) that will add definition to the concept of the learning organization. The amount of empirical research is increasing, but it is important to research *practical* applications of organizational learning and the learning organization. The motivation and context of this research is the need to create learning organizations as a competitive strategy for the future. The learning organization should not be abandoned; rather, a practical emphasis should be adopted. Workplace learning easily provides that type of focus. Workplace learning can provide executive leaders with strategies to build a learning organization.

Workplace Learning

Workplace learning acknowledges that the workplace is a rich source of knowledge creation; people learn at work in a variety of ways. Workplace learning brings

to practical terms the possibility of the learning organization. A desire to make work more intellectual has ignored valuable knowledge creation that is perceived as vocational. While the learning organization and organizational learning continue to be hot business topics, the lofty academic theory has failed to translate into practical application. Workplace learning clearly purports that people learn at work. The area of research easily directs research and writing about learning at work. The key difference between organizational learning and workplace learning is the focus and practicality.

As a research area, workplace learning is grounded in multiple fields of study: adult education (Mezirow, 1985), organizational behavior (Argyris, 1992), vocational education (Mumford, 1992), and human resources management (Rowden, 1995). In addition, workplace learning research stems from multiple points of view: the manager, learner, and practitioner. In addition, the learning theories outlined in the literature review for this research integrate the learning theories that are consistently cited in workplace learning research.

Mintzberg emphatically proposed that learning about management cannot take place in a classroom (2004). Framed as formal, informal, and incidental learning, workplace learning brings to “life” the theory and discussion surrounding the possibilities of the learning organization. While it seems that many in the United States (unlike the United Kingdom) judge workplace learning because of its vocational tone, workplace learning brings necessary simplicity to discussions about the learning organization, knowledge work, and organizational learning. Workplace learning has been undervalued, although the attitude is changing; there has been immense growth in the study during the late 1990s (Holland, 2009). The recent growth in this area is due to the need for practical

organizational learning strategies. Further research and writing is required that positions workplace learning as a body of knowledge and practice that prompts organizational learning. Reflection is a specific strategy that can be used to increase workplace learning.

Reflective Practice

Schon (1983) popularized reflective practice as a process focused on the practitioner who is using tacit knowledge to turn thought into action. Reflection is an imperative for effective managers and leadership development in the learning organization. In Mintzberg's text, *Managing* (2009) he noted that managers must hone their capacity to reflect in their work. Reflective practice has been a construct of interest since the early 1900s when John Dewey defined learning as "reflective thinking" (1910). As business professionals are constantly solving problems and dealing with uncertainty, reflection is a key element of practice and learning.

The reflective practitioner is constantly learning from work. "This he does through a web of moves, discovered consequences, implications, appreciations, and further moves...individual moves yield phenomena to be understood, problems to be solved, or opportunities to be exploited" (Schon, 1983, p. 131). The idea is analogous to the final step in the controlling function of management as well as the PDCA (plan, do, check, act) cycle popularized by Deming (1986). Reflective practice purports continuous improvement and learning on behalf of the individual professional. Furthermore, reflective practitioners integrate theory and practice.

The nursing profession has adopted the concept of reflective practice as a tool for nurses to learn and increase their individual capacity. In the United Kingdom, reflective practice is a part of practicing nurses' continuing education (Lawrence, 2009). The

knowledge that drives successful practice is tacit and not easily managed – it resides in the process of reflection. Reflection is the catalyst to learning in the workplace and is the opposite of competence perspectives in which professionals solely apply prescribed technical theories. There is a well-identified gap between professional knowledge and real-world practice (Schon, 1983), as professionals think on their own about what they are doing and how they are doing; reflection is taking place. Moreover, reflection provides an opportunity to learn more about the practice of management (Morgan, McCall, Lombardo, & Morrison, 1988).

Workplace Learning in Practice

In an internal study (Soroan, 1993), Ernst & Young found that 90% of employees' learning was informal and took place on the job. A variety of daily tasks like project teams, self-study and professional coaching all contributed to the learning that took place at the company. In an effort to develop employees, the company sought out a *practical* process to capture workplace learning. The company engaged the work of consultants (Marsick, 1986, 1987, 2009; Marsick & Watkins, 1990) who defined the informal/incidental learning theories as a model that uses business experiences as learning opportunities. The models the company employed positioned employees as learners responsible for managing their learning and their managers as coaches. Managers would help others learn by creating a learning environment, reviewing the plan to help others, acting on plans, encouraging reflection, providing feedback, and finally transferring the lessons learned to share with others. Employees would plan what needs to be learned, reflect on their plans, act upon the plans, reflect on the actions, and transfer the lessons learned to share with others (Soroan, 1993).

The model at Ernst & Young is focused on providing a process that can be used to promote learning. The new approach requires professionals to frame problems from many perspectives—reflect. Planning, reflection and feedback helps the organization deal with complex challenges it faces. These are valuable implications for practitioners, as noted in this Ernst & Young example. This study will focus on reflection as a means to prompt and coach learning in the workplace.

Research Questions

The targeted population for this research was Michigan business professionals with an undergraduate degree. The following research questions guided this study:

1. To what extent do the three types of workplace learning (formal, informal, and incidental) relate to reflective practice?
2. What is the relationship among the three types of workplace learning for business professionals?

The first question was the focus of the study, while the second research question adds information to make practical recommendations. The second research question will help executive leaders and general managers think about the type of training and development expenditures that should be made.

Delimitations and Limitations

This goal of the study was to evaluate reflective practice as a strategy to increase workplace learning. It was not the intent of the study to draw conclusions about learning in the workplace beyond the scope of reflective practice. The research evaluated reflective practice and workplace learning for individual professionals, not executive

leaders. This research supports the idea that organizational learning starts with individual learning (Argyris & Schon, 1996). Today's leaders are required to build learning organizations and should be provided with strategies that aid them in cultivating learning as a competitive competency. Executive leaders can gain valuable insight from understanding learning from the individual perspective and applying that knowledge to nurture learning in the organization.

Learning is a complex phenomenon; the process of participant self-reporting limited this study. No theory can account for every variable that impacts individual learning. Social, cultural, and other assumptions and experiences influence an individual's accumulation of knowledge. There are ways of knowing that may not be available for question. This research allowed participants to report on their own reflection as it relates to learning in the workplace. However, the study could not account for every influence upon the individual.

Summary

Executive leaders require practices that can be applied in the workplace to deliver the promise of the learning organization. This research focused on understanding and developing strategies for practice to meet the growing demands for individual life-long learning as well as the organizational development demands required of executive leaders. The dual benefit of understanding and applying learning practices at the individual level with an intent to impact executive leadership will add significantly to the body of knowledge related to learning at work.

Mintzberg stated there is a need to move to a third-generation of management development that requires managers to "slow down, step back, and reflect thoughtfully on

their natural experience (Mintzberg, 2004, p. 28).” Mintzberg proposed that managers must move beyond action and actively engage in learning. He believes that ideas like action learning moved management development beyond training but did not go far enough to drive learning. This research proposes reflective practice as a practical strategy for the type of individual learning Mintzberg (2004) highlighted. Chapter II outlines and integrates the theories and fundamental ideas that have evolved the discussion about learning through experience and reflection in the workplace. The literature review amplifies the constructs of this research by reviewing pertinent learning theories and related studies.

CHAPTER II: LITERATURE REVIEW

The context of this study acknowledges that generic skills are not a feasible position toward building a learning organization or developing future leaders competing in a dynamic economy. Further understanding and framing of workplace learning will provide a practical approach to the learning organization. This literature review will introduce and describe three learning theories important to understanding learning in the workplace: experiential learning theory (ELT), Agryis' and Schon's (1996) theory of action, and action learning (AL). The concept of workplace learning will be discussed and defined. Finally, the learning theories will be integrated and the concept of reflection will be amplified, as a characteristic of each theory along with Schon's (1983) ideas on reflective practice.

Experiential Learning

ELT (Kolb, 1984; Kolb & Kolb, 2008; Kolb, Rubin, McIntyre, 1971) has become the foundation for modern discussions on learning and experience. It is the basis for practices in modern management development and training as well as management education. Kolb's model is comprehensive. Theoretical traditions of John Dewey, Kurt Lewin and Jean Piaget in experiential learning, as well as streams of thought originated by Carl Jung, Erik Erikson, Carl Rogers and Abraham Maslow (Kolb, 1984), are the foundation of the model. The interdisciplinary roots stretch from experiential learning to psychology.

ELT has been generalized in a variety of environments from the classroom to the workplace. It is pragmatic and it acknowledges the individuality in learning. It allows practitioners to make connections between theory and practice. In management practice, the theory helps to provide valuable insight to help managers understand their experiences and learn from them.

Kolb's model (1984) defined learning as "the process whereby knowledge is created through the transformation of experience" (p. 26). Four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation, define the model. Kolb (1984) delineated that the four modes represent two dialectically opposed adaptive orientations. The abstract/concrete orientation represents the grasping and interpreting of experiences through context. The active/reflective dialectic represents the transformation of the experience through intention and extension. Specific to management, Kolb (1984) noted the following about managers:

He must be able to involve himself fully, openly, and without bias in new experiences (CE), he must be able to reflect on and observe these experiences from many perspectives (RO), he must be able to create concepts that integrate his observations into logically sound theories (AC), and he must be able to use these theories to make decisions and solve problems (AE). (Kolb et al., 1971, p. 31)

Experiential Learning Theory Critique

Criticism of ELT focuses on the shortcomings of the theory. The lack of context and acknowledgement of organizational issues like politics and power are common critiques of the theory (Ramsey, 2005; Vince, 1998). Not everybody will choose to work

respectfully with others. Ramsey (2005) directly criticized the concrete experience variable in the model, noting that the experiences lack meaning without appropriate context, which is created through reality and communication.

While these commentaries are valuable, Kolb (1984) acknowledged the theories that informed his work. Although many of these ideas are not explicit in the model, they are included in the details of his research. Organizational and context issues are characteristics of the reflection process. Contextual dimensions are obvious aspects of the reflection process.

Another relevant critique of Kolb's theory is the focus on self and the lack of continuous reflection (Kayes, 2002; Pavlica et al., 1998; Ramsey, 2005; Vince, 1998). Although developing a learning organization requires organizational learning, learning starts with individuals. Understanding the process and tension in the minds of managers is imperative to execute learning strategies. Kolb (1984) noted that the learner acts and reflects at the same time. Reflection should stand out more as an iterative process in the model. Previous experiences do affect current ones and can thwart potential learning, requiring continuous reflection to prompt new learning. Reflecting only after an experience is a shortsighted view of learning (Vince, 1998).

Kolb's theory purported a subjectivist epistemology while integrating appropriate ideas into a model that undergirds the idea of workplace and lifelong learning for professionals. Valuable subjectivity in management theory would aid in reflection and other tools like ELT to support strategic thinking and the type of innovation necessary for organizations to compete.

Summary

The critiques of ELT are important because they highlight its existing gaps. Vince (1998) proposes working from models that are as complex as the learning environment. As the workplace becomes more complex, learning theories applied for management development will require both breadth and depth. Other theories discussed in this literature review add that type of depth and breadth where ELT has shortcomings.

The individual is only one aspect of the learning process. However, individual learning should not be discounted when the goal is the development of managers. ELT is not incomplete. The theory has a very strong foundation based on an impressive degree of interdisciplinary perspectives. While many critique the model's lack of social aspects and the positioning of the individual as the sole author of theory, the model serves the purpose of dealing with the process specific to the individual. ELT proposes an important framework to begin thinking about learning from experience. The power of ELT is the potential to explore the dialectic of experience and reflection.

Action Learning

Action learning is a management development strategy. Action learning is a model for the development of the learning organization (Revans, 1982). It is a simple idea that requires the practitioner to become more self-aware in team-based situations. Unlike experiential learning theory, action learning principles require that the experience is a real working situation that is meaningful to the participant. Action learning proposes that one can only learn about work at work; the responsibility for learning is individual. Action learning is a process by which individuals study their actions and experiences to

improve performance (Serrat, 2008). The author of the theory, Revans (1982) believed that people should become aware of their lack of knowledge and be prepared to explore their ignorance with the help of others.

Action learning is a theory that is purposefully fluid while recognizing the importance of individual motivation and empowerment in the learning process. Action learning is expressed by the formula $L = P + Q$, where the learning process (L) takes place through programmed knowledge (P) and questioning (Q). Reflection requires the individual to make sense of an experience by conceptualizing it and generalizing the replicable points with plans for future actions based on the learning gathered. Open communication and team commitment are imperative to the process; Action learning is an experience-based group learning process. The group of colleagues, called the set, facilitates the learning through discussions and group problem-solving. Therefore, this theory contradicts the individual nature of learning proposed by Kolb (1984). As defined by Revans (1982), action learning depends on the interdependence and communication of the team.

The set provides the analysis for individual reflection, where actions are shaped and questioned. The set discussions are reflective and action-oriented. Like other theories related to management and learning, the theory focuses strongly upon reflection which is designated as questioning. The theory states that programmed knowledge should be kept to a minimum.

Action learning is noted in the text, *The 75 Greatest Management Decisions Ever Made* by Crainer (1999). The text details how Revans was invited to Belgium in 1960 to test his hypothesis. His ideas were well received and helped the Belgian economy: the

practice of his theory in building the Common Markets in Belgium helped increase productivity by 102% (Crainer, 1999). The popular Work-Out program initiated by Jack Welch at General Electric is a successful example of Action learning (Peddler, Burgoyne, & Cheryl, 2005). In addition, many organizations have found the military's After-Action Review to be an effective way to learn from work, which is a form of action learning. The GE Work-Out program and the After-Action Review make action learning much more evidence-based and valuable to practitioners as a learning model.

Criticism of AL includes the need for a formal facilitator or educator; others have critiqued the theory as being incomplete, as it does not take into account organizational culture and politics (Peddler et al., 2005). In many cases, practitioners use formal facilitation as a way to employ action learning. Different practices and approaches have been developed that include action mentoring, critical action learning, online and remote action learning, and business-driven action learning (Peddler et al., 2005).

Theories of Action

Argyris (1992) and Argyris and Schon (1996) proposed learning theories that were focused on human behavior and reasoning. Their experience consulting and teaching prompted a proposition of key concepts related to the intersection of individual and organizational learning. The concepts focused on how practitioners think and act, as well as the challenges in changing behavior.

The theories of action assumed that all individuals have their own ideas, values and beliefs that are the context of any experience. When faced with a challenge, individuals will seek another strategy that works within their governing values. This process of seeking an alternative solution based on current knowledge is *single-loop*

learning. Argyris (1991) stated that most professionals are very good at single-loop learning. *Double-loop learning* requires the questioning of the governing values and an alteration in those governing values.

To exemplify the tension between behavior and reasoning, Argyris and Schon noted that practitioners often become successful in organizations even while practicing single-loop learning because they are often good at communicating *espoused theory*. Espoused theories are the ideas that practitioners would ideally employ. A seasoned manager might describe to colleagues how he/she is constantly listening to employees and empowering them to take risks. However, in reality, the manager creates an environment void of freedom and creativity. The actual theory of micromanagement employed is the *theory-in-use*. Espoused theory can slow the learning process as practitioners attempt to force prior knowledge and make multiple attempts to apply it. When applying espoused theory, multiple loops may be required before the practitioner takes new and effective action to apply an alternative theory. The new theory that is applied is the theory-in-use. Learning has taken place when the professional applies the new knowledge.

Argyris (1993) tested these ideas and was able to aid in the development of practical skills for a group of consultants. Over five years, his practice of action research provided evidence to support many of the ideas he and Schon had written about. Argyris (1993) worked with professionals to help overcome defensive actions that promoted single-loop learning and developed an environment where managers are free to test their assumptions.

Individuals may not be aware of the theories they actually use. Reflection can aid in revealing the theory-in-use. Reflection is fundamental in the ideas proposed by Argyris and Schon (1996). Double-loop learning provides a very specific focus for reflective practice. The act of shedding previous values, beliefs, and practices to test new ideas is the type of critical thinking and application characteristic of learning. In writing and researching about learning, these thought leaders amplify the role and importance of reflection in learning and practice. Schon (1983) further investigated the concept of reflection in his work which will be discussed later in this review.

Summary

The theories of action take into account the organizational and individual context in acknowledging the practice of espoused theories. The definitions Argyris and Schon (1996) set forth are valuable, as they defined a specific type of reflection and give depth to the idea of changing values and applying concepts through behavior. While the ideas are referenced in most discussions on organizational learning, specific research testing the constructs and critiquing the concepts is limited to the original authors and their network of colleagues. The ideas help paint a conceptual view of learning from experience when integrated with other theories.

Workplace Learning

Workplace learning is experiential learning in which the experience is “work.” The daily work tasks are learning opportunities for the professional. Workplace learning is not a new phenomenon – it happens all the time. Learning in the workplace is a broad idea. The literature about workplace learning amplifies the importance of reflection, as

well as analyzes, critiques, and combines the learning models and ideas of Kolb, Agyris, Schon, and Revans.

Research focused on learning from experience has shown that there are a multitude of lessons that managers gain from work and related experiences (Douglas, 2003; Lindsey, Homes, & McCall, 1987a, 1987b; Morgan et al., 1988; Mumford, 1988, 1996). Because workplace learning builds from research across disciplines regarding learning, there is a strong building block from which academics and applied researchers can pull. Key facts that characterize workplace learning are as follows (Sorohan, 1993):

- Learning is embedded in individual experiences and is best when individually directed.
- Effective learning has context; therefore, learning should be linked to work.
- Learning is social; the workplace should promote free collaboration and communication.
- Knowledge is continuously being created; individuals need to learn how to capture and share experiences.
- Learning is unconscious; therefore, individuals need help recognizing and questioning tacit assumptions.

The research and writings of Marsick (1986, 1987, 2009) and Marsick and Watkins (1990) provide the most valuable frame and operationalize the concept of workplace learning. Their research defines three categories of learning: formal, informal and incidental. Formal learning includes all planned, structured learning opportunities, and informal learning is the unplanned events that prompt learning situations. Incidental

learning is a byproduct of informal learning; the learning experience stems from informal learning. Marsick and Watkins (1990) have worked together to clarify and frame the theory from Marsick's (1986, 1987, 2009) original research at the University of Texas. The original study used a tool called the *Learning Practices Audit* to study the nature of incidental learning and how it affected the workplace. The study was framed by the concepts of action science and noted that practitioners espouse very different solutions than those that they employ. The qualitative study observed that not all incidental learning is positive. The qualitative study aided in framing the characteristics of the three learning types and how they appear in action. The rich observations and narratives are imperative to later research, both quantitative and qualitative.

In addition to heavy emphasis on the ideas of Agryis (1992; 1996) and Schon (1983) as well as Dewey (1910); informal learning is rooted in research on adult education (Mezirow, 1985) and learning. Cognitive psychologists have supported the concept of informal learning in their research showing that experienced professionals easily reform prior knowledge into new responses (Hager, 2001). Kolb's (1984) research and the framework for ELT are very consistent with cognitive psychology, and the combination of the learning theories presented is very congruent with ideas presented by Bandura's (1986) social cognitive theory. Bandura (1986) proposed that people are governed by internal forces and external stimuli. Internal factors like cognition, affect, and biological events impact behavior. Bandura's (1986) ideas are not only important to the cognitive aspects of reflection and learning—the ideas support individuals as key to understanding organizational learning. Bandura (1986) believed that individuals are

impacted by their environment while contributing to it. Cognitive research supports the theory that intelligence and expertise come from interaction with the environment.

The value of work experience and apprenticeships further support the idea that informal learning takes place at work. Formal, informal and incidental learning are appropriate categories of workplace learning and aided in framing this research.

Informal/Incidental Learning

Informal and incidental learning is a direct contrast to formal learning. Informal learning is a way to tap into tacit knowledge. Formal learning includes structured events, usually in a formal setting or sponsored by an institution. Formal learning includes planned events, while informal learning opportunities are unstructured events. Incidental learning is a subset of informal learning. Incidental learning differs from informal learning in that it is a byproduct of another activity or challenge. People are not always aware of incidental learning, but it is consistently taking place.

Informal and incidental learning can be encouraged or self-motivated. The theory of informal learning has grown from the scholarship and practice of Marsick (1986, 1987, 2009) and Marsick and Watkins (1990). Informal learning is not highly conscious (Marsick, Watkins, Callahan, & Volpe, 2009). It is a social process linked to others, haphazard, prompted by an external jolt and integrated with daily work. Most important, informal learning is an inductive process combining reflection and action.

Experience and reflection are major concepts that undergird informal learning. Essentially, the dialect proposed by ELT is the source of substantial informal learning.

Practical Research

Workplace learning is characterized by a wide variety of practical research (Boud, 1994; Mumford, 1988). Informal learning as a subset of workplace learning is gaining more attention in the corporate environment as a supplement and complement to training and other development programs.

The Teaching Firm Project, developed by the Education Development Center (EDC), Inc., in Massachusetts, undertook research (Leslie, Aring, & Brand, 1998) that involved four businesses in six states. The goal of the research was to explore ways to improve competitiveness in informal ways. Two key conclusions were that many critical skills are acquired informally. In addition, informal learning comprises a majority of the learning that takes place in the workplace. Skill development associated with intrapersonal, interpersonal and cultural knowledge is developed through informal learning. The research concluded that basic daily activities like shift changes, teaming, meetings, communication, documentation, site visits, mentoring and supervision all contribute to informal learning. These findings are consistent with many of the lessons and experiences identified from the *Lessons of Experience* studies (Lindsey et al., 1987; Morgan et al., 1988).

The EDC research denotes the benefit of informal learning for employees. The need for personal achievement, the need for recognition and acceptance and financial security/advancement are all motivating benefits individuals acquire through informal learning. These benefits are important, as workplace learning is positively correlated with job satisfaction and organizational commitment (Chiang & Wang, 2008; Rowden, 1995, 2002; Rowden & Ahmad, 2000; Rowden & Conine, 2005).

As technology is a growing variable in the workplace, recent studies have begun to include technology as a resource to aid in workplace learning. Information technology professionals rely heavily on Internet searching to learn informally as well as on talking and sharing with others (Lohman, 2009). The MAISE Center and Learning Consortium surveyed 6,100 employees in companies around the world for a study titled *The Voice of the Learner* (Masie, 2008). The study found that workers were learning independently at work from colleagues, online courses, searching the web, one-on-one training, and stretch assignments. In a study conducted by The American Society for Training and Development (2008), 41% of respondents said informal learning is occurring in their organizations at a high level. Respondents also noted that informal learning enhanced performance and that it had a positive impact on market performance. Continued research in the area provides a valuable contribution to management practice and leadership development. Additional quantitative research in this area adds dimension to the body of knowledge.

Research Philosophy

Research in workplace learning has historically been qualitative (Marsick, 2009). Marsick (2009) noted the benefit of an action science approach to the topic to add richness to the subject. The wide range of qualitative research provides a valuable framework for conducting quantitative research on the topics. The Small Business Workplace Learning Survey (SBWLS), which is one of the instruments used in this study, utilizes three categories for the types of learning (formal, informal, incidental) based on the work of Marsick (1986, 1987, 2009) and her colleague (Marsick & Watkins, 1990). The research conducted by Rowden and colleagues (Rowden, 1995,

2002; Rowden & Ahmad, 2000; Rowden & Conine, 2005) adds value to the study of workplace learning. The studies have correlated workplace learning to job engagement and job satisfaction. While a qualitative approach is sensible for a complex concept like learning, the current foundation provides strong direction for quantitative research (Creswell, 2003; Easterby-Smith, Thorpe, & Jackson, 2008).

Reflective Practice

All of the learning theories discussed propose a form of reflection. ELT proposes that experiences are at the root of learning. Action Learning and the Theories of Action propose ideas that position the individual as the purveyor of knowledge creation. A more in-depth look into reflection as part of the learning models proposed adds the missing dimension and required complexity. In the learning models presented, reflection is the conduit for learning. Reflection turns experience into learning by maximizing situations for future application. This belief is in contradiction to competency-based practice where prescribed theories are applied to situations regardless of context. A focus on reflection fills the gaps of ELT, embraces work as the experience and acknowledges the value of others in the process while requiring double-loop learning.

In addition to the role of reflection in the learning theories presented in this review, Mezirow's (1985) transformative learning theory offered three types of learning: dialogic, instrumental, and self-reflective. Dialogic and self-reflective thinking prompt critical reflection, which is analogous to double-loop learning. Instrumental learning is a cause-and-effect type of learning comparable to single-loop learning. Reflection is central to informal learning (Marsick, 1987) and therefore is central to workplace learning. A large portion of learning happens in action and through experience, but requires

reflection. However, formal learning depends very little on action but requires more reflection to codify the learning.

The Reflective Practitioner

Schon's dual proposition of reflection has philosophical merit in the ideas of Heidegger (1978, as cited in Pierson, 1998); a German philosopher who proposed that awareness should be both contemplative and calculative. Research and writing about reflection is not consistent about the degree of reflection or critical reflection. A definition that includes both dimensions is important to provoke continuous change consistent with learning and growth. This research did not propose dimensions or levels of reflection, but defines a continuous double-loop-like process that is both contemplative and calculative.

Reflection-in-action (Schon, 1983) is when professionals are thinking about what they are doing while they practice. The current situation may be a challenge presented to the practitioner. While acting, the professional is adjusting concepts, ideas, and beliefs while thinking about the courses of action. The practitioner develops thoughts to aid the action and add to his or her toolbox for future use. Reflection-on-action involves a post-mortem approach of reflecting upon actions and the thoughts associated with them, given the outcomes. Reflection-in-action is real time during management situations while reflection-on-action takes place afterwards.

Reflection-on-action (Schon, 1983) is consistent with reflection in ELT and AL. However, Schon's (1983) definitions of reflection are congruent with double-loop learning. Both concepts are important, as the use of only one would constitute single-loop

learning. The re-evaluation of past beliefs and experiences is a key element of double-loop learning and requires both reflection-in-action and reflection-on-action.

Reflection is metacognitive. Time-sensitive decisions may lack the time for reflection and the dependence upon intuition and tacit knowledge without reflecting-in-action; but reflection-on-action then plays a key role. The goal in promoting reflection as a strategy for learning is to create reflective practitioners who are reflective learners. Ultimately, promoting reflection in the workplace will increase the use and plausibility of reflecting-in-action and/or dependence on reflection-on-action when appropriate.

Reflection: A Model

Boud (1994), one of the pre-eminent thinkers in the area of workplace learning, has proposed a learning framework detailing the reflection process. The model (Boud, 1994; Boud, Keough, & Walker, 1985) extends reflection to include preparation, which is consistent with the ideas of Greenwood (1998), who proposed reflection-before-action.

This model provides a promising tool to guide managers who can aid in facilitating learning in the workplace. The model combines the ideas of Schon and Kolb in producing a pragmatic tool that employs reflection after the experience and reflection during the experience. The model suggests preparing for learning experiences as well as acknowledging the external stimuli that can impact learning. These dimensions to the model are important additions, as they add aspects that are missing from other models while combining the appropriate aspects of the learning models.

The model assumes that learning is rooted in experience and that learners bring their personal foundations to the learning experience. The model also assumes that the process of learning from experience is active. Learners interact with social and

psychological context (milieu). The model proposed by Boud (1994) added dimension to Kolb's (1984) model and Schon's (1983) ideas. It also adds a social aspect that many critique as shortcomings to both ELT and reflective practice. The social/group dimension can be credited to the process of action learning. The model is defined as: 1) Preparing for the event and enhancing the possibility of the learner's experience; 2) Making sure during the event that the learner engages with the interaction and notices, intervenes, and reflects-in-action; and 3) Following the event, the learner returns to the experience, attends to feelings and re-evaluates the experience.

This framework is a comprehensive integration of key learning models and theories to propose an active guide to aid practitioners' learning in the workplace. Much of what Boud presents requires multiple steps of reflection. Reflection is the active aspect of learning that takes place in the minds of managers. Reflecting-in-action is what Schon denotes to be the important artistry of practice. This is the tacit knowledge, but it is also the important individual value that managers bring to the workplace. Although this is a learning model, amplifying the reflection process supports the idea that reflection is the powerful conduit requiring further examination for learning.

Boud et al. (1985) gives extensive credence to the affective dimension in the reflective process. The model that is proposed represents reflection as a totality of experiences, personal synthesis, integration of knowledge, validation of knowledge, and ultimately a new affective state along with decisions for more activity. This type of self-awareness and self-reflection on individual values in context of the current situation is consistent with the concept of double-loop learning.

Lawrence (2009) correlated reflection with work engagement, moral distress, and education level; these are all individual and complex personal feelings consistent with the idea that interpersonal skills and tacit knowledge are unique and hard to codify.

Explorations into reflection in the workplace consistently confirm the affective domain and tacit knowledge gained from reflective practice. The research also confirms the complexity of reflection with the required depth. Reflection is defined as a key skill in the fields of education and nursing. In nursing, reflection is taught as part of the education and certification processes. Studies specific to professions like education and nursing (Ostorga, 2003; Teekman, 2000) propose levels of reflection instead of the concurrent and post-mortem categories proposed by Schon.

Reflection Critique

The largest area of discourse regarding reflection is whether practitioners can realistically reflect on all practice situations. Writings regarding reflection note that the “experience” and reflection are prompted by perplexity, inner discomfort, dilemma, or unique situations as originally proposed by Dewey (1910). The main discourse in this debate revolves around whether reflection can truly happen during extremely challenging and time-sensitive situations. Can practitioners realistically reflect during “hot action” (Beckett, 2002; Eraut, 1985)? Many of the professions like education and nursing that embrace reflective practice are characterized by many time-sensitive dilemmas that may leave little room for reflection.

Hot action is the center of tacit knowledge fruitful for learning in the workplace. Recognizing the challenge of reflecting on hot action should not discount the value of reflection. Continued research and definition that recognizes the value and the

shortcomings will provide insight for future research and practice. The post-mortem approach to reflection can still codify the tacit knowledge gained from hot action.

As reflection has become a popular topic and a valuable tool in many professions, its definition and application have become diluted. This prompted Boud and colleagues to propose the concept of *productive reflection* (Boud, Cressey, & Docherty, 2006). Their goal is to position productive reflection in the workplace and bring the subject to the center of work.

This researcher believes that the term “reflection” continues to offer promise for workplace learning without the need to re-conceptualize the concept. Concern about diluting the theory is warranted as research notes that many practitioners have confused single-loop learning with reflection. When reflection is connected to the concepts of learning and experience, valuable research and learning strategies will be developed. There continue to be a variety of possibilities for studying reflective practice that provide learning options for practitioners.

Summary

The connection of reflection to workplace learning is well defined. Research in specific areas has continued to grow, showing a value for reflective practice in the workplace. Schon provided a framework for reflection that can easily aid in facilitating and promoting reflection at work. The model proposed by Boud extends the concept of reflection for workplace application. Although debate exists regarding the feasibility of reflection-in-action for all practical work dilemmas, continued focus on facilitation and promotion of reflection can help practitioners become more reflective in all practice situations.

Reflection in the Workplace

Much of what takes place in management development, in management “knowing,” is tacit. There will always be limitations to what we understand about learning, limitations that are exactly why a broad understanding and insight into management learning is necessary. These limitations underscore why understanding individual manager reflections are imperative, and why this research is significant.

Kolb’s (1984) experiential learning theory is powerful and practical when it is integrated with double-loop learning as a process of reflection. Double-loop learning adds to experiential learning the continuous reflection dimension necessary to constantly adapt in a dynamic environment. Action learning specifically adds the social and collective dimension that learning takes place in a group setting and has social implications. Argyris and Schon’s contribution to experiential learning is the delineation between single and double-loop learning, along with the clear implication that learning that is simply cause/effect can be defensive and ineffective. A better understanding of the reflective process and how it might impact learning in the workplace will provide rich insight into the practice of management.

“A constant habit of reflection” (Marsick, 1986, p. 4) will help aid work-related learning. Reflection is about cause and effect. It is about learning and personal development. Reflection allows organizations to combine the goals of self-improvement and learning to benefit the organization. Reflection in the workplace takes the context of the situation and the organization into account to increase individual and organizational capacity.

Social, cultural, and cognitive experiences have an impact on any analysis of managers' workplace learning and experiences. Some of the research ignores these components and some does not. Research must assume that these variables are at play in any individual's experience. The experience and the reflection remain central issues requiring further investigation. Each of the learning models presented correctly positions these variables into the discussion on how managers learn in the workplace.

Each of the learning models presented in this review includes an element of reflection. The individual work of Schon (1983) is the lens through which learning should be viewed, because reflection is the action that leads to learning. Practitioners should amplify the role of reflection from these models and set it on a course toward practical implications. Each of these theories starts with an experience that is transferred into learning through reflection. The individual theories provide a piece of the puzzle to understanding the workplace as the experience and positioning reflection as the testing laboratory of the manager's mind.

Reflection is a plausible strategy to leverage learning that takes place daily in the workplace. Research that combines these concepts can provide valuable strategies for practice. This research proposes that a higher degree of individual reflection will correlate to higher levels of formal, informal, and incidental learning. Outcomes from this research can aid in defining an area for focus. Executive leaders can aid in creating a learning organization by facilitating reflective practices and positioning learning opportunities.

CHAPTER III: METHODOLOGY

Research exploring managers' activities and experiences concludes that understanding more about how individual managers think about their practice would be valuable (Carlson, 1991; Kotter, 1982; Lindsey et al., 1987; Mintzberg, 1975). Many leaders already embrace the concept of the learning organization and see its potential value in creating competitive advantage. The approach to workplace learning is practical and based on interdisciplinary learning theories. Reflection is a key characteristic of these learning theories and a plausible tool to facilitate workplace learning.

The study of reflection offers an opportunity to explore how managers think as they work. This research proposed that reflective practice is related to the degree to which individual learning is taking place at work. The purpose of this study was to examine the relationship between the dependent variable, workplace learning, and the independent variable, reflective practice. This research explored the following research questions:

1. To what extent do the three types of workplace learning (formal, informal, and incidental) relate to reflective practice?
2. What is the relationship among the three types of workplace learning for business professionals?

As stated in the first chapter, the first research question was the focus of the research. The purpose of the second research question was to add insight toward recommendations regarding the different types of workplace learning and their

interaction. The data from this research question helped frame the recommendations for executive leaders

The study tested the following hypotheses:

H₀: There is no relationship between workplace learning and reflective practice.

H₁: There is a relationship between workplace learning and reflective practice.

H₀: There is no relationship between formal learning and informal/incidental learning.

H₂: There is a relationship between formal learning and informal/incidental learning.

Research Design

This quantitative study was designed to follow the knowledge claim of post-positive positions (Easterby-Smith et al., 2008). The research begins with theory as outlined in the literature review. The learning theories presented in the literature integrate with a focus on reflection, the independent variable for this research.

Current research on reflective practice (Boud et al., 1985; Ramsey, 2005; Schon, 1983) and workplace learning (Marsick & Watkins, 1990; Mumford, 1996, 1998) is primarily qualitative. Qualitative research contributed clearly defined categories for workplace learning and attributes of reflective practice. Because of the rich qualitative research, the instruments selected for this research are aligned to the attributes of the variables that were studied. This quantitative study adds to the current body of knowledge of both workplace learning and reflective practice.

This study is descriptive, cross-sectional, and correlational. The research is cross-sectional as the subjects were measured once and relationships were tested among variables (Easterby-Smith et al., 2008). The study results provide insight for the executive leader to aid in developing learning organizations.

Sample and Setting

To appropriately plan for the possibility of significant results from the study, power analysis was conducted using GPower. GPower is an IBM-compatible software program for computing high-precision statistical power analysis (Erdfelder, Faul, & Buchner, 1996). Using an alpha of .05 and a beta of .20, the power analysis revealed that a sample size of 84 would produce a power of .9518. An effect size of .80 (Erdfelder, Faul, & Buchner, 1996) is considered large. The goal was to recruit a usable sample of at least 84 participants; 86 usable respondents were used for the actual study.

Participants were recruited using convenience sampling because they were easy to access. The researcher's profession and affiliations provided easy access to business professionals. The study population was focused on a Midwestern state, Michigan.

Instrumentation

The survey (Appendix A) for this research was developed based on two instruments: The Small Business Workplace Learning Survey (SBWLS) and the Critical Reflective Practice Questionnaire (CRPQ). Both of these instruments were selected because they align well with the rich qualitative research that frames the study variables. Approval to use the instruments was received by both authors and included with the IRB

forms. The survey consisted of three sections: workplace learning, critical reflection, and demographics.

The Small Business Workplace Learning Survey (SBWLS)

The Small Business Workplace Learning Survey (SBWLS) was developed by Robert Rowden from a qualitative study conducted in 1995 (Rowden & Conine, 2005) using interview transcripts and field notes. The SBWLS includes 21 questions in a 6 point Likert scale (1-6) to measure three areas of workplace learning: the formal learning scale (6 items), the informal learning scale (8 items) and the incidental learning scale (7 items).

The instrument aligns with research; the instrument uses the three categories of workplace learning (formal, informal, incidental) defined in seminal research conducted by Marsick and Watkins (1990). The factor analysis conducted from Rowden's initial qualitative research operationalized workplace learning under the three categories.

Reliability and Validity

The Cronbach alpha was used to establish reliability (Rowden, 2002). Each subscale yielded adequate reliability ($> .70$). The formal learning scale produced an alpha of .81; the informal learning scale produced an alpha of .73; and the incidental learning scale produced an alpha of .78. In a subsequent study conducted by Rowden and Conine (2005), the instrument performed consistently, with Cronbach alpha's of formal learning = .74; informal learning = .83; and incidental learning = .77 (2005). The first use of the SBWLS instrument was subjected to review sessions by content area experts to ensure content validity (Rowden & Conine, 2005). Based on the reports of Cronbach alpha's above .70, the instrument shows internal consistency and overall, the instrument has

produced consistent results in four studies (Chiang & Wang, 2008; Rowden, 2002; Rowden & Conine, 2005).

The Critical Reflective Practice Questionnaire (CRPQ)

The Critical Reflective Practice Questionnaire (CRPQ) was constructed by Lawrence (2009) for a dissertation studying work engagement, moral distress, educational level, and critical reflective practice among intensive care nurses. Lawrence developed the CRPQ to measure critical reflective practice in the study. The instrument consists of 22 items in a 7-point Likert format (1 to 7), with higher scores reflecting higher levels of reflection. Results of Lawrence's (2009) research showed two significant correlations between critical reflective practice and work engagement ($r=.56$, $p=.01$, $r^2=.31$) as well as moral distress and work engagement ($r=-.48$, $p=.05$, $r^2=.23$). Most importantly, analysis using stepwise regression ($R^2 = .315$, $p = .002$, $\beta = .561$) determined that the independent variable, critical reflection, had a direct relationship with work engagement, although it did not have a direct relationship with moral distress.

This instrument was selected because it aligned well with the literature on reflective practice (Boud et al., 1985; Boud et al., 2006; Schon, 1983) and the objective of this study. Other instruments with associated constructs measure cognitive aspects of reflection not pertinent to this study. The individual questions in this instrument are consistent with characteristics discussed in Schon's (1983) work and the survey takes into consideration critiques of reflective practice. The instrument includes a question related to the ability to pause to think during practice, which is a consistent critique of reflection-in-action. The critique questions whether it is possible for professionals to pause and think in time-sensitive situations. The conclusions from Lawrence's (2009) study are

consistent with the aims of this study to show the practical value of reflection to aid in workplace learning.

The original items in the CPRQ instrument were generated in collaboration with a team of expert nursing faculty. Questions were slightly adjusted for this research. The tones of the questions were adjusted to relate to a business environment and the questions related to assumptions regarding patients and political activities related to nursing were removed. The Likert scale was also adjusted from 1 to 7 to 1 to 6. The change made the entire survey consistent (with SBWLS), and reduced the potential for statistical problems by using zero as a choice. The updated survey provides equal positive and negative options (Alreck & Settle, 2004) by removing sometimes from the CPRQ survey which was the “middle” option.

Reliability and Validity

The CRPQ demonstrated adequate reliability with a Cronbach alpha of .83 in its pilot by the author (Lawrence, 2009). Validity for the CRPQ was examined in correlation with the Rumination-Reflection Questionnaire (RRQ) reflections scale ($r=.16$, $p=ns$, $n=28$). The correlation was non-significant with a coefficient of .16. Lawrence (2009) believed that RRQ may not have been as congruent, since the RRQ is solely a cognitive measure. There was a strong relationship with the work engagement study variable ($r=.56$, $p=.01$, $n=28$) which was one of Lawrence’s study variables. Although the study’s proposed variables were not significant, there were correlations in the correct direction as theorized by the constructs. The directions of the variables were consistent with the constructs’ definitions and the intent of the instrument. Social constructs can be complex

to measure and validate but the internal consistency of the instrument and its reaction to other theorized constructs show the instrument to be valuable.

Demographics

The third section of the survey collected participants' demographic information. The demographic section of the survey included questions about gender, age, industry, job classification, organization size, number of years at the company as well as whether the participant was currently enrolled in a graduate program. These items were collected to aid in determining if any additional relationships existed. Specifically the enrollment in graduate school could have provided additional insight about formal learning. The demographic information collected did not show any additional relationships but it did help describe the sample.

Recruitment

Diverse strategies were employed to recruit participants for the study. The online survey allowed the recruitment strategies to be employed using email and social media. The researcher created an online community on the professional networking site; LinkedIn, and joined other professional groups on the site. Participants were solicited using LinkedIn, a Midwest's college alumni email list, and the researcher's professional email lists. Because of the way participants were recruited, it is not possible to calculate a response rate because it is not known how many people saw the solicitation posting.

The goal of the research was to include a diverse sample of professionals across industries and representing different age groups. There was not a defined organization or association chosen to target participants. While this strategy was ultimately effective in

obtaining the desired sample size, obtaining participants was challenging. A variety of email lists were added to the solicitation process and several attempts were made to the lists, the overall response was small. As noted later in this paper, the pilot study was helpful in identifying problems in meeting some of the participation requirements. These requirements were adjusted after the pilot study.

Data Collection and Management

After Walsh College IRB approval, the survey instrument was developed and implemented using Qualtrics, an online survey tool (www.qualtrics.com). The first window of the survey included the consent to participate (Appendix B). Qualtrics provided a web link for the survey. Progress regarding participation could be reviewed from the site along with reports. The site is password protected and hosts all of the response data for the survey. No personal information was submitted with the survey. IP addresses were not tracked; each respondent was assigned a unique identifier code.

Data were downloaded from the site into a Microsoft Excel spreadsheet for analysis. The raw data provided a field for identifying incomplete attempts. This feature did not capture all incomplete attempts; therefore the spreadsheet was manually reviewed for incomplete attempts. All attempts with more than two missing responses to questions were removed from the spreadsheet. Multiple sheets and files were created to organize data for analysis. Only raw data were maintained on the researcher's computer.

Pilot Study

A pilot study was conducted using a sample of 44 cases. The pilot study produced important insights about the targeted population. The study was initially

designed to target professionals with an undergraduate degree in business. The low response in the initial release of the survey during the pilot study helped uncover the fact that the criterion of an undergraduate degree in business was unrealistic. Many professionals who work in professional business careers do not have undergraduate business degrees. The study target population was adjusted along with the overall research design. Changes were approved by the Walsh College IRB. The researcher noted that this requirement was unnecessary for the study and had only been included to add definition to the population.

The pilot study also alerted the researcher that factor analysis would not be feasible for the reflection portion of the instrument. Consistent with the research on workplace learning, the SBWLS instrument has three subscales that define the construct. The CPRQ does not contain multiple factors. Some research discusses different types of reflection depending on when it takes place (before, after, during) but these categories are not defined well in research and the instrument was not developed with subscales. The instrument simply measures reflection in general. Therefore, face validity was utilized to evaluate the reflection portion of the survey. The reflection section of the survey was reviewed by experts to establish face validity. The panel included nursing, business and education professionals who had both practical work and research experience. Four professionals participated in the review of the survey questions. In addition to their experience as professionals who have conducted doctoral research; each of the panel members works in fields where reflection is a valued skill. Each participant affirmed that the questions in the instrument were aligned with the construct reflection.

Factor analysis was conducted on the 21 items from the SBWLS portion of the survey. Principal Components Analysis (PCA), Principal Axis with Direct Oblimin rotation was used. Direct Oblimin was selected because the subscales are intercorrelated. The factors did not load consistently with the original study. A recent study (Wang, Tolson, Chiang, & Huang, 2010) using the same SBWLS also reported inconsistency in the factor loading. As noted in Table 1, an exploratory factor analysis of small to midsize firms in Taiwan used the instrument and reported inconsistent factor analysis that was attributed to cultural differences. Since that study had a much larger sample size (206) and the Cornbach's $\alpha = .91$ during the pilot was very strong, it was concluded that the instrument was still a plausible tool to measure learning. The underlying factors of formal, informal, and incidental learning have strong inter-correlations that seem to be a potential cause for the inconsistency in factor loading. Highly correlated are likely influenced by the same factors; inter-correlations conducted during the larger study show the correlations to be high.

Table 1.

Comparison of Factor Analysis for SBWLS Studies.

Study	Factor 1	Factor 2	Factor 3
Original SBWLS	2, 3, 11, 12, 16, 19	1, 4, 7, 8, 10, 13, 15, 17	5, 6, 9, 14, 18, 20, 21
Taiwan Study	16, 17, 2, 12	6, 8, 4, 10, 7, 1, 9, 3, 5	20, 13, 19, 21
Pilot Study	6, 1, 10, 7, 4, 9	16, 2, 12, 19, 18, 17, 8, 15, 11	5, 13, 20, 21, 14, 3

The pilot study was a valuable step in conducting this research, it aided in further development of the research design. The pilot also added context for the final analysis. The definition of the targeted sample is important as it notes that business professionals come from a wide variety of educational backgrounds. Furthermore, the factor analysis made it possible to analyze the potential quantitative limitations of evaluating social constructs. This research makes valuable quantitative contributions but social constructs with strong inter-correlations are not consistently categorized and defined.

Ethical Considerations

This research did not involve direct risks to participants. No personal information was collected from the survey. Forms were submitted for approval in accordance with Walsh College research policies and procedures. The first window of the online survey included the consent to participate (Appendix B). The consent outlined the voluntary nature and purpose of the research as well as a reasonable expectation regarding time commitments and privacy. Contact information is listed for inquiries and the participants acknowledged the provisions prior to beginning the online survey. Clear communication and expectations were consistent with potential participants starting with the solicitation to participate (Appendix C).

According to IRB standards, all data were managed appropriately. Because there was no personal information, security was not an issue. But separate files of the data are backed-up in multiple locations, including the Qualtrics website to maintain for the required seven years.

Hypothesis Testing

Workplace learning, the dependent variable, was correlated with reflection, the independent variable, and interrelationships among the workplace learning subscales (formal, informal, and incidental learning) were tested. The following hypotheses guided the testing and analysis:

H₀: There is no relationship between workplace learning and reflective practice.

H₁: There is a relationship between workplace learning and reflective practice.

H₀: There is no relationship between formal learning and informal/incidental learning.

H₂: There is a relationship between formal learning and informal/incidental learning.

Both hypotheses were tested using the Pearson Product-Moment Correlation.

CHAPTER IV: RESULTS AND DISCUSSION

This chapter discusses the results of the study. The characteristics of the sample are outlined followed by information on the reliability and validity of the instruments. Both research questions are presented along with the statistical procedures used and analysis of each questions' results.

Sample Demographics

The sample for this study was business professionals in Michigan who have completed an undergraduate degree but had not completed graduate work. Participants were recruited from a Midwest college's alumni email list, personal networks and online professional communities. This study included 86 respondents.

The sample represents a range of industries. 64% of the participants were female, 76% of the participants were under the age of 50 and 64% work for organizations with over 250 employees. Only 21 of the participants were enrolled in a graduate program which was initially defined as an important demographic variable to add insight about formal learning to the study. Overall, the demographic variables did not provide any additional insights to the research although they do describe the characteristics of the sample. Table 2 presents a summary of the sample's demographic characteristics.

TABLE 2.

Summary of Sample Demographics.

	#	%
Gender: Male	31	36%
Female	55	64%
Age: 20-29	11	13%
30-39	23	27%
40-49	31	36%
50-59	9	10%
60+	3	3%
Industry: Education	10	12%
Health Care	6	7%
Manufacturing	13	15%
Non-Profit	2	2%
Retail	5	6%
Service	22	26%
Other	28	33%
Org Size: Under 50	13	15%
51-100	10	12%
101-150	4	5%
151-200	3	3%
201-250	2	2%
251+	54	64%
Job Title: Vice President	8	9%
Middle Management	32	37%
Supervisory	20	23%
Office/Administration	23	27%
Grad School: Enrolled	21	24%
Not Enrolled	65	76%

Research Questions & Analysis

Research Question One

Research question: “To what extent do the three types of workplace learning (formal, informal, and incidental) relate to reflective practice?”

Hypothesis:

H₀: There is no relationship between workplace learning and reflective practice.

H₁: There is a relationship between workplace learning and reflective practice.

The pearson-product moment correlation was used to correlate the dependent variable, workplace learning with the independent variable, reflection. Workplace learning and reflection showed a significant relationship ($r = .240$, $p = .05$, $r^2 = .06$). The null hypothesis is rejected denoting a relationship between workplace learning and reflection, although the relationship reported is not strong. As noted by the coefficient of determination, only 6% of workplace learning in general is because of reflection.

Further investigation into the different types of learning uncovered that incidental learning had a significant relationship with reflection ($r = .317$, $p = .01$, $r^2 = .10$). This is an important revelation as most workplace learning strategies have been focused on informal learning. Incidental learning is characterized in the survey questions by daily activities, mistakes, interaction with co-workers, reflection, interaction with management and meetings. This highlights key opportunities for executive leaders to promote learning in the workplace. As shown in Table 3, incidental learning is the only workplace learning

category that correlates with reflection. The coefficient of determination notes that 10% of incidental learning is because of reflection.

TABLE 3.

Types of Learning Correlated to Reflection

	Reflection Correlation	Mean	Std. Dev
Incidental	.317	4.14	1.05
Informal	.198	3.91	1.06
Formal	.134	3.94	1.30

All correlations are significant at 0.01 level.

Combined with the inter-correlations identified in the second research question, it is evident that incidental learning and specific activities in the daily workplace offer executive leaders an opportunity to prompt learning experiences.

Research Question Two

Research question: “What is the relationship among the three types of workplace learning for business professionals?”

Hypothesis:

H₀: There is no relationship between formal learning and informal/incidental learning.

H₂: There is a relationship between formal learning and informal/incidental learning.

The pearson-product moment correlation was used to correlate formal learning and informal/incidental learning. The null hypothesis is rejected denoting a relationship between formal learning and informal/incidental learning, there was a statistically significant relationship ($r = .650$, $p = .01$, $r^2 = .42$) with a strong correlation. Table 4 outlines all of the inter-correlations. The relationship between informal and incidental is extremely strong ($r = .810$, $p = .01$, $r^2 = .66$) as well as the relationship between informal learning and formal learning ($r = .606$, $p = .01$, $r^2 = .37$). The relationship between informal and incidental learning is consistent with the construct definition that incidental learning is a subset of informal learning. Overall, 37% of formal learning is rooted in informal learning while 66% of informal learning is a result of incidental learning.

TABLE 4.

Inter-correlations of Learning Types.

	Formal Learning	Informal Learning	Incidental Learning
Formal Learning	1	.606	.632
Informal Learning	.606	1	.810
Incidental Learning	.632	.810	1

All correlations are significant at the 0.01 level.

As noted in Table 5, there was a stronger existence of incidental learning among the participants. The mean for that category was highest (4.14) and the minimum number reported was double the minimum of formal learning.

TABLE 5.

Learning Types; Summary of Ranges and Means

	Range	Mean
Formal Learning	1.5 – 5.6	3.9
Informal Learning	3 – 5.6	3.9
Incidental Learning	2.1 – 5.8	4.14

Assessment of the Validity and Reliability of the Instruments

The findings offered additional insight into workplace learning and reflection with overall consistency to past research (Chiang & Wang, 2008; Lawrence, 2009; Rowden, 2002; Rowden & Ahmad, 2000; Rowden & Conine, 2005). The SBWLS lacks validity in defining the three elements of workplace learning. Factor analyses conducted on the instrument during the pilot study were not consistent with the original research. Factor analysis research on the SBWLS reported by Wang et al. (2010) notes the inconsistency of the factor loading; their conclusion was that the cultural differences impacted the factor loading. This researcher believes that the inter-correlations of the three variables are very strong and effect consistent factor loading to statistically define the factors. Face validity was appropriate for the CRPQ and positive feedback was received. Furthermore, the variables responded consistently with theory.

As noted in Table 6, the Cronbach's alpha for both instruments as well as the individual learning categories demonstrated adequate reliability. Cronbach alpha above .70 shows internal consistency of the items in the instrument (Sushil & N, 2010).

TABLE 6:

Cronbach's alpha for Instruments and Learning Types.

	2002 Study	2005 Study	Lawrence Study	Current Study
Formal Learning	.81	.74		.80
Informal Learning	.73	.83		.81
Incidental Learning	.78	.77		.80
SBWLS				.80
CRPQ			.83	.71

Based on the study findings, workplace learning can be impacted by reflective practice. This is evidenced in the correlations between the different types of learning and the strong presence of incidental learning when correlated with reflection. While reflection can be a tactic to aid in learning, incidental learning is a gateway for executive leaders to create a culture of learning.

CHAPTER V: IMPLICATIONS AND CONCLUSIONS

The purpose of this study was to examine the relationship between workplace learning and reflective practice in order to provide executive leaders with strategies to build learning organizations. The intent was to understand how business professionals are learning in the workplace to provide knowledge and practical strategies for executive leaders. This study documented the power of incidental learning when combined with reflection. These findings are significant because informal learning alone has been highlighted in the literature as an important management development strategy. Research has shown that up to 90% of learning is informal (Sorohan, 1993) and incidental learning is a byproduct of informal learning. In this study, incidental learning had the highest range and mean which prompts the need to focus more attention on daily activities.

This research is evidence that the small things do matter. The idea that executive leader buy-in and modeling is one of the integral aspects of most modern management strategies is quantitatively noted in the findings that incidental learning is correlated to reflective practice and that it can serve as the conduit to informal and formal learning.

Executive leaders must make sure that reflection creates positive learning experiences through coaching, feedback and communication which is incidental learning. The byproduct and observations from daily activities in the workplace are the gateway to codified knowledge (informal and formal learning). Incidental learning must be acknowledged and leveraged by executive leaders.

Although reflection is an integral aspect in most learning models, by separating reflection as a variable; additional information is gleaned about workplace learning. This research is significant because it uncovers a specific type of learning that benefits most from cognition and dialogue. This study is evidence that incidental learning is where reflective practice becomes extremely important. And, while all three types of learning are inter-related, reflection will aid in the learning process through the small discrete daily activities of business professionals; incidental learning.

Learning is a topic that has been tasked to the human resources department. Informal learning has been embraced by the human resource department for training and development to open up new opportunities and avenues for learning online, company book clubs, meetings, collaboration and other creative strategies. But, if most daily incidental interactions are the starting point for learning opportunities; learning needs to become the concern of executive leaders in modeling behavior and facilitating reflective practice across the organization. The power of incidental learning makes learning a required organizational competency that starts with the executive leader and executive level decisions. Companies should be asking themselves:

- Are executive leaders facilitating the transformation of daily activities into codified knowledge that will benefit organizational competency and help build a learning organization?
- Do all managers across the organization know that daily activities and interaction (good and bad) are teachable moments that can leverage informal and formal learning experiences and investments?

Findings and Discussion

Question #1: To what extent do the three types of workplace learning (formal, informal, incidental) relate to reflective practice?

The correlation between workplace learning and reflection was expected, it validated that there was a need for the study to identify the role of reflective practice in promoting learning in the workplace. It was surprising to learn that incidental learning was the only type of learning that correlated with reflective practice. Informal learning is a growing area of research (Cross, 2007; Mosher, 2011). The practical importance of informal learning is evidenced by its growing simultaneous presence in academic journals and practitioner publications. Jay Cross's book, *Informal Learning* (2007) is seminal work among human resources and training professionals. Although incidental learning is defined as a subset of informal learning; it has not been looked at separately as a construct with promise for practice.

The power of incidental learning found in this research is very consistent with management beliefs like “teachable moments”. Executive leaders with interpersonal skills and coaching abilities will be able to dialogue about daily activities and incidents in a way that bring forth positive learning experiences. Incidental learning should not remain a byproduct of informal learning in organization execution; it should be the gateway to learning and a bottom-up strategy with briefing all business professionals in the organization.

A business professional whose mistakes are discussed in an informative and positive manner learns informally from the mistakes and incidentally about risk, effective communication and possibly organizational culture. Not only will these interactions

produce informal and incidental learning but further connections are made to classroom knowledge and; the cost of formal learning like training will be further leveraged.

Executive leaders need to understand the potential of incidental learning to build the type of innovative and flexible environments required for a dynamic, global economy.

Question #2: What is the relationship among the three types of workplace learning for business professionals?

The results of the two research questions can easily be combined into a continuum of learning. Because of the strong inter-correlations of the three types of workplace learning and the strong correlation between incidental learning and reflection, incidental learning can be positioned as a conduit to rich workplace learning. In daily workplace interactions, reflecting on specific situations will allow professionals to increase overall learning.

Move Learning to the Boardroom

Executive leaders need to acknowledge the value of “teachable moments” in their interpersonal interactions in the workplace. Executive leaders can create an environment that welcomes a pause for reflection in decision making processes. Individual professionals can make the post-mortem an organizational norm like the military does with after-action reviews (Garvin, 2000, Peddler et al., 2005). Executive briefings about how to use daily activities as learning opportunities could be beneficial for organizations. Business strategies like *Management By Walking Around* (MBWA) have been popular since the 1980s; the strategy easily applies to executive leaders embracing the individualized and social aspect of learning. Strategies like MBWA engage incidental learning as it is defined; in daily activities. For executives, incidental learning supports

management development expenditures in mentoring programs, and coaching. Incidental learning can be the rationale to use teams, schedule effective meetings, increase face-to-face meetings and plan social activities. Decisions about telecommuting and Internet usage rules should all be made while understanding the role of incidental learning in building learning organizations. Discussions about informal learning and knowledge management are characterized by discussions of technology but characteristics of learning being organic, social and individualized call for other tactics beyond technology. Incidental learning and reflection requires that executive leaders transform current practices into fruitful learning experiences.

Executive leaders need to evaluate telecommuting and teleconferencing decisions for social interaction opportunities. These strategies are cost savers and they can be a key to individual effectiveness. But, organizations must think about the lost learning opportunities. Understanding incidental learning can aid in developing other activities like check-ins and online chatting. The small incidental moments should be considered when making organizational decisions, learning resides in those experiences that may be removed by technology and geography. Furthermore, organizations should not solely depend upon technology to codify knowledge. Tacit knowledge and incidental learning cannot be added to a company database. Incidental learning can lead to codified knowledge that is added to the company knowledgebase.

Ford Motor Company Case Study

The Chief Executive Officer of Ford Motor Company, Allan Mulally provides a great example (Pearlstein, 2010) of executive leaders' role in incidental learning. The weekly meetings held at Ford provide updates on business plans and each team member

is responsible for introducing his/her plan with a color; red, yellow or green. Red alerts that there are problems with the plan, yellow notes possible problems and green reports that there are no problems. After the first few weeks, Mulally recognized that all of the reports presented were coded as green. Mulally spoke up and asked if there was something that needed to be shared with him since the company lost \$14 million the previous year. He told the team that the color coding was about the project, not them. He made it clear that it is expected that there will be problems and delays. At the next meeting, there was one “bright red” report. While the team gasped, Alan Mulally clapped. The meeting turned into a collaborative problem solving session. The report was yellow the following week and ultimately green. Future meetings included a rainbow of reports and an open dialogue about problems and solutions.

The Ford example highlights how meetings can be a place of informal learning. Incidental learning gained from these type of situations might include gaining technical knowledge, taking risks, developing communication skills and embracing innovation. Learning is active and executive leaders must understand and engage in the learning process.

Reflection is most powerful and needed in incidental learning, reflection can increase the return on training and other learning investments. Incidental learning is the gateway to other learning experiences and it needs most to be codified. Executive leaders should provide business professionals the opportunity and freedom to discuss work, mistakes and ideas. Reflection offers an opportunity to codify knowledge gained every day in the workplace.

Executive leaders should apply strategies that promote reflection and incidental learning. Marsick (1986) who helped operationalize workplace learning noted that formal learning is more conducive to machine like work. Marsick (1986) believed that more emphasis should be placed on helping people understand their daily informal interactions to use them for growth. The Mulally example highlights, risk-taking, experimentation, and dialogue as learning activities.

Knowledge about motivational theories help managers understand the motivational strategies they develop and employ. Understanding learning theories like experiential learning, action learning, theories of action, workplace learning and reflection not only undergird this research but can serve as powerful knowledge for executive leaders. While emotional intelligence is a popular concept for business professionals to adopt in managing and developing their own careers, the self-awareness aspect of emotional intelligence can help executive leaders coach and develop self-directed, reflective professionals who drive learning organizations.

Informal and incidental learning (Cross, 2007) are the types of learning that breed creativity, flexibility and innovation into the workplace. These are the characteristics of a learning organization that build 21st century competitiveness. The search for strategies that can aid in the development of learning organizations was an important purpose of this study. Incidental learning provides executive leaders with hundreds of opportunities a day to aid in building a learning organization.

Developing Reflective Practitioners

While corporations acknowledge the value of informal learning to replace and/or leverage formal learning expenditures; the execution of incidental learning needs to be

infused across the organization. If learning is taking place in daily activities, all managers and business professionals need to understand informal and incidental learning.

While human resource strategy may include the development of systems and the implementation of technology to capture and facilitate informal learning; understanding the value and process of learning needs to be taught to the entire organization. The team needs to know what and why informal and incidental learning is important. The entire organization must be engaged in appreciating interactions and making learning more conscious. As incidental learning is more unconscious than informal learning, strategies at the individual level truly depend upon the individual's engagement. Incidental learning should not remain a byproduct of informal learning in organizational execution; it should be the gateway to learning and a bottom-up strategy to develop reflective practitioners.

Public Policy and Education Sector Implications

In addition to the contributions to management practice, understanding the value of workplace learning and reflections' role in learning is important to executive leaders in education and the public sector. Workforce development policies and education programs that embrace apprenticeships, co-operative learning, internships and other experiential learning strategies will be imperative as future professionals are trained and re-trained. Executive leaders must be able to write policy and lead diverse programs that embrace the possibilities of reflective practice and workplace learning. As these types of strategies will aid in the development of learning organizations; development of lifelong learners who are adaptable are important to economic development.

Organizational funding as well as federal and national initiatives to support these types of programs have been reduced immensely. Furthermore, the professionalization of

management education has removed itself from education strategies that resemble occupation education. If learning is taking place at work, it is sensible to provide real-work assignments and work placement concurrent to classroom where reflective practice can be taught and modeled.

Research Contributions

This study adds dimension to the body of knowledge on workplace learning, bringing to attention the value of incidental learning. The research also adds quantitative contribution to the body of knowledge on reflection. Research on workplace learning has progressed to provide construct framework for quantitative contribution like this study. This research confirms work done by the Center for Creative Leadership that denotes many daily activities as learning opportunities (Lindsey et al., 1987; Morgan et al., 1988). Their research highlights shift changes, teaming, meetings, communication, documentation, site visits, mentoring and supervision as management development. These activities ultimately provoke incidental learning.

In addition to the theory and practice contributions, the study provided additional testing of the two instruments. Both instruments provided advancements in quantitative research for the study of workplace learning and reflection. This research adds insights into reliability and validity for the use of the instruments and future research design.

Implications for Future Research

Incidental learning adds a new area of focus to workplace learning that connects to reflective practice. While reflection exists as a construct of learning theories that could

be applied in the workplace; it had not been quantitatively correlated to workplace learning.

Workplace learning provides practical inroads into helping executives build learning organizations. As this research concludes, there is strong promise in incidental learning as the basis for strategies and tactics. Qualitative and quantitative research studying strategies that make-up incidental learning could further benefit management practice. In addition, many of the limitations discussed below could be used to define studies in workplace learning and reflection that fill gaps.

Study Limitations

The SBWLS instrument showed adequate reliability but some inconsistency in validity. The CRPQ proved to be adequately valid showing strong face validity among a group of experts. Both instruments responded as expected; further supporting the validity of the instruments. All variables were measured by self-reports in this study which is an obvious limitation. Future studies could benefit by using method variance. An oral introduction to the study and/or qualitative follow-up could add dimension and clarity.

Based on the results from the face validity, the CRPQ could use a more detailed review regarding wording and structure. An introductory script could be written to aid in the value of the quantitative research. A mixed method approach would be an additional enhancement to quantitative research in the area of reflection.

Adding a quantitative body of knowledge to research on workplace learning and reflection is important. But, the value of qualitative framing to add context should be included in future studies that aim to broaden research beyond a single

organization/industry. With a purely online survey, participant understanding and context should be a future consideration too.

This study was progressive in attempting a study design that included a broader cross-section of participants. Although the lack of moderation from demographic variables is consistent with past studies, a sample with clear understanding of the constructs and ideas of the study could provide more robust data. For example, access to specific companies and/or industries could provide more consistent insight and further testing of the instruments.

Concluding Remarks

The initial intent of the study to contribute to organizational learning was met. The study has offered practical implications for management practice while adding research in workplace learning and reflection. The study provided an opportunity to test the survey instruments and identify limitations for adjusting future research design. As the value of understanding learning continues to grow in business organizations and economic policy; this researcher is confident that this contribution will add value to progress in understanding the tangible value of workplace learning and reflective practice.

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APPENDIX A

RESEARCH SURVEY INSTRUMENT

Introduction questions appear individually on the screen once survey link is clicked:

1. Consent to participate: Consent or Do not consent
2. Do you have a bachelor's degree? Yes or No
3. Do you have a graduate degree? Yes or No
4. Are you a current resident of Michigan? Yes or No

A “no” on any of the above answers, jumped to the “thank you” screen because the participant does not meet the qualifications.

Part I: Reflective Practice

This scale measures your perceptions of how often you engage in certain activities as a business professional. The following statements are about being mindful of oneself in one's practice experiences and interactions, including personal values and beliefs and opportunities for growth. Please read each statement carefully and decide how often you experience the activity in your professional interactions.

	Never	Almost Never	Rarely	Often	Very Often	Always
1. My conversations with co-workers and subordinates give me new insights regarding how I manage my professional behavior.	1	2	3	4	5	6
2. I discuss work experiences that perplex me.	1	2	3	4	5	6
3. I try to learn from the challenges I face at work.	1	2	3	4	5	6
4. I am able to delay my actions, so I can think about what to do before I act.	1	2	3	4	5	6
5. I analyze my personal views in order to make sense of troubling experiences in practice.	1	2	3	4	5	6
6. I think about how to improve my professional skills.	1	2	3	4	5	6
7. I write about my work related experiences in a diary or journal.	1	2	3	4	5	6

8. I meet with colleagues to debrief about work situations and projects.	1	2	3	4	5	6
9. In relation to my work, I share my suffering and my happiness with colleagues.	1	2	3	4	5	6
10. In my work, I experience tension between my practice ideals and the actions I am able to do.	1	2	3	4	5	6
11. I share feelings, good or bad, about my practice with co-workers and/or manager.	1	2	3	4	5	6
12. I am conscious of my own values, beliefs and assumptions at work.	1	2	3	4	5	6
13. I hypothesize about how to change my practice with creative solutions.	1	2	3	4	5	6
14. I try out the ideas that I generate in practice, in order to see if my hypotheses work.	1	2	3	4	5	6
15. I try to find meaning in difficult practice situations.	1	2	3	4	5	6
16. I am familiar with and implement active listening in my practice.	1	2	3	4	5	6
17. I meet with co-workers away from the office to discuss thoughts and feelings about my industry and profession.	1	2	3	4	5	6
18. I have a vision of my professional philosophy and I can verbalize this to others.	1	2	3	4	5	6
19. I share my skills and knowledge in formal environments like committees, organizations and educational forums.	1	2	3	4	5	6
20. From an ethical standpoint, I examine the appropriateness of my professional actions.	1	2	3	4	5	6

PART II: Workplace Learning

The purpose of this section is to give you a chance to tell how you learn on your present job. Based on your answers and those of people like you, we hope to get a better understanding of the nature and extent of workplace learning. Please circle one item for each question.

To what extent do you agree with the following statements?

	Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
1. When I came to work here, they had me work with someone who "showed me the ropes."	1	2	3	4	5	6
2. The company pays all or part of the costs of job-related courses at the local university, college, or voc-tech school.	1	2	3	4	5	6
3. When the company buys a new piece of equipment, they have someone come out and show us how to use it.	1	2	3	4	5	6
4. I have or can get the information that I need to do a good job.	1	2	3	4	5	6
5. What I learn about my job happens as a natural consequence of doing things and keeping busy.	1	2	3	4	5	6
6. When I make a mistake, my boss or a co-worker helps me to identify what to do to avoid making the mistake again.	1	2	3	4	5	6
7. When I am transferred to another job, they have me work with someone who helps me learn how to do it.	1	2	3	4	5	6
8. If a hazardous or dangerous situation is noticed, our supervisor will call us together to discuss it.	1	2	3	4	5	6
9. I am encouraged to share my job experiences with my co-workers.	1	2	3	4	5	6
10. I believe managers feel that helping us learn how to do our job better is an important responsibility.	1	2	3	4	5	6
11. I sometimes attend professional conferences or workshops related to my job or profession.	1	2	3	4	5	6

12. My company makes training funds available if I can demonstrate a need or it is felt it will help me perform my job.	1	2	3	4	5	6
13. I have an opportunity for cross training, or to learn skills from others who perform different tasks in my department or office.	1	2	3	4	5	6
14. I often find time to review or reflect on my experiences.	1	2	3	4	5	6
15. I learn useful information at safety meetings.	1	2	3	4	5	6
16. The company provides support if I want to further my formal education.	1	2	3	4	5	6
17. The company supports me in professional associations related to my work.	1	2	3	4	5	6
18. Our supervisor will call us together to discuss any hazardous or dangerous situation that may arise.	1	2	3	4	5	6
19. There is support from top management for training activities.	1	2	3	4	5	6
20. I sometimes have the opportunity to work closely with co-workers with different skills.	1	2	3	4	5	6
21. We have regularly scheduled or periodic meetings where we are encouraged to express our opinions.	1	2	3	4	5	6

I HAVE PARTICIPATED IN THE FOLLOWING TYPES OF TRAINING (check all that apply):

☐ Administrative Skills ☐ Health or Safety Skills ☐ Sales
☐ Computer Skills ☐ Management Skills ☐ Technical Skills
☐ Communication Skills ☐ New Methods/Procedures ☐ Wellness
☐ Customer Relations ☐ Remedial/Basic Education ☐ Other _____(specify)

PART III - Background Information

In what year were you born? 19_____

What is your gender?

- 1 Male 2 Female

What type industry do you work in?

- 1 Manufacturing 4 Retail
2 Service 5 Health Care
3 Education 6 Other ? _____(specify)
4 NonProfit

How many employees work in your current organization?

- 1 Under 50 people 3 101-150 5 201-250
2 51-100 4 151-200 6 250+

How long have you worked for this company?

- 1 1-3 years 3 7-9 years 5 11-20 years
2 4-6 years 4 10-12 years 6 15+ years

What is your job classification?

- 1 Executive (VP or higher) 3 1st Line Supervision
2 Middle Management 4 Office/Administrative

Are you currently enrolled in a graduate program?

Yes No

APPENDIX B

CONSENT TO PARTICIPATE

Title of Study: Business Professionals' Reflective Practice in the Workplace

Principal Investigator: Kimberly Hurns, Walsh College Doctor of Management in Executive Leadership Student

Purpose of the Study: the purpose of this study is to explore how you learn at work and how you think about your actions/tasks.

Study Procedure: This study requires your completion of this online survey. You will be asked to rate prompts presented to you based on your professional experience.

Risks/Benefits to the Participants: This study presents no risks to you. All personal information and/or results from the questionnaire will be secured. Your name will only be used to validate the unique number of participants. Names and background information will be removed prior to data analysis and will not be included in the final report. IP addresses (internet identification) will not be collected.

Compensation for Participants: There are no costs to you or monetary compensation for participating in this study.

Research Participants' Rights: Your acknowledgement below indicates that you have read all of the above and that you confirm all of the following:

- You have reviewed the risks and benefits of the study.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You understand that you do not have to take part in this study. You can stop the survey at anytime without completing. Your refusal to participate or your decision to withdraw from the study will involve no penalty or loss of rights or benefits.

Questions about the Study: If you have any questions about the study, contact Kimberly Hurns at telephone number (313) 231-4799. Questions regarding rights as a person in this research project should be directed to Dr. Linda Hagan, Walsh College Institutional Review Board Chairman, at 248-679-1403.

APPENDIX C

SOLICITATION LETTER

Dear Business Professional:

You are invited to participate in a research study about workplace learning. This research project is being conducted by Kimberly Hurns, a doctoral candidate at Walsh College. The purpose of this study is to learn more about how professionals learn at work. The information you provide will help researchers understand more about how professionals learn from their workplace experiences.

Your participation in this study is voluntary. If you choose to participate please complete the survey by clicking this link:

http://walshcollege.qualtrics.com/SE/?SID=SV_3l0p5J6NG2oY5CI. It should take you approximately 20 minutes to complete this survey.

If you have any questions or concerns about completing the survey or your participation in the study, you may contact me at [REDACTED] or khurns@mail.walshcollege.edu.

Thank you,
Kimberly Hurns