MEASUREMENT OF MENTORING PROGRAM OUTCOMES:

A SYSTEMATIC MULTIPLE STUDIES REVIEW

by

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ABSTRACT

The purpose of this research study was to investigate how mentoring is measured and assessed in the workplace by reviewing and synthesizing qualitative, quantitative and mixed methods studies that appear in the professional literature. Mentoring programs are common practice in the workplace. The one-on-one nature of a formal mentoring program creates outcomes that benefit the protégé throughout their career in three ways: onboarding, retention at an organization, and career advancement. However, mentoring programs are expensive, both in terms of direct monetary cost and the time it takes to complete the tasks associated with mentoring, making measurement of outcomes critical for organizations. The primary question of this study was: how do organizations assess the outcomes of mentoring programs? There were three sub-questions that will provide the details to the primary question: what are the assessed outcomes of mentoring programs; what quantitative measures and scales do organizations use to assess mentoring programs; how do organizations qualitatively assess mentoring programs?

The study was conducted using a systematic multiple studies review (MSR) to answer the research questions. The researcher followed the seven steps of the MSR process as outlined by Petticrew and Roberts (2006). The researcher used the systematic process to narrow an initial search result of 4,795 articles down to the final twenty which included qualitative, quantitative and mixed methods research written between 2012 and 2018 about outcomes of participants in formal mentor programs in the business environment.

The key results found during this study were that organizations have measured mentor program outcomes by focusing on seven key themes: career resilience, career success, employee engagement, mutual development, personal learning, protégé satisfaction and professional exposure. Of those themes, the most measured outcome themes by quantitative methods were career success, professional exposure and personal learning. Qualitative assessment in the studies used in this MSR focused on career success and mutual development. Fifteen of the seventeen qualitative studies in this MSR measured outcomes of mentoring by survey of the protégé and/or mentor. The remaining two qualitative studies measured outcomes by extant data. Both qualitative studies assessed mentoring outcomes via interview. The mixed methods study used both interview and survey.

The desired benefits and the expense of formal mentoring programs show the importance of evaluating the outcomes. This MSR shows that mentoring can be evaluated successfully using quantitative methods, especially by survey, and qualitatively, especially by interview. When determining what to evaluate, an organization needs to consider which outcomes to focus on then align their study to those specific themes, as the studies in this MSR have modeled. Rather than focusing on only the quality of the mentoring experience or satisfaction with mentoring, evaluation should focus tying the mentoring experience to outcomes like job satisfaction, level of employee engagement, and adjustment to new job environments to show the organizational impact of a formal mentor program.

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CHAPTER ONE: BACKGROUND, PURPOSE & RESEARCH QUESTIONS

1.1 Definition of Mentoring

Mentoring programs are common practice in the workplace. A formal mentor relationship is between a mentor and protégé, where the mentor is usually more experienced and knowledgeable, and responsible for the career development of the protégé (Chen, Giacumo, & Sequinot-Cruz, 2017; Weinberg & Lankau, 2011; Wu, Turban, & Cheung, 2012). There are four stages of the mentoring relationship (Kram K. , 1983), which unfold over a period of time, as outlined in Figure 1. During these four stages, mentors support the protégé's growth both professionally and psychologically (Logan, 2009).

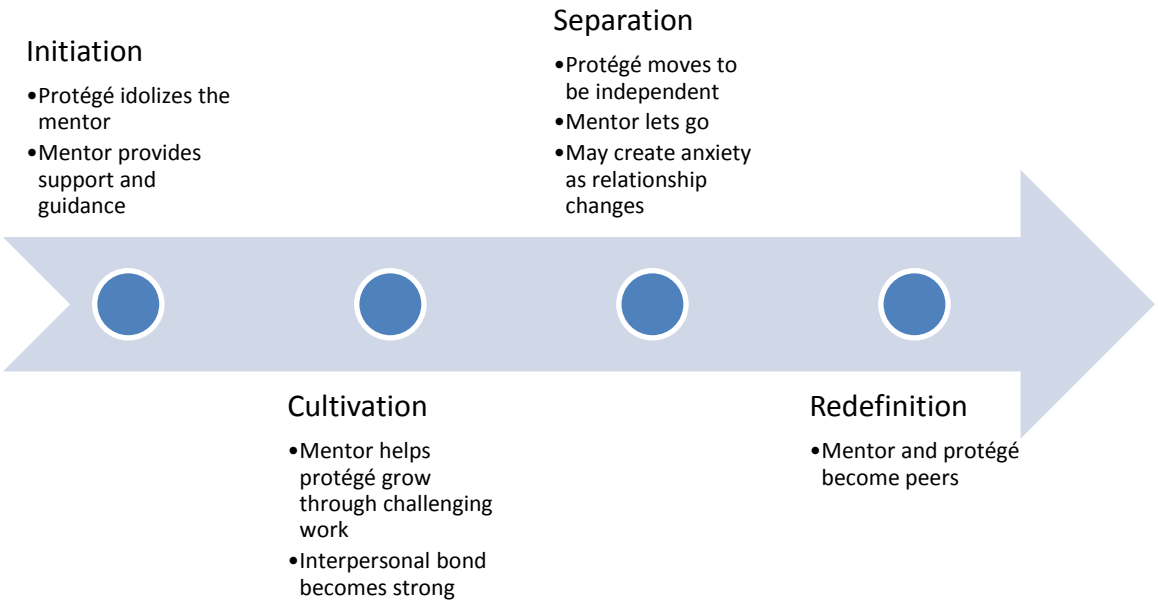

Figure 1 Four Stages of Mentoring by Kram (1983)

1.2 Mentoring Outcomes

1.2.1 Outcomes for Participants

The one-on-one nature of a formal mentoring program creates outcomes that benefit the protégé throughout their career in three ways: onboarding, retention at an organization, and career advancement. These outcomes contribute to increased individual performance, which impacts the entire organization. The paragraphs below are a discussion of the use of mentoring during the various career stages.

During the socialization and onboarding at a job, the mentoring process can help a new employee become familiar with co-workers, organizational culture, processes, procedures, and tools (Beecroft, Santner, Lacy, Kunzman, & Dorey, 2006; Anakwe & Greenhaus, 1999). Being new to an organization creates a lot of anxiety and uncertainty, which can cause new employees to leave organizations if they get overwhelmed (Fox, 2010). Having a mentor while starting a new job can help protégés find their organizational identity and provide the protégés a way to grow self-confidence and effectiveness on the job (Weinberg & Lankau, 2011). A mentor can guide the protégé, ensuring that they can effectively use company resources, including how to submit expenses, who to talk to for office supplies, or how to book a conference room (Dunham-Taylor, Lynn, Moore, McDaniel, & Walker, 2008).

Mentoring also can impact experienced employee engagement (Robinson, Annear, & Lea, 2014; Aylward, Odar, Kessler, Canter, & Roberts, 2012). Grossman (2011) reported that the engagement levels of employees declined 30% from 2009 to 2010 and found that 64% of those who were dissatisfied were unhappy because they had no opportunity for development. The outcome of non-engaged employees is that they

may harm the organization by acting against organizational culture (Cheng & Peng, 2016).

Tied to engagement, mentoring also can impact retention (Bourke, Waite, & Wright, 2014; Boyd, Blue, & Im, 2017; D'Ambra & Andrews, 2014). For example, a study by Fox (2010) showed that within a two-year period, 35% of new nurses who did not have a mentor left the profession, while only 5% who did have mentors left the profession. One reason that mentoring may aid in retention is that a mentor relationship can provide personalized learning that matches a protégé's needs (Klinge, 2015; Jyoti & Sharma, 2017; Gong, Chen, & Yang, 2014).

Finally, mentoring can help employees advance their careers (Boyd et al., 2017; Pololi et al., 2015). Mentors help protégés navigate the organization so that they contact the right influences to prepare for new roles (Weinberg & Lankau, 2011). Smith-Ruig (2014) writes that the career-related coaching was the most mentioned benefit by protégés. The mentors also can advance their careers by participation in mentoring. The responsibility of being a mentor helps align their work with the protégé with organizational goals (Weinberg & Lankau, 2011).

1.2.2 Outcomes for Organizations

Organizations also expect to see benefits from mentoring programs in areas of communication, knowledge, teamwork, and developing leaders. Mentoring programs build communication channels (Bruce, Miller, & Zimmerman, 2015) and affect changes in organizational culture by building relationships across areas where there may be functional silos (Britton, 2015). The organization benefits when the mentor increases the protégé's strategic knowledge and enhances their performance (Chun, Sosik, & Yun,

2012; Kahle-Piasecki, 2011). Many studies mention mentoring improving teamwork and building networks with colleagues (Bryant,et al., 2015; Mwangi, Zondervan, & Bascaran, 2017; Doucet, Andrews, Lauckner, Nasser, & Godden-Webster, 2012). Organizations can build leaders because the mentors are practicing leadership behaviors in their relationship with a protégé (Chun et al., 2012).

1.3 Popularity of Mentoring

Mentoring is extremely popular across organizations in all industries. Dunham-Taylor et al. (2008) called mentoring "the single most influential way" to develop employees because of "the benefits of recruitment, retention, and long-term maturation" (p. 337). Tullman (2016) reported that 71% of Fortune 500 companies have formal mentoring programs. In recent years, mentoring has become a top priority specifically for the training and development profession (Bergelson, 2014) as well. While trainers deliver content 42% of the time using stand and deliver methods (Freifeld, 2017), learning and development managers are looking for alternate ways, including mentoring, to interact with employees (Association for Talent Development, 2017).

1.4 Human Performance Technology and Mentoring

The Human Performance Technology (HPT) professional needs awareness of the real outcomes of mentoring, because mentoring programs often fall to HPT professionals to implement (Fox, 2010). An overall workplace performance plan can include classroom training, mentoring, supervisor coaching and other interventions (Masalimova, Usak, & Shaidullina, 2016; Buck, 2004). Nick et al. (2012) state that it takes "institutional responsibility in order for the intended mentoring program to thrive" (p. 7). That includes gaining administrative support, adding mentoring into promotion and Key Job

Accountabilities (KJAs), implementing training programs and providing time for mentoring. The HPT professional influences those responsibilities. The next section looks at formal mentoring as it fits into a commonly used root cause model, trends within HPT, and how mentoring can support training.

1.4.1 Behavior Engineering Model (BEM)

Thomas Gilbert (2007) created the BEM as a model to describe the conditions that lead to behaviors. The BEM helps HPT practitioners identify "barriers to individual and organizational performance" (Chevalier, 2003, p. 8), or behavior gaps. Behavior gaps are broken down into two categories: environmental support and a person's repertory for behavior. Table 1 is a model that links the mentoring outcomes, listed in the previous section, to the behavior conditions.

Table 1 Mentoring Outcomes That Affect the BEM

	Data	Resources	Incentives
Environmental Support	Mentor can pass on information to the protégé (Chun et al., 2012).	Mentor can share resources to use and introduce protégé to resources (Anakwe & Greenhaus, 1999).	Participation as a mentor can be an incentive (Weinberg & Lankau, 2011). Having a mentoring program can be part of the incentive for the organization (Boyd et al., 2017).
	Knowledge	Capacity	Motivation
Person's repertory of behavior	Mentor can be part of a learning process to reinforce learning that matches the protégé's needs (Klinge, 2015) .	Mentor can help shrink the gap between capacity and task by providing additional support (Weinberg & Lankau, 2011).	Mentor can provide motivation to protégé (Robinson et al., 2014).

1.4.2 HPT Trends Aligned with Mentoring Interventions

Rothwell, Hohn, and King (2007) identified key trends within Human Performance Technology. While more than ten years old, those same trends still affect HPT. As with the BEM, formal mentoring can impact these trends positively, as discussed below. The trends include the emergence of a knowledge-based economy, an aging workforce, changing culture and ethnicity, employee retention, and Human Resources departments having to be increasingly innovative.

1.4.2.1 Knowledge-based economy

The knowledge-based economy has been a topic of many articles and books over the past twenty years (Foss, 2002; Harris & Ormond, 2018; Rossett, 2009) Albescu, Pugna and Paraschive (2008) say, "knowledge [is] contained within huge volumes of information and leveraging this value is increasingly important in the competitive market" (p. 5). According to Sloman and Philpott (2006), Robert Reich, President Clinton's Secretary of Labor, stated that "employment in developed economies will consist of … knowledge workers" (p. 242). With the emergence of a knowledge-based economy, "it is important to create and maintain a positive culture to keep employees engaged in the goals and objectives of the organization" (Rothwell et al., 2007, p.189). This points to the potential mentoring outcomes of engagement and onboarding.

1.4.2.2 Aging workforce

Because the workforce is aging and knowledge and productivity within organizations needs to be preserved, "establishing mentor programs that pair younger workers with older workers can be effective at passing along necessary skills and

knowledge" (Rothwell et al., 2007, p. 191). These skills point to the outcomes of career advancement for the younger employees and career engagement for both employees.

1.4.2.3 Changing culture and ethnicity

The changing culture and diverse ethnicity within the workforce can lead to communication gaps and silos. Mentoring programs can be part of a strategy to promote that "leaders in our organizations have the additional skills required to manage a remote workforce, especially one from a different part of the world where time zones and languages could add to the challenge" (Rothwell et al., 2007, p. 193). Mentoring for culture and ethnicity impacts the employee engagement, not only for the leaders who are being mentored, but also for their staff, who will be more effectively led.

1.4.2.4 Employee retention

Rothwell et al. (2007) state that workers are increasingly considering job changes. Employee retention is a key priority. Mentoring helps HPT professionals "help their organizations respond to the needs of their workforces. It might not be lava lamps and beer that keeps (sic) your employees happy. Perhaps it's flex-time, opportunities for advancement and telecommuting" (Rothwell et al., 2007, p. 194). Mentoring, as one of these strategies for retention, has an impact on the outcome of employee engagement.

1.4.2.5 Innovative Human Resources departments

Human Resources departments need to be increasingly innovative in providing services. "Self-directed learning, group-based instruction, job rotation, mentoring, and coaching programs all can be effective in the right circumstances (Rothwell & Sensenig, 1999). The HPT practitioners must be comfortable selecting and implementing a full range of high-quality training and non-training solutions" (Rothwell et al., 2007, p. 199).

Meeting the needs of the workforce through flexibility impacts the outcome of employee engagement.

1.4.2.6 Support of Training

An Association for Talent Development (ATD) survey (Association for Talent Development, 2017) reported the topics for training completed across 299 organizations in 2016. The results of this survey are in Table 2. Four of the training categories, 40% of the total results, are supported by formal mentor programs. Those four categories, listed below, are: managerial and supervisory; processes, procedures and business practices; new employee orientation; and interpersonal skills.

1.5 Mentoring Measurements and Expectations

Measurement of mentoring programs to determine the outcomes, positive or negative, is important for organizations. Any program, like mentoring, must be evaluated to align with stakeholders' needs and expectations (Stufflebeam & Coryn, 2014). Mentoring programs are expensive, both in terms of direct monetary cost and the time it takes to complete the tasks associated with mentoring. In 2010, Fox (2010) reported that an annual mentoring program for 200 nurses cost $291,000, which translates to $1,455 per protégé. As an example of time expenses, Murray (2001) states that it takes three years to fully implement a mentoring program and see benefits. Those time expenses include time away from other job responsibilities (Murray, 2001; Matusovich, Paretti, McNair, & Hixson, 2014), time (months) to establish effective mentor/protégé relationships (Murray, 2001), and time for program administration to match relationships and assess needs (Murray, 2001). Mentoring programs require ongoing participation of employees to serve as mentors (Weinberg & Lankau, 2011). Negative experiences will

reduce the popularity of the program and, therefore, reduce the number of people available to make it

Table 2 ATD Training Categories

Rank	Category of training	Percentage of training delivered
1	Managerial and Supervisory (aka leadership)	13.7%
2	Mandatory and compliance	10.8%
3	Process, Procedures and Business Practices	10.4%
4	Sales (not including product knowledge)	8.9%
5	New Employee Orientation	8.2%
6	Profession specific or industry specific	8.0%
7	Information technology and systems	7.9%
8	Interpersonal skills (e.g. teamwork and communication)	7.8%
9	Executive development	6.9%
10	Customer Service	6.7%
11	Product Knowledge	6.0%
12	Basic Skills	2.9%
13	Other	1.8%
	Total	100.00%

successful. An example of the negative impact of time spent mentoring is pointed out by Hansford, Tennent, and Ehrich (2002), where overburdened mentors had declining sales numbers.

1.5.1 Problems Measuring Outcomes and Expectations

Despite the promises of positive outcomes listed above, mentoring programs may not live up to expectations (Blake-Beard, 2001; Eby & Lockwood, 2005, as cited by Tummons, Kitchel, Gordon, 2014, p. 70). Efron, Winter, and Bressman (2012) include a quote from a mentor program participant who states, “neither my mentor nor I were

completely sure what [was] expected of us during the program" (p. 341). Murray (2001) writes that the protégé might not recognize the benefits of the relationship and may not get promoted as quickly as they believe they should.

Many researchers have written that the outcomes of mentor programs are hard to measure, and the actual outcomes of mentoring are difficult to determine. (Santoro et al., 2010; Struyk & Haddaway, 2011; Chun et al., 2012; Ehrich, Hansford & Tennent, 2003). Santoro et al. (2010) suggest that outcome data is cloudy as far as the best approach to mentoring. Murray (2001) mentions that it is hard to quantify and measure leadership "soft skills." Struyk and Haddaway (2011) decided to avoid measuring impacts of the program they were studying because it was too challenging. Chun et al. (2012) conclude that "it remains unclear whether providing mentoring functions enhances positive organizational outcomes" (p. 1072) based on conflicting findings from other studies. These studies point out the importance of compiling information about successfully measured mentor programs as a basis for success of future programs.

1.6 Research Purpose

The purpose of this research was to investigate how mentoring is measured and assessed in the workplace by reviewing and synthesizing qualitative, quantitative and mixed methods studies that appear in the professional literature. Many studies about mentoring, including those in the Background Section, are case studies with conclusions based on one situation and one study (Barthalus, 2015; Beltman & Schaeben, 2012). Ehrich, Hansford, and Tennent conducted systematic studies in the 2000s that focused on mentoring in various contexts, such as nursing, education and business, and then extrapolated over other professions (Ehrich et al., 2003; Ehrich, Hansford, & Tennent,

2004; Hansford et al., 2002) The focus of their systematic studies is not on measurement, but instead on "positive and negative outcomes" (Hansford et al. 2002, p. 107), "nature and outcomes of mentoring" (Ehrich et al., 2004, p. 2) and "meaning and scope of mentoring in medical contexts and its positive and negative outcomes for those involved" (Ehrich et al., 2003, p. 2).

These previous studies show a gap in the literature focusing on mentor outcomes. Measuring and assessing outcomes of mentoring programs is important to organizations due to the direct and indirect costs involved, as discussed in the Background Section. Therefore, this study will focus on measurement of mentoring programs and answer the following research questions. The primary question is: how do organizations assess the outcomes of mentoring programs? There are three sub-questions that will provide the details to the primary question: what are the assessed outcomes of mentoring programs; what quantitative measures and scales do organizations use to assess mentoring programs; how do organizations qualitatively assess mentoring programs?

1.7 Key Terms

Table 3 lists key terms used in this document. Authors use different terms to mean similar ideas. Table 3 defines the terms as used in this paper.

Chapter One discussed the purpose of mentoring in organizations. Next, it discussed the outcomes of mentoring programs on individuals and on organization. After that, the impact of mentoring tied to Human Performance Improvement (HPI), including training, was discussed. Finally, based on all that information, Chapter One showed the purpose of this study.

Table 3 List of Key Terms

Term	Definition
Career function (of mentoring)	"Those aspects of the [mentoring] relationship that primarily enhance career advancement" (Kram, 1983, p. 614).
Coach	An expert who provides guidance and feedback on a specific skill or at critical moments (Coach, n.d., Clutterbuck, 2008, Ghefaili, 2003). In other words , a coach is concerned with a more narrow performance gap than a mentor. Smith-Ruig (2014) state that coaching can be seen as a "function" of mentoring.
Formal Mentoring Program	"A structured, purposeful process for supporting career advancement, professional growth or skill development" (Cowan, 2010) .
Informal mentoring	A voluntary mentoring relationship that the mentor and protégé enter by choice rather than created and monitored by the organization (Allen & Eby, 2003; Lankau & Scandura, 2002).
Mentor	A trusted advisor who provides assistance on broad concepts, such as career or psychosocial development (Clutterbuck, 2008, Kram, 1983, Mentor, n.d.) In other words, mentors sometimes act as coaches, although coaching is a means to a broader outcome.
Mentoring	"The activity of supporting and advising someone with less experience to help them develop in their work." (Mentoring, n.d.)
Protégé	"Someone who is helped [or] taught… by an important or more experienced person (Protégé, n.d.)" like a mentor.
Psychosocial Function (of mentoring)	"Those aspects of the relationship that primarily enhance sense of competence, clarity of identity, and effectiveness…" (Kram, 1983, p. 614).

Next, Chapter Two describes the methodology of the multiple studies review (MSR) used in this study, from the initial search of articles to the writing of the report. Chapter Three discusses the findings of the research and how the data answered the research questions. Chapter Four discusses the findings and implications of the findings shown in Chapter Three.

CHAPTER TWO: METHODOLOGY

This study used a systematic multiple studies review (MSR) to answer the research questions listed in the previous chapter. Petticrew & Roberts (2006) described a systematic multiple studies review as a literature review that:

> Adhere closely to a set of scientific methods that explicitly aim to limit systematic error (bias), mainly by attempting to identify, appraise and synthesize all relevant studies (of whatever design) in order to answer a particular question (or set of questions). In carrying out this task they set out their methods in advance, and in detail, as one would for any piece of social research (p. 9).

The term "systematic" refers to how much structure is in the study (Okoli & Schabram, 2010).

This study followed a specific protocol, as outlined below. The MSR is used to make sense of large amounts of information (Petticrew & Roberts, 2006) and is of value "when there is uncertainty about what the evidence on a particular topic shows: for example when there's uncertainty about the effectiveness of a particular intervention" (Petticrew & Roberts, 2006, p. 28). As stated earlier, there is uncertainty around the outcomes of formal mentoring programs. Mulrow (1994) states that an MSR takes less time and less money than a brand-new study.

An MSR uses quantitative, qualitative, and mixed methods empirical studies as the source of data rather than live subjects, surveys, observations or other data collection

methods. As stated above, the disadvantage of most studies around mentoring is that they focus on a single case study and single outcome, while an MSR looks across multiple cases to find the trends (Whittemore & Knafl, 2005; Mertens & Hesse-Biber, 2013): Each individual piece is examined critically to determine whether it really is part of the picture, and where to place it (if anywhere) – and to find out how it fits with other pieces (if at all). In the context of a systematic review, this involves determining whether any of the individual studies are affected by significant bias, as this may affect the weight to place on them when it comes to putting the whole picture together. "This involves assessing whether the study is representative of the wider population, whether the numbers add up (for a quantitative study), and whether the study was affected by problems or other events that might affect your interpretation of its results." (Petticrew & Roberts, 2006, p. 125).

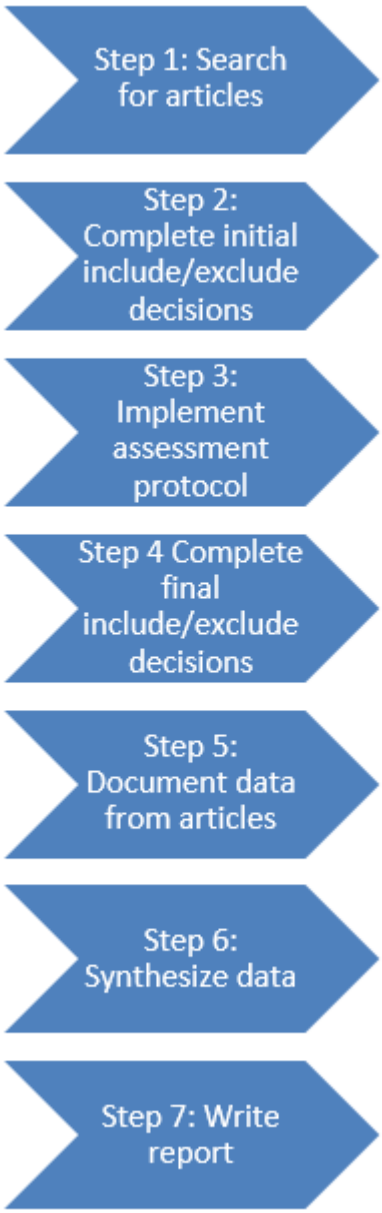

Figure 2 Multiple Studies Review Process

This study followed the procedure outlined by Petticrew and Roberts (2006), one of the most recent books about MSR in the Social Sciences. There are seven steps in the process: search for articles, complete initial include/exclude decisions, implement

assessment protocol, complete final include/exclude decisions based on protocol, document data from articles, synthesize data, and write report (Figure 2). The paragraphs below describe each step in more detail.

2.1 Step 1: Search for Articles

This study searched for articles in multiple business journal databases as seen in Table 4. These databases include research from around the world. A description of the specific focus of each database is included in Table 4.

Adhering to a rigorous MSR methodology, this study used the same starting search terms in every database. The search terms used were **(mentor OR mentors OR mentorship) AND formal AND (measurement* OR evaluat*) AND workplace AND adult* NOT educ***. This search term is based on Petticrew and Roberts' (2006) Population, Intervention, Comparison, Outcomes, Context (PICOC) criteria shown in Table 5. The search terms used include the definitions as shown in Table 5. The study resulted in 4,795 articles being found, as shown in Table 4.

Once all articles were found, all citation information (author, year, article title, publication) was entered into Microsoft Excel and sorted alphabetically. Then duplicates were removed to complete the finalized list of initial articles. The number of articles remaining after duplicates were removed is shown in Table 6. Eighty-one percent of the articles remaining after duplicates were removed were found from the Academic Search Premier database.

Table 4 Article Search Databases

Database	Description	Initial search numbers
ABI/Inform Collection	"Includes important full- text journals and much sought- after titles from the business press as well as key trade publications, dissertations, conference proceedings, and market reports—will help today's researchers resolve tomorrow's problems" (ProQuest, 2018a).	49
Academic Search Premier (EBSCO/HOST)	A "multidisciplinary research database … provides acclaimed full-text journals, magazines and other valuable resources" (EBSCO Information Services, 2018a).	3605
Asian and European Business Collection	"Provides information pertinent to the study of business and finance topics across Asia and Europe, including academic journals, newspapers, newswires, and magazines" (ProQuest, 2018b).	49
Business Source Premier	"The industry's most widely used business research database … features full text and searchable cited references for top journals covering a variety of business disciplines" (EBSCO Information Services, 2018b).	998
JSTOR	A databased to "explore a wide range of scholarly content through a powerful research and teaching platform" by "collaborate with the academic community to help libraries connect students and faculty to vital content" (JSTOR, 2018).	18
LexisNexis	Includes "legal, regulatory and business information and analytics that help customers increase productivity, improve decision-making and outcomes, and advance the rule of law around the world" (LexisNexis, 2018).	0

ProQuest Central	"The largest single periodical resource available, bringing together complete databases across all major subject areas, including Business, Health and Medical, Language and Literature, Social Sciences, Education, Science and Technology, as well as core titles in the Performing and Visual Arts, History, Religion, Philosophy, and includes thousands of full-text newspapers from around the world" (ProQuest, 2018c).	76
Web of Science	"The world's leading scholarly literature in the sciences, social sciences, arts and humanities and examine proceedings of international conferences, symposia, seminars, colloquia, workshops, and conventions" (Web Of Science, 2018).	0
Total		4,795

Table 5 PICOC Search Criteria

Population	Participants in mentor programs in the workplace
Intervention	Mentoring programs, both formal and informal
Comparison	Outcomes that are measured and assessed
Outcomes	Quantitative data (e.g. promotions, number or mentor relationships, advancement, better pay, employee engagement surveys, better "work") Qualitative data (e.g. employee morale, employee confidence, program "success") Mixed methods
Context	Within the business environment; not social mentoring or adult/student relationships

2.2 Step 2: Complete Initial Include/Exclude Decisions

After the finalized list of initial articles was created, the researcher considered each article for inclusion or exclusion as data for the study based on a brief read of the abstract, based on preliminary criteria. This initial assessment was simply to weed out studies that were not relevant to the topic. The researcher did not make any judgement about the validity of the study (e.g. the quality of the research methods), but only that the topic studied matched the criteria. The initial assessment criteria included two criteria: 1) the article is about a formal mentoring program in a workplace environment and 2) the article includes a measurement of mentoring outcomes.

All articles were assessed based on these criteria, which reduced the number of articles from 4,424 to 363. The most common reason that articles were removed from the search numbers was because the content did not match our PICOC criteria, as outlined in Table 5. The other common three reasons that articles were eliminated were that the population was about youth or college students (1385), descriptions of a program rather than outcomes (734), and discussions about commentary and theory (592). Table 7 shows the totals at the conclusion of this sorting process. This brought the total included articles down to 363. The researcher conducted two further sorts. First, the researcher categorized the articles into business, medical or education settings (Table 7). Second, only studies written between 2012 and 2018 were included in the results. This reduced the number of studies to 143 (Table 8).

Next, after assessing the number of articles and the scope of the project, the researcher narrowed the scope to articles about business (shown in Table 8), eliminating the articles focused on medical and education work settings. The researcher focused on

the business environment and excluded the medical and education environments in order to narrow in on the mentoring relationship without the additional factors of patient care and educational goals. This reduced the number of articles to 45. The 45 articles set in the business workplace were then screened one more time to ensure that they met the requirements and the researcher eliminated an additional 22 articles based on the PICOC criteria (Table 5), leaving him with the final 23 articles included in the study (Appendix A).

Table 6 Article search results

Database	Initial article results	Article results after duplicates removed
ABI/Inform Collection	49	49
Academic Search Premier (EBSCO/HOST)	3605	3605
Asian and European Business Collection	49	0
Business Source Premier	998	727
JSTOR	18	16
LexisNexis	0	0
ProQuest Central	76	27
Web of Science	0	0
Total	4795	4424

Table 7 Included articles

	Subtotals			Total
Database	Included about business	Included about education	Included about medical	Remaining Included articles
ABI/Inform Collection	4	0	0	4
Academic Search Premier (EBSCO/ HOST)	45	79	101	225
Business Source Premier	116	11	3	130
JSTOR	1	0	1	2
ProQuest Central	2	0	0	2
Total	168	90	105	363

2.3 Step 3: Implement Assessment Protocol

The goal of this step was to determine the rubric to determine the studies that are appropriate for the research. The researcher used the Mixed Methods Appraisal Tool (MMAT) (Pluye et al., 2011). All the articles in the initial include/exclude file were read and recorded on an additional worksheet based on the MMAT protocol. All studies were evaluated on two criteria (Table 9):

Table 8 Included articles from 2012 - 2018

	Subtotals			Total
Database	Included about business	Included about education	Included about medical	Remaining Included articles
ABI/Inform Collection	2	0	0	2
Academic Search Premier (EBSCO/ HOST)	16	40	54	110
Business Source Premier	27	3	1	31
JSTOR	0	0	0	0
ProQuest Central	0	0	0	0
Total	45	43	55	143

1) "Are there clear qualitative and quantitative research questions (or objectives) or a clear mixed methods question (or objective)?" (Pluye et al., 2011, p. 2), and
2) "Do the collected data … address the research question (objectives)?" (Pluye et al., 2011, p. 2)

Then, additional criteria were applied based on the type of study (qualitative, quantitative or mixed methods). The additional criteria are described in Step 4 below. During this step, three articles were eliminated after further evaluation. McKevitt & Davis (2014) and Perrone et al. (2016) were not about mentoring. ÖZcan & ÇAĞLar (2013) was not understandable after translating from the original language.

2.4 Step 4: Complete Final Include/Exclude Decisions Based on Protocol

In Step 4, the researcher used the MMAT scoring protocol (Pluye et al., 2011) to make the final determination of articles to include in the study. This assessment rubric is a comparison of the number of criteria met to a minimum number. Each criterion was evaluated as "Yes", "No" or "Can't Tell". An article was included in the study if 80% of the elements were evaluated as "Yes". All the articles that met this minimum number of criteria were added to the final include list of articles for the study shown in Appendix B.

2.5 Step 5: Document Data from Articles

More information from the articles on the final include/exclude list were documented in an expanded worksheet in the researcher's Excel sheet (Petticrew & Roberts, 2006, p. 121; Petticrew & Roberts, 2006, p. 165). The purpose of this information was not only used to create the final report's bibliography, but also to complete the methodology and results data sections. The expanded data included study population, intervention details and background, outcomes and measurements, type of study (qualitative, quantitative, mixed methods), methods used to analyze data, and date of study. This final list is shown in Appendix A.

Table 9 MMAT, part 1

Article details		**Screening questions**	
Citation	Study Type	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?
Arora and Rangnekar (2014)	Quantitative	Yes	Yes
Bach Ouerdian, Malek, and Dali (2018)	Quantitative	Yes	Yes
Cheng and Peng (2016)	Quantitative	Yes	Yes
Deptula and Williams (2017)	Qualitative	Yes	Yes
Farnese, Barbieri, Bello, and Bartone (2017)	Quantitative	Yes	Yes
Grima, Paillé, Mejia, and Prud'homme (2014)	Quantitative	Yes	Yes
Holtbrügge and Ambrosius (2015)	Quantitative	Yes	Yes
Janssen, Tahitu, van Vuuren, and de Jong (2018)	Qualitative	Yes	Yes
Koyuncu, Burke, Alayoglu, and Wolpin (2014)	Quantitative	Yes	Yes
Lyle and Smith (2014)	Quantitative	Yes	Yes
Makokha et al. (2014)	Quantitative	Yes	Yes
Naim and Lenka (2017)	Quantitative	Yes	Yes
Rogers, Luksyte, and Spitzmuller (2016)	Quantitative	Yes	Yes

Rueywei, Shih-Ying, and Min-Lang (2014)	Quantitative	Yes	Yes
Smith-Jentsch, Fullick, and Bencaz (2012)	Quantitative	Yes	Yes
Srivastava (2015)	Mixed	Yes	Yes
Srivastava and Thakur (2013)	Quantitative	Yes	Yes
Welsh and Dixon (2016)	Quantitative	Yes	Yes
Zhenyuan, Huiping, Xi, and Yongjia (2016)	Quantitative	Yes	Yes
Zhuang, Wu, and Wen (2013)	Quantitative	Yes	Yes

2.6 Step 6: Synthesize Data

After documenting the data from the articles, the researcher synthesized and coded the data. “Coding involves identifying and marking not only concrete things but also ideas and meanings” (LeCompte & Schensul, 2013, p. 148). Through the coding, the researcher looked for independent variables, described by LeCompte and Schensul (2013) as “possible explanations for the outcomes” (p. 148) and dependent variables, described by LeCompte and Schensul (2013) as the outcomes. Determining the codes in data-driven studies, like this study, involves “five steps to inductively create codes for a codebook: 1) reduce raw information; 2) identify subsample themes; 3) compare themes across subsamples; 4) create codes; and 5) determine reliability of codes” (DeCuir-Gunby, Marshall, & McCulloch, 2011, p. 141). The codebook was set up following the process outlined by (MacQueen, McLellan, Kay, & Milstein, 1998) which included defining the variable, showing an example of when to use and when not to use.

2.6.1 Reducing raw data

The first step was to read through the article and identify the outcomes and results. The researcher focused on the results and conclusions sections of the articles to document the actual results. The researcher recorded the relevant quotes from the articles as raw data in an Excel sheet. This resulted in 241 lines of raw data points.

2.6.2 Identify subsample themes and compare themes

Using data from the articles, the researcher looked for themes in each article. The researcher then compared themes across articles to find commonalities to identify main themes. These themes were further defined in the next step.

2.6.3 Create codes

From the themes, the researcher created codes. Originally, the codes were defined by starting with the two functions of mentoring, career functions and psychosocial functions, outlined by Kram (1983). This article is cited by more than 2,700 other reports, including 6 of the 21 articles in this study. 12 of the 21 studies refer to the career and psychosocial functions originally outlined in Kram's (1983) article. After defining those two codes, the researcher developed 30 sub-codes and organized them under the two mentor functions. These codes were based on information in the articles and defined using information from the study articles directly (Appendix C).

2.6.4 Determine reliability of codes

After completing the research and documenting relevant quotes and codes, the primary researcher (the student) consulted with a secondary researcher (another student who has experience with research coding) to assess the reliability of the codes. Following a deductive coding process (LeCompte & Schensul, 2013, p. 167), the primary researcher

shared a 20% sample of his notes with the secondary researcher, along with the codes he had developed. The secondary researcher then coded the notes using their interpretation of the codes.

Originally, quotes were coded with multiple codes of either the psychosocial or career functions of mentoring with multiple codes used on a single data point to help focus broader concepts. For example, employee engagement is a broad term defined as "aspects of the job that stimulate personal growth, learning and development" (Welsh & Dixon, 2016, p 233). But, more specific codes, like organizational identification, defined as "a perceived oneness with an organization and the experience of the organizations' successes and failures as one's own" (Mael & Ashforth, 1992, p. 103, cited by Cheng and Peng (2016) narrow the scope of the data point. To establish interrater reliability, the researcher used a method to calculate kappa on a one-to-many relationship. Kirilenko and Stepchenkova (2016) established Fuzzy Kappa "for certain data usage purposes, the requirement to describe a set of data by using one-to-one protocol may be overly restrictive" (page 2). A reliable Kappa value is ≥.70 (Morgan, 2013). Using a coding program developed for Fuzzy Kappa (Kirilenko & Stepchenkova, 2016), the researcher determined the Fuzzy Kappa value of .27 for career function codes and .25 for psychosocial function codes. Due to the low interrater reliability, the researcher went back to the "create codes" step and redefined the codes. The researcher decided to detach the codes from the two mentor functions of psychosocial and career (Kram K. , 1983) because many codes apply to both the psychosocial and career functions of mentoring. Then, the researcher redefined the codes to create 7 top level codes (Table 10). The original codes, shown in Appendix C were not well enough defined to be applied

consistently. Applying MacQueenet al. (1998) to remove deadwood, the researcher combined codes. For example, the original codes had affective commitment, adjustment, developmental climate, and job embeddedness. However, all the codes had a common theme, employee engagement. Therefore, the researcher combined them into one code, employee engagement. Additionally, to help focus the definitions of those seven codes, the researcher created a definition matrix (MacQueen et al., 1998). The researcher then reapplied those seven codes to the quotes originally determined from the "Reducing Raw Data" step. A second round of interrater reliability with a different 20% of quotes was done with the original second researcher. The results of the second interrater reliability was a Fuzzy Kappa of .702, within the acceptable range.

2.7 Step 7: Write Report

After analyzing and synthesizing the data, the researcher wrote the final report with feedback from the thesis committee and editor.

Chapter Two discussed the methodology used for this MSR study. Chapter Three discusses the findings of the study. Chapter Four discusses the implications of the findings.

Table 10 Code Definitions

Outcome	Definition
Career Resilience (CR)	Career resilience is the protégé's ability to adapt to all situations, including disruptive change. The protégé demonstrates career resilience by performing well in new settings, as well as their own feeling of comfort, competence and satisfaction in new settings (Arora & Rangnekar, 2014; Black & Gregersen, 1991; Zhuang et al., 2013). A protégé not demonstrating career resilience results in ongoing job stress, which leads to burnout (Dowden &Tellier, 2004).
Career Success (CS)	Career success is when the protégé has achieved "a high level in [their] profession" (Monserrat et al., 2009). Elements of success include "pay, promotions, status… job and life satisfaction" (Judge & Bretz, 1992, p.58) There are two types of career success: Objective career success, defined as observable success such as promotion, seniority, salary, and increased responsibility (Judge & Bretz, 1992; Nicholson, 2000; Bach Ouerdian et al., 2018, p. 118). Subjective career success is defined by the protégé satisfaction for their current career. Examples include development opportunities, happiness, work/life balance (Hall & Chandler, 2005; Bach Ouerdian et al., 2018)
Employee Engagement (EE)	Employee engagement is the elements of a protégé's job that encourage their personal growth and learning. (Welsh & Dixon, 2016) Engaged employees identify with an organization's direction (Mael & Ashforth, 1992; Cheng & Peng, 2016) have an emotional connection with the organization (Meyer & Allen, 1997, Fleig-Palmer & Rathert, 2015) and express an intention to stay with the organization (Currivan, 1999; Naim & Lenka, 2017). A non-engaged employee may demonstrate organizational deviance by behaving in ways that "erode organizational norms and bring potential harm to [the organization] (Bennett & Robinson, 2000; Michel, Newness, & Duniewicz, 2016)" (Cheng & Peng, 2016, p. 119).
Mutual Development (MD)	Mutual development is the synergistic power of the mentoring relationship which allows the pair to work collaboratively to achieve more goals, generate more knowledge and access more resources as a pair than they could individually. (Deptula & Williams, 2017).
Personal learning (PL)	Personal learning is the protégé acquiring "the skills, knowledge or competence that contribute to career outcomes" (Rueywei et al., 2014, p. 489).

Protege Satisfaction (PS)	Protégés that are satisfied with their mentor and the mentor experience. Welsh and Dixon (2016) state that satisfied proteges align their expectations with the provided support.
Professional Exposure (PX)	Professional exposure is when the "visibility of the protégé in the enterprise" (Grima et al., 2014, p. 471) is increased through job assignments and interactions with influencers. Because navigating these interactions and assignments successfully requires political skill (Rogers et al.,2016), the mentor needs to share knowledge of processes, people and systems (Bryant et al., 2005), and provide protection from the mentor to help the protégé avoid actions that may damage their image and reputation. (Grima et al., 2014).

CHAPTER THREE: DATA ANALYSIS AND FINDINGS

This chapter discusses the results from the steps outlined in Chapter Two. First, the chapter discusses the alignment of the outcomes identified in the MSR articles. The quantitative measures are discussed to answer Research Question 1a. This is followed by a discussion of the scales referenced in the quantitative studies, which will answer Research Question 1B. After that, the assessments used in the qualitative articles are discussed, answering Research Question 1C.

The researcher tallied the codes that applied to each article. Those results are shown in Table 12. The tally shows that career success, employee engagement, and personal learning were the most-assessed codes in the quantitative studies. Career success and mutual development showed up in both qualitative studies.

3.1 Research Question 1a: What are the assessed outcomes of mentoring programs?

The measured assessed outcomes of mentoring programs found in this MSR are tied to the seven codes defined in Table 10. Six of the codes were measured quantitatively in the study articles: career resilience, career success, employee engagement, personal learning, protégé satisfaction, and professional exposure. Two of the codes were assessed by both qualitative studies (Deptula & Williams, 2017; Janssen et al., 2018): career success and mutual development. The outcomes that were measured qualitatively and assessed qualitatively encompass a large range within the seven codes developed for this MSR. Table 11 describes the specific elements of each of the codes that the studies in the MSR focused on. Additionally, many studies measured mentoring

and mentoring function in general (Arora & Rangnekar, 2014; Cheng & Peng, 2016; Grima et al., 2014; Koyoncu et al., 2014; Naim & Lenka, 2017; Rogers etl al., 2016

Table 11 Elements of outcomes measured by MSR studies

Outcome	Element	Study
Career Resilience	Career resilience	Arora and Rangneker (2014)
	Protégé adjustment	Zhuang et al. (2013)
	Burnout factors	Farnese et al. (2017)
Career Success	Career development	Holtbrügge and Ambrosius (2015)
	Job promotion	Rueywei et al. (2014) Lyle and Smith (2014)
	Job performance	Srivastava and Thakur (2013) Makokha et al. (2014) Deptula and Williams (2017) Janssen et al. (2018)
	Career / job satisfaction	Holtbrügge and Ambrosius (2015) Rueywei et al. (2014) Bach Ouerdian et al. (2018) Koyuncu et al. (2014) Farnese et al. (2017)
	Competency development	Welsh and Dixon (2016)
	Work adjustment	Zhuang et al. (2013)
	Mentor competency	Janssen et al. (2018)
	Length of mentoring relationships	Deptula and Williams (2017)

Employee Engagement	Employee engagement	Welsh and Dixon (2016) Janssen et al. (2018)
	Organizational identification	Cheng and Peng (2016)
	Organizational support	Naim and Lenka (2017)
	Perceived developmental / learning climate	Cheng and Peng (2016) Farnese et al. (2017) Welsh and Dixson (2016)
	Intention to stay with the organization	Naim and Lenka (2017)
	Positive work attitudes	Janssen et al. (2018)
	Positive work environment	Janssen et al. (2018)
	Organizational deviance	Cheng and Peng (2016)
	Burnout	Farnese et al. (2017)
	Exclusion of others outside the mentor relationship	Janssen et al. (2018)
Mutual Development	Protégé and mentor performance as a team	Deptula and Williams (2017) Janssen et al. (2018)
	Personal and professional changes resulting from mentoring	Srivastava (2015)

Personal Learning	Personal learning	Arora and Rangnekar (2014)
	Role modeling	Cheng and Peng (2016)
	Personal skill development	Srivastava and Thakur (2013)
		Holtbrügge and Ambrosius (2015)
	Relational job learning	Srivastava and Thakur (2013)
	Knowledge of organizational values	Farnese et al. (2017)
	Personal learning resources	Farnese et al. (2017)
		Janssen et al. (2018)
Protégé Satisfaction	Job/career satisfaction	Koyuncu et al. (2014)
	Mentor quality	Zhenyuan et al. (2016)
Professional Exposure	Exposure and visibility	Arora and Rangnekar (2014)
		Bach Ouerdian et al. (2018)
		Grima et al. (2014)
	Protégé ingratiation	Smith-Jenstch (2012)
	Assignments given	Cheng and Peng (2016)
	Social and professional connections	Farnese et al. (2017)
		Srivastava (2015)
	Political skill and organizational politics	Roberts et al. (2016)
		Srivastava and Thakur (2013)
	Knowledge sharing	Zhenyuan et al. (2016)
	Protégé power	Janssen et al. (2018)
	The environment for risk taking	Janssen et al. (2018)
	Connections with coworkers	Srivastava (2015)
		Zhuang (2013)

Rueywei et al., 2014; Smith-Jentsch et al., 2012; Srivastava & Thakur, 2013; Zhuang et al., 2013) using a variety of established scales (Allen, 2003; Allen & Eby, 2003; Berk, Berg, Mortimer, Walton-Moss & Yeo, 2005; Burke, 1984; Castro, Scandura & Ragins, 2004; Dreher & Ash, 1990; Noe, 1988; Poteat et al., 2015; Ragins & Scandura, 1999; Scandura & Ragins, 1993).

Table 12 Count of articles that measure the MSR codes

	Type of study			
	Quantitative	Qualitative	Mixed	Total
Career Resilience	4	0	0	4
Career Success	10	2	1	13
Employee Engagement	4	1	0	5
Mutual Development	0	2	1	3
Personal Learning	6	1	0	7
Protégé Satisfaction	2	0	0	2
Professional Exposure	11	1	1	13
Total number of articles	17	2	1	20

The specific measures and outcomes, organized by the codes and definitions in Table 10, are discussed. The scales that were the foundations for the quantitative measures used in the MSR articles are described. Finally, the qualitative assessments and outcomes from the MSR articles are discussed, also organized by the code definitions from Table 10.

3.2 Research Question 1b: What quantitative measures and scales do organizations use to assess mentoring programs?

Seventeen of the studies in this MSR measured mentor outcomes quantitatively. Those measurements covered six of the seven codes defined in Table 10. Fifteen of the studies compiled results of surveys. Two studies used extant data: Lyle and Smith (2014) measured administrative personnel data and Makokha et al. (2014) measured lab quality results. Table 13 shows which codes each study measured. After the table is a discussion of how each code was measured, as well as a discussion of the established scales referenced in these studies.

This information is organized by the codes defined in Table 10. Most of the data in the MSR articles was collected by surveys, mainly based on 5-point or 7-point Likert scales. Some surveys did include nominal data, such as Yes/No questions or single answer questions (e.g. "How long have you been in the mentor relationship?").

3.2.1 Career Resilience

As mentioned in Table 10, career resilience is the protégé's ability to adapt to all situations, including disruptive change. The protégé demonstrates career resilience by performing well in new settings, as well as by their own feeling of comfort, competence and satisfaction in new settings (Arora & Rangnekar, 2014; Black & Gregersen, 1991; Zhuang et al., 2013). As defined by Dowden and Tellier (2004), a protégé who does not demonstrate career resilience experiences ongoing job stress, which leads to burnout.

Table 13 Quantitative articles and applied MSR codes

Key:

***CR** = career resilience*
PL= personal learning
***CS*= career success**
PS= protégé satisfaction
***EE*= employee engagement**
PX= professional exposure
***MD*= mutual development**

	Code					
Author	CR	CS	EE	PL	PS	PX
Arora and Rangnekar (2014)	X			X		X
Bach Ouerdian et al. (2018)		X				X
Cheng and Peng (2016)			X	X		X
Farnese et al. (2017)	X	X	X	X		X
Grima et al. (2014)						X
Holtbrügge and Ambrosius, (2015)		X		X		
Koyuncu et al. (2014)		X			X	X
Lyle and Smith (2014)		X				
Makokha et al. (2014)		X				
Naim and Lenka (2017)			X	X		
Rogers et al. (2016)						X
Rueywei et al. Lang (2014)		X				

Smith-Jentsch et al. (2012)							X
Srivastava (2015) (as a mixed methods study)							X
Srivastava and Thakur (2013)	X	X		X			X
Welsh and Dixon (2016)		X	X				
Zhenyuan et al. (2016)						X	X
Zhuang et al. (2013)	X	X					X

In Arora and Rangnekar (2014), career resilience was measured by survey of the protégé. They modified items from Carson and Bedeian (1994) to create their survey. An example question asked in the survey was "the discomforts associated with my line of work/career field sometimes seem too great" (Arora & Rangnekar, 2014, p. 212). A 5-point scale from 1) "strongly disagree" to 5) "strongly agree" was used to measure the survey items. Arora and Rangnekar (2014) concluded that psychosocial mentoring (defined in Table 3) impacts career resilience for the protégé, but career mentoring (also defined in Table 3) does not impact career resilience.

Zhuang et al. (2013) measured protégé adjustment. Adjustment to new settings is part of the definition of career resilience in Table 10. This measurement, conducted by survey, was based on the scale developed by Black & Stephens (1989). Respondents answered questions on the protégé's adjustment to living in a foreign country along a five-point scale from 1) "totally disagree" to 5) "totally agree." An example question asked was "'I can adjust to the performance standards and expectations in my host

country" (p. 41). Zhuang et al. (2013) concluded that "mentorship is an effective mechanism to facilitate expatriate adjustment" and "the assistance provided by mentors, from both the home and the host countries, facilitates expatriate adjustment in the host country. In other words, multiple-mentor support networks might better assist expatriate adjustment" (p. 45).

Farnese et al. (2017) surveyed new correctional officers to determine their mentoring and the factors that lead to burnout. Burnout is defined by Dowden and Teller (2004) as "the protracted consequence of unabated job stress" (p. 34). Farnese et al. (2017) measured burnout in a survey by modifying the personal accomplishment, cynicism, and emotional exhaustion dimensions of the Maslach Burnout Inventory (Schaufeli, Leiter, Maslach, & Jackson, 1996), and the interpersonal strain dimension modified from Borgogni, Consiglio, Alessandri, and Schaufeli (2012). An example question asked by Farnese et al. (2017) was "I deal very effectively with the problems of my work" (p. 324). The conclusion of the study on burnout amongst correctional officers is that "mentoring proved to be a protective factor against burnout onset" (Farnese et al., 2017, p. 325).

Established scales used to measure career resiliance in the articles in this MSR focused on different aspects of career resiliance. The articles focused on adjustment (Black and Stephens,1989), interpersonal strain (Borgogni et al. ,2012), career commitment (Carson and Bedeian 1994), and burnout (Schaufeli et al., 1996). None of the established scales directly measured the use of interventions, such as mentoring, into career resiliance.

The studies in this MSR that measured career resilience focused on career reliance itself (Arora & Rangnekar, 2014), adjustment to a new environment (Zhuang et al., 2013), and burnout (Farnese et al. 2017). All three studies measured the outcomes of mentoring in relation to a protégé's resilience. All three studies concluded that mentoring was a factor in supporting career resilience by helping protégés adjust and reduce their stress.

As an additional note, while their study did not directly measure elements of career resiliance, Srivastava and Thakur (2013) specifically comment on reacting to circumstances affecting performance of a mentor.

> The fact that job performance is influenced so much by situational factors beyond the control of mentees or individual mentors, as argued here, means that it is quite possible that in the present study there may have been many mentees with good relationships who performed poorly because of the effect of negative situational factors, while the effect of positive situational factors may have been responsible for many with poor relationships performing well (Srivastava & Thakur, 2013. p. 24).

These situational factors cannot be tied to mentoring but should be used as a caution while measuring the impact of mentoring on factors like career resilience.

3.2.1 Career Success

Career success is defined as when the protégé has achieved a high level in [their] profession (Table 10). Objective career success is defined as observable success such as promotion, seniority, salary, and increased responsibility (Judge et al., 1995; Nicholson, 2000, Bach Ouerdian et al., 2018). Subjective career success is defined as the protégé's

satisfaction for their current career. Examples include development opportunities, happiness, work/life balance (Hall & Chandler, 2005, Bach Ouerdian et al., 2018).

3.2.1.1 Articles that measured both objective and subjective career success

Holtbrügge and Ambrosius (2015) measured career success as both career development and career satisfaction. Survey items in Holtbrügge and Ambrosius's (2015) research tested career development (aka objective career success) were based on the study published by Gould & Penleys (2014). Questions asked included "I learned technical skills or product knowledge during my assignment that helped me in future positions";. "I successfully built a network in the host country". "I can incorporate new ways of thinking and problem solving due to spending time in a different culture. I can see problems from a different perspective"; and "Due to my assignment, I can see the goals of the organization as a whole, not just the immediate needs in my own home plant. I use this attribute to make decisions in my current position" (Holtbrügge & Ambrosius, 2015, p. 285).

Holtbrügge and Ambrosius (2015) also asked survey questions about career satisfaction (aka subjective career success). These questions were based on the career satisfaction scale in Greenhaus, Parasurman, and Wormley (1990). The survey asked the following three questions: "The assignment prepared me well for future career opportunities"; "Upon return to my home country, I began directly in a higher position than when I left"; and "Did the assignment adequately prepare you for greater responsibilities" (Holtbrügge & Ambrosius, 2015, p. 285).

Holtbrügge and Ambrosius (2015) concluded that skill development is an important interim step between mentoring and career development, and skill development

an important measure in showing career development. Holtbrügge and Ambrosius (2015) state, “If the mentor knows about the plans and ambitions of the mentee in advance, he/she can support the mentee and help him/her gain the skills needed for the career development” (Holtbrügge & Ambrosius, 2015, p. 288).

Rueywei et al. (2014) measured career success by measuring a job promotion scale (objective career success) which was their own design, and a job satisfaction scale (subjective career success) based on the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England, & Lofquist, 1967). No examples of specific questions used in the survey were reported by Rueywei et al. (2014). The results of this study showed that “Mentoring provides a number of benefits to protégés, including increased frequency and speed of promotion and increased job satisfaction” (Rueywei et al., 2014, p. 498).

3.2.1.2 Articles that measure objective career success

Srivastava and Thakur (2013) measured career success by using a scale of role-based performance developed by Welbourne, Johnson and Erez (1998). This scale investigated five dimensions of performance: job performance, team performance, career performance, organizational citizenship and innovation performance (Srivastava & Thakur, 2013, p 20). No examples of specific questions used in the survey were reported. Srivastava and Thakur (2013) found “relational mentoring to be a valid predictor of … personal skill development (partial mediation)” (p. 24).

Welsh and Dixon (2016) measured competency development using self-measured pre-mentoring and post-mentoring ratings, using survey questions designed specifically for their work. Questions asked about competency development included “’apply strategies to ensure effective conflict resolution’, ‘modify her/his communication style to

positively impact work relationships', and 'navigate organizational politics'" (Welsh & Dixon, 2016, p. 238). The study found that competency development is related to skill development and that "development was maximized when mentees quickly implemented or practiced what they learned, as competency development was related to skill practice." (Welsh & Dixon, 2016, p. 242).

Lyle and Smith (2014) is one of the few studies that did not use a survey, but instead measured personnel records of the US Department of Defense. Lyle and Smith (2014) looked at employment records of battalion commanders who served as mentors and the company commanders who were the battalion commanders' protégés. The primary measurement used was the time it took for company commanders to promote from Captain to Major, especially when compared to the quality of the mentor. Their study showed that a junior officer serving under a high-performing mentor led to early promotion. A mentor who was promoted to Major early was considered "high performing". Lyle and Smith (2014) concluded "The likelihood of early promotion increases in the duration of the high-quality mentorship, and the impact of time spent with a high performing mentor is also greater for higher-ability protégés" (p. 232).

Makokha et al. (2014) studied a mentor program's impact on organizations rather than individuals by studying the overall lab quality scores where mentoring programs with higher-performing labs were implemented. Those results were compared to lab results where mentoring programs were not implemented. An important point from this study is that the measurement showed improvement over several tests taken at distinct time intervals. Makokha et al. (2014) stated in the introduction that "observational studies have suggested that the mentorship component, especially when aligned to laboratory

accreditation goals and overall plans of the Ministry of Health (MOH), provides substantial impact on laboratory quality improvement" (p. 2). In the conclusion, the study confirmed that

> The eight regional-level laboratories in Kenya's first SLMTA cohort all made substantial quality improvements, moving from zero SLIPTA stars to anywhere from one to fourstars in a period of one year. Laboratories twinned with research institutions started slightly higher and improved nearly twice as much as non-twinned laboratories during the first half of the programme (Makokha et al., 2014, p. 5).

3.2.1.3 Articles that measure subjective career success

Bach Ouerdian et al. (2018) focused on subjective career success. Measurements were done by a survey based on Turban & Dougherty's (1994) work. Sample questions asked were "Do you think your career is successful?"; "In comparison with your colleagues, how successful do you think your career is?"; "At what point do you think your career is successful?"; and "Considering your age, do you think your career is successful?" (Bach Ouerdian et al., 2018, p. 129). Beyond measuring subjective career success, an underlying theme reported on in Bach Ouerdian et al. (2018) is the impact of mentoring on career success by gender, which was analyzed by looking at the surveys based on gender. The authors concluded that men who are mentored are promoted and translate the psychosocial support to feeling successful. Women, on the other hand, do not translate the mentoring support into promotions or feelings of success.

Koyuncu et al. (2014) measured the effect of mentoring on women in Turkish banks. Like Holtbrügge and Ambrosius (2015), the survey designed by Koyuncu et al.

(2014) for their research asked questions based on Greenhaus et al. (1990). Those questions asked by Greenhaus et al. (1990) were "I am satisfied with the success I have achieved in my career"; "I am satisfied with the progress I have made toward meeting my overall career goals"; "I am satisfied with the progress I have made toward meeting my goals for income"; "I am satisfied with the progress I have made toward meeting my goals for advancement"; and, "I am satisfied with the progress I have made toward meeting my goals for the development of new skills" (p. 86).

One conclusion from the study was that women who had role models were more satisfied with their jobs (Koyuncu et al., 2014). However, the overall results of this study showed that with women in Turkish banks, Koyuncu et al, (2014) study participants, having a mentor on its own was not enough to ensure career success. Further changes to organizational culture are also needed.

Farnese et al. (2017) stated that mentoring influences personal accomplishment, which the authors define as feeling effective at work and "job-related sense of adequacy" (p 324). Farnese et al. (2017) measured personal accomplishment by asking survey questions such as "I have done many worthwhile things on this job" (p. 324). They concluded that mentoring "was positively slightly correlated with personal accomplishment" (Farnese et all, 2017, p. 325).

Zhuang et al. (2013) focused on the difference in mentoring between a mentor from the "host country" (where the protégé is now working) and a mentor from the "home country" (where the protégé is from). The study states that employees working overseas fail because they are "unable to adjust to [a] different psychological or cultural environment" (Zhuang et al., 2013, p. 36). Therefore, career success is a result of work

adjustment. The study measured work adjustment through a survey of protégés, asking questions focusing on interactions within the new culture and work environment. Zhuang et al. (2013) conclude that mentors' "career development functions can enhance expatriate protégés' work adjustment in the host country" (p. 45).

Established scales used to measure career success in the articles in this MSR focused on career achievement (Greenhaus et al., 1990; Turban & Dougherty, 1994; Wellbourne et al., 1998) and career satisfaction (Kofodimos, 1993; Weiss et al. 1967). . All five established scales asked questions about career goals. Two established scales (Greenhaus et al, 1990; Turban & Dougherty, 1994) measured a general overall feeling of satisfaction. The remaining three scales (Kofodimos, 1993; Weiss et al. 1967; Wellbourne et al., 1998) measure more specific details, like interactions with coworkers and supervisors, the challenging nature of the work, and the recognition and praise for outputs produced. None of the established scales specifically measured the factors that led to career success or satisfaction, like mentoring.

Ten studies in this MSR measured career success as it related to mentoring. Two studies measured both objective and subjective carer success (Holtbrügge & Ambrosius, 2015; Rueywei et al., 2014). Four only measured objective career success (Srivastava & Thakur, 2013; Welsh & Dixon, 2016; Lyle & Smith, 2014; Makokha et al. ,2014) Four measured subjective career success (Bach Ouerdian et al., 2018; Koyuncu et al. 2014; Farnese et al., 2017; Zhuang et al. 2013). The ten studies focused on various elements of career success (Table 11) Two of the studies (Lyle & Smith, 2014; Makokha et al., 2014) used extant data to measure career success, without using any survey data. The remaining

eight studies measured career success by surveying the respondents about their own success.

3.2.3 Employee engagement

Employee engagement is defined in Table 10 as the elements of a protégé's job that encourage their personal growth and learning. Engaged employees identify with an organization's direction (Mael & Ashforth, 1992; Cheng & Peng, 2016) have an emotional connection with the organization (Meyer & Allen, 1991, Fleig-Palmer & Rathert, 2015) and express an intention to stay with the organization (Currivan, 1999; Naim, & Lenka, 2017).

Cheng and Peng (2016) focused on organizational deviance, organizational identification, and perceived developmental climate. The study used surveys of protégés and mentors to measure each element. The questions for organizational deviance were based on Bennet and Robinson (2000). A sample question used was "I intentionally worked slower than they (your protégé) could have" (Cheng & Peng, 2016, p. 207). Job embeddedness questions were based on Crossley, Bennet, Jex, and Burfield (2007). A sample question used was "I [the protégé] am tightly connected to the organization" (Cheng & Peng, 2016, p. 207). Perceived development survey questions were based on Mael and Ashforth (1992). A sample question used was "Professional growth is encouraged in my organization" (Cheng & Peng, 2016, p. 207). From their surveys, Cheng and Peng (2016) conclude that "the supportive behaviors and role models of organizational agents [mentors] can influence employee organizational deviance" (p. 214).

The study by Farnese et al. (2017) focused on burnout, which is a direct measure of lack of employee engagement. Employee engagement (coded by Farnese et al. as "learning process") was measured in two dimensions based on Chao, O'Leary-Kelly, Wolf, Klein and Gardner (1994). First, the people dimension was measured with sample questions like "I believe most of my co-workers like me" (Farnese et al., 2017, p. 324). The goals and values dimension was measured with survey questions like "I support the goals that are set by my organization" (Farnese et al., 2017, p. 324). Questions used to measure burnout were based on the Maslach Burnout Inventory – General Survey (Schaufeli et al., 1996). A sample survey question related to burnout was "I have become less enthusiastic at work" (Farnese et al., 2017, p. 324). Finally, the researchers created questions to measure interpersonal strain based on Borgogni et al. (2012). A sample question related to interpersonal strain was "at work I treat others in a cold and detached manner" (Farnese et al., 2017, p. 324). The results showed that "Mentors also appear to nourish the newcomers' social networks and encourage their integration and acceptance processes, thus helping to prevent a distant and disengaged attitude toward work (cynicism), and reducing the distance from other people at work (interpersonal strain)" (Farnese et al., 2017, p. 327).

The focus of Naim and Lenka (2017) was on perceived organizational support, affective commitment and intention to stay. Naim and Lenka based their survey questions around perceived organizational support on the scale from Eisenberger, Cummings, Armeli and Lynch (1997). The survey included questions like "My organization cares about my opinion." To measure affective commitment, Naim and Lenka (2017) surveyed their study population with questions based on Meyer and Allen (1997) such as "I really

feel as if this organization's problems are my own." For intention to stay, the sample survey questions were based on Mayfield and Mayfield (2007). Questions included "I expect to be working for my current employer one year from now." (Naim & Lenka, 2017, p. 322). Naim and Lenka's results supported the hypothesis that "mentoring and intention to stay were positively related"; "mentoring and perceived organizational support were positively related"; and "mentoring and affective commitment were positively related" (p. 323).

Welsh and Dixon (2016) specifically measured employee engagement by using a six-point scale from "strongly disagree" to "strongly agree" at various time checkpoints in the mentoring relationship. Items began with, "To what extent do you agree that participation in the program has positively impacted your," and ended with, for example, "level of engagement within your organization?" and "your readiness to take on roles with greater complexity, scope or authority?" (Welsh & Dixon, 2016, p. 238). However, Welsh and Dixon also suggest that additional factors need to be accounted for when measuring employee engagement, such as skill practice and support of the protégé. Welsh and Dixon recommended that all factors are measured.

Several articles briefly touch on, but do not directly measure, employee engagement of the protégé. Bach Ouerdian et al. (2018) only mention employee engagement briefly. Bach Ouerdian et al. state "One explanatory factor for interpreting the low level of psychosocial mentoring perceived by women could be that the mentor [is] primarily the responsibility of men and few women fulfill this role for their female colleagues" (p 134). That low-level of connection is tied to lower mentoring impact on

employee engagement. However, employee engagement is not a primary measure in Bach Ouerdian et al. (2018). Koyuncu et al. (2014) reported the results:

> Women managers and professionals reporting higher levels of career development tended to also [indicate] higher levels of job satisfaction … and women managers and professionals reporting higher levels of psychosocial functions from their mentors tended to report lower levels of exhaustion. But not statistically significant…" (p. 13).

Lyle and Smith (2014) briefly discussed social identity, which was defined as "closely identifying with the organizations norms …If high-performing mentors are more effective in developing social identity in their protégés, their protégés should also experience faster promotion" (p. 249). This ties to the emotional connection of the organization, an element of employee engagement. Makokha et al. (2014) labels employee engagement as "motivation" in their discussion section, however, they do not measure employee engagement directly.

The established scales used to measure employee engagement in this MSR focused on learning culture (Aryee, Lo, Kang, 1999), deviant behavior (Bennet & Robinson, 2000;), strategic outlook (Boswell & Boudreau, 2001), employee commitment (Burke, 1991; Mayfield & Mayfield, 2007; Meyer and Allen, 1997), socialization (Chao et al., 1994), job embeddedness and organizational identification (Crossley et al., 2007; Mael and Ashforth, 1992), perceived organizational support (Eisenberger et al., 1997), job conditions (Eisenberger et al., 1997), and motivating language (Mayfield & Mayfield, 2007). Both Bennet and Robinson (2000), Burke (1991) measure employee engagement from an undesired behavior standpoint (deviant actions and leaving the organization).

Three studies measured employee's desired behaviors and attitudes (Crossley et al., 2007; Eisenberger et al., 1997; Mael & Ashforth, 1992; Mayfield & Mayfield, 2007). Three studies also ask questions about the respondents' perception of organizational culture (Aryee, et al., 1999; Chao et al., 1994; Mael & Ashforth, 1992). Meyer and Allen (1997) asked respondents questions on desired behavior and attitudes, like "I would be very happy to spend the rest of my career in this organization" (p. 118) and undesired behavior and attitudes, like "I do not feel 'emotionally attached' in this organization" (p. 118). Chao et al. (1994) also asked about desired behaviors and attitudes, like "I can identify the people in this organization who are most important in getting the work done" (p. 734) and undesired behaviors and attitudes, like "I do not always believe in the values set by my organization" (p. 735). Ayree et al. (1999) measured interventions that lead to employee engagement but did not specifically mention mentoring. None of the established scales specifically measured the factors that led to employee engagement, like mentoring.

Four studies in this MSR measured employee engagement as it related to mentoring. The four studies focused on employee engagement (Welsh & Dixon, 2016), organizational identification (Cheng & Peng, 2016), organizational support (Naim & Lenka, 2017), perceived developmental / learning climate (Cheng & Peng, 2016; Farnese et al., 2017), organizational support (Naim & Lenka, 2017), intention to stay with the organization (Naim & Lenka, 2017), organizational deviance (Cheng & Peng, 2016), burnout (Farnese et al., 2017).

Farnese et al. (2017), Naim and Lenka (2017) and Welsh and Dixon (2016) surveyed the protégés. Cheng and Peng (2016) surveyed both protégés and mentors.

Naim and Lenka (2017) and Welsh and Dixon (2016) focused on mentoring effects on desired outcomes of employee engagement, including organizational support. Cheng and Peng (2016) and Farnese et al. (2017) did measure desired outcomes, like perceived climate, but the principal focus was on mentoring impacts on undesired outcomes including burnout and organizational deviance.

3.2.4 Mutual development

In Table 10, mutual development is defined as the synergistic power of the mentoring relationship which allows the pair to work collaboratively to achieve more goals, generate more knowledge and access more resources as a pair than they could individually (Deptula & Williams, 2017). No quantitative articles in this MSR specifically measure mutual development.

Grima et al. (2014) attempted to measure the mutual development of both the protégé and the mentor, including the effects of same-gender versus different-gender pairings. The focus of this study is on the mentor's experience specifically, and four of the six hypotheses focus on the "psychological and instrumental benefits gained by the mentor" (Grima et al., 2014, p. 475). Survey questions that focus on the benefits of mentoring are 13 items on a five-point response; however, no specifics are listed. Holtbrügge and Ambrosius (2015) specified,

> The study shows that the outcomes of mentoring in terms of skill and career development may be more positive when the mentoring relationship is reciprocal and not affected by conflicting objectives of different departments. To avoid this, it is important to ensure that both parties receive as much as they give, which is more likely when they come from unrelated departments. It may thus be

> advantageous if [the] mentor and the person responsible for mentor selection are organizationally distant from the mentee (Ensher, Craig & Murphy 2001; Kram 1983) (as cited by Holtbrügge & Ambrosius, 2015, p. 289).

These conclusions come from measurements of job performance after mentoring, as well as the organizational closeness of the mentors. Holtbrügge and Ambrosius (2015) do not define organizational closeness but measured it by asking "if the … mentor worked in the same department" (p. 284).

3.2.5 Personal learning

Personal learning is defined as the protégé acquiring "the skills, knowledge or competence that contribute to career outcomes" (Rueywei et al., 2014, p. 489) in Table 10.

Arora and Rangnekar (2014) used survey questions based on Noe (1988) such as "I try to imitate the work behavior of my mentor" (p. 211) that measure elements of the protégé's personal learning. They conclude that the development of Indian managers in their study "is characterized by excessive dependence on the supervisors for their socioemotional development" (Arora & Rangnekar, 2014, p. 214).

Cheng and Peng (2016) asked questions based on the role modeling section of the Mentoring Functions Scale (Scandura & Ragins, 1993). The survey asked survey questions about personal learning, such as" I try to model my behavior after my mentor" (Cheng & Peng, 2016, p. 207). They concluded that "the supportive behaviors and role models of organizational agents can influence employee organizational deviance" (Cheng & Peng, 2016, p. 214).

Srivastava and Thakur (2013) used the 12-item scale on personal learning developed by Lankau and Scandura (2002) to measure the respondents' level of personal learning on two dimensions of personal skill development and relational job learning. Srivastava and Thakur (2013) conclude that "relational mentoring and personal learning are positively related" (p. 20). However, they also conclude that personal learning on its own does not "mediate the relationship between motivation to mentor and role based performance" (Srivastava & Thakur , 2013, p. 20).

Farnese et al. (2017) conclude that "mentoring positively enhances personal learning resources" (p. 326). The authors define personal learning resources as "feeling more adjusted in the social and work system." (Farnese et al., 2017, p. 323). To measure this, they surveyed their participants on two dimensions of learning based on Chao et al. (1994). To measure the people dimension, the survey asked questions like "I believe most of my coworkers like me". To measure the goals and values dimension, the survey asked questions like "I support the goals that are set by my organization" (Farnese et al., 2017, p. 324).

While these questions seem to be more about employee engagement, Farnese et al. (2017) concluded that social connections and knowing the organization values are part of the personal learning of a protégé.

> Formal mentoring also has a positive effect on the newcomers' learning process related to the understanding of the organizational goals, rules and principles (Goals & Values), and to the establishment of successful relationships with other organizational members (People) ... It further confirms the role of mentoring

> interventions as a specific job resource able to enhance personal growth (Farnese et al., 2017, p. 328).

Holtbrügge and Ambrosius (2015) used the term "skill development" as a synonym for "personal learning". They defined skill development as "the degree to which an expatriate acquires important skills during the assignment" (p. 284). Skill development survey questions were based on both Gould and Penley (1984) and Lohman (2004). Questions asked by Holtbrügge and Ambrosius (2015) included "I learned technical skills or product knowledge during my assignment that helped me in future positions"; "I successfully built a network in the host country"; "I can incorporate new ways of thinking and problem solving due to spending time in a different culture. I can see problems from a different perspective"; and "due to my assignment, I can see the goals of the organization as a whole, not just the immediate needs in my own home plant. I use this attribute to make decisions in my current position" (p. 284). Holtbrügge and Ambrosius (2015) concluded that "skill development is an important interim stage between mentoring and career development" (p. 289).

The established scales used to measure personal learning in this MSR focused on knowledge sharing tendencies (Bock, Zmud, Kim & Lee, 2005), career and personal learning strategies (Gould & Penleys, 1984, Lankau & Scandura, 2002), problem solving skills (Lohman, 2004), life's mental demands (Kegan, 1994), and relational learning (Kram, 1996; Lankau & Scandura, 2002). All the scales in personal learning have elements of self-learning and learning through relationship with others. The list by Kegan (1994) is the most focused on self-learning; the scale by Bock (2005) is the most focused on learning with others. Kram (1994) directly measures mentoring. Gould and Penleys

(1984) do not specifically measure mentoring, however, they do have items asking about behaviors to seek career guidance and networking.

Five studies in this MSR measured mentoring and personal learning. The studies focused on personal learning (Arora & Rangnekar, 2014;), role modeling (Cheng & Peng, 2016) personal skill development (Srivastava & Thakur, 2013; Holtbrügge & Ambrosius ,2015), relational job learning (Srivastava & Thakur, 2013), knowledge of organizational values (Farnese et al., 2017), and personal learning resources (Farnese et al., 2017). All five studies conclude that mentoring positively influences a protégé's personal learning.

Additional studies (Makokha et al., 2014; Rueywei et al., 2014; Smith-Jentsch et al., 2012; Rogers et al., 2016) referred to personal learning, but did not directly measure it. Makokha et al. (2014) talked about personal learning in their conclusion:

> A consultancy team from the Association of Public Health Laboratories observed that there had previously been little to no sharing of resources and knowledge between the two groups, even where they were physically close in location. The twinning approach helped to bring the laboratories together to bridge the quality differential gap between the research laboratories and public laboratories that serve the majority of the population (Makokha et al., 2014, p. 6).

However, no specific measurements beyond this observation appear in this article. Rueywei et al. (2014) defined personal learning in a similar way to the one used in Table 10. The article, however, does not list specific questions used to measure the definition of personal learning. Rueywei et al. does say that the measures included seven items for personal skill development based on Kram (1996), and four items for relational job

learning based on Graen & Uhl-Bien (1995). The study concluded that mentoring enhanced skill development in the participants.

While the outcome of Smith-Jentsch et al. (2012) stated that "supervisors who were more strongly motivated to mentor for intrinsic satisfaction appear to have provided greater support to protégés they felt had growth potential" (p. 65), no specific measure of the protégé's personal learning was done in this study. Rogers et al. (2016) focused on the mentor's learning goal orientation (LGO) based on VandeWalle (1997). Rogers et al. (2016) does not directly measure personal learning from the protégé's perspective.

3.2.6 Protégé satisfaction

Table 10 defines protégé satisfaction as protégés who are satisfied with their mentor and the mentor experience.

Koyuncu et al., (2014) measure job satisfaction using five items developed by Kofodimos (1993) including questions such as "I feel challenged by my work" (p. 10). Career satisfaction was measured by questions such as "I am satisfied with the success I have had in my career" (Koyuncu et al., 2014, p. 11) in scale developed by Greenhaus et al. (1990). The authors conclude that "women having female mentors tended to be more satisfied with their career progress to date" (Koyuncu et al., 2014, p. 13). However, they also conclude that the "sex of one's mentor seemed to have little impact on antecedents and outcomes of the mentor relationship or on the mentor relationship itself" (Koyuncu et al., 2014, p. 13).

Zhenyuan et al. (2016) measure mentor quality using Graen and Uhl-Bien (1995), who measured Leader-Member Exchange (LMX). The authors hypothesize that mentor quality is a mediator between impression management and mentor knowledge sharing.

The results show that “the mediating effect of mentorship quality on relationship between protégés’ mentor-focused [impression management] tactics and mentor’s knowledge-sharing behavior … is prominent” (Zhenyuan et al., 2016, p. 183).

Srivastava and Thakur (2013) report that satisfaction is a result all factors in the workplace. The mentoring relationship is one of those many factors. However, there was no direct measure of satisfaction in their study.

3.1.7 Professional exposure

Table 10 defined professional exposure is when the “visibility of the protégé in the enterprise” (Grima et al., 2014, p. 471) is increased through job assignments and interactions with influencers.

Arora and Rangnekar (2014), Bach Ouerdian et al.(2018) and Grima et al.(2014) used a checklist by Noe (1988) to measure career and psychosocial mentoring. Part of that checklist includes measures of “exposure and visibility” (Noe, 1988, p. 468). Grima et al. (2014) used those results to show that “better job exposure is NOT supported as an outcome of mentoring for the mentor” (p. 482).

Smith-Jenstch et al. (2012) measured protégé ingratiation in relation to mentor motivation. They study defined ingratiation as “flattering others with the goal of gaining acceptance or approval (Brodsky, 2004)” (Smith-Jentsch et al, 2012, p. 57). The authors used the scale by Bolino and Turnley (1999) to assess protégé ingratiation. The results showed that “the interaction between protégé ingratiation behavior and supervisor motivation to mentor for self-enhancement was not a significant determinant of career support received [by the protégé]” (Smith-Jentsch et al, 2012, p. 62).

Other articles also use established surveys to measure professional exposure. Cheng and Peng (2016) used the survey created by Scandura and Ragins (1993) which included the question "My mentor has placed me in important assignments" (Cheng & Peng, 2016, p. 207). Farnese et al. (2017) used a scale by Chao et al. (1994) which included items in a category about people like "within my workgroup, I would be recognized as one of the gang" (p. 734). Farnese et al. (2017) results showed "mentors also appear to nourish the newcomers' social networks and encourage their integration and acceptance processes, thus helping to prevent a distant and disengaged attitude toward work (Cynicism) and reducing the distance from other people at work (Interpersonal strain)." (p. 327) Rogers et al. (2016) referred to the survey by Berk et al. (2005) which includes a question stating, "my mentor was helpful in providing direction and guidance on professional issues (e.g. networking) (p. 71). Results in Rogers et al. (2016) showed that "political skill moderated the relationship between mentor commitment and mentor effectiveness" (p. 217). Srivastava and Thakur (2013) used the scale from Lankau and Scandura (2002) which includes a question about organizational politics. However, no specific results were reported in the results (Srivastava and Thakur, 2013). Zhenyuan et al.(2016) measured knowledge sharing based on Bock et al. (2005) which includes the reciprocal effects of knowledge sharing. Their results show that "job-focused impression management tactics had no effect on mentorship quality" (p. 183). Zhuang et al. (2013) asked questions modified from Dreher and Ash (1990) such as "Taiwanese mentor gave or recommended me for assignments that increased my contact with higher-level managers", or "Taiwanese mentor went out of his/her way to promote my career interests" (p. 40). Zhuang et al. (2013) conclude that "home country mentors

… may know better than the host country mentors how expatriate protégés can overcome problems about life in general and their interaction with collegues" (p. 45).

Srivastava (2015) completed quantitative measurements after completing qualitative measurement in his mixed methods study. He specifically measured the number of contacts the protégé had as a result of their mentor relationship by two surveys. The first survey was conducted prior to the mentor program. The second was conducted after two months of the protégé's participation in the mentor program. Results from Srivastava (2015) showed that "people who participate in targeted formal mentoring will experience greater network expansion than comparable individuals who do not participate in targeted formal mentoring." (p. 442).

The established scales used to measure professional exposure in this MSR focused on responses to social situations (Bachner-Melman, Bacon-Shnoor, Zohar, Elizur & Ebstein, 2009; Bolino & Turnley, 1999; Bolino, Varela, Bande & Turnley, 2006), political skill (Ferris et al, 2005), and the respondent's network connections (Podolny & Baron, 1997). Podolny and Baron (1997) specifically measured who in the respondents' network had the role of a mentor.

Eleven studies measured professional exposure in this MSR. The studies focused on exposure and visibility (Arora & Rangnekar, 2014; Bach Ouerdian et al., 2018; Grima et al., 2014), protégé ingratiation (Smith-Jenstch et al., 2012), assignments given (Cheng & Peng, 2016), social and professional connections (Farnese et al., 2017; Srivastava, 2015), political skill and organizational politics (Roberts et al., 2016, Srivastava and Thakur, 2013), knowledge sharing (Zhenyuan et al., 2016), and connections with coworkers (Zhuang et al., 2013). Rogers et al. (2016), Zhuang et al. (2013), Srivastava

(2015) concluded that mentoring positively influenced the outcome professional exposure. Grima et al. (2014), Smith-Jentch et al. (2012), and Zhenyuan et al. (2016) concluded that the outcome of professional exposure was not an outcome that influenced the mentor.

3.1.8 Scales used as more general measurements of mentoring

Many of the articles in this MSR built part of their measurements on more general studies on mentoring. These general survey items were often used in combination with the specific measured listed previously in this chapter to explain the mentor program influence on the intended outcomes. The list of these general mentoring scales is shown in Table 14.

Allen (2003) measured the motivation of the mentor to participate being in mentors. The original measure was a survey with 253 professional women. Allen (2003) measured experience as a mentor, willingness to mentor, prosocial personality and mentor motives. She measured eleven items using a five-point scale from "1) no extent" to "5) great extent". Sample items Allen (2003) asked survey participants to rate as reasons to mentor included "to enhance your visibility within the organization", "a desire to help others succeed in the organization", and "the personal pride that mentoring someone provides" (p. 142). Allen (2003) was referenced by Smith-Jentsch et al. (2012) in this MSR.

Smith-Jentsch et al. (2012) used the scale in Allen (2003) for mentor motivation as part of their study. No modification to the scale by Allen (2003) was reported. Smith-Jentch et al. (2012) summarized the results:

> Specifically, the more a supervisor was motivated to mentor for intrinsic satisfaction, the stronger the positive relationship was between protégés' potential for advancement and the psychosocial support they reported receiving. Further, protégés' potential for advancement was less positively associated with career support provided the more a supervisor was motivated for the benefit of others. Finally, if a supervisor was strongly motivated for self-enhancement, protégés who made greater attempts to ingratiate themselves reported receiving greater psychosocial support. However, if a supervisor was not strongly motivated to mentor for self-enhancement, protégé ingratiation attempts were negatively associated with psychosocial support (p. 65).

The second established scale used to measure mentoring in this MSR was created by Allen and Eby (2003) who measured factors that led to mentor effectiveness from the mentor's perspective. Like Allen (2003), the respondents to the survey by Allen and Eby (2003) were 253 professional women. 249 of the respondents had served as mentors. They first asked the respondents a yes/no question:

> During your career, has there been an individual who you have taken a personal interest in; who you have guided, sponsored, or otherwise had a positive and significant influence on their professional career development? In other words, have you ever been a mentor? (Allen & Eby, 2003, p. 476).

Second, the authors asked if the mentoring was informal or part of a formal program, if the respondents were similar to their partner, and the length of the relationship. Finally, the authors used a five-point scale from "1) strongly disagree" to "5) strongly agree" to ask survey questions in the categories or relationship quality and

relationship learning. A sample question asked about relationship quality was “My protégé and I enjoyed a high-quality relationship”; a sample question asked about relationship learning was “my protégé gave me a new perspective on many things” (Allen & Eby, 2003, p. 483). Allen and Eby (2003) was referenced by Grima et al. (2014) in this MSR.

Table 14 General Mentoring Measurement Scales

Original article	Referenced by	Focus of scale
Allen (2003)	Smith-Jentsch et al. (2012)	Motivations to mentor
Allen and Eby (2003)	Grima et al. (2014)	Mentor effectiveness (from mentor’s perspective)
Berk et al. (2005)	Rogers et al. (2016)	Mentor effectiveness
Burke (1984)	Koyoncu et al. (2014)	Mentor functions
Castro, Scandura and Williams (2004)	Naim and Lenka (2017)	Mentor relationships
Dreher and Ash (1990)	Rueywei et al. (2014) Srivastava and Thakur (2013) Zhuang et al. (2013)	Effects of mentoring on career outcomes
Noe (1988)	Arora and Rangneker (2014) Grima et al. (2014) Koyoncu et al. (2014) Smith-Jentsch et al. (2012)	Mentor functions across multiple dimensions
Poteat et al. (2015)	Rogers et al. (2016)	Mentor satisfaction and commitment
Ragins and Scandura (1999)	Grima et al. (2014)	Costs and benefits of mentoring
Scandura and Ragins (1993)	Cheng and Peng (2016)	Mentoring functions

Grima et al. (2014) used the question to define a mentoring relationship and the question defining an informal and formal mentor relationship used by Allen and Eby (2003). The question about being a mentor helped Grima et al. (2014) qualify the

responses to their study. The informal vs. formal mentoring question was used to dissect the relationship between career advice and rewarding experience; it was also used to dissect the relationship between career advice and improved performance. Results showed that "the association between career advice and rewarding experience [was] highly significant in the case of informal mentoring … whereas the link was not supported in the case of formal mentoring" (p. 480). The results for career advice and improved performance were reported like this: "it is in the case of formal mentoring … that the link between career advice activity and improved performance is the most established in comparison with informal mentoring" (Grima et al., 2014, p. 481).

The third established scale that measured mentoring in this MSR was created by Berk et al. (2005). Berk et al. (2005) measured mentor effectiveness with a created Mentor Effectiveness Scale. The scale was originally used with mentees nominated by mentors, with a focus on medical school faculty. The authors created three sections to their study: 1) A description of the relationship, 2) Outcome measures and 3) the Mentorship Effectiveness Scale. The description of the relationship was measured using the following open-ended questions like "What was the role of your mentor?" and "How would you characterize the strengths and weaknesses of your relationship?" (Berk et al., 2005, p. 70). Outcomes were measured by one question. The directions were to check which of the ten activities listed resulted from interaction with the mentor. Sample items included "publication, job change/promotion, and new teaching method or strategy" Berk et al., 2005, p. 71). The Mentor Effectiveness Scale was a series of twelve survey questions with a 6-point scale from "strongly disagree" to "strongly agree" with a "not applicable" option. Sample items asked by Berk et al., (2005) were "My mentor was

accessible"; "My mentor demonstrated content expertise in my area of need", and "My mentor challenged me to extend my abilities" (p. 71). Berk et al. (2005) was referenced by Rogers et al. (2016) in this MSR.

Rogers et al. (2016) used Berk et al. (2005) to measure mentor effectiveness. Rogers et al. (2016) asked mentors' supervisors four questions based on the Mentorship Effectiveness Scale to measure "mentor behaviors that proved to be effective for mentor success (Kram, 1988), namely, the provision of both psychosocial (e.g. being approachable) and career-related (e.g. providing guidance on professional matters) mentoring" (p. 216). The results of Rogers et al. (2016) in regard to mentor effectiveness were reported this way: "we found support for the role of both getting along (i.e., self-monitoring, political skill) and getting ahead (i.e., learning goal orientation, strategic outlook) motives as important mentor attributes. The impact of mentor commitment corresponded with diminished mentoring effectiveness when these attributes were deficient" (p. 218).

The fourth established scale used to measure mentoring in this MSR was created by Burke (1984), who measured mentor functions. Originally the scale was used with 80 participants in a management development course. The author used a mixed methods approach, surveying the respondents with open-ended and fixed response questions. The fixed response questions used a seven-item scale from "1) not at all" to "7) a great deal". Sample fixed items surveyed were "host to a new world", "went to bat for me", and "opened doors for me" (Burke, 1984, p. 362). Burke (1984) was referenced by Koyoncu et al. (2014) in this MSR.

Koyoncu et al. (2014) used the scales by Burke (1984), along with Noe (1988), to measure three mentor functions. The three mentor functions were career development, psychosocial, and role model. Koyoncu et al. (2014) reported results that tied the mentor function to a protégé's personal demographics. Koyoncu et al. (2014) found that "younger respondents reported more psychosocial functions, … less educated respondents reported more career development functions, ... [and] respondents earning less reported more career development functions." (Koyoncu et al., 2014, p. 12).

The fifth established scale used to measure mentoring in this MSR was created by Castro and Scandura (2004). Castro and Scandura (2004) measured mentoring relationships by revising a scale by Scandura and Ragins (1993). The scale was revised using three different studies. In study one, 169 university students were asked to judge the wording of the scale. In study two, 474 MBA students were surveyed to test the validity of the scale. From study two, a revised scale was created, which was used for study three. Study three was conducted with 795 CPAs. The scale for study one and two is shown, however the nine-item scale for study three is not. Those items were measured on a scale, however Castro and Scandura (2004) do not define this scale. The non-revised items were categorized into "career support", "psychosocial support", and "role modeling" (Castro & Scandura, 2004, p. 30). Castro and Scandura (2004) was referenced by Naim and Lenka (2017) in this MSR.

Naim and Lenka (2017) used Castro and Scandura (2004) to measure mentoring. No changes to the scale by Castro and Scandura (2004) are reported. No results specific to mentoring in general were reported.

The sixth established scale used to measure mentoring in this MSR was created by Dreher and Ash (1990). Dreher and Ash (1990) measured the effects of mentoring and gender on career outcomes. They originally used a sample of 440 American business school graduates. The measure used a 5-item scale and asked "to what extent has a mentor…" with responses from "1) to a small extent" to "5) to a very large extent" (Dreher & Ash, 1990, p. 542). Sample behaviors asked were "…Given or recommended you for challenging assignments that present opportunities to learn new skills"; "…Helped you finish assignments/tasks or meet deadlines that otherwise would have been difficult to complete"; and "…Shared personal experiences as an alternative perspective to your problems" (Dreher & Ash, 1990, p. 542). Dreher and Ash (1990) was referenced by Rueywei et al. (2014), Zhuang et al. (2013), and Srivastava and Thakur (2013) in this MSR.

Rueywei et al. (2014) modified Dreher and Ash (1990) to measure mentor functions of coaching, sponsorship and protection. Rueywei et al. (2014) used a five-point scale from "1) never" to "5) always". No specific results related to the three functions of mentoring are reported. However, Rueywei et al. (2014) reported results on the mediating effects of mentoring, personal learning and career success. The authors stated, "For protégés, an increase in mentoring time provided them with a chance to create a better career outcome than those who did not have as much in mentoring time. This result indicates that the career outcome of the employees could be enhanced when their personal learning was catalyzed by mentoring" (Rueywei et al., p. 495).

Zhuang et al. (2013) also modified the scale by Dreher and Ash (1990) to measure career development, psychosocial and role modeling functions of mentoring. Zhuang et

al. (2013) used a five-item scale from “1) totally disagree” to “5) totally agree”. The authors reported “when considering home and host country mentors as a whole, mentors’psychosocial support can enhance expatriate protégés’ general adjustment in the host country …, their role modeling functions can enhance expatriate protégé’s office interaction adjustment in the host country … and their career development functions can enhance expatriate protégé´s work adjustment in the host country” (Zhuang et al., 2013, p. 45). The authors also reported that “the psychosocial support and role modeling functions of home country mentors facilitate expatriates’ general adjustment and office interaction adjustment better than those of host country mentors” (Zhuang et al., 2013, p. 45). Finally, they reported that “the career development functions of host country mentors are more strongly related to expatriates’ work adjustment than those of home country mentors” (Zhuang et al., 2013, p. 45).

Srivastava and Thakur (2013) used the scale by Dreher and Ash (1990) to measure motivation to mentor. Srivastava and Thakur (2013) used a five-point scale from “1) strongly disagree” to “5) strongly agree”. The results showed that “motivation to mentor influences the performance significantly in formal mentoring, but in supervisory mentoring motivation to mentor does not play any significant role in role based performance.” (Srivastava & Thakur, 2013, p. 23). Secondly, the authors reported that “motivation to mentor does not moderate the relationship between relational mentoring and role based performance in both formal and supervisory mentoring” (Srivastava & Thakur, 2013, p. 23).

The seventh established scale used to measure mentoring in this MSR was created by Noe (1988). Noe (1988) measured job involvement, locus of control, career planning,

relationship importance, quality of interaction and amount of time spent with mentor, gender composition of the mentoring dyad, and mentor functions across mutiple dimensions. Noe (1988) asked twenty-nine items across the multiple mentor functions of coaching, acceptance and confirmation, role model, counseling, protection, exposure and visibility, sponsorship, challenging assignments, and friendship. Originally the scale was used with 139 teachers across the United States, and 43 mentors for those teachers. Only the full scale for mentoring functions was reported by Noe (1988). The surveys were measured on a five-point scale from "1) to a very slight extent" to "5) to a very large extent". Noe (1988) was referenced by Arora and Rangnekar (2014), Grima et al. (2014), Koyoncu et al. (2014), and Smith-Jenstch et al. (2014) in this MSR.

Arora and Rangnekar (2014) modified twenty-one items of the scale by Noe (1988). The specific twenty-one items modified are not specified by the authors, however it is reported that "fourteen items measured psychosocial mentoring and seven items measured career mentoring" (Arora & Rangnekar, 2014, p. 211). They reported that "career mentoring and psychosocial mentoring are strongly linked with each other" (Arora & Rangnekar, 2014, p. 213). The authors also reported that "psychosocial mentoring was moderately correlated with career resilience …and career mentoring showed weak correlation with career resilience" (Arora & Rangnekar, 2014, p. 213). Grima et al. (2014) took fifteen items from Noe (1988) to measure mentor activities. The fifteen items were selected from the mentor functions of advice, exposure, role modelling and coaching. Grima et al. (2014) used a five-point scale from "1) completely disagree" to "5) completely agree" to measure results. They reported that "psychological support is

more closely associated with perceived benefits than career support." (Grima et al., 2014, p. 482).

Koyuncu et al. (2014) modified Noe (1988) to measure three mentor functions: career development, psychosocial, and role model. They used a seven-point scale to measure the extent the mentor engaged in each function. The authors reported

> Women managers and professionals reporting higher levels of all three mentor functions (career development, psychosocial, role model) indicated higher levels of career satisfaction …; and women managers and professionals reporting higher levels of role model also indicated higher levels of job satisfaction. …. In addition, women managers and professionals reporting higher levels of career development tended to also indicated higher levels of job satisfaction … and women managers and professionals reporting higher levels of psychosocial functions from their mentors tended to report lower levels of exhaustion. (Koyuncu et al., 2014, p. 13).

Koyuncu et al. (2014) also reported that "mentor functions tended to have few effects on work outcomes" (p. 14).

Smith-Jentsch et al. (2012) measured functional mentoring using 21 items from Noe (1988). They used a six-point scale from "1) no extent" to "6) great extent" to measure the items. The authors reported that "the more a supervisor was motivated to mentor for intrinsic satisfaction, the stronger the positive relationship was between protégés' potential for advancement and the psychosocial support they reported receiving" (Smith-Jentsch et al., 2012, p. 65).

The eighth established scale used to measure mentoring in this MSR was created by Poteat et al. (2015). Poteat et al. (2015) measured relationship satisfaction and mentor-protégé commitment. Originally, the scale was used with 97 pairs of doctoral student proteges and their faculty mentors. No specific scale is reported by the authors. Poteat et al. (2009) was referenced by Rogers et al. (2016) in this MSR.

Rogers et al. (2016) reported using Poteat et al. (2009) to measure mentor commitment. One item they used to measure was "I was committed to developing an effective and productive mentoring relationship" (Rogers et al., 2016, p. 215). The authors used a five-point scale from "1) strongly disagree" to "5) strongly agree".They reported that "mentor commitment, which can be construed as a motivational force, relates positively to mentoring effectiveness only if the mentor simultaneously possesses a series of attributes, many of which can be viewed as abilities or skills" (Rogers et al. ,2016, p. 220).

The ninth established scale used to measure mentoring in this MSR was created by Ragins and Scandura (1999). Ragins and Scandura (1999) measured costs and benefits of mentoring using various factors. The factors under costs inlcuded more trouble than its worth, dysfunctional relationship, nepotism, bad reflection, and energy drain. For benefits, the factors included rewarding experience, improved job performance, loyal base of support, recognition by others, and generativity. Originally, Ragins and Scandura (1999) surveyed 275 high-ranking managers and executives. They used a seven-point scale from "1) strongly disagree" to "7) strongly agree" in their measurement. Ragins and Scandura (1999) was referenced by Grima et al. (2014) in this MSR.

Grima et al. (2014) measured benefits of mentoring using the scale by Ragins and Scandura (1999). Grima et al. (2014) used a five-point scale from "1) completely disagree" to "5) completely agree" to measure fifteen items from Ragins and Scandura (1999): four items of rewarding experience, three for improved job performance, three for recognition by others, and three for rejuvination. The results of Grima et al. (2014) showed a reported link between many of the mentor functions and benefits of mentoring. "Relationships existed between rewarding experience and improvement in performance, between coaching and rejuvenation, between role modelling and rewarding experience and between improvement in performance and rejuvenation" (Grima et al., 2014, p. 480).

The tenth established scale used to measure mentoring in this MSR was created by Scandura and Ragins (1993). Scandura and Ragins (1993) measured mentor functions using 15 items. Sample items include "mentor takes a personal interest in my career"; "mentor gives me special coaching on the job"; and "I try to model my behavior after mentor" (Scandura & Ragins, 1993, p. 257). Originally, the scale was used in a survey with 800 CPAs in the United States. The actual scale available for respondents to use was not reported by the authors. Scandura and Ragins (1993) was used by Cheng and Peng (2016) in this MSR.

Cheng and Peng (2016) used Scandura and Ragins (1993) to measure mentor functions. Cheng and Peng (2016) measured on a five-point scale from "1) strongly disagree" to "5) strongly agree". They reported that "mentoring functions satisfy protégés' demands for development because mentoring is a tool and strategy intended to facilitate learning" (Cheng & Peng, 2016, p. 214).

3.1.8.1 A summary of scales used to measure mentoring

The established scales used as a foundation for measuring mentoring in this MSR focused on motivation to mentor (Allen, 2003), factors of mentor effectiveness (Allen & Eby, 2003; Berk et al., 2005; Burke, 1984; Noe, 1988, Scandura & Ragins, 1993), mentoring relationships (Castro & Scandura, 2004; Poteat et al., 2015), mentoring effects on career outcomes (Dreher & Ash, 1990), costs and benefits of mentoring (Ragins & Scandura, 1999). Allen (2003) and Alen and Eby (2003), Dreher and Ash (1990), and Ragins and Scandura (1999) measured the mentor's perspective of the mentoring relationship. Berk et al. (2005), Burke (1984), Castro et al. (2004), and Scandura and Ragins (1993) measured the mentor relationship from the protégé perspective. Noe (1988), Poteat et al. (2015) measured the mentor relationship from both the mentor and protégé's perspective.

3.3 Research Question 1c: How do organizations qualitatively assess mentoring programs?

Each qualitative study and the associated construct codes are shown in Table 15. Both career success and mutual development are present in each study, while Janssen et al. (2018) also explored other codes. Discussed below are the results of how each code is assessed qualitatively in the studies in this MSR. Career resilience and protégé satisfaction were not assessed qualitatively. The information below will discuss the two articles that were qualitative studies only (Deptula & Williams, 2017; Janssen et al., 2018) and the qualitative assessment studied in the mixed methods study by Srivastava (2015). The section below will first discuss the two codes that appear in both articles, career success and mutual development, then briefly describe the remaining codes.

Table 15 Qualitative articles and applied MSR Codes

Author	CS	EE	MD	PL	PX
Deptula and Williams (2017)	X		X		
Janssen et al.(2018)	X	X	X	X	X
Srivastava (2015) (as a mixed methods study)	X		X		X

Key:

CS= c*areer success*

EE= *employee engagement*

MD= *mutual development*

PL= *personal learning*

PX= *professional exposure*

3.3.2 Career success

Career Success is defined in Table 10 as when the protégé has achieved a high level in [their] profession. Objective career success is observable success such as promotion, seniority, salary, and increased responsibility (Judge et al., 1995; Nicholson, 2000, Bach Ouerdian et al., 2018, p. 118). Subjective career success is protégé satisfaction for their current job and career. Examples of subjective career success are development opportunities, happiness, work/life balance (Hall & Chandler, 2005, Bach Ouerdian et al., 2018). The qualitative assessments in this MSR (Depulta & Williams, 2017; Janssen et al., 2018) used interviews to assess career performance, protégé performance, increase in mentor skills, and length of the relationship.

Both quantitative articles mention objective career success. Deptula and Williams (2017) mention that a mentor relationship can increase "information and unit performance (p. 280)." Four of twenty-one participants, who were co-workers of a mentoring dyad, in the study by Janssen et al. stated that mentoring can increase protégé

performance. They also state that mentoring can help the protégé “know their way around the organization” (Janssen et al., 2018, p. 253). All 21 participants mentioned that the mentors’ competency is increased through the mentor relationship. Neither qualitative article documented specific interview questions to use to assess objective career success.

When discussing subjective career success, Janssen et al. (2018) stated that for the mentor, “it is also good to practice leadership skills” (p. 253). The interviews with coworkers of mentoring dyads in Janssen et al. (2018) revealed a barrier to supporting career success in a mentor relationship. An undisclosed number of interviewees mentioned that the close relationship may impede necessary feedback from being provided to the protégé.

Subjective career success includes length of the mentor relationship. According to Deptula and Williams (2017), successful mentoring relationships last for a long period of time; the study specifically mentions examples of mentoring relationships from four to more than eight years. Qualitative assessments of unit performance over time can correlate to the career success process.

3.3.3 Employee engagement

Employee engagement is defined in Table 10 as the elements of a protégé’s job that encourage their personal growth and learning (Welsh & Dixon, 2016). Janssen et al. (2018) assessed employee engagement themes such as positive work attitudes, happy and relaxed work environment, and engaged older employees. Janssen et al. (2018) specifically report that "the positive work attitudes of mentors and protégés and their high-quality relationships contribute to a happy and relaxed work environment" (p. 259). One participant in the study had this to say about mentoring and older employees: “Older

employees are sometimes a little bit stuck, so to encourage knowledge sharing, mentoring should be incorporated in an organization's policy (male, age 36, health care)" (Janssen et al., 2018, p. 258). Barriers to employee engagement of the coworkers of mentoring dyads were expressed in this study. Coworkers "felt excluded by the mentor and protégé", "have distrust for the mentor because they believe they share everything", and "were envious about the subgroup formed by the mentor and protégé" (Janssen et al., 2018, p. 259).

3.3.4 Mutual development

Both qualitative articles, and the qualitative portion of Srivastava (2015) mention mutual development. Assessments around mutual development that are assessed qualitatively include time to complete tasks together, amount of work done as a team, and knowledge created as a team. For this study, mutual development is defined as the synergistic power of the mentoring relationship which allows the pair to work collaboratively to achieve more goals, generate more knowledge and access more resources as a pair than they could individually (Deptula & Williams, 2017).

One item assessed qualitatively is increased performance as a team. According to Deptula and Williams (2017), mentoring dyads increase performance when there are non-overlapping skills. Janssen et al. (2018) talks about the pair increasing knowledge creation and sharing. Deptula and Williams (2017) also mention that mentoring dyads work when they find a common purpose that "enables members to work collaboratively until goals are achieved" (p. 382). Srivastava (2015) assessed mutual development in the qualitative portion of his mixed methods study by asking an interview question "Do you

believe [you/your protégé] changed personally or professionally as a result of the experience? If so, how?" (p. 449).

One potential barrier to mutual development is the time to complete tasks. This is illustrated by the following quote: "sometimes I'm wondering why they do things together and not solo. I mean, they are both highly paid professionals and now it costs twice as much because they do their jobs together (male, age 27, government)." (Janssen et al., 2018, p 257).

3.3.5 Personal learning

Personal learning is defined as the protégé acquiring "the skills, knowledge or competence that contribute to career outcomes" (Rueywei et al.., 2014, p. 489) in Table 10. In Janssen et al. (2018), study participants reported experiencing mentoring relationships as a facilitator with potential barriers to personal learning. On the positive side, one participant said,

I think that especially for employees who are not that experienced in a certain field…I think it's very helpful then to learn from someone who is more experienced. I think that works better than learning it from theory (Female, age 25, health care) (Janssen et al., 2018, p. 255).

A potential barrier to personal learning mentioned in Janssen et al. (2018) was the concern that feedback was not given: "Participants worried that the close bond between mentor and protégé can impede critical feedback" (p. 256).

3.3.6 Protégé satisfaction

Table 10 defines protégé satisfaction as protégés that are satisfied with their mentor and the mentor experience. The articles in this study do not show that organizations are measuring protégé satisfaction

3.3.7 Professional exposure

Professional exposure is defined in Table 10 as when the "visibility of the protégé in the enterprise" (Grima et al., 2014, p. 471) is increased through job assignments and interactions with influencers. One assessment of professional exposure that was assessed qualitatively is the protégé's power: Participants in Janssen et al. (2018) "believed that the protégé may have access to information via the mentor, which may give the protégé then more power in the organization than non-protégés" (p 260). Janssen et al. also show that the power can manifest itself in decision-making processes. This can be used to the coworker's advantage as expressed by one participant: "I would express my opinion … [to the] mentor or protégé about that, and get their approval. … [then] I already have them on my side" (Janssen et al., 2018, p. 261). However, mentoring can also be a barrier to the protégé's strong decision-making. One participant stated, "I'm not sure she is able to make decisions on her own, without falling back on her mentor" (Janssen et al., 2018, p. 261).

Secondly, organizations can assess interpersonal risk taking qualitatively. Janssen et al. (2018) state that the mentor dyad's coworkers told them "the protégé knows that the mentoring relationship is safe for interpersonal risk taking and that it is allowed to make mistakes, which will improve the protégé functioning" (p. 256). In the qualitative portion of the mixed methods study by Srivastava (2015), interview questions were asked to

assess professional exposure, which was the focus of the study. Questions included: “Did participating in the program affect the size or composition of your network in the organization?;” “Did your mentor introduce you to any of his/her contacts?”; and “Did [you/your protégé] form any relationships as an indirect result of the program?” (Srivastava, 2015, p. 449).

3.3.8 A summary of qualitative assessments

In summary, the qualitative studies in this thesis showed that organizations are assessing career success and professional exposure of the protégé and mutual development of the mentoring pair qualitatively. Additionally, Janssen et al. (2018) reveal many assessments of employee engagement in the quotes from the participants. While other themes are also mentioned in Janssen et al. (2018), like personal learning and professional exposure, no other of the codes in this thesis are conclusively shown to be assessed qualitatively.

CHAPTER FOUR: DISCUSSION AND CONCLUSIONS

4.1 RQ1a What are the assessed outcomes of mentoring programs?

Chapter 1 discusses three benefits of a mentoring relationship to the participants:: onboarding, retention and career advancement. For an organization, the benefits of a mentoring include increased communication channels, knowledge sharing, teamwork and development of leaders.. Through the coding done in this MSR, the researcher found that the mentoring outcomes being measured and assessed align with the mentoring benefit.

Table 16 describes the following outcome links. Outcomes that relate to personal learning and professional exposure link to onboarding; outcomes related to career resilience, employee engagement and protégé satisfaction link to employee retention; career success, mutual development, personal learning and professional exposure link to career advancement. For the organization, professional exposure links to communication; career success and personal learning link to knowledge sharing; mutual development and professional exposure link to teamwork; and career success and professional exposure link to developing leaders.

Thirteen of the articles in this MSR directly measured the outcomes of career success and professional exposure. All the remaining codes from Table 10 appeared in less than half of the MSR studies. Protégé satisfaction was measured the least, appearing in two studies.

Table 16 Mentor benefits linked to outcomes

Participant Outcomes	**Socialization and Onboarding**	**Personal Learning**	**Strong outcomes**
		Professional Exposure	Mixed outcomes
	Retention at an organization	Career Resiliance	Strong outcomes
		Employee Engagement	Strong outcomes
		Protégé Satisfaction	Weak outcomes
	Career Advancement	Career Success	Mixed outcomes
		Mutual Development	Mixed outcomes
		Personal Learning	Strong outcomes
		Professional Exposure	Mixed outcomes
Organizational Outcomes	Communication Channels	Professional Exposure	Mixed outcomes
	Knowledge	Career Success	Mixed outcomes
		Personal Learning	Strong outcomes
	Teamwork	Mutual Development	Mixed outcomes
		Profressional Expsosure	Mixed outcomes
	Developing leaders	Career Success	Mixed routcomes
		Professional Exposure	Mixed outcomes

In each of the seven codes derived from the articles in this MSR, outcomes were reported. A discussion of the methods to get to these outcomes is written in Chapter 3. A summary of the conclusions across the MSR studies follows.

4.1.1 Career Resilience

The articles discussing career resilience reached the following conclusions. The mentoring function of psychosocial mentoring (defined in Table 3) affects a protégé's ability to demonstrate career resilience (Arora & Rangnekar, 2014; Zhuang et al., 2013). However, the career mentoring function (defined in Table 3) received mixed results: Arora and Rangnekar (2014) stated that career mentoring does not affect career resilience; but Zhuang et al. (2013) reported that career mentoring does help protégé adjustment to their new work environment. Farnese et al. (2017) concluded that mentoring helps reduce burnout. Farnese et al. also concluded that mentoring helps employees cope with stressful situations. Finally, Naim and Lenka (2017) concluded that mentoring, especially the psychosocial function, results in employees being more willing to stay. Overall, the studies report that both the career and psychosocial functions of mentoring equips a protégé with the ability to be resilient in their career, and therefore impact the organization long-term.

4.1.2 Career Success

The articles discussing career success reached the following conclusions. The psychosocial function of mentoring is reported to move objective career success into subjective career success (Bach Ouerdian et al., 2018; Grima et al., 2014). However, career mentoring is not shown to move objective career success to subjective career success (Bach Ouerdien et al., 2018).In other words, an employee who has success on the job will feel good about their success when they have the additional psychosocial support provided by the relationship with a mentor.

With regard to how close the mentor and protégé are within the organizational structure, Holtbrügge & Ambrosius (2015) reported that objective career success (termed "skill development") is more effective when the mentor and protégé are from different areas of the organization (termed as "organizational closeness" or "organizational distance").

The articles in this MSR also reported specific information about objective career success. Bach Ouerdian et al. (2018) concluded that both the career function and psychosocial function have a positive impact on objective career success. However, Bach Ouerdian et al., also state that the career function of mentoring is more impactful on the career success of women, while the psychosocial function of mentoring is more impactful on men. Grima et al. (2014) stated it a different way: career advice and role modelling by the mentor do lead to improved job performance for the protege and are a rewarding activity for the mentor.

The benefit of mentoring in the onboarding process is discussed in terms of career success in these articles as well. Holtbrügge and Ambrosius (2015) concluded that skill development is a bridge between mentoring and career development. Skill development starts in the onboarding process. They also concluded that the career planning of the protégé should involve the mentor, as a way to enhance skill development (Holtbrügge and Ambrosius, 2015). Farnese et al. (2017) concluded that mentoring helps protégés during the onboarding process learn the organizational rules and goals, and helps establish effective work relationships. A mentor also lessens a protégés' undesirable behaviors and habits (Cheng and Peng, 2016), which can begin during onboarding.

Finally, the articles in this MSR reported specific information about subjective career success as well, however the conclusions about the impact of mentoring on subjective career success are mixed. Bach Ouerdian et al. (2018) could not verify that career mentoring and psychosocial mentoring act positively on subjective career success but were able to show that there was at least some impact. The study stated that men feel more satisfied with their careers because of the mentoring they receive; women are concluded to not have the same benefit. Subjectively, employees trust those in authority (including mentors) who are personally involved in their career path (Arora & Rangnekar, 2014). Finally, Grima et al. (2014), who address the outcomes of mentoring from the mentor's perspective, stated that informal mentoring leads to subjective career success of the mentor more than formal mentoring. They also stated that being a role model and mentor also proves to be rewarding, rejuvenating and leads to improved performance. Grima et al. finally cautioned that "the mentor runs the risk of over-soliciting his contacts within the organization (sic.) at his own personal cost" (p. 482).

4.1.3 Employee Engagement

The articles discussing employee engagement reached the following conclusions. Cheng and Peng (2016) focused on mentoring in relation to job embeddedness and organizational identification. Job embeddedness is defined as "the combined forces (fit, links and sacrifice) that keep a person from leaving his or her job (Yao, Lee, Mitchell, Burton, & Sablynski, 2004, p. 159)" (as cited by Cheng & Peng, 2016, p. 203). Mentoring leads to stronger job embeddedness (Cheng & Peng, 2016). Organizational identification is defined as "a perceived oneness with an organization and the experience of the organizations' successes and failures as one's own" (Mael & Ashforth, 1992, p.

103)" (as cited by Cheng & Peng, 2016, p. 204). Cheng and Peng conclude that protégés with a mentor are "more likely to develop their attitudes and behaviors consistent with organizations requirements and hence feel high organizational identification" (p. 204). Farnese et al. (2017) concluded that mentoring helps prevent "distant and disengaged" attitudes toward work (p. 327). Grima et al. (2014) concluded that being a mentor rejuvenates the mentor. These outcomes all contribute to protégés remaining on the job.

4.1.4 Personal Learning

Personal learning can benefit the protégé, especially during onboarding. The articles discussing personal learning reached the following conclusions. Farnese et al. (2017) reported a direct correlation between mentoring and the protégé's growth, specifically in learning the values, goals and protocols of the organization. Holtbrügge and Ambrosius (2015) discussed the impact of organizational distance and the person who selected the mentor on the protégé's learning. They concluded that greater organizational distance between the mentor and protégé leads to stronger protégé skill development; however, the organizational distance of the person who *selects* the mentor has no impact on the protégé's skill development. Overall, Holtbrügge and Ambrosius concluded that skill development is an important outcome of mentoring. Rueywei et al. (2014) also concluded that skill development was increased by mentoring in their study. Welsh and Dixon (2016) focused on the skill development of protégés and the relationship to development of competency. They concluded that the skill practice offered in mentoring increases the protégé's competencies. Specifically, they reported that "development was maximized when the [protégés] quickly implemented or practiced

what they learned" (Welsh & Dixon, 2016, p. 242). Srivastava and Thakur (2013) concluded that relational mentoring and personal learning go hand in hand.

Three studies approached the personal learning of the protégé from the mentors' perspective (Rogers et al., 2016 Smith-Jentsch et al., 2012; Zhenyuan et al., 2016). Rogers et al. (2016) reported that mentors who are "centered upon attaining competence in situations of performance and learning [aka learning goal orientation]" (p. 214) increased mentor effectiveness. Smith-Jentsch et al. (2012) reported that mentoring quality is better if the mentor believes the protégé has growth potential. Zhenyuan et al. (2016) concluded that mentor quality was related to the mentor's knowledge sharing, which leads to a protégé's learning. Knowledge sharing is one of the benefits of mentoring and is confirmed by these studies.

4.1.5 Protégé Satisfaction

While protégé satisfaction was somewhat measured in the studies used in this MSR, no quantitative studies come to any actual conclusions tied to protégé satisfaction.

4.1.6 Professional Exposure

Professional exposure can benefit a protégé, especially during onboarding. Professional exposure also benefits an organization by making sure knowledge is shared throughout the organization. The articles discussing professional exposure reached the following conclusions. Farnese et al. (2017) and Srivastava (2015) both reported that mentoring increases a protégé's workplace network. Srivastava (2015) concluded that access to influential professionals, participation on project teams, enhanced social skills, and the validation that comes from having a mentor relationship are all benefits that expand the protégé's network. Srivastava reported that the initial benefits of mentoring

are more pronounced for women. However, the effect is lessened as the protégé gains a foothold within their organization: “as women gained legitimacy through their own contributions during their time in the organization, they appeared to benefit less from the signal of being affiliated with a respected senior person” (Srivastava, 2015, p. 445). Zhuang et al. (2013) and Rogers et al. (2016) both reported benefits to the protégé of having mentors, including multiple mentor networks. Lyle and Smith (2014) also reported that the amount of time spent with a high-quality mentor leads to a better chance for promotion as a protégé, which they further state demonstrates the benefit of an increased network. However, Lyle and Smith also reported that having multiple mentors does not increase this benefit. That conclusion contradicts Zhuang et al. (2013) who concluded that multiple mentor networks may increase protégé adjustment. Grima et al. (2014) reported both that mentoring does not promote the social network of the mentor and that the mentor risks over-using his network. However, they also state that their own research is limited due to the age of a mentor, explaining that older employees (the average age was 38), may not see as many benefits from professional exposure.

4.2 RQ1b What quantitative measures and scales do organizations use to assess mentoring programs

Two quantitative studies (Lyle & Smith, 2014; Makokha et al., 2014) used extant data to measure job performance and career success. Fifteen of the qualitative measurement studies in this MSR, as well as the quantitative portion of Srivastava (2015), compiled their results by using surveys with Likert scales. Most of the established scales used to form the surveys were not about mentoring. However, the researchers used these surveys, many in combination with established scales about mentoring, to create

unique surveys for their research. For example, Cheng and Peng (2016) created their survey using items from four unrelated established scales (Bennet & Robinson, 2000; Crossley et al., 2007; Mael & Ashforth, 1992; Ayree et al., 1999), and then measured the effect of mentoring in their unique survey by using the scale created by Scandura and Ragans (1993).

The researcher defined seven codes for mentor measurement (Table 10). Eleven of the quantitative articles in this MSR measured some element of professional exposure; ten of the articles measured elements of career success. Less than half of the articles measured any one of the remaining five codes (career resilience, employee engagement, mutual development, personal learning, protégé satisfaction). Nine quantitative studies in this MSR used established scales to measure mentoring and mentoring functions in general, listed in Table 14. Common among many of the general mentoring scales was the focus on the career development and psychosocial mentor functions as defined by Kram (1983). Details of the individual scales used are discussed in Chapter 3.

4.3 RQ1c how do organizations qualitatively assess mentoring programs?

Both qualitative studies (Deptula & Williams, 2017; Janssen et al., 2018) and the qualitative portion of Srivastava (2015) used interviews to assess mentoring impacts. Deptula and Williams (2017) focused their interviews on assessing the impact of the mentoring dyad as a unit. Janssen et al. (2018) assessed "coworkers' perceptions and experiences of informal mentoring relationships" (p. 245). Srivastava (2015) used interviews to assess "the effects of formal mentoring on formal networks" (p. 427). The results of all three studies discussed career success and mutual development. Additionally, Janssen et al. (2018) revealed outcomes regarding employee engagement

and personal learning. Janssen et al. (2018) and Srivastava (2015) also revealed both positive and negative professional exposure outcomes.

In the category of career success, all three studies concluded that mentoring does positively impact a protégé's performance and knowledge. Deptula and Williams (2017) concluded that mentoring increases performance and information, especially when the skill set of the mentor and protégé are diverse but complement each other. Similarly, Janssen et al. (2018) concluded that having a mentor enhanced management competency. Srivastava (2015) concluded that mentoring does help increase the protégé's knowledge of how to find information. A conclusion can be made that the impact of mentoring on career performance can be assessed by interview, especially over time. Deptula and Williams (2017) stated that mentoring in a synergistic relationship takes time, but also turns into a beneficial long-term relationship, aligning with the four mentor stages discussed by Kram (1983).

However, Janssen et al. (2018) stated that increasing competencies do not necessarily lead to increased performance. Additionally, the interviewees also stated that the close bond between the mentor and protégé can keep the mentor from providing feedback to help the protégé improve performance. Respondents also believed that the protégé and mentor relationship takes a lot of effort, workload and time for the mentor (Janssen et al., 2018). Srivastava (2015) concluded in his study that the benefit of having a mentor decreased as the protégé's success increased.

In the category of mutual development, both Deptula and Williams (2017) and Janssen et al. (2018) showed mixed results from the mentoring/protégé dyad. One desirable outcome of the relationship is that a mentoring dyad empowers mentors and

protégés to have the courage to speak up. Deptula and Williams conclude that mentoring dyads act as a coalition when there is a common goal, and when they work on each other's developmental goals and career objectives. However, there also are undesirable outcomes from the mentor relationship. The study by Janssen et al. specifically reported some respondents' unfavorable opinions. Protégés may copy their mentor's work style instead of developing their own habits. Another respondent stated that the mentor relationship doesn't appear to be good use of company resources: "Sometimes I'm wondering why they do things together and not solo. I mean, they are both highly paid professionals and now it costs twice as much because they do their jobs together (male, age 27, government)" (Janssen et al., 2018, p. 257).

Srivastava (2015) specifically reported four categories of a mentor and protégé relationship that contribute to increased professional exposure: "Access to influential organizational actors", "participation in semiformal foci (e.g. work groups and project teams)", "enhanced social skills", and "legitimacy-enhancing skills" (p. 436 – 437). Srivastava recorded many examples of beneficial outcomes in his study, including expanding social network by interaction with the mentor's network, additional help in preparing for proposals and presentations, increased confidence in connecting to people who the protégé does not know. Janssen et al. (2018) reported that mentoring provides a safe space for interpersonal risk. Respondents also stated that the protégé has more power in the organization because of the mentor relationship (Janssen et al., 2018).

The three studies in the MSR that used qualitative methods to assess mentoring impacts (Deptula & Williams, 2017; Janssen et al., 2018; Srivastava, 2015) all utilized interviews to gather data. All three studies focused on aspects of the impact of the mentor

relationship, including network size (Srivastava, 2015), the power of the mentoring dyad (Deptula & Williams, 2017), and coworkers' perception of the mentor/protégé relationship (Janssen et al., 2018).

4.4 Implications for organizations

The articles in this MSR show that measurements and assessments can be used to demonstrate the effectiveness of mentoring on the outcomes of onboarding, retention and career success. Surveys and interviews designed to capture personal learning and employee engagement tie to onboarding. Employee engagement and career resilience tie to retention. Career advancement ties directly to career success and mutual development. Organizational strategic knowledge ties to personal learning and professional exposure.

Secondly, the articles in this study show that the specific outcomes of mentoring vary greatly from organization to organization. When organizations choose to implement a mentor program, consideration should be given to the outcomes desired so that measurements and assessments can be designed that align with the goals.

4.5 Implications for future research

Future research should be done to tie the outcomes of mentoring within the seven codes (Table 10) to specific business results. Each research goal is an opportunity to design a new survey, however, the foundation of surveys about mentoring is well-established as shown in Table 14. Because the outcomes of mentoring cover a wide range, survey items can be derived from many sources, not just surveys related to mentoring.

4.6 Limitations

There are several limitations to the conclusions from this MSR. First, none of these studies were completed by the organizations directly. Instead, they were completed by outside researchers. Nevertheless, the data evaluated provide a framework for how organizations *should* be evaluating and assessing mentoring programs. Second, fourteen articles studied international audiences, four were based in the United States, and two were not specified. Many studies based in international settings, including Farnese et al. (2017), Bach-Ouerdian et al. (2018), Cheng and Peng (2016), and Grima et al. (2014) all reported the limitation that their results apply to specific cultural and organizational contexts, and should not be generalized to other situations. Therefore, while this MSR compiled results across multiple studies, each individual organization setting needs to be analyzed separately, since results may vary. Third, many of the study populations used by the article researchers were completed by convenience samples or were selected by company management or by Human Resource departments. Many articles mention that the sample was limited. Like the cultural contexts, the limited sample size and selection methods mean the individual study results may not be translatable to larger settings, but the compilation of results by the researching in an MSR points to trends to follow, however each population will have its own unique characteristics.

Fourth, all the articles in this study were about traditional mentoring relationships. A traditional mentoring relationship is one where the activity of advising someone with less experience (Table 3) is guided by a more experienced, longer tenured employee. However, outcomes from other models of mentoring, like reverse mentoring, were not

studied. These less-traditional mentor relationships may lead to different outcomes that should be explored.

Fifth, results from fifteen of seventeen of the quantitative articles were based on self-report surveys. The qualitative studies as well were mainly self-report of perceptions of mentoring. More hard data, like salary records, would provide further insights into the success of mentoring programs.

Sixth, all studies in this MSR are from 2012 or later. While this provides insight into the recent measurement of mentoring outcomes, long-term trends may have been missed. A more extensive timeframe could be studied to look for constants across time in mentoring outcomes.

Seventh, nineteen of the twenty articles in this study studied formal mentoring programs. Only Janssen et al. (2018) researched informal mentoring. Informal mentoring outcomes are more difficult to measure because the relationships are not monitored by the organization. Any informal mentoring relationship would be self-reported. Future studies of informal mentoring results within an organization could provide a more complete picture of the outcomes and impacts of mentoring within an organization.

Finally, all steps of this MSR were completed by a single researcher, under advisement of his thesis advisor. No electronic system was used, outside of recording data in Excel and using the built-in remove duplicates function. The limitation of a single researcher means that mistakes in include and exclude decisions could be made throughout the process, either by mis-reading information or applying a bias into the interpretation of an article abstract. These mistakes could eliminate an article that should have been included or include an article that should have been eliminated. These

limitations could be removed by using more technological methods of include and exclude decisions or by using consensus among multiple researchers in the MSR article selection process.

4.7 Conclusion

The desired benefits and the expense of formal mentoring programs show the importance of evaluating the outcomes. This MSR researched how organizations assess the outcomes of mentoring program. Three sub-questions were researched to provide the details to the primary question: what are the assessed outcomes of mentoring programs; what quantitative measures and scales do organizations use to assess mentoring programs; how do organizations qualitatively assess mentoring programs?

The outcomes evaluated by the studies in this MSR centered on seven main themes (Table 10): career resilience, career success, employee engagement, mutual development, personal learning, protégé satisfaction and professional exposure. Mentoring was successfully measured quantitatively primarily by using surveys of the mentor program participants, as well as organizational leaders. Survey questions came from established scales about mentoring, but also established scales used to explore other workplace outcomes, like burnout, employee engagement and adjustment to new situations. Extant data was also used to measure career success by reviewing job promotion records and work quality.

Quantitatively, interviews were used to assess the impact of mentoring, especially on the impact of mentoring on career success, the mutual development of the mentoring dyad, and the impact on the protégé's professional exposure (size of network of influence and organizational political skill) successfully using quantitative methods. Interviews

were conducted with both participants in mentor programs as well as coworkers of the mentor program participants.

When determining what to evaluate, an organization needs to consider which outcomes to focus on then align their study to those specific themes, as the studies in this MSR have modeled. Rather than focusing on only the quality of the mentoring experience or satisfaction with mentoring, evaluation should focus tying the mentoring experience to outcomes like job satisfaction, level of employee engagement, and adjustment to new job environments to show the organizational impact of a formal mentor program.

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APPENDIX A

Articles Included in Study

Table A1 Articles included in study

Author	Title	Year	Study Type	Study population	Measure
Arora and Rangnekar (2014)	Workplace mentoring and career resilience: An empirical test	2014	Quantitative	International	Survey of 205 Indian managers in five organizations in North India on their own experiences
Bach Ouerdian et al. (2018)	L'effet du mentorat sur la réussite de carrière : quelles différences entre hommes et femmes? [The effect of mentoring on career success: What are the differences between men and women?]	2018	Quantitative	International	Survey of 400 middle and senior managers in Tunisian banks based on a convenience sample. 237 responses were included in the final analysis. Some data had to be translated from French. Participants were asked about their own experiences with mentors. Sample responses were 137 men and 100 women - and the study is focused on gender differences
Cheng and Peng (2016)	The effect of mentoring on protégé' organizational deviance	2016	Quantitative	International	Surveys sent to 250 dyads of mentors and proteges in 2 Chinese manufacturing companies - randomly identified by HR at both companies. 218 proteges and 211 mentors responded. Survey had to be translated to Chinese to administer, and then back to English to measure.

Deptula and Williams (2017)	An intersubjective perspective on the role of communal sharing in synergistic co-mentoring: Implications for human resource development	2017	Qualitative	International	Semi-structured interviews with 26 mentoring dyads - 5 at a national hotel chain, 21 where the protégé was involved in an executive MBA program in the United Stated, but the mentor was not. Mentoring was not related to the education.
Farnese et al. (2017)	Don't abandon hope all ye who enter here: The protective role of formal mentoring and learning processes on burnout in correctional officers	2017	Quantitative	International	Survey to all 396 Italian corrections officers who had completed the Ministry of Justice training. 117 responded.
Grima et al. (2014)	Exploring the benefits of mentoring activities for the mentor	2014	Quantitative	International	500 surveys sent to former students of a French business school (randomly selected). 198 returned. Survey asked about the respondent's' experiences as a mentor
Holtbrügge and Ambrosius (2015)	Mentoring, skill development, and career success of foreign expatriates	2015	Quantitative	International	Survey of all 109 expatriate American workers who worked in Germany for their company between 2008 and 2013. 62 surveys returned.

Janssen et al. (2018)	Coworkers' perspectives on mentoring relationships.	2018	Qualitative	International	21 semi structured interviews with co-workers of mentoring dyads in the Netherlands. Participants selected through LinkedIn advertising. Participants were outside observers of informal mentoring in their workgroup, were in a clerical or professional white-collar role and worked on their team for at least twelve months
Koyuncu et al. (2014)	Mentoring relationships among managerial and professional women in Turkey: potential benefits?	2014	Quantitative	International	480 surveys sent to female employees of a Turkish airline. 192 surveys were returned. Asked about their experiences as a protégé
Lyle and Smith (2014)	The effect of high-performing mentors on junior officer promotion in the US army.	2014	Quantitative	US	US Army administrative data from 1998 - 2008 of battalion commanders and their proteges. Measure of promotion among those mentors
Makokha et al. (2014)	Using standard and institutional mentorship models to implement SLMTA in Kenya	2014	Quantitative	International	Kenyan lab results were audited before, during and after mentor program participation. Quality scores were tracked.

McKevitt and Davis (2014)	Supplier development and public procurement: allies, coaches and bedfellows	2014	Quantitative	International	Survey of convenience sample of those involved in public buying in UK. 338 respondents. Not used in this MSR because, after further review, this article is not about mentoring.
Naim and Lenka (2017)	How does mentoring contribute to gen Y employees' intention to stay? An Indian perspective	2017	Quantitative	International	Cross-sectional survey of Gen Y tech employees in India with at least 1 year experience from 27. 415 surveys randomly sent - 314 completed.
ÖZcan and ÇAĞLar (2013)	İl eğıtım denetmenlerının meslekı gelışımında mentorluk [Mentorship in the professional development of provincial educational supervisors]	2013	Qualitative	International	Semi-structured interviews. Not used in this MSR because not translated from Turkish enough to understand

Perrone et al. (2016)	Implementation research: a mentoring programme to improve laboratory quality in Cambodia.	2016	Qualitative	International	Non-randomized quasi-experimental study quantitative study of laboratories in Cambodia. Not used in this MSR because the study showed implementation results of a quality program across laboratories in Cambodia. Mentoring was one part of a larger program. The paper, however, did not have a specific mentoring outcome RQ shown.
Rogers et al. (2016)	Predictors of effective formal mentoring: Is the mentor's commitment all that matters?	2016	Quantitative	International	Surveys of mentor pairs at an oil company in west Africa. Performance data provided by 20 supervisors on their 78 mentors
Rueywei et al. (2014)	Career outcome of employees: The mediating effect of mentoring	2014	Quantitative	International	Survey of 246 Taiwanese corporate employees (based on 400 sent based on a convenience sample.)
Smith-Jentsch et al. (2012)	Complementary mentor motivations and protégé characteristics: Determinants of mentoring	2012	Quantitative	US	Survey of eighty-six individuals who have a supervisory mentor across five companies in the US

Srivastava (2015)	Network intervention: assessing the effects of formal mentoring on workplace networks	2015	Mixed	Not specified	40 interviews with proteges in a Chinese software company.
Srivastava and Thakur (2013)	Mentoring and performance: Testing a mediated model in supervisory and formal mentoring in business organisation	2013	Quantitative	Not specified	502 surveys of participants in a mentor workshop about their mentor experience
Welsh and Dixon (2016)	Improving mentoring outcomes: Examining factors outside the relationship.	2016	Quantitative	US	Periodic surveys of proteges throughout a year-long mentor program. 342 of 429 mentors who started the program completed all surveys. And those results were included. Two protégés were eliminated due to "suspicious answer patterns." Protégés were from 24 organizations
Zhenyuan et al. (2016)	Imprression managment tactics of protègès and mentors' knowledge-sharing behavior	2016	Quantitative	International	Periodic surveys of proteges in China. Surveys were sent randomly from HR departments. 280 sent, 227 started, 209 valid responses to all survey levels.

Zhuang et al. (2013)	Relationship of mentoring functions to expatriate adjustments: comparing home country mentorship and host country mentorship	2013	Quantitative	International	Survey of 400 expatriates working in China for Multi-National Corporations (Taiwanese corporation). Convenience sampling. Distributed through HR departments and an EMBA program. 286 returned.

APPENDIX B

Mmat Quantitative Studies

Table B1 **MMAT Quantitative studies**

Article	4.1. Is the sampling strategy relevant to address the research question?	4.2. Is the sample representative of the target population?	4.3. Are the measurements appropriate?	4.4. Is the risk of nonresponse bias low?	4.5. Is the statistical analysis appropriate to answer the research question?
Arora and Rangnekar (2014)	Yes	Yes	Yes	Can't tell	Yes
Bach Ouerdian et al. (2018)	Yes	Yes	Yes	Yes	Yes
Cheng and Peng (2016)	Yes	Yes	Yes	Yes	Yes
Farnese et al. (2017)	Yes	Yes	Yes	No	Yes
Grima et al. (2014)	Yes	Yes	Yes	Yes	Yes

Holtbrügge and Ambrosius (2015)	Yes	Yes	Yes	Yes	Yes
Koyuncu et al. (2014)	Yes	Yes	Yes	Can't tell	Yes
Lyle and Smith (2014)	Yes	Yes	Yes	Yes	Yes
Makokha et al. (2014)	Yes	Yes	Yes	Yes	Yes
Naim and Lenka (2017)	Yes	Yes	Yes	Yes	Yes
Rogers et al. (2016)	Yes	Can't tell	Yes	Yes	Yes
Rueywei et al. (2014)	Yes	Yes	Yes	Yes	Yes

Smith-Jentsch et al. (2012)	Yes	Yes	Yes	Can't tell	Yes
Srivastava and Thakur (2013)	Yes	Yes	Yes	Yes	Yes
Welsh and Dixon (2016)	Yes	Yes	Yes	Yes	Yes
Zhenyuan et al. (2016)	Yes	Yes	Yes	Yes	Yes
Zhuang et al. (2013)	Yes	Yes	Yes	Can't tell	Yes

Table B2 MMAT Qualitative studies

Article	1.1. Is the qualitative approach appropriate to answer the research question?	1.2. Are the qualitative data collection methods adequate to address the research question?	1.3. Are the findings adequately derived from the data?	1.4. Is the interpretation of results sufficiently substantiated by data?	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?
Deptula and Williams (2017)	Yes	Yes	Yes	Yes	Yes
Janssen et al. (2018)	Yes	Yes	Yes	Yes	Yes

Table B3 MMAT Mixed Studies

Article	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	5.2. Are the different components of the study effectively integrated to answer the research question?	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?
Srivastava (2015)	Yes	Yes	Yes	Yes	Can’t tell

APPENDIX C

Coding For Articles

Table C1 Original Coding

Code	Level	Second level	Meaning	Definition
C	Mentor Function		Career	Career functions are those aspects of the relationship that primarily enhance career advancement. (Kram, 1983, p. 614).
P	Mentor Function (Kram, 1983)		Psychosocial	Psychosocial functions are those aspects of the relationship that primarily enhance sense of competence, clarity of identity, and effectiveness in the managerial role. (Kram, 1983, p. 614).
CD	Career		Competency development	"Opportunity to practice new skills" (Welsh & Dixon, 2016, p. 232).
CSO	Career		Objective Career Success	"Objective career success is thus defined as the judgment of others on career achievements of an individual using observable, measurable criteria, such as salary, promotion and seniority (Judge et al., 1995; Nicholson, 2000)" (Bach Ouerdian et al., 2018, p. 118).
CSS	Career		Subjective Career Success	Subjective career success is defined by the satisfaction of the person for his current job and career satisfaction, which in turn is defined as the satisfaction from the intrinsic and extrinsic aspects of life, including salary, advancement and development opportunities (Hall & Chandler [reference corrected from translation], 2005). (Bach Ouerdian et al., 2018, p. 119).
CX	Career		Coaching	setting a challenge that leads the protégé to excel himself professionally (Grima et al., 2014, p. 471).

KS	Career		Knowledge Sharing	Peer mentors share or externalize knowledge when they take time to organize their thoughts, write them down, and make explicit what they understand implicitly. Mentors can share knowledge of processes (such as accessing the network or how to enter a record in a database), knowledge of people (such as who to contact for help on particular issues), and knowledge of systems (such as how customer feedback is collected and shared in the firm) (Bryant, 2005, p. 324).
LP	Career	CD	Learning Process	The learning process refers to self-initiated and self-directed individual behaviors, by means of which employees (in the present research, newcomers) actively improve their competencies and work environment [43–45] and effectively cope with demanding conditions (Farnese et al., 2017, p. 322).
MD	Career		Mutual Development	Co-mentoring dyadic processes include fluid expertise, collaborative development, and knowledge generation. (Deptula & Williams, 2017, p. 377).
PL	Career		Personal Learning	Kram (1985, 1996) defined personal learning as acquiring skills, knowledge, or competence that contribute to career outcome (Rueywei et al., 2014, p. 489).
PRO	Career		Protector	Prevent the protégé from undertaking actions that might jeopardise his image and reputation in the enterprise (Grima et al., 2014, p. 479).
PS	Career	PX	Political Skill	"Political skill includes knowing how to wield the social skill to obtain needed resources in environments where expectations are unclear and networks are complex (Ferris et al., 2005)." (Rogers et al., 2016, p. 213).

PX	Career		Professional Exposure	Appointments to enviable posts, or introductions to influential people in order to increase the visibility of the protégé in the enterprise (Grima et al., 2014, p. 471).
SP	Career		Synergistic potential	"...members act as a coalition: “alliances of members uniting to achieve a common objective (Stevenson, Pearce, & Porter, 1985, p. 267)"(Deptula et al., 2017, 382).
Int	Control variable		International	Study population outside the United States.
NS	Control variable		Not Stated	Study population not stated.
US	Control variable		United States	Study population within the United States.
AC	Psychosocial	EE	Affective Commitment	"Affective commitment is the desire to remain a member of an organization because of a strong emotional attachment (Meyer & Allen, 1991)" (Fleig-Palmer & Rathert, 2015, p. 58).
ADJ	Psychosocial	EE	Adjustment	‘The degree of a person’s psychological comfort with various aspects of a new setting’ (Black and Gregersen 1991). … subjectively experiencing some degree of life satisfaction and feeling qualified to do their jobs and interact" (Zhuang et al., 2013, p. 36, 40).
BO	Psychosocial	CR	Burnout	Burnout is the protracted consequence of unabated job stress (Dowden & Tellier, 2004, p. 34).

CA	Psychosocial	Career Advice	reassuring the protégé about his actions, encouraging the latter to forge a positive image of himself (Grima et al., 2014, p. 471).
CONF	Psychosocial	Confidante	seeking to create a space of complicity with the protégé within which the latter can freely express his fears and anxieties (Grima et al., 2014, p. 471).
CR	Psychosocial	Career Resilience	Ability to adapt to changes even when situations are disruptive (Arora & Rangnekar, 2014, p 209).
CSO	Psychosocial	Objective Career Success	Objective career success is thus defined as the judgment of others on career achievements of an individual using observable, measurable criteria, such as salary, promotion and seniority (Judge et al., 1995; Nicholson, 2000) (Bach Ouerdian et al., 2018, p. 118).
CSS	Psychosocial	Subjective Career Success	Subjective career success is defined by the satisfaction of the person for his current job and career satisfaction, which in turn is defined as the satisfaction from the intrinsic and extrinsic aspects of life, including salary, advancement and development opportunities (Hall & Chandler [reference corrected from translation], 2005). (Bach Ouerdian et al., 2018, p. 119).

DC	Psychosocial	EE	Developmental Climate	"According to Blickle, Schneider, Meurs, and Perrewe´ (2010), the organizational developmental climate refers to “the extent to which the organization supports employees’ development such that organizational members share perceptions and expectations that learning is an import part of everyday work life" (p. 1901)." (Cheng & Peng, 2016 , p. 205).
EE	Psychosocial		Employee Engagement	"Aspects of the job that stimulate personal growth, learning and development" (Welsh & Dixon, 2016, p. 233).
IM	Psychosocial		Impression Management	"refers to the process by which a person uses particular tactics to influence others’ perception of him/her and to impress others (Turnley & Bolino, 2001)" (Zhenyuan et al., 2016, p. 1826).
ITS	Psychosocial	JE	Intention to Stay	"Intention to stay is the tendency of employees to remain employed with their current organization (Currivan, 1999)" (Naim & Lenka, 2017, p. 320).
JE	Psychosocial	EE	Job Embeddedness	"Job embeddedness is described as “the combined forces (fit, links and sacrifice) that keep a person from leaving his or her job” (Yao, Lee, Mitchell, Burton, & Sablynski, 2004, p. 159)" (Cheng & Peng, 2016 , p. 203).
MC	Psychosocial	MS	Mentor Commitment	"mentor commitment describes a mentor’s long-term view of the mentoring relationship and whether they are tethered to promoting the goals and interests of the partnership (Poteat et al., 2009)" (Rogers et al., 2016, p. 211).

MS	Psychosocial		Mentor Satisfaction	"Mentees who are satisfied with the support they receive likely either receive high levels of organizational support or have expectations that align with the support provided (Irving and Meyer, 1994)" (Welsh & Dixon, 2016, p. 234).
OD	Psychosocial	EE	Organizational Deviance	"Organizational deviance refers to employee behaviors that erode organizational norms and bring potential harm to organizations, such as stealing, withholding effort, sabotage, and drug use (Bennett & Robinson, 2000; Michel, Newness, & Duniewicz, 2016)" (Cheng & Peng, 2016, p. 119).
OI	Psychosocial	EE	Organizational Identification	"organizational identification can be defined as “a perceived oneness with an organization and the experience of the organizations’ successes and failures as one’s own” (Mael & Ashforth, 1992, p. 103)" (Cheng & Peng, 2016, p. 204).
RM	Psychosocial		Role Modeling	The mentor serves as an example of the attitudes and behaviour most sought after by the organisation, and passes on the values of the enterprise (Grima et al., 2014, p. 471).

Table C2 Final coding

Outcome	Definition	When to use	When not to use	Example of when to use
Career Resilience (CR)	Career resilience is the protégé's ability to adapt to all situations, including disruptive change. The protégé demonstrates career resilience by performing well in new settings, as well as their own feeling of comfort, competence and satisfaction in new settings (Arora & Rangnekar, 2014; Black & Gregersen, 1991; Zhuang et al., 2013). A protégé not demonstrating career resilience results in ongoing job stress, which leads to burnout (Dowden &Tellier, 2004).	Use this when the quote relates to a protégé able to overcome an obstacle to their career.	Do not use when the quote relates to the mentor's performance.	"I think it's especially nice for a new employee that he or she can fall back on the same person. That makes that you are a little less afraid to make mistakes. And that will give you more confidence, I think. (Female, age 27, health care)" (Janssen et al., 2018, p.256).

Career Success (CS)	Career success is when the protégé has achieved "a high level in [their] profession" (Monserrat et al., 2009). Elements of success include "pay, promotions, status… job and life satisfaction" (Judge & Bretz, 1992, p.58) There are two types of career success: Objective career success, defined as observable success such as promotion, seniority, salary, and increased responsibility. (Judge et al., 1995; Nicholson, 2000; Bach Ouerdian et al., 2018, p. 118) Subjective career success is defined by the protégé satisfaction for their current career. Examples include development opportunities, happiness, work/life balance (Hall & Chandler, 2005; Bach Ouerdian et al., 2018).	Use this when the quote when the quote talks about professional success (objective), or the psychosocial impact (subjective) from the success.	Do not use when the quote talks about the process instead of the result.	"We find that junior officers who serve under a high-performing mentor are 29% more likely to be selected for early promotion to the rank of major" (Lyle & Smith, 2014, p. 232).

Employee Engagement (EE)	Employee engagement is the elements of a protégé's job that encourage their personal growth and learning. (Welsh & Dixon, 2016) Engaged employees identify with an organization's direction (Mael & Ashforth, 1992; Cheng & Peng, 2016) have an emotional connection with the organization (Meyer & Allen, 1991, Fleig-Palmer & Rathert, 2015) and express an intention to stay with the organization (Currivan, 1999; Naim, & Lenka, 2017). A non-engaged employee may demonstrate organizational deviance by behaving in ways that "erode organizational norms and bring potential harm to [the organization] (Bennett & Robinson, 2000; Michel, Newness, & Duniewicz, 2016)"	Use this when the quote refers to an employee psychosocially connecting with their role, job and organization. This code Focuses on the psychosocial connection, not the competency.	Do not use when the quote refers to the employee being skilled at their job only.	"This is probably due to continuous emotional support, guidance, counseling, visibility, protection, personal and professional development opportunities offered by mentors, which evoke an intention to stay forth. Hence, it can be assumed that employees with an access to mentoring at workplace have a higher likelihood of staying as compared to non-mentored employees "(Naim & Lenka, 2017, p. 325).

	(Cheng & Peng, 2016, p. 119).			
Mutual Development (MD)	Mutual development is the synergistic power of the mentoring relationship which allows the pair to work collaboratively to achieve more goals, generate more knowledge and access more resources as a pair than they could individually. (Deptula & Williams, 2017)	Use this if the quote is related to the mutual benefit of the mentor and protégé through the relationship	Do not use if the quote refers to the success of only the mentor or protégé, rather than the pair.	"Collaboration comes from commonly working on each partner's developmental goals and career objectives" (Deptula & Williams 2017, p. 383)
Personal learning (PL)	Personal learning is the protégé acquiring "the skills, knowledge or competence that contribute to career outcomes" (Rueywei et al., 2014, p. 489).	Use when the quote talks about any specific aspect of tangible learning, like training, coaching, self-learning of one on one skills, trying new tasks etc.	Do not use when the quote talks about a learning environment, or culture of learning etc.	"the skill development of the Taiwanese employees who took part in our study was enhanced by mentoring" (Rueywei et al., 2014, p. 495)
Protege Satisfaction (PS)	Protégés that are satisfied with their mentor and the mentor experience. Welsh and Dixon (2016) state that satisfied proteges	Use this when the quote refers to the protégé's satisfaction with their mentor.	Do not use when the quote refers to the *protégé's* satisfaction with the organization, or their job, but not specifically the	"Gen Y employees expect mentoring at workplace, therefore participation in mentoring is perceived as a positive work experience,

	align their expectations with the provided support.)		mentor. Do not use when the quote refers to the mentor's satisfaction.	which in turn, contributes to the feeling of emotional attachment." (Naim & Lenka, 2017, p. 326)
Professional Exposure (PX)	Professional exposure is when the "visibility of the protégé in the enterprise" (Grima, F., Paillé, P., Mejia, J. H., & Prud'homme, L., 2014, p. 471) is increased through job assignments and interactions with influencers. Because navigating these interactions and assignments successfully requires political skill (Rogers, A., Luksyte, A., & Spitzmueller, C. ,2016), the mentor needs to share knowledge of processes, people and systems (Bryant, 2005), and provide protection from the mentor to help the protégé avoid actions that may damage their image and reputation. (Grima, F.,	Use this when the quote is in relation to opening new positions and influence from the mentor relationship.	Do not use when the quote refers to enhancing skills with the same co-workers, or in the same position.	"One reason the shadowing program works is that it gives you visibility in another part of the organization." (Srivastava, 2015, p. 436)

Paillé, P., Mejia, J. H., &
Prud'homme, L., 2014))