

DBA THESIS (2018)

**Moderators that Accelerate
Competency Development from
Challenging Work Experiences**



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Abstract

Leaders learn and grow from work experience. Scholars have claimed that at least 70% of learning and leadership development comes from work experience, particularly challenging experiences. This research examines the relationship between challenging work experiences and competency development, and moderators of the relationship.

The relationship between challenging work experience and competency development varies across different situations and contexts: not all individuals learn and grow equally and uniformly from the same experiences. The relationship can be accelerated or attenuated by various factors: individual characteristics such as cognitive abilities and personal propensities or situational factors such as psychological safety and relationships with supervisors. This research identifies the factors that accelerate competency development from challenging work experiences.

The data used for this research consist of 494 Japanese participants who occupy the position of manager or higher. Participants were randomly recruited from an online panel in 2017.

The results showed that challenging work experiences and competency development were significantly correlated, indicating competencies are developed from challenging work experiences. As previous research has shown for non-Japanese samples, this research confirmed that individual factors—self-efficacy, learning goal orientation, and work

engagement—moderate the relationship. When individuals have higher levels of these individual traits, they develop competency from challenging work experiences more effectively.

This research found that psychological safety moderates the relationship in that it accelerates competency development when individuals face and learn from challenging work experiences. Competency development is positive when individuals feel high psychological safety and nonsignificant when the perceived psychological safety is low. The moderation effect of psychological safety was significantly larger than those of self-efficacy, learning goal orientation, and work engagement.

Having trusting relationships with supervisors contributes to creating psychological safety. Incremental effects that trusting relationships with supervisors have on psychological safety and its moderation of the relationship between challenging work experiences and competency development were also examined and found to be significant.

Moreover, the results indicate that the positive effect of psychological safety is only active when individuals believe they have a trusting relationship with their supervisor. When this trust is lacking, the positive effect of psychological safety is attenuated, if not nullified.

This research makes an empirical contribution to understanding the roles of psychological safety and trusting relationships with supervisors as well as the mechanisms by which they moderate how individuals develop competencies from challenging experiences in their work. This research elucidates the contributions of situational factors which are of equal or greater

importance than individual factors in optimizing competency development from challenging work experiences.

To accelerate and optimize competency development from challenging work experiences, organizations and supervisors need to not only identify those with suitable individual characteristics, but to also provide psychologically safe environments and build trusting relationships with their subordinates.

1. Introduction

1.1. The Leader Development Situation

“Talents, talents, and talents ... that’s what we need,” is a pressing concern voiced by the executives of Japanese companies. A survey in 2016 conducted by the Japan Management Association (JMA) indicated that the second-most important management issue in Japanese companies was talent development.

Japanese companies have led their businesses through operational excellence, as exemplified by the manufacturing industry. However, the business world has become increasingly globalized and complex and thus, simple incremental improvements to performance will not ensure their survival.

Japanese companies search internally to find leaders who can direct their organizations in this turbulent and disruptive business environment—but only a few can be found, if any. This is not limited to Japanese companies; attracting and developing managerial talent is becoming a critical strategic challenge for organizations to succeed (Hill, 2004; Silzer & Church, 2009). A report by the Conference Board and McKinsey & Company (2012) stated that two-thirds of human resource professionals listed talent development as their foremost priority.

Companies spend billions of dollars developing managerial talent to expand leadership capacities (DeRue & Wellman, 2009), and US\$13 billion was spent annually for leadership

training in the United States alone (Loew & O'Leonard, 2012). However, talent development has not yet successfully borne its expected fruits.

Scholars have claimed that at least 70% of learning and leadership development comes from work experience (McCall, Lombardo, & Morrison, 1988; Morrison & Brantner, 1992; Robinson & Wick, 1992), and especially from challenging on-the-job experiences—in other words, people learn from the lessons of experience (McCall, Lombardo, & Morrison, 1988).

Indeed, there is a growing body of research showing that challenging work experiences are one of the most effective ways of developing individual capacity for leaderships (Dragoni, Park, Soltis, & Forte-Trammell, 2014; Hill, 2004; McCall, 2010; McCall, Lombardo, & Morrison, 1988, McCauley, Ruderman, Ohlott, & Morrow, 1994; Silzer & Church, 2009). Managerial talents are developed mainly through experience and lessons learnt on the job. The capacity and capabilities required for business management cannot be learnt from books nor taught in classrooms, thus, “managers learn it by doing it, observing it and interacting with others” (Hill, 2004, p. 122).

By learning from experience, individuals develop the managerial capacity and capability—conceptualized and labelled as competencies—required for executing tasks and leading organizations (Mumford, Campion, & Morgeson, 2007). Competency is underlying enduring personal characteristics that predict outstanding work performance (Boyatzis, 1982; Spencer & Spencer, 1993).

According to Spencer and Spencer (1993), who classified and defined the set of competencies applicable to a wide range of individuals in different work settings, there are five types of competency characteristics: motives, traits, self-concept, knowledge, and skill. The concept, characteristics, and effects of competency in work settings will be explained in subsequent sections.

Here, the past research examined and validated the effects of these competencies in work settings and showed that they are developed from challenging work experiences (DeRue & Wellman, 2009; Dragoni, Tesluk, Russell, & Oh, 2009; McCall, 2004; McCall, Lombardo, & Morrison, 1988).

Despite the understanding that the best learning comes from experience, the most widely used leader development practices in organizations are training and coaching or mentoring, the effectiveness of which in leader development is rather modest (Seibert, Sargent, Kraimer, & Kiazad, 2017). Training typically provides proven approaches for known problems, whereas the challenges leaders face are too complex and poorly defined to be solved by standard training (Day, Fleenor, Atwater, Sturm, & McKee, 2014).

While only moderately effective, organizations and human resources departments tend to disproportionately rely on training and coaching for leader development. This is because they are more easily controlled and more readily available than job assignments, which offer rich developmental learning opportunities.

In a hypercompetitive world in which short-term financial performance tends to be prioritized over long-term talent development, achieving the right balance between talent development and financial performance is a difficult task for organizations (Hill, 2004, McCall, 2010).

In particular, business leaders are so pressured to meet financial targets that they may (sometimes unwillingly) forgo talent development opportunities. Matching talent development needs with suitable opportunities that are available at the right time may also not be easy. When it comes to important and challenging assignments rich in developmental elements, organizations are pressured to choose the proven performers over high-potential talents who would likely learn and grow the most from the assignments, due to a fear of risking the business results (McCall, 2010).

Companies, especially human resource departments, then turn to coaching and training programs, which are often readily available and cater to a wide variety of talents (Morrison & Brantner, 1992; Pfeffer, 2015). This type of training does not cater for individual or specific needs. It is inevitably framed to be generic and focused on positive, fun experiences without the substance of exercises that are challenging and threatening. It can be called, according to Pfeffer's (2015) cynical statement, *entertainment*.

Business leaders need to be reminded that meaningful learning comes more often and mainly, from bitter, challenging experiences and failures. In both business and life, the hardship, failure,

loss, and near-death experience of defining moments in which people significantly grow are called as *crucibles* by Bennis and Thomas (2002) and *Hitokawamukeru* (“break out of one’s shell” in Japanese) by Kanai (2002). Though bitter, these tough experiences tend to become pivotal moments for learning and development.

It should also be noted that, in addition to the difficulties in offering job assignments rich in developmental opportunities to target individuals—often high-potential talents who are expected to take up senior management positions—it is not uncommon that work experience with job assignment, training, and coaching are provided to individuals separately. These elements should be integrated, mutually complementing other elements instead of being designed and executed independently (McCall, 2010).

Seibert et al. (2017) showed that a training program was effective only when both the amount of challenging work experiences and developmental supervision by a supervisor were high. Their research also revealed that challenging work experiences had greater effect on leadership effectiveness and promotability evaluations, than did official developmental training programs and developmental supervision.

Creating opportunities for learning and development through work experience will naturally benefit individuals and companies in the long term, as these individuals will grow and fill positions that are critical for their companies’ futures.

There are other benefits for companies in terms of retention and monetary compensation—employees may forgo monetary rewards if offered fulfilling jobs; that is, job satisfaction can be more desirable. Helliwell and Huang's (2010) research revealed that employees feel more rewarded by “the jobs requiring skills,” “being given variety of tasks,” and “trust in management,” than they do by monetary rewards. Based on perceived equivalence scaling of their measurements, jobs that require skills and a variety of tasks are twice as rewarding as financial returns. Companies can increase retention of individuals by giving them fulfilling jobs, and thereby, save on recruitment and onboarding costs (Dong, Seo, & Bartol, 2014).

Higher positions in organizational hierarchy have elevated turnover and replacement costs (Boushey & Glynn, 2012). Additionally, external hires for senior positions face greater risks of not fitting with the position or organization, and thus, may fail despite their higher qualifications, skills, and experience (Bidwell, 2011).

The grooming of new leaders from within the organization is critical for continued business growth. The types of leaders needed would depend on the specific stages and environments of the companies in question; however, grooming internal leaders remains a “must do” of every company.

Considering Japan's stable employment system, based on lifetime employment and seniority-based promotion, the need to groom internal leaders is particularly important. It is a difficult task for Japanese companies to fill strategic positions with external talent; highly

capable talent does not enter the open job market. Because of the stable employment system, newcomers face difficulties integrating into a new company with its own embedded culture, vernacular, and relationships.

Thus, companies need to groom inside talent who are equipped with outside perspectives. Bower (2007) called such talent “inside-outsider” leaders and advocates that two factors are necessary to groom them. First, companies need to assign leaders management of a whole business as early as possible (this alternatively could be assignment of distinct units in geographical regions or different competitive markets). Second, they must assign mentors to oversee the leaders’ development by providing advice and resources to maximize learning and efforts to transform ideas into actions.

There is a general understanding that a leader’s capability is important in driving and improving organizational performance; however, how individuals develop their leadership capabilities from work experience is under-researched (DeRue & Wellman, 2009)—particularly in Japanese companies. The relationship between challenging work experiences and competency development varies across different situations and contexts. Some research has proved the positive relationship between challenging work experiences and leader capacity development and identified factors that moderate this relationship.

It should be noted that capability development is not uniform for all individuals, who may have different cognitive abilities, motivations, and personal propensities (Kanfer & Ackerman,

1989; Morrison & Brantner, 1992). Similarly, although challenging work experiences can stimulate learning, not all individuals learn well from the same experience and there are individual variances in learning (Dong, Seo, & Bartol, 2014; Spreitzer, McCall, & Mahoney, 1997). Matching an individual's ability to learn from challenging work experiences with the appropriate job assignment (and associated experience) is necessary to optimize their development.

Beyond individual characteristics, to boost the efforts of individuals who endeavor to develop their competencies—capabilities as leaders—from challenging work experiences, organizations and supervisors can provide support and create environments for learning and development. Suitable work environments and cultures (including relationships and social support) help enhance learning from work experiences (DeRue & Wellman, 2009; Dragoni, Park, Soltis, & Forte-Trammell, 2014), and reduce the uncertainty and risks that individuals may associate with challenging assignments (Dong, Seo, & Bartol, 2014). Such social support networks, which function as safety nets—or are perceived as such—reassure individuals that setbacks from possible failure will not be fatal to their leadership development or career progression (Moxley & Pulley, 2004).

Work environments in which individuals perceive a sense of safety were conceptualized and examined as a form of psychological safety. Psychological safety is defined as “a team climate characterized by interpersonal trust and mutual respect in which people are comfortable

being themselves” (Edmondson, 1999, p. 354). The creation of a psychologically safe environment in which talents can take on challenges, sometimes fail, and ultimately develop themselves has somehow been regarded as secondary for talent development, particularly in Japan.

Part of the reason for this is that the creation of such environments falls upon the shoulders of immediate supervisors; however, they are often pressured to generate short-term business results and may have neither the time nor the inclination to create these environments and thereby, develop talents. Moreover, even when talent development is regarded as a priority, supervisors are not necessarily adept at it, which may make them hesitant to invest the time and effort required (McCall, 2010).

This research is not situated at the broader level of labor market institutions. Psychological safety in Japan may generally be regarded higher by default because of the labor market institutions of lifetime employment and job security, which are commonly associated with low-risk context. Instead, this research is looking more specifically at the team-level psychological safety such as seeking help and feedback, voicing concerns, and admitting mistakes. These behaviors enhance learning but could have negative consequences such as feeling embarrassed, being perceived as incompetent and ineffective or losing self-esteem.

A business line director lamented, “I assigned him for a special task force, expecting that he would challenge himself in a tough assignment and learn from the experience. But he did

just what I told him, exactly following my guidance. I wanted to him to both challenge himself and challenge me!”. The subordinate whispered to me, “I want to show him my complete and great work that meets exactly my boss’s expectations.” The subordinate was hesitant to ask for feedback on premature work to avoid appearing incompetent. The business director specifically said, “We need to foster a psychologically safe environment and culture in my organization so that we can accelerate leader development”, but he did not know exactly how this psychologically safe environment could be created.

Another line director shared his principle of leader development: “I delegate tasks to my subordinates, telling them try out and do your best. I also clearly tell them I am always with you to help you. But you try your best first. Even if you make mistakes or fail, you can trust me I am responsible for it.”

Many, if not all, supervisors experientially understand the importance of psychological safety for subordinates to learn and grow from work experiences, but do not know exactly how psychological safety works or how it can be created. This research aims to elucidate the mechanisms of psychological safety and how it supports leader development from work experiences.

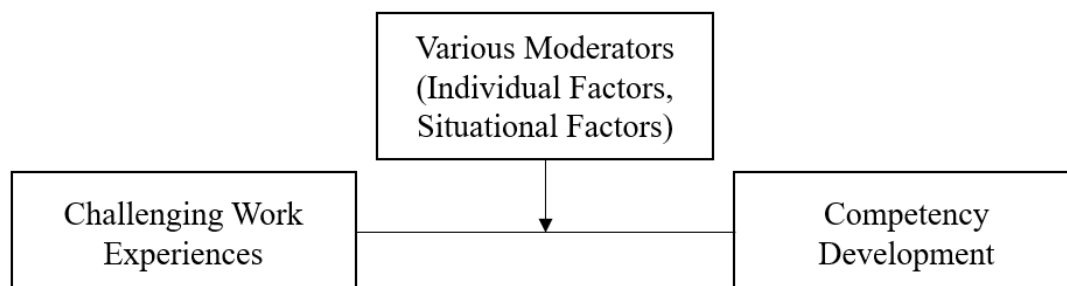
1.2. Conceptual Research Framework

Previous research examined the relationship between challenging work experiences and competency development and its moderators. The relationship between challenging work

experience and competency development varies across different situations and contexts; individuals do not develop competencies equally and uniformly from the same challenging work experiences. The relationship can be accelerated or attenuated by various factors: individual factors such as cognitive abilities, personalities, and personal propensities or situational factors such as psychological safety and relationship with the supervisor, latter of which creates the former.

This research aims to identify the factors (moderators) that accelerate competency development from challenging work experiences. The conceptual research framework is illustrated in Figure 1.

Figure 1. Conceptual Research Framework: Moderators of the Relationship between Challenging Work Experiences and Competency Development



1.3. Dissertation Structure

The dissertation begins with literature review sections that discuss previous research on challenging work experiences, competencies, the relationship between them, and moderators

of this relationship. Previous work also examined self-efficacy, learning goal orientations, and work engagement as the moderators of the relationship and this will be discussed.

In the following sections, psychological safety and having trusting relationships with supervisors are introduced as moderators whose effects are yet unexamined. By elucidating the role of these factors, this research will contribute to the theoretical and empirical development of models of the relationships between challenging work experiences, competency development, psychological safety, and trusting relationships with supervisors.

In subsequent sections, I outline the research method with data sampling and analysis, and present the research results and a discussion thereof. Based on these results, I suggest managerial implications, research limitations, and directions for future research.

2. Literature Review

2.1. Challenging Work Experiences

What are challenging work experiences? Some examples include transitioning from an individual contributor to a manager, changing functions, moving into a corporate position (as opposed to a line position) or a general management position for the first time, having an international assignment, creating new business, turning around problematic businesses and divisions, dealing with a difficult boss or subordinate, and taking over a position after a colleague is fired (Dragoni, Park, Soltis, & Forte-Trammell, 2014; Hill, 2004; McCall, 2010; McCauley, Ruderman, Ohlott, & Morrow, 1994; McCauley, Eastman, & Ohlott, 1995).

Challenging work experiences provide opportunities for learning because individuals are confronted with difficult situations, that are often new to them (e.g., problems, issues, trade-offs, and conflicts) and demand that individuals develop solutions, make decisions under uncertain or risky conditions, and ultimately frame these situations in the way that guides action (DeRue & Wellman, 2009; McCauley, Ruderman, Ohlott, & Morrow, 1994; McCauley, Eastman, & Ohlott, 1995).

These challenging situations are a source of motivation for learning, as they reveal skill and experience shortcomings and thereby, prompt individuals to fill these gaps (DeRue & Wellman, 2009). Thus, challenging work experiences coupled with other experiences such as exposure

to other people, mistakes, setbacks, and training, help individuals develop their managerial competencies (Spreitzer, McCall, & Mahoney, 1997).

Measurements of managerial jobs that are conducive to developing managerial capacity and capability have been developed by McCauley and colleagues (1994) based on their extensive research on types of work experiences and the lessons learnt from the experiences.

An initial set of 155 items was drawn from the responses of 191 executives collected by McCall et al. (1988). After removing problematic or irrelevant items, and adding new ones (e.g., items more relevant to female executives; previous studies were predominantly done with male executives), McCauley et al. (1994) tested 116 items to develop a scale of measurement. They tested the items with a first study of 692 managers and continued to test with second study of 350 managers. They conducted an internal consistency test, confirmatory analysis of factors, test-retest reliability, and validity to prove robustness of their instrument.

This instrument to assess the developmental components of managerial jobs continued to be refined as the Developmental Challenge Profile (DCP) with 50 items. These 50 items are listed in Appendix A.

The DCP consists of five dimensions: “job transition,” “creating change,” “high levels of responsibility,” “managing boundaries,” and “dealing with diversity.” A brief description and examples of assignments of each dimension were given by Ohlott (2004):

- ***Job transition:*** A job transition involves a change in work role, such as a change in job content, level of responsibility, or location. Examples of assignments are: being the inexperienced member of a project team; moving to a general management job; moving from a line job to a corporate staff role; and managing an unfamiliar group or discipline.
- ***Creating change:*** Jobs that require a leader to create change call for numerous actions and decisions in the face of uncertainty and ambiguity. Examples of assignments are: launching a new product, project, or system; dealing with a business crisis; handling a workforce reduction; and reorganizing a unit.
- ***High levels of responsibility:*** Leadership assignments with high levels of responsibility have greater breadth, visibility, and complexity; they also expose the individual to pressure and high-stakes decisions. Examples of assignments are: managing a corporate assignment with tight deadlines; representing the organization to the media or influential outsiders; and assuming additional responsibilities following a downsizing.
- ***Managing boundaries:*** In a situation where individuals must work across lateral boundaries, either externally or within own their organizations, they may encounter a challenge working with people over whom they have no formal or direct authority. Examples of assignments are: serving on a cross-functional team; performing a corporate staff job that involves diverse functions and divisions; negotiating with union; and managing a vendor relationship.

- ***Dealing with diversity:*** Jobs may require individuals to manage people with different values, experiences, backgrounds, workplace needs, and desires. Examples of assignments are: taking an assignment in another country and managing a work group made up of people with different racial, ethnic, or religious backgrounds.

Challenging work experiences are often associated with stretch assignments in which individuals are stretched in terms of skills, competencies, and experience in fulfilling the requirements and responsibilities of the assignment to successfully complete the assignment. These stretch assignments are thought to be the most powerful learning experiences as individuals are confronted with novel situations requiring them to frame and develop new ways of thinking and behaviors to cope with novel opportunities and problems (Hill, 2004; McCauley, Ruderman, Ohlott, & Morrow, 1994). However, when an assignment is too stretched, there is a risk of failure. Therefore, an ideal stretch assignment is one that forces individuals to act outside their comfort zones but is also matched with their skills (even if these skills are not yet sufficient) so that the stretch assignment does not become too overwhelming (DeRue & Wellman, 2009; McCauley, Eastman, & Ohlott, 1995; Moxley & Pulley, 2004).

At the greatest degree of stretch is what General Electric, known for talent development through stretch assignments, defined as “stretch goals,” which “are, by definition, far enough beyond the levels currently being achieved that people lack a clear idea about how to reach

them, and they are, therefore, typically received with considerable incredulity” (Kerr & Landauer, 2004, p. 134).

Though there is variation in the levels and type of challenges, job and task assignments that are rich with an adequate degree of challenge, but remain developmental, have been recognized and utilized as a valuable source for learning and development of leader capacity.

2.2. Competency Development as a Measurement of Leader Development

Competency as a measurement of leadership effectiveness began with the seminal work of McClelland (1973), who claimed that competency testing was more relevant than intelligence testing to predict success in the workplace.

McClelland and consultants at McBer (founded by, and named after, McClelland and David Berlow) were commissioned by the State Department in the 1970s to identify the characteristics that predicted successful foreign service information officers (McClelland, 1993). The State Department traditionally used a Foreign Service Office exam that tested the applicants' aptitudes based essentially on knowledge of the liberal arts and culture. However, this traditional aptitude test did not predict the officers' job performance.

Through research, McClelland and his team identified the characteristics that differentiated superior from average information officers and named these factors as competencies. The competencies included "cross-cultural interpersonal sensitivity," "positive expectation of others," and "speed in learning political networks."

The relevance of competency testing was challenged by Barrett and Depinet (1991) who argued that it was no better than intelligence testing, which yet remained relevant. They also criticized the lack of empirical evidence to support the claims of McClelland and his McBer colleagues.

To expand the practice of competency assessment, Boyatzis (1982) integrated and reanalyzed the extensive data collected from competency assessment studies on managers and identified the competencies that distinguished superior performers. Boyatzis and consultants at McBer attempted to develop a methodology to assess competency with a defined scaling system. The findings of their research were based on rigorous methodology and contributed to the increased acceptance and popularity of the competency approach (Ulrich, Younger, Brockbank, & Ulrich, 2012).

In collaboration with McClelland, Boyatzis, and consultants at McBer, Spencer and Spencer (1993) went on to further refine the competency model and assessment methodology. They analyzed competency models for more than 200 jobs and made a list of 760 behavioral indicators that appeared in 286 competency models. Of the 760 behavioral indicators, 360 constituted 21 generic competencies and covered over 80% of behaviors in each model.

Spencer and Spencer defined competency as an “underlying characteristic of an individual that is causally related to criterion referenced effective and/or superior performance in a job or situation” (1993, p. 9). Competency is a deep and enduring characteristic of an individual that can predict behavior and performance in a wide variety of jobs and situations, when measured against specific criteria.

Spencer and Spencer (1993, p. 9–11) defined the underlying characteristics of individuals with five types of competency characteristics, with examples, using “the Iceberg Model” as shown in Figure 2.

Figure 2. The Iceberg Model (Spencer & Spencer, 1993)



The five competency characteristics are:

- **Motives:** The things a person consistently thinks about or wants that cause action.

Motives drive, direct, and select behavior toward certain actions or goals and away from others. For example, achievement-motivated people consistently set challenging goals for themselves, take personal responsibility for accomplishing them, and use feedback to improve.

- **Traits:** Physical characteristics and consistent responses to situations or information.
For example, reaction time and good eyesight are physical traits (or competencies) of combat pilots.
- **Self-concept:** A person's attitudes, values, or self-image. For example, self-confidence, a person's belief that he or she can be effective in almost any situation, is part of that person's concept of self.
- **Knowledge:** Information a person has in specific content areas. For example, a surgeon's knowledge of nerves and muscles in the human body.
- **Skill:** The ability to perform a certain physical and mental task. For example, a dentist's physical skill to fill a tooth without damaging the nerve.

While skills and knowledge competencies tend to be visible above the waterline (see Figure 2), self-concept, traits, and motive competencies tend to be hidden deeper—though the invisible part is much larger than what can be seen. As this model shows, there are differences in competency characteristics. Those that are visible and appear at surface level (i.e., skills and knowledge) are easier to develop, and therefore, are more trainable. In contrast, the invisible, deeper inner aspects of individuals are harder to detect and develop.

McClelland (1998) reported empirical evidence of how competencies could predict the work performance and success of executives. He utilized a method called “behavioral event interview (BEI)” to accurately assess and capture those competencies that distinguish

outstanding performers from typical (average) ones. BEI is a structural interview methodology with a standardized procedure. To identify the competencies that distinguish the two groups of talents, BEI involves interviewing both groups of talents and asking them to describe what they said, thought, felt, and did in selected three episodes in which they thought themselves effective at work and three in which they felt ineffective.

McClelland (1998) claimed that competency assessment and models did predict higher performance of executives using empirical data from performance evaluations, bonus amounts received, lower turnover rates, and the development of leader effectiveness from feedback on focused competencies.

Competency assessment has been widely accepted in professional literature, journals, and psychology text books, through which it has become pervasive over time, and gained wider acceptance by practitioners and companies as an effective way of assessing leadership effectiveness and human resource management (Barret & Depinet, 1991; Ulrich, Younger, Brockbank, & Ulrich, 2012; Vazirani, 2010).

Hewitt Associates conducted research in 2005 with 373 companies in the United States. They screened and labelled companies with higher leader quality and depth as the “Top 20 Companies for Leaders” and showed that these companies integrated competencies into their human resource management systems and delivered better financial performance than others (Hewitt Associates, 2005).

Johnson & Johnson, known for talent development, conducted research and identified key competencies that distinguished high-performing managers (Cavallo & Brienza, 2006). They have continued to refine and update their competency model and use the model named as “leadership imperatives” as the core tenet of talent development (Johnson & Johnson, 2017).

Spencer and Spencer (1993) developed a generic competency model, which consisted of 21 competencies, classified into seven clusters. Based on this model, the Hay Group, a consulting firm evolved from McBer, defined 20 generic competencies that have general applicability and relevance to various jobs and situations (Hay/McBer, 1996). These 20 generic competencies are listed in Appendix A

However, it should be noted that the set of competencies required to be successful differs according to the type of job; no single competency is always valid in every situation (McClelland, 1998; Spencer & Spencer, 1993).

The 20 generic competencies are applicable to all jobs but cover only common competencies. Most jobs require unusual and unique capabilities or characteristics that are not captured by these generic competencies. Unique competencies specific to a job range from around 2 to 20% of desired competencies of the job, depending on the type of job and its requirements (Spencer & Spencer, 1993).

2.3. The Relationship Between Challenging Work Experiences and Competency Development

Past research showed the positive relationship between challenging work experiences and talent development in the form of competency and leadership.

Dragoni et al. (2009) collected data from junior managers and their supervisors to identify how the developmental quality of managerial assignments fostered competency. They used DCP to measure developmental quality and challenging work experiences. Managerial end-state competencies selected from the items established and validated by Spreitzer et al. (1997) were used as measures. Regression analysis showed that the developmental quality of managerial assignments was positively related to the managerial end-state competencies.

DeRue and Wellman (2009) collected data from middle- and senior-level managers through surveys and interviews, which gathered examples and rich descriptions of specific work experiences. The participants were asked to rate challenging, developmental components of these experiences using DCP and their leadership skill development scores were rated by their supervisors using the taxonomy of leadership competencies by Mumford et al. (2007). The research showed that the developmental work challenges were positively related to leadership skill development.

Courtright et al. (2014) collected data from junior- and middle-level managers and their subordinates and used DCP to measure developmental challenges on the job. For measuring leadership effectiveness, the Multifactor Leadership Questionnaire-5X, developed by Avolio et

al. (1999), was used. This leadership measurement is one of the most frequently used and identifies characteristics of high-performing leaders (who exhibit transformational leadership). The research found that developmental challenges were positively related with leader engagement, which, in turn, was positively related to the subordinates' perceptions of the managers having exhibited transformational leadership more frequently. The indirect effects of developmental challenges on transformational leadership, through leader engagement, were also significant.

Research has also showed that the amount of learning and capability development tends to be higher for individuals at higher levels of organizations: the higher the position, the more challenging the work experiences. Thus, individuals in these positions have more opportunities to learn and develop their capabilities (McCauley, Ruderman, Ohlott, & Morrow, 1994).

Challenging work experiences are not always beneficial for developing talent as difficult jobs can be the source of both positive and negative experiences (Dong, Seo, & Bartol, 2014), though there is more literature on the positive effects of challenging work experiences than negative ones (McCall, 2010).

Courtright et al. (2014) discussed the emotional exhaustion caused by challenging work experiences, which has negative effects on leadership development. In addition, when challenging work experiences are overwhelming, the developmental value from these experiences will be diminished, thus, learning from these experiences decreases once the

degree of challenges reaches a certain point (DeRue & Wellman, 2009). This is attributed to both cognitive overload (processing too many work elements embedded in a job and associated experiences with the job and anxiety about failure and performance evaluation, which impair learning).

2.4. Moderators of the Relationship Between Challenging Work Experiences and Competency Development

A growing body of research shows the positive relationship between challenging work experiences and effective leader development, including competency; however, this field remains under-researched and is not yet definitive (Day, Fleenor, Atwater, Sturm, & McKee, 2014).

The relationship varies across different situations and contexts and changes with a number of moderating factors: Dragoni et al. (2009) identified moderation effects of learning goal orientation and access to developmental assignments opportunities; DeRue and Wellman (2009) highlighted moderation effects of learning goal orientation and feedback availability; and Courtright et al. (2014) identified moderation effects of work engagement and leadership self-efficacy.

As shown by past research the relationship between challenging work experiences and leader development can be moderated by individual characteristics such as self-efficacy, learning goal orientation and work engagement.

2.4.1. Self-Efficacy

Self-efficacy has been studied in the field of cognitive and social psychology (Hannah, Avolio, Luthans, & Harms, 2008) and is “people’s beliefs in their capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives” (Wood & Bandura, 1989, p. 364). Higher self-efficacy “allows one to learn the behavioral strategies necessary to face new challenges and achieve difficult goals” (Seibert, Sargent, Kraimer, & Kiazad, 2017, p. 8).

When the concept of self-efficacy is extended to leadership, it is defined as “leaders’ beliefs in their perceived capabilities to organize the positive psychological capabilities, motivation, means, collective resources, and courses of action required to attain effective, sustainable performance across their various leadership roles, demands, and contexts” (Hannah, Avolio, Luthans, & Harms, 2008, p. 2).

Self-efficacy was proven to be one of the most influential factors in learning (Morrison & Brantner, 1992) and has been identified for its relationship to forming preferable attitudes, intentions, and behaviors for developmental activities (Maurer, 2001). Belief in self-efficacy also determines the level of motivation and reflects the amount of effort and perseverance exerted for accomplishing tasks. It is crucial in the sense that not only possessing necessary skills, but also having a resilient self-belief in one’s capabilities to control tasks would enable individuals to accomplish their objectives (Wood & Bandura, 1989).

Bandura (2001) stated that self-efficacy is the mechanism through which learning is translated into effective behaviors in new and challenging situations. Therefore, individuals with high self-efficacy believe in their ability to execute tasks effectively, and are motivated to learn and grow, with sustained drive and persistence even when they face difficulties, as is likely in challenging work experiences.

These individuals with high self-efficacy are more resilient and recover even when they suffer from adverse events such as failures and negative feedback (Murphy & Johnson, 2016). The characteristics associated with high self-efficacy are beneficial for individuals to learn and develop their competencies from challenging work experiences that require persistence and resilience to solve new challenges innate in tasks and jobs.

Research has shown the positive relationship between self-efficacy and performance. Meta-analysis showed positive correlations of .36 between self-efficacy and work-related performance (Stajkovic & Luthans, 1998) and correlations of .23 between generalized self-efficacy and job performance (Judge & Bono, 2001).

Beyond this direct relationship between self-efficacy and performance, self-efficacy has been shown to positively moderate the relationship between challenging work experiences and leadership development—specifically the effects of these challenging work experiences on transformational leadership, which exemplifies the leadership characteristics of high-

performing leaders—moderated by leadership self-efficacy (Courtright, Colbert, & Choi, 2014).

Self-efficacy has also been shown to mediate the relationship between challenging work experiences and leadership effectiveness (Seibert et al., 2017). The mediation effects of leadership self-efficacy suggest that individuals build their belief in their own capacity as a leader from challenging work experiences, which leads them to further success in their managerial roles.

Researchers of self-efficacy theory suggest that an individual's own performance has the strongest effect on their self-efficacy development (Murphy & Johnson, 2016) and may create positive or negative spirals between them: good performance increases self-efficacy while bad performance attenuates it (Wood & Bandura, 1989).

In this theoretical context, I examine self-efficacy for its moderation effect on the relationship between challenging work experiences and competency development.

2.4.2. Learning Goal Orientation

Goal orientations are associated with different behavioral patterns and affect task difficulty and failure (Dweck, 1986). Initially conducted with children, goal orientation studies have been extended to work situations and have proved increasingly relevant to businesspeople in the corporate world (Dragoni, Tesluk, Russell, & Oh, 2009; VandeWalle & Cummings, 1997).

There are two types of goal orientation: learning goal orientation and performance goal orientation. According to VandeWalle (1997, p. 997), learning goal orientation is to “seek to develop competence by acquiring new skills and mastering new situations,” and performance goal orientation is to “seek to demonstrate and validate the adequacy of one’s competence by seeking favorable judgements and avoiding negative judgements about one’s competence.” Learning-goal-oriented individuals view ability as a malleable attribute so that they can continuously develop through effort and experience. With this predisposition, learning-goal-oriented individuals are adaptive in response to tasks and challenges as they see them as opportunities to learn and develop their abilities.

Performance-goal-oriented individuals view ability as a fixed and uncontrollable attribute and think it is difficult to develop abilities and are, therefore, predisposed to validate and demonstrate their current abilities. With this predisposition, performance-goal-oriented individuals are maladaptive in response to tasks, particularly challenges, as they see these as

potential risks that could reveal their shortcomings if they cannot prove their abilities by accomplishing those tasks successfully.

Ashford and Tsui (1991) discussed the effectiveness of feedback seeking in enhancing performance evaluation accuracy by which individuals identify areas for development. Goal orientation predisposition affects feedback-seeking behavior: a positive relationship exists between learning goal orientation and feedback-seeking behavior, for learning-goal-oriented individuals who are eager to develop new competencies (VandeWalle, 1997; VandeWalle & Cummings, 1997), whereas this relationship is negative for performance-goal-oriented individuals due to the perceived high cost and low value of receiving feedback (VandeWalle & Cummings, 1997). These inverse relationships have been shown by a number of studies (Bell & Kozlowski, 2002).

Aryee and Chu (2012) examined the mechanisms among learning orientation, challenging work experiences, task-specific self-efficacy, task performance, and promotability assessment. They found that learning goal orientation was positively related to challenging work experiences, which were, in turn, related to task performance and promotability assessment. Challenging work experiences fully mediated the relationship between learning orientation and task-specific self-efficacy.

The relationship between these constructs requires further theoretical study and empirical testing. In this research, I examine the moderating role of learning goal orientation on the relationship between challenging work experiences and competency development.

Existing research has shown the potential moderation effects of goal orientation on the relationship between challenging work experiences and competency development. The aforementioned research by Dragoni et al. (2009) showed that learning-goal-oriented individuals were given more opportunities for developmental work assignments, as they were eager to seek developmental opportunities, and their learning goal orientation helped enhance competency development. Learning goal orientation directionally moderates the relationship between challenging work experiences and competency development, in that the higher learning goal orientation alleviates the diminishing return from experience, which forms an inverted U-shape as the challenge level increases (DeRue & Wellman, 2009).

There appears to be a lack, or limited number, of research studies showing the moderation effects of performance goal orientation. I expect performance goal orientation would not significantly moderate the relationship between challenging work experiences and competency development due to its associated characteristics.

In this theoretical context, I examine learning goal orientation for its moderation effect on the relationship between challenging work experiences and competency development.

2.4.3. Work Engagement

Research and implementation of work engagement has increased in the past decades as one of the crucial elements in creating a competitive advantage in both individual and company performance (Macey & Schneider, 2008; Rich, Lepine, & Crawford, 2010). Despite these increases, the concept of work engagement and its definition are sparse and varied—a consensus of the construct has not yet been reached.

Macey and Schneider (2008) outline their framework with three broad domains of the work engagement construct: “trait engagement,” such as proactive personality, positive affect, and conscientiousness; “state engagement,” such as satisfaction, involvement, and commitment; and “behavioral engagement,” such as organizational commitment, proactive initiative, and role expansion.

Work engagement was originally defined by Kahn (1990, p. 700) as “the simultaneous employment and expression of a person’s ‘preferred self’ in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performance.” Kahn stated that expressing one’s preferred self yields behaviors that connect the self to the role by expending physical, cognitive, and emotional energies into the role behavior. Engaged individuals simultaneously exercise physical, cognitive, and emotional energy for work performance in a connected, rather than fragmented, manner (Kahn,

1990; Kahn, 1992). Of the broad and diverse constructs of work engagement, the domain of “state engagement” has received the most attention (Macey & Schneider, 2008).

The most popular measurement of work engagement focusing on state engagement is called the Utrecht Work Engagement Scale (UWES). It was built upon preceding research and was conceptualized and validated in several countries (Bakker, Schaufeli, Leiter, & Taris, 2008). According to the UWES work engagement is “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption.”

Vigor is characterized by “high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties.” Dedication is characterized by “a sense of significance, enthusiasm, inspiration, pride, and challenge.” Absorption is characterized by “being fully concentrated and deeply engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work” (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). In short, engaged individuals “work hard (vigor), are involved (dedicated), and feel happily engrossed (absorbed) in their work” (Bakker, Schaufeli, Leiter, & Taris, 2008, p. 190).

The positive relationship between work engagement and performance has been studied in many forms: with task performance and organizational citizenship behavior (Rich, Lepine, & Crawford, 2010); with job performance (Christian, Garza, & Slaughter, 2011); and, through service climate, with employee performance (Salanova, Agut, & Peiró, 2005).

Engaged individuals not only perform their tasks effectively, but also influence and create a team environment that facilitates teamwork, collaboration, and altruistic behaviors that lead to organizational effectiveness beyond individual effectiveness (Bakker & Demerouti, 2008; Christian, Garza, & Slaughter, 2011). As Courtright et al. (2014) showed, developmental work challenges lead to work engagement, which builds effective leadership—that is, transformational leadership.

As the number of research found how work engagement plays a role on the relationship between challenging work experiences and competency development, engaged individuals who work hard and are engrossed in their work are likely to be motivated to identify and absorb lessons from in challenging work experiences, and develop the necessary competencies to perform tasks effectively and achieve their individual goals and those of their organization.

In this theoretical context, I examine work engagement for its moderation effect on the relationship between challenging work experiences and competency development.

3. Present Research

Beyond self-efficacy, learning goal orientation, and work engagement, there are other possible moderators of the relationship between challenging work experiences and competency development including personality, emotional intelligence, motivation, proactive behavior, and organizational commitment. These are the characteristics and abilities of individuals.

Beyond individual characteristics and abilities, there are situational factors that affect, and thus, moderate, the relationship between challenging work experiences and competency development. Individuals do not grow and develop themselves in a vacuum, but rather, in the multifaceted environments of their companies.

Day (2001, p. 585) argued the distinction between human capital and social capital, saying that “unlike the human capital, in which the focus is on developing individual knowledge, skills, and abilities, the emphasis on social capital is on building networked relationships among individuals that enhance cooperation and resource exchange in creating organizational value.”

Individuals in organizations, build on, rely on, and utilize their relationships with surrounding people: their supervisor, peers, and subordinates. These people provide support in the form of advice, resources, feedback, and mentoring or coaching. Both quality relationships with colleagues and the supportive environments that the relationships create foster psychological safety.

When individuals undertake challenging works (and try to learn from the associated experiences), they will sometimes be successful—but may also fail at times. It is crucial that

they feel and perceive psychological safety in the environment in which they embark on challenging works, as they may otherwise fear failure and the associated negative consequences for their performance evaluations and career prospects.

Psychological safety has been extensively researched for its effects on outcomes such as learning behavior, and organizational commitment at an individual level, and group learning, information sharing, and group effectiveness at a group level (Edmondson & Lei, 2014). The mechanisms of how psychological safety affects the relationship between challenging work experiences and competency development has not been empirically examined. Psychological safety is particularly relevant for Japanese companies, supervisors, and subordinates, as this concept has been neglected in terms of talent development. A survey conducted by Ipsos Reid (2012) revealed that only 47% of workers, of 24 countries surveyed, viewed their workplace as a psychologically safe and healthy work environment; of the 24 countries surveyed, Japan was fifth from the bottom with only 36%.

Perceived psychological safety in the workplace is an enabling factor for learning and development from challenging work experiences. Psychological safety is critical in enhancing learning and development from challenging work experiences since individuals would not fully benefit from such experiences unless they were protected from potentially negative consequences for their performance evaluation, and career development, should they fail.

In this research I will illuminate the role of psychological safety as a moderator of the relationship between challenging work experiences and competency development.

3.1. Psychological Safety

The construct of psychological safety was studied by pioneering researchers in 1960 (Edmondson & Lei, 2014). Schein and Bennis (1965) were most notable among the pioneering researches in the context of making organizational changes. They argued that psychological safety was an essential factor to enable individuals to adapt their behaviors in response to organizational changes.

Since 1990, psychological safety research has been rejuvenated and extensive body of research has accumulated (Edmondson & Lei, 2014). The research has shown that psychological safety plays an important role in creating an environment in which individuals exhibit effective learning behaviors (Carmeli, Brueller, & Dutton, 2009; Edmondson, 1999; Edmondson, 2004,) and learn more from failures (Carmeli & Gittell, 2009). This facilitates organizational learning and thus, improves team and company performance (Edmondson & Lei, 2014).

In the current business environment, jobs and tasks are becoming highly specialized, complex, multinational, virtual, and fluid—greater collaboration among individuals and teams is required. This environment also suggests that individuals now face more uncertainty and ambiguity in accomplishing jobs and tasks and thus, a higher risk of failure exists. The importance and relevance of psychological safety in the workplace are expected to increase, if individuals and companies are to continue to perform and deliver results.

Psychological safety is defined as “a team climate characterized by interpersonal trust and mutual respect in which people are comfortable being themselves” (Edmondson, 1999, p. 354); indeed “psychological safety was experienced as feeling able to show and employ oneself without fear of negative consequences to self-image, status, or career” (Kahn, 1990, p. 708).

The construct of psychological safety is based on the definition and measurement developed by Edmondson (1999, 2004), and the majority of research in this field used these (Newman, Donohue, & Eva, 2017) for extensive validity testing of reliability, content, criterion and construct of the measurement. The scale of psychological safety according to Edmondson (1999, 2004) includes:

1. If you make a mistake on this team, it is often held against you (reverse item upon scoring).
2. Members of this team are able to bring up problems and tough issues.
3. People on this team sometimes reject others for being different (reverse item upon scoring).
4. It is safe to take a risk on this team.
5. It is difficult to ask other members of this team for help (reverse item upon scoring).
6. No one on this team would deliberately act in a way that undermines my efforts.
7. Working with members of this team, my unique skills and talents are valued and utilized.

Psychological safety research has been conducted at three levels: individual, group, and organization. The positive effect of psychological safety on outcomes and performance was observed at all the three levels (Edmondson & Lei, 2014). At the individual level, on which this research focuses, the relationship between psychological safety and outcomes (e.g., work engagement, organizational commitment, learning from failure, creativity, and speaking up or voicing opinions) was researched.

Kahn (1990) examined the relationship between psychological safety and work engagement, showing that when individuals felt higher psychological safety, they were more engaged at work. Kark and Carmeli (2009) examined how psychological safety induced feelings of vitality that affected an individual's involvement in creative work. Gong et al. (2012) examined the mechanism by which proactive behavior with information seeking created psychological safety that affected individual creativity. Detert and Burris (2007) examined the relationship between leadership behavior and voicing (speaking up) of subordinates and found that psychological safety was a mediator. Thus, past psychological safety research at the individual level examined its impact on work engagement, creativity, and voicing behaviors, but not its effect on competency development.

The relationship between psychological safety, learning, and performance was examined by a number of researchers at the group level (e.g., Edmondson, 1999). The research showed

the positive impact of psychological safety on learning behavior and team learning that lead to performance (Edmondson & Lei, 2014).

Recent research conducted by Google's People Analytics division to analyze and identify the factors that enable high-performing teams found psychological safety to be the most fundamental requirement for teams to be innovative (Bergmann & Schaeppi, 2016).

Although the influence of psychological safety on learning behaviors takes place in a group setting, learning occurs at both the individual and group levels as a group is an aggregation of individuals. If individuals feel psychologically safe, they are more willing to engage in learning behaviors without excessive concerns about the risks and consequences of their actions (Carmeli, Brueller, & Dutton, 2009).

Therefore, psychological safety encourages learning-oriented behaviors such as help and feedback seeking, voicing errors and concerns, innovative behaviors, and boundary spanning—collaboration between different units or levels of the company (Edmondson, 2004), all these behaviors could have negative consequences such as being perceived as incompetent and ineffective, losing self-esteem, causing embarrassment, and making mistakes.

When individuals face challenging work experiences, they may need to ask others for help as, more often than not, these jobs go beyond the individual's capacity or what a single person could comfortably handle—otherwise these jobs could not be regarded as challenging.

It is often the case that developmental tasks engender a situation in which individuals face or feel substantial risk and uncertainty that is likely to increase their feelings of anxiety or fear of failure and negative performance evaluation (Dong, Seo, & Bartol, 2014). Psychological safety helps lessen the degree of, or minimize the negative consequences associated with the learning process (Edmondson, 2004) and helps lessen concerns about seeking help, which could be viewed as a sign of incompetence (Carmeli, Brueller, & Dutton, 2009).

Thus, I posit that the presence of psychological safety would enhance learning from challenging work experiences, which would result in competency development, without fear or excessive concern about trying and experimenting to perform challenging tasks and benefit from the associated experiences.

In this theoretical context, it is proposed that psychological safety functions as a moderator of the relationship between challenging work experiences and competency development. I examine the hypothesis: psychological safety moderates the relationship between challenging work experiences and competency development in such a way that the effect is stronger for individuals who feel high psychological safety, and weaker for individuals who feel low psychological safety.

3.2. Trusting Relationships with Supervisors

Researchers have investigated the antecedents of psychological safety and indicated that antecedents to its creation were: according to Kahn (1990), interpersonal relationships, group and intergroup dynamics, management styles and processes, and organizational norms; according to Edmondson (1999), team leader coaching and context support (such as provision of and access to adequate resources, information, and rewards); according to Carmeli et al. (2009), the capacities of high-quality relationships; and, according to Detert and Burris (2007), leadership behavior—transformational leadership and managerial openness.

This research directed thinking toward that the idea that relationships, especially with leaders, were foundational in creating psychological safety, an environment in which individuals feel safe to try and fail in working on challenging jobs without fear of negative consequences for performance evaluation and career development. Ultimately, supervisors are the key influencers of performance evaluation and career development. Individuals need to build trusting relationships with their supervisors, whom they must trust to appropriately evaluate their efforts and performance.

A meta-analysis of factors related to psychological safety—antecedents and outcomes—with 136 sample studies over 22,000 individuals presented that the quality of relationships with leaders, and trust in leaders—as a building element of the relationship with leaders—had positive relationships to psychological safety and are antecedents thereof (Frazier, Fainshmidt,

Klinger, Pezeshkan, & Vracheva, 2017). Increasing attention has been paid to the trust on which meaningful and effective interpersonal relationships are built to sustain individual and organizational effectiveness (McAllister, 1995).

McAllister (1995, p. 25) defined interpersonal trust as “the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of” others. According to him, interpersonal trust is composed of two forms: cognition-based trust, which is grounded in individual beliefs about peer reliability and dependability, and affect-based trust, which is grounded in reciprocated interpersonal care and concern. Thus, cognition-based trust is the relatively more visible and measurable (“harder”) element of interpersonal relationships (e.g., perceived competency, responsibility, reliability, and dependability of others).

Affect-based trust includes the relatively less visible and measurable (“softer”) elements of interpersonal relationships (e.g., the emotional bonds in which individuals invest to develop genuine care and concern for the wellbeing of others). Individuals who have higher trust in others tend to constructively cooperate and engage in their relationships to accomplish tasks.

In an employee’s organizational life, the supervisor is the most significant other—the one who gives direction, defines work, evaluates performance, and influences their career. This relationship—especially if it is a trusting one—is a critical element in determining what and how individuals learn and develop through their work.

Trusting relationships will generate altruistic behavior toward others, providing guidance and support, and enable individuals to take risks as they do not fear of being taken advantage of (McAllister, 1995). Supervisors can reduce the stress and uncertainty stemming from difficult, ambiguous, or unfamiliar jobs, and thereby, create an environment for learning and development (Dragoni, Park, Soltis, & Forte-Trammell, 2014; Morrison & Brantner, 1992).

When a trusting relationship is established between an individual and their supervisor, the individual is likely to receive more opportunities to learn about their job from their supervisors, who act as role models of effective leadership behavior (Dragoni, Park, Soltis, & Forte-Trammell, 2014). Such a trusting relationship develops shared positive expectations based on mutual respect for each other's competence and reliability, and emotional bonds with genuine care and concern.

Working with a respectable and inspiring leader, individuals also have a more meaningful work experience that enhances leadership development (Dragoni, Park, Soltis, & Forte-Trammell, 2014). By demonstrating effective leadership behavior and providing job information, supervisors help individuals to more effectively identify learning and development opportunities and to expend more effort to be successful in their jobs.

Trusting relationships with supervisors contribute to creating psychological safety for individuals to feel safe to try and fail in challenging jobs, and effectively learn from their supervisor's role-modelling leadership behaviors and feedback. Therefore, it is proposed that

trusting relationships with supervisors have supplemental effects on psychological safety and its moderation of the relationship between challenging work experiences and competency development.

In this theoretical context, I examine the hypothesis: the interaction between psychological safety and trusting relationships with supervisors moderates the relationship between challenging work experiences and competency development.

4. Research Methods

4.1. Data Sampling

A survey was conducted using the online panel of Marketing Applications, Inc., a research and marketing agency in Japan. A total of 494 participants were randomly recruited during the period of June 14–19, 2017.

Almost all participants were Japanese and were selected for their hierarchical positions as managers or higher (“Shunin” = group principal, “Kakaricho” = section head, “Kacho” = department head, “Bucho” = division head). Counting those above 65 years old as 66 years old, the average age was 49.1 years (SD = 8.0), and the sample was 93.5% male. According to the Gender Equity Bureau Cabinet Office, a government agency, the percentages of females in Kakaricho, Kacho, and Bucho positions were 14.4%, 7.9%, and 4.9% in 2013, respectively. By limiting the participants to manager and above positions, the proportion of females in this sample was consistent with the general population.

As control variables, information was collected on education, industry type, company size, and participants’ departments and position levels in their organizations. The participants were recruited from various industries, with the largest sample from the manufacturing industry, followed by the services industry. The size of the participants’ companies varied and was evenly distributed from fewer than 100 employees to over 10,000 employees. The participants were recruited from a variety of departments, with the largest sample from sales departments,

followed by research and development departments. In terms of positions, the percentages of Shunin, Kakaricho, Kacho, and Bucho positions were 24.3%, 19.0%, 36.4%, and 20.2%, respectively.

4.2. Measurement of Variables

The following variables were measured:

- **Challenging work experiences:** Participants' challenging work experiences were assessed using the DCP (McCauley, Ruderman, Ohlott, & Morrow, 1994; McCauley, Ohlott, & Ruderman, 1999). This measurement was assessed on a scale of 1 to 5 (1 = *not at all descriptive*; 5 = *extremely descriptive*). This measure was chosen for its proved validity (McCauley, Ruderman, Ohlott, & Morrow, 1994). Internal consistency reliability was .97.
- **Competency:** Participants' competencies were assessed using the Hay/McBer generic competencies (Hay/McBer, 1996) (e.g., "Analytical thinking: Understands cause-and-effect chains and relationships"). This measurement was assessed on a scale of 1 to 7 (1 = *strongly disagree*; 7 = *strongly agree*) of whether the participants had developed or were developing these competencies in their current job. Internal consistency reliability was .95.
- **Psychological safety:** Participants' psychological safety was assessed using Edmondson's method (1999, 2004) (e.g., "It is safe to take a risk on this team"). This

measurement was assessed on a scale of 1 to 7 (1 = *strongly disagree*; 7 = *strongly agree*). Internal consistency reliability was .58. This low reliability could be attributed to this measurement having three reversed items, which may have caused some respondents to choose answers in the opposite direction by mistake.

- ***Trusting relationship with supervisor:*** Participants' relationships with their supervisors were assessed using McAllister's (1995) 11-item scale (e.g., "My supervisor and I have a sharing relationship. We can both freely share our ideas, feelings, and hopes"). This measurement was assessed on a scale of 1 to 7 (1 = *strongly disagree*; 7 = *strongly agree*). Internal consistency reliability was .93.

Additional moderator variables to replicate the findings of past research

Self-efficacy, learning goal orientation, and work engagement measurements were included as supplemental moderator variables. These measurements were proven to be effective moderators of the relationship between challenging work experiences and competency development with non-Japanese samples and have been included here to confirm this effect with Japanese samples:

- ***Self-efficacy:*** Participants' self-efficacy was assessed using Chen, Gully, and Eden's (2001) eight-item scale (e.g., "I will be able to achieve most of the goals that I have set for myself"). This measurement was assessed on a scale of 1 to 7 (1 = *strongly disagree*; 7 = *strongly agree*). Internal consistency reliability was .92.

- **Learning goal orientation:** Participants' learning goal orientation was assessed using Vandewalle's (1997) six-item scale (e.g., "I enjoy challenging and difficult tasks at work where I'll learn new skills"). This measurement was assessed on a scale of 1 to 7 (1 = *strongly disagree*; 7 = *strongly agree*). Internal consistency reliability was .91.
- **Work Engagement:** Participants' engagement was assessed using the shorter version of the UWES developed by Schaufeli et al. (2006) as a nine-item scale (e.g., "At my work, I feel bursting with energy"). The nine items comprised three items each for measuring vigor, dedication, and absorption. This measurement was assessed on a seven-point frequency rating scale (0 = never; 6 = always). Internal consistency reliability was .94.

4.3. Analysis Methods

Average scores were calculated and used for analysis of challenging work experiences (all 50 items), competency development (all 20 items), psychological safety (all seven items), trusting relationship with supervisor (all 11 items), self-efficacy (all eight items), learning goal orientations (all six items), and work engagement (all nine items).

Competency development was the dependent variable, and challenging work experiences were the independent variable. Here, psychological safety was the focal moderator of this relationship. To examine the supplemental effect of a trusting relationship with the supervisor

on the effect of psychological safety, a new variable was created by multiplication of the average scores of psychological safety and trusting relationship with supervisor.

Gender, age, education level, industry type, company size, department type, and position level were entered to regression models as control variables.

SPSS software was used for analysis with the add-on macro program MODPROBE, developed by Hayes and Matthes (2009), used for moderation analysis.

5. Results

5.1. Overall Statistics

Regression model analysis was run on the tested variables. The results in Table 1 indicate that there was no multicollinearity; the highest variance inflation factor (VIF) was 1.900 and multicollinearity exists when VIFs exceed the value of 10.

Table 1. Regression Model on Competency Development

Variable	Coefficient	SE	VIF
Intercept	1.389 ***	0.424	
Challenging work experiences	0.036	0.050	1.232
Psychological safety	-0.004	0.053	1.418
Trusting relationship with supervisor	0.133 ***	0.041	1.480
Self-efficacy	0.285 ***	0.049	1.714
Learning goal orientation	0.217 ***	0.044	1.900
Work engagement	0.083 **	0.033	1.474
Control variable			
Gender	-0.234 †	0.138	1.180
Age	0.007	0.005	1.339
Education level	-0.004	0.032	1.045
Industry type	-0.013	0.054	1.048
Company size	0.016	0.030	1.078
Department type	-0.071 *	0.029	1.048
Position level	-0.005	0.034	1.361

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Table 2 presents the means, standard deviations, and correlations for all variables. Correlation indicates that these variables positively contributed to competency development.

One important finding is that the correlation between challenging work experiences and psychological safety was negative. As the amount of challenging work experiences increases,

individuals perceive less psychological safety. The survey was self-administered, and this suggests that individuals felt less psychologically safe when they faced more challenges on the job. However, this result does not suggest that colleagues would become less supportive or cooperative when someone else faced difficult and challenging situations.

Table 2. Descriptive Statistics and Correlations

Variable	M	SD	1	2	3	4	5	6
1. Competency Development	4.41	0.87	–					
2. Challenging work experiences	2.22	0.70	0.149 **	–				
3. Psychological safety	4.22	0.70	0.188 **	-0.160 **	–			
4. Trusting relationship with supervisor	4.08	0.93	0.344 **	0.090 *	0.451 **	–		
5. Self-efficacy	4.45	0.84	0.495 **	0.081	0.227 **	0.251 **	–	
6. Learning goal orientation	4.23	0.99	0.523 **	0.243 **	0.155 **	0.349 **	0.596 **	–
7. Work engagement	3.72	1.15	0.303 **	0.206 **	0.275 **	0.380 **	0.372 **	0.451 **

** $p < .01$ * $p < .05$ (two-tailed tests)

The principal relationship between challenging work experiences and competency development was tested first whether they are positively related. As indicated by Model 1 in Table 3, challenging work experiences are positively related to competency development (coefficient = .165, $p < .01$).

It has been suggested that this relationship could be curvilinear (an inverted U-shape), as was the case in the work of DeRue and Wellmann (2009). Thus, additional tests for this were performed by adding a square term for challenging work experiences (Model 2) to the linear model (Model 1). A curvilinear relationship did not exist in the samples (coefficient of the squared term = .076, ns).

Table 3. Regression Models on Competency Development

Variable	Model 1		Model 2	
	Coefficient	SE	Coefficient	SE
Intercept	3.621 ***	0.445	4.016 ***	0.544
Challenging work experiences	0.165 **	0.057	-0.194	0.291
Challenging work experiences (Squared)			0.076	0.060

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note. Regression analysis was controlled for control variables. These control variables were suppressed from the output.

5.2. The Moderation Effects of Psychological Safety

Table 4 shows that psychological safety has a main effect (coefficient = .29, $p < .001$) and an interaction effect with challenging work experiences (coefficient = .21, $p < .05$) as a moderator.

The moderation effects of high (+1 SD above the mean) and low (-1 SD below the mean) levels of psychological safety are shown in Figure 3. Competency development from challenging work experiences is positive when individuals feel high psychological safety (simple slope = .37, SE = .09, $p < .001$) and nonsignificant when individuals feel low psychological safety (simple slope = .08, SE = .08, ns) (see Figure 3).

These results support the hypothesis that psychological safety moderates the relationship between challenging work experiences and competency development in such a way that the effect is stronger for individuals who feel high psychological safety, and weaker for individuals who feel low psychological safety.

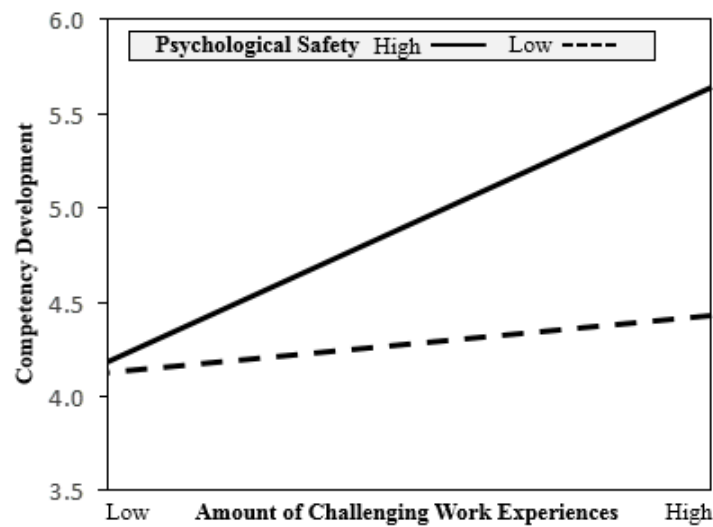
Table 4. Competency Development: Interaction Effect from Challenging Work Experiences and Psychological Safety

Variable	Coefficient	SE
Intercept	4.177 ***	0.417
Challenging work experiences	0.225 **	0.057
Psychological safety	0.287 ***	0.056
Psychological safety X Challenging work experiences	0.211 *	0.095

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note. Regression analysis was controlled for control variables. These control variables were suppressed from the output.

Figure 3. Competency Development: Challenging Work Experiences, Moderated by Psychological Safety



5.3. Trusting Relationship with Supervisor as a Supplementary Effect to Psychological Safety

Whether the effect of psychological safety on competency development is strengthened by the existence of a trusting relationship with the supervisor was tested. To determine this, a new

term was created by multiplication of the psychological safety score with the that of trusting relationship with supervisor (TRWS).

Table 5 shows that this new term (PS X TRWS) has a main effect (coefficient = .06, $p < .001$) and an interaction effect (coefficient = .03, $p < .01$) as a moderator. Figure 4 shows that competency development from challenging work experiences is positive when individuals have high PS x TRWS (simple slope = .36, SE = .07, $p < .001$) and nonsignificant when individuals have low PS x TRWS (simple slope = .01, SE = .08, ns).

Table 5. Competency Development: Interaction Effect from Challenging Work Experiences and PS X TRWS

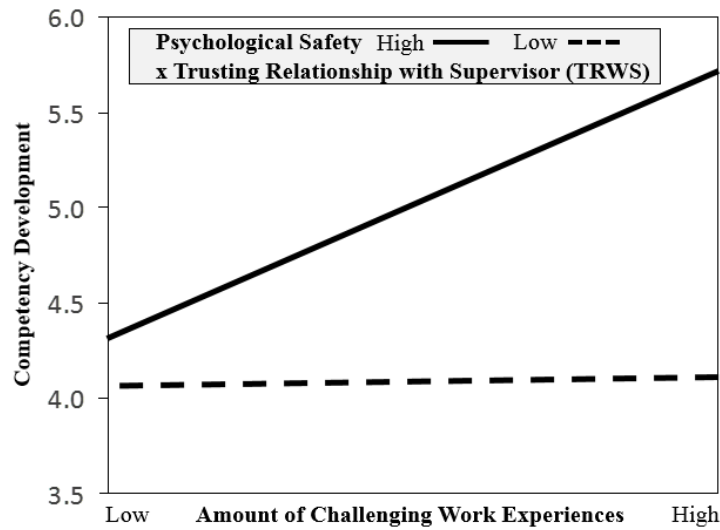
Variable	Coefficient	SE
Intercept	4.161 ***	0.396
Challenging work experiences	0.185 **	0.053
PS X TRWS	0.058 ***	0.007
(PS X TRWS) X		
Challenging work experiences	0.030 *	0.010

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note. Regression analysis was controlled for control variables.

These control variables were suppressed from the output.

Figure 4. Competency Development: Challenging Experience, Moderated by Psychological Safety X Trusting Relationship with Supervisor (PS X TRWS)



To more clearly illustrate the role of a TRWS, its moderation effect on the relationship between psychological safety and competency development was tested.

Table 6 shows that TRWS as a moderator has a main effect (coefficient = .31, $p < .001$), and an interaction effect (coefficient = .13, $p < .001$). TRWS moderated the relationship in the way that if individuals have high TRWS, they will develop competencies more effectively.

The moderation effects of high and low levels of psychological safety are shown in Figure 5: competency development due to psychological safety is positive when individuals have high TRWS (simple slope = .18, SE = .07, $p < .05$) and nonsignificant (even negative) when individuals have low TRWS (simple slope = $-.06$, SE = .07, ns).

It is notable that psychological safety only has a positive impact on competency development when individuals have high TRWS. This suggests that even if psychological

safety is perceived by individuals, its effect could be nullified if they do not have a trusting relationship with their supervisor.

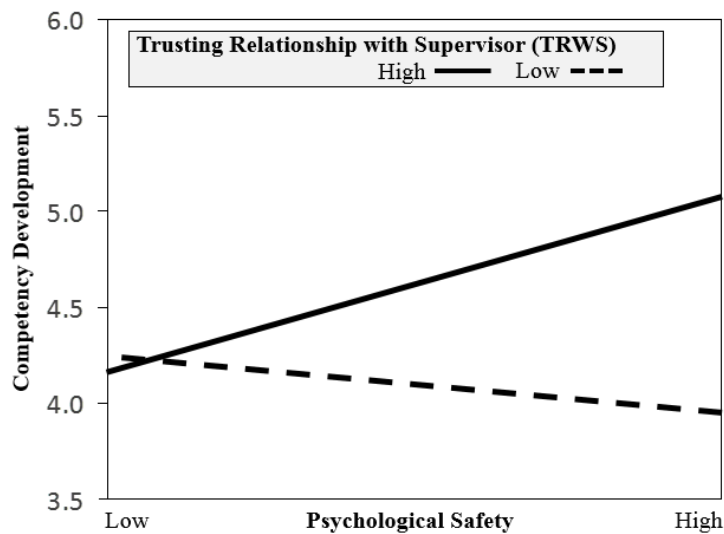
Table 6. Competency Development: Interaction Effect from Psychological Safety and TRWS

Variable	Coefficient	SE
Intercept	3.952 ***	0.401
Psychological safety	0.061	0.059
TRWS	0.308 ***	0.044
TRWS X Psychological safety	0.126 **	0.038

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note. Regression analysis was controlled for control variables. These control variables were suppressed from the output.

Figure 5. Competency Development: Psychological Safety, Moderated by TRWS



5.4. Confirming the Effects of Self-Efficacy, Learning Goal Orientation, and Work Engagement

The potential moderating effects of self-efficacy, learning goal orientation, and work engagement were examined with Japanese samples. Table 7 shows that all three factors moderate the relationship between challenging work experiences and competency development. The moderation effects of high and low levels of three factors are shown in Figure 6.

Table 7A shows that as a moderator, self-efficacy has a main effect (coefficient = .52, $p < .001$) and an interaction effect (coefficient = .13, $p < .05$). Figure 6A shows positive competency development from challenging work experiences is positive when individuals have high self-efficacy (simple slope = .22, SE = .06, $p < .001$).

Table 7B shows that, as a moderator, learning goal orientation has a main effect (coefficient = .45, $p < .001$) and an interaction effect (coefficient = .07, $p < .1$). Figure 6B shows positive competency development from challenging work experiences when individuals have high learning goal orientation, but this is nonsignificant (simple slope = .09, SE = .06, $p = .16$). The moderation effect of learning goal orientation is weak.

Table 7C shows that work engagement as a moderator has a main effect (coefficient = .29, $p < .001$) and an interaction effect (coefficient = .08, $p < .05$). Figure 6C shows positive competency development from challenging work experiences when individuals have high work engagement (simple slope = .16, SE = .07, $p < .05$).

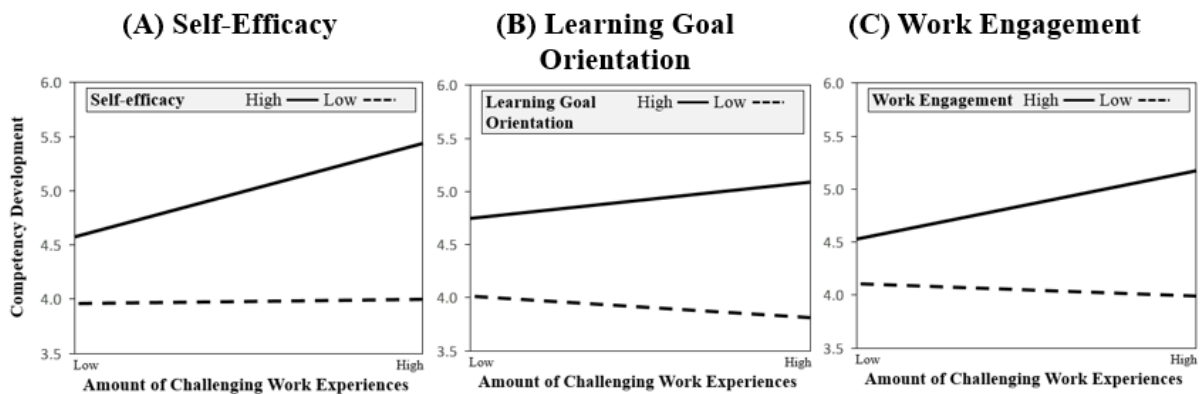
Table 7. Competency Development: Interaction Effect from Challenging Work Experiences and Three Factors

Variable	(A) Self-Efficacy		(B) Learning Goal Orientation		(C) Work Engagement	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Intercept	4.431 ***	0.370	4.314 ***	0.369	4.508 ***	0.401
Challenging work experience	0.115 *	0.050	0.018	0.051	0.067	0.054
Self-Efficacy	0.517 ***	0.041				
Self-Efficacy X						
Challenging work experience	0.126 *	0.049				
Learning goal orientation			0.452 ***	0.035		
Learning goal orientation X						
Challenging work experiences			0.070 †	0.041		
Work engagement					0.285 ***	0.033
Work engagement X						
Challenging work experiences					0.085 *	0.040

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note. Regression analysis was controlled for control variables. These control variables were suppressed from the output.

Figure 6. Competency Development: Challenging Experience Moderated by Three Factors



Work engagement has three sub-components: vigor, dedication, and absorption. These three sub-components were also examined for differences in their moderation effects.

Table 8 shows that dedication and absorption have positive and significant interaction effects (coefficient = .08, $p < .05$ for dedication, and coefficient = .09, $p < .05$ for absorption), whereas vigor does not. The moderation effects of high and low levels of each sub-component of work engagement are shown in Figure 7.

These findings might indicate that a work should be challenging enough so that individuals must dedicate themselves to it and be absorbed by it—simply finding a work invigorating enough to be invigorated by it is not enough. This has potentially interesting implications for job assignments in that managers should design and assign works in such a way that they are meaningful and relevant beyond simply being invigorating so that they motivate individuals to dedicate themselves to, and immerse themselves in, their work.

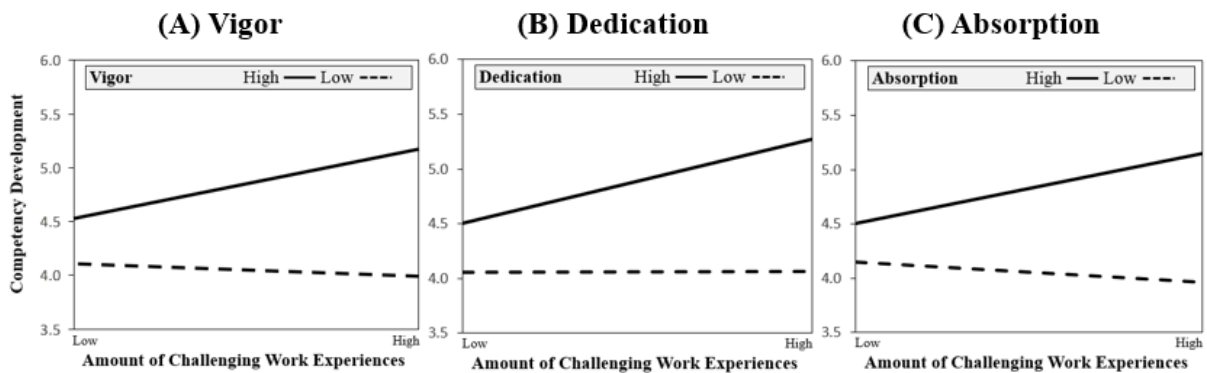
Table 8. Competency Development: Interaction Effect from Challenging Work Experiences and Three Sub-Components of Work Engagement

Variable	(A) Vigor		(B) Dedication		(C) Absorption	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Intercept	4.427 ***	0.414	4.565 ***	0.399	4.295 ***	0.402
Challenging work experiences	0.090	0.056	0.099 †	0.053	0.059	0.055
Vigor	0.204 ***	0.031				
Vigor X						
Challenging work experiences	0.049	0.038				
Dedication			0.275 ***	0.030		
Dedication X						
Challenging work experiences			0.080 *	0.037		
Absorption					0.254 ***	0.032
Absorption X						
Challenging work experiences					0.088 *	0.038

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note. Regression analysis was controlled for control variables. These control variables were suppressed from the output.

Figure 7. Competency Development: Challenging Experience Moderated by Three Sub-Components of Work Engagement/



6. Summary and Discussion

Challenging Work Experiences and Competency Development

The relationship between challenging work experiences and competency development was rather weak with correlation of .15 ($p < .001$). The difficulty in researching experience-based learning is that work experience is a complex, multifaceted, and fluid construct. Thus, learning from work experience is not a straightforward phenomenon and depends on the organizational context and the cognitive, mental, and social states of individuals (Day, 2010).

The observed low correlation could be attributed to the use of generalized challenging work, instead of specific and unique categories of experiences in each separate task. The same was true for competency development. As indicated by past research, the types of competency developed from experiences varied with the types of work tasks (DeRue & Wellman, 2009). Additionally, individuals do not necessarily learn and develop the same type of competency from the same type of experience (Mumford, Campion, & Morgeson, 2007). To more clearly understand the relationship between types of job experience and competency types developed, task-based experience and competency development need to be examined. Accordingly, it is surmised that the sizes of the moderation effects tested here would also likely change.

The results of this research show that the relationship between challenging work experiences and competency development is linear. As shown by the research of DeRue and Wellman (2009), I suspect that this relationship is more likely to be curvilinear, with

diminishing returns once the degree of challenge exceeds a certain point. When the amount of challenging experiences goes beyond an individual's capacity, these experiences will simply become an overload. Courtright et al. (2014) showed that emotional overload could occur when individuals faced an excessive amount of challenging experiences.

Moreover, and more importantly, the relationship between challenging work experience and competency development varies across different situations and contexts and is moderated by both individual and situational factors, which either accelerate or attenuate it.

Psychological Safety

Psychological safety moderated the relationship between challenging work experiences and competency development. The effect was positive and significant for those who perceive high psychological safety and nonsignificant for those who perceive low psychological safety.

As the negative correlation between challenging work experiences and psychological safety suggests, individuals likely feel insecure and vulnerable when facing challenges on the job. Therefore, psychological safety is an enabling factor for individuals to tackle challenging jobs and develop competencies by learning from the associated experiences.

Previous research has not examined the effect of psychological safety on the relationship between challenging work experiences and competency development. This research makes an empirical contribution to better understand the role of psychological safety and the mechanism

by which it moderates how individuals develop competencies from challenging experiences in the workplace.

The nomological network of psychological safety constructs is complex with numeral antecedents and outcomes, as well as linkage mechanisms that include both direct and indirect influences with moderation and mediation effects (Binyamin, Friedman, & Carmeli, 2017; Edmondson & Lei, 2014; Frazier, Fainshmidt, Klinger, Pezeshkan, & Vacheva, 2017). Edmondson and Lei (2014) laid boundary conditions for when psychological safety facilitates learning and performance, such as contextual characteristics (size and complexity of teams), and task characteristics (task interdependence and content to motivate learning, and possible conflicts). Further theoretical exploration and empirical examination are required to better understand the role and mechanisms of psychological safety.

It is unsurprising that these boundary conditions hold in the current work environment because much workplace learning occurs from interpersonal and interrelated tasks when individuals work with highly interdependent members and organizations. The creation of psychological safety becomes increasingly challenging in the current work environment in which teams and jobs are increasingly international, cross-cultural, virtual, and fluid as compared to “traditional” work environment in which teams and jobs are local, culturally homogenous, specific and well-defined.

In general, the effects of psychological safety are considered positive. However, it should be noted that there may be “dark side.” Pearsall and Ellis (2011) examined the relationship between utilitarianism and cheating behavior, and how psychological safety moderates it. They showed that in the presence of high psychological safety, high utilitarianism of team members makes them more likely to cheat. It is conceivable that when team members perceive excessive psychological safety, they may lower performance standards. Supervisors need to strike a balance between psychological safety and the push for performance by delivering appropriate messages about performance standards and expectations.

O’Neill (2009) showed that when decision makers are collectively responsible for making an investment decision in a project, the presence of psychological safety urges them to admit that the project is failing. In contrast, when decision makers are individually responsible for decisions, the presence of psychological safety escalates their commitment to bad investment decisions. O’Neill reasoned that, when decision makers are not individually responsible, they are less personally motivated to salvage a project that is failing.

Supplemental Effects to Psychological Safety from Trusting Relationships with Supervisors

Previous research showed that both the leadership behavior of supervisors and the quality of their relationships with employees influenced the creation of psychological safety. The supplementary effects of trusting relationships with supervisors (TRWS) were examined here.

A variable for this analysis was created by multiplying the score of psychological safety and that of TRWS. It showed moderation of the relationship between challenging work experiences and competency development. Psychological safety and TRWS have a synergistic effect on individuals who learn and develop competencies from challenging work experiences.

To illustrate the effect of TRWS, additional analysis of its moderation of the relationship between competency development and psychological safety was performed. It was found that only when individuals have a higher level of TRWS, a higher level of psychological safety helps them to develop competencies. This suggests that individuals learn and develop competencies most effectively when psychological safety and TRWS are both high.

The relationships between challenging work experiences, competency development, psychological safety, and TRWS also require further theoretical and empirical examination to improve understanding. For example, this work may take the form of longitudinal studies tracking changes in the levels of psychological safety and TRWS, and how such changes affect the relationship between challenging work experiences and competency development.

Self-efficacy

The moderation effect of self-efficacy was significant and contributed to enhanced competency development from challenging work experiences. This effect was replicated with Japanese samples.

As past research (e.g., Seibert, Sargent, Kraimer, & Kiazad, 2017) indicated, self-efficacy and competency development mutually enhance each other by creating a positive spiral between the two: a higher competency creates higher self-efficacy through which individuals gain confidence in performing more challenging jobs and so, further develop their competencies. Wood and Bandura (1989, p. 364) stated that “performance successes strengthen self-beliefs of capability. Failures create self-doubts. After people become assured of their capabilities through repeated successes, they can manage setbacks and failures without being adversely affected by them.” Individuals with low self-efficacy tend to attribute their failures to personal, rather than job-related, shortcomings, which attenuates learning from work because these individuals believe they lack the ability to learn (Murphy & Johnson, 2016).

Learning Goal Orientation

The moderation effect of learning goal orientation was also significant and contributed to enhanced competency development from challenging work experiences. As with self-efficacy, this moderation effect was replicated with Japanese samples; however, the moderation effect of learning goal orientation was modest compared to that of self-efficacy.

Learning goal orientation is a beneficial individual characteristic in developing competencies, but in the context of learning from challenging experiences, self-efficacy appears to be a more robust individual characteristic. Learning goal orientation is advantageous

in creating learning habits and behaviors; however, this alone would not suffice to establish a clear and strong link between challenging work experiences and competency development.

Work Engagement

The moderation effect of work engagement was also significant and enhanced competency development from challenging work experiences, an effect that was, again, replicated with Japanese samples.

Of the sub-components of work engagement, dedication and absorption had moderating effects on the relationship between challenging work experiences and competency development, while vigor did not. This suggests that challenging works do not suffice to develop competencies when they are only invigorating; they must inspire individuals to be dedicated to, and absorbed in, their works.

The developmental components associated with challenging work experiences are fully realized when experiences are so challenging that urge individuals to determine to seriously dedicate and absorb themselves in their work, otherwise they may risk not succeeding. Challenging work experiences can be fun and interesting, and thus, invigorate individuals; however, for these experiences to be developmental, they require serious stretching of individuals' capabilities, capacities and mind-sets beyond simply being entertaining.

Elucidating the Contributions of Situational Factors

This research elucidates the contributions of situational factors (i.e., psychological safety and supervisory relationships) to competency development from challenging work experiences. Situational factors are of equal or greater importance than individual factors in optimizing competency development from challenging work experiences. Executives and managers can facilitate improved employee performance and leader development by creating psychologically safe environments and building trusting relationships with their subordinates.

In a conversation about leader development with a human resources director of a Japanese company and a business line director who started his career at a strategy consulting firm and later joined the company, the line director commented:

When individuals are fresh graduates, their leadership levels are not so differentiated. But individuals who work at strategy firms are much more committed and determined to grow, otherwise they will be forced out of the firms. Moreover such firms are much more committed to talent development, investing time and money as talents are the assets that create differences. Such small differences of individuals and organizations accumulate over long term, which results in the levels (high or low) and speed (faster or slower) of leader development.

7. Managerial Implications

This research corroborated previous work showing that challenging work experiences are an effective way to develop talents. Some scholars have claimed that at least 70% of learning and leadership development came from on-the-job experience (McCall, Lombardo, & Morrison, 1988; Morrison & Brantner, 1992; Robinson & Wick, 1992).

Seibert et al. (2017) examined the contributions of official developmental training programs, challenging work experiences, and developmental supervision by supervisors. They concluded that challenging work experiences contributed the most to enhancing the leadership self-efficacy of individuals, which lead to leadership effectiveness and favorable promotability evaluations by supervisors.

This research by Seibert et al. also revealed that official developmental training programs alone did not contribute to enhancing leadership self-efficacy. These programs had an effect only when challenging work experiences and developmental supervision were both either low or high. When they were both low, official developmental training programs were one of a few opportunities individuals could take advantage of to develop themselves.

When many challenging work experiences were available and developmental supervision was high, individuals applied their learnings from official developmental training programs to challenges they face on the job and learnt more from developmental supervision.

This research suggests that the most effective learning and development come from challenging experiences in real work situations; training programs and supervisor support should be provided so that individuals can optimize their learning and developmental opportunities from these challenging experiences. The assignment of tasks that are rich in developmental challenges is a critical element; other enabling elements, such as training and developmental supervision, help individuals capitalize on these developmental assignments.

While theoretically easy, the provision of challenging tasks that are suitable for individual needs is challenging in practice. Such opportunities are not necessarily abundant and there may only be a limited number of opportunities for everyone.

If Japanese companies truly wish to develop talents who can navigate and lead their organizations in the increasingly complex and global business environment, they may need to fundamentally change their thinking and implementation of talent development schemes.

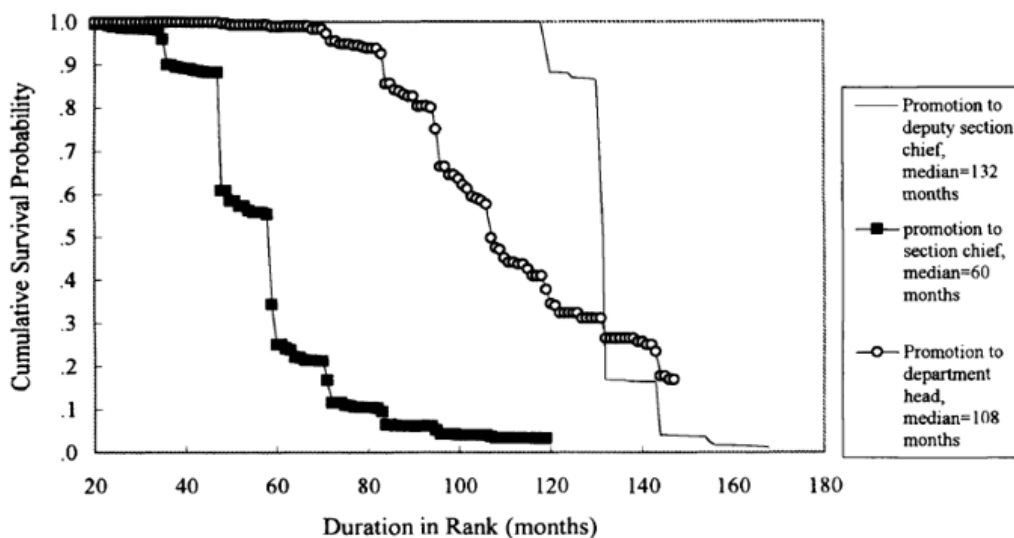
First, Japanese companies should start selecting promising talents early by prioritizing and investing in them. This does not mean that they should not invest in employees who are not selected, but talent development and investment should be targeted to cater for companies' needs.

Ishida et al. (2002) researched the promotion timing of a large Japanese company in the financial and insurance sector. Figure 8 shows the cumulative survival rate to deputy section chief, section chief, and department head. If all employees retained non-title positions before

deputy section chief, the survival rate was 1.0 (100%). Promotion to deputy section chief only occurred after 120 months (10 years)—no one was promoted until their 11th year after joining in the company. Subsequent promotion to section chief occurred, at the earliest, two years after promotion to deputy section chief, and the majority of employees were promoted after 48 months (4 years) and 60 months (5 years).

In summary, in Japanese companies adopting lifetime employment and seniority-based promotion, individuals were promoted to each managerial position at a “predetermined” stage or age (as the majority of employees are hired at the same timing when they graduate from colleges). Some companies may have more flexible promotion practices; however, many companies, especially large ones, follow the same patterns of seniority-based promotion.

Figure 8. Cumulative Survival Curves for Three Ranks in a Japanese Company



[Source: Ishida et al (2002)]

In interviews with senior management and human resource directors of large Japanese companies that have global operations, interviewees often voiced their concerns about the shortage of Japanese talents, especially young ones. They have global programs catering to promising candidates for top management positions but struggle to find talents to fill them—and if they do find talents, they are several years older than their counterparts in other countries of the same companies.

Acceleration of talent development (the “fast-track”) can be achieved by early selection of talent with suitable characteristics, such as tested self-efficacy and learning goal orientation, both of which are conducive to competency development—and are foundational elements of leader capability and effectiveness.

Second, target-oriented talent development should be strategically designed. Many talent development programs and assignments are focused on enhancement of general managerial capability, rather than targeting specific goals, roles, and positions.

While the specific relationship between experience types and the competencies they develop was not examined here, preliminary analysis of this relationship using the data from this study indicated that some experiences are more correlated with specific competencies than others (see Appendix A).

Some scholars argued that experiences are task-specific (e.g., McCauley, Ruderman, Ohlott, & Morrow, 1994) and thus, that competencies developed are related to the experiences

associated with tasks. Developmental assignments, training programs, and developmental supervision should be designed with the target roles in mind so that tasks with suitable experiences are assigned. To accelerate talent development, jobs should have more weight on developmental elements (McCall, 2010).

When more is known about the types of experiences associated with the capabilities individuals need, companies, supervisors, and human resources practitioners can structure assignments to suit both individual and organizational needs. With specific job requirements, individuals direct their efforts and behaviors to what they are asked to do, and accurately assess their progress in developing capabilities—as do their supervisors (Stajkovic & Luthans, 1998). As McCall (2010, p. 5) succinctly stated, “ultimately matching developmental needs to developmental opportunities is a matter of intentionality.”

Third, organizations and supervisors should support individuals in their endeavors to benefit from developmental experiences for building competencies, and thus, enhance their capabilities and leadership effectiveness. The creation of psychological safety is one possible support mechanism.

Edmondson and Lei (2014, p. 38) state that “employees in certain cultures may be particularly hesitant to ask questions, provide feedback, or openly disagree with superiors, because these behaviors are considered impolite or to cause a loss of face.”

Frazier et al. (2017) examined cultural influences using the concept of uncertainty avoidance (UA) and how it moderated the relationship between psychological safety and outcome. UA is “the extent to which members of society are threatened by (i.e., high UA) or tolerate (i.e., low UA) uncertainty and ambiguity in the workplace” (Frazier Fainshmidt, Klinger, Pezeshkan, & Vranceva, 2017, p. 124). Frazier and colleagues used Hofstede’s national cultural dimension scores to classify countries as either high UA or low UA.

As expected, Japan was classified as a high UA country. Their meta-analysis, comparing high UA and low UA countries, showed the extent of the effect of psychological safety on work engagement, task performance, learning behavior, and organizational commitment was stronger for high UA countries.

In countries where individuals are more prone to avoid uncertainty and ambiguity in the workplace, the importance of creating psychological safety is highlighted to enhance learning behavior and performance. Simply giving individuals challenging assignments that are rich in developmental elements does not suffice to realize talent development. Companies and supervisors are responsible for creating psychologically safe environments to ensure talents take on challenges to the fullest extent and learn and grow from the experiences without fearing failure and negative consequences for their performance evaluations and career prospects.

The necessity of creating psychological safety is particularly important for talents chosen for the fast-track, as they are likely assigned more challenging jobs than others. Furthermore,

supervisors need to build trusting relationships with subordinates (if they truly wish to optimize their subordinates' development); otherwise, the effects of psychological safety could be attenuated, if not nullified.

Finally, it should also be noted that a barrier to organizational investment in talent development is the difficulty of measuring returns in the long-term, particularly when compared to measurable and visible short-term business results (McCall, 2010).

The evaluation criteria for those responsible for talent development may be better if separated into short-term goals, such as business results, and long-term goals, such as talent development. Compared to creating career development plans and assigning challenging jobs to target individuals, the monitoring and tracking activities of companies and supervisors receive less attention, though the importance of these tasks cannot be neglected (McCauley, Eastman, & Ohlott, 1995). Monitoring the consequences of developmental job assignments by companies and supervisors will offer valuable lessons for improving effective task allocation at both the individual and organizational levels.

To fully achieve the goal of successful talent development—especially managerial talent—more attention should be paid to long-term evaluation and monitoring mechanisms.

8. Limitations and Future Research

This research was done using an online panel with a self-administered survey, and thus, left room for common-method biases. Participants' responses were self-declared subjective scores. Participants could be biased and overestimate their capabilities; ideally, scores for competency development should be evaluations by their supervisors. Similarly, the challenging work experiences were scored based on the participants' perceptions, without their supervisors' input.

This presents a gap in the perceived degree of work challenge between the participants (who have actually experienced these jobs) and the supervisors who assigned them (with the expectation that they were adequately challenging to encourage competency development). A mismatch between the two groups of stakeholders would have caused inadequate challenges and development, leading to sub-optimal learning and, in some cases, negative consequences.

This research used a cross-sectional survey and thus, causal relationships could not be confirmed. Although it is more plausible that challenging work experiences led to competency development, I cannot deny the possibility that those who have a higher level of competency are able to detect higher degree and larger amount of challenges in their jobs. Since this research used a self-administered survey and subjective perceptions, the possibility of the reversed causal relationship from perceived level of competency development to perceived amount of challenging work experiences cannot be dismissed.

This research was a snapshot of learning from experiences, asking individuals to recall and rate their current jobs and their perceived competency development. Tracking learning and

capability development over a longer period, with a longitudinal study, would shed light on the more dynamic and contextual influences of the learning process and competency development from challenging work experiences. As suggested by Dragoni et al., (2014) multiyear studies are necessary to detect changes in leadership competency and leader emergence.

The generalized, overall relationship between challenging work experiences and competency development was examined; however, a more detailed study of relationships between specific types of job experiences and competencies will benefit both supervisors and individuals as it would elucidate which competencies can be developed from particular types of challenging work experiences. Additionally, if the suitable level of challenging work experiences for each individual was identified, companies and supervisors could design and assign jobs tailored to optimize their learning and development.

It is likely that there is a saturation point in terms of the amount of challenging experiences that can lead to competency development, as examined by DeRue and Wellman (2009). Similarly, the existence of time to proficiency—mastering the necessary skills and knowledge required in a job—was suggested (Dragoni, Park, Soltis, & Forte-Trammell, 2014). This research did not examine the effect of tenure on the relationship between challenging work experiences and competency development.

The effect of psychological safety on the relationship between challenging work experiences and competency development was examined. However, reviews of past research

(Binyamin, Friedman, & Carmeli, 2017; Edmondson & Lei, 2014; Frazier, Fainshmidt, Klinger, Pezeshkan, & Vracheva, 2017) revealed that the nomological network of the psychological safety construct is complex. The mechanisms and the effects of psychological safety beyond the specific relationships examined here are areas for further theoretical development and empirical testing.

The results obtained may be subject to omitted variable bias and I cannot rule out the possibility that other variables may affect particular research outcomes, either directly or indirectly. In this research I have examined individual factors related to intrinsic motivators (e.g., self-efficacy). However, I am aware that extrinsic motivators such as monetary rewards and promotion prospects may also moderate the relationship between challenging work experience and competency development.

The relationship will likely also be affected by other variables related to both individual factors, including both intrinsic and extrinsic motivators (personality, emotional intelligence, motivation, proactive behavior, organizational commitment, monetary rewards, and promotion prospects) and organizational factors (organizational contexts, team characteristics, supervisor's leadership behavior and coaching, work design, and resource availability).

There may be differences between genders, industry types, function/division types, and position levels in organizational hierarchies that affect the relationship between challenging

work experiences and competency development. These factors were used as control variables in this research.

Due to the small sample of females used here, further analysis on gender differences could not be conducted. As there is growing body of research to illustrate differences between the genders, knowledge of these differences in competency development from challenging experiences should be pursued.

Research on leadership development is ongoing and interesting avenues remain open for further research.

Appendix A: Measurements

Challenging Work Experiences (Developmental Challenge Profile: DCP) (McCauley, Ruderman, Ohlott, & Morrow, 1994; McCauley, Ohlott, & Ruderman, 1999)

“Please decide how well each of the following statements describe something you face in your current job. Please choose the answer that best corresponds to your response.”

(5 point-scale from “Not at all descriptive” to “Extremely descriptive”)

1. Unfamiliar responsibilities (Job transition)

- 1.1. You lack experience important to carrying out some aspect of your job (e.g., financial or market analysis, negotiation, or budgeting)
- 1.2. You have to manage something, such as function, product, technology, or market, with which you are unfamiliar
- 1.3. Others question whether you are "ready" for this job
- 1.4. Compared to previous job incumbents, you do not have the credentials, background, or experience expected for this job
- 1.5. This job is no less than a change in your career direction, that is, you are doing a type of work dramatically different from what you have done before

2. New directions (Creating change)

- 2.1. You have to carry out a major reorganization as a result of a merger, acquisition, downsizing, or rapid growth
- 2.2. You have to make major strategic changes in the business--its direction, structure, technology systems, or operations
- 2.3. You are trying something the organization has never tried before; no one knows for sure how to do it or how it will come out
- 2.4. This job includes launching new organizational ventures, such as new product lines or acquisitions, new functions or groups, new plans or concepts, or new facilities
- 2.5. You have to create or establish new policies or procedures

3. Inherited problem (Creating change)

- 3.1. You inherited widespread morale problems
- 3.2. You need to restore the credibility of your unit with the rest of the organization
- 3.3. To succeed in this job, you have to dismantle the strategy your predecessor had established
- 3.4. Your business or unit has a record of poor performance
- 3.5. You must solve major problems a predecessor created

4. Problem with employees (Creating change)

- 4.1. Your direct reports resist your initiatives

- 4.2. There is an interpersonal conflict between you and at least one of your key direct reports
- 4.3. Your employees are used to doing things the way they have always been done and are reluctant to change
- 4.4. Key members of your staff are incompetent, demotivated, technically obsolete, or otherwise performing poorly
- 4.5. Some of your key direct reports lack the experience to do their jobs without close supervision from you

5. High stakes (High levels of responsibilities)

- 5.1. Your success or failure in this job will be evident to higher management
- 5.2. You are responsible for decisive action in a highly charged environment
- 5.3. You are being tested by higher management
- 5.4. There are clear deadlines by which your key objectives must be accomplished
- 5.5. There is pressure to complete a major piece of your job quickly

6. Scope and scale (High levels of responsibilities)

- 6.1. This job is a dramatic increase in scope for you (managing significantly more people, dollars, sites, functions, and so forth)
- 6.2. The job is potentially more than even a good delegator can handle
- 6.3. You are responsible for numerous different products, technologies, or services

- 6.4. You are responsible for multiple functions or groups
- 6.5. This job puts you under constant pressure there are seldom any periods to "catch your breath"

7. External pressure (Managing boundaries)

- 7.1. The customer base you work with is extremely varied
- 7.2. To achieve your most important goals, you must influence people outside the organization (e.g., clients, suppliers, unions, government agencies)
- 7.3. You manage relationships with government officials or regulatory agencies
- 7.4. You must deal with diverse clients, customers, or markets
- 7.5. You have to carry out formal negotiations with an outside body, such as a union, a client, or joint venture partner

8. Influence without authority (Managing boundaries)

- 8.1. You have to coordinate action across dispersed sites over which you have no direct authority
- 8.2. To achieve your most important goals, you must influence peers at similar levels in other units, functions, divisions, and so forth
- 8.3. Achieving your goals depends on how well you handle internal politics
- 8.4. To accomplish a major portion of your objectives, you must influence and work with executives higher than your immediate boss

8.5. A great deal of coordination with other organizational units or functions is required

9. Work across cultures (Dealing with diversity)

9.1. You conduct business with people from different countries

9.2. Your job requires working in a foreign country in which the culture is different from
your own

9.3. This job requires dealing with foreign companies, agencies, or governments that can
have a substantial impact on the business

9.4. You manage parts of the business that are scattered across the world

9.5. Your job requires understanding the traditions and values of people from different
cultures

10. Work group diversity (Dealing with diversity)

10.1. In terms of demographic variables, you have a diverse group of direct reports

10.2. You are part of a diverse work group

10.3. You are responsible for developing managers from both genders and different ethnic
groups

10.4. You have to get people from different racial, religious, cultural, or ethnic backgrounds
to work together

10.5. You must make personnel decisions about employees who differ from you in terms of
race or gender

Hay/McBer Generic Competencies (Hay/McBer, 1996)

“Please indicate competencies listed below that you think you are developing (learning) in your current job. Please choose the answer that best corresponds to your response.”

(7 point-scale from “Strongly disagree” to “Strongly agree”)

Achievement and Action Cluster

1. Achievement orientation: Thinks about meeting and beating goals and taking calculated risks for measured gains.
2. Concern for order/conscientiousness: Demonstrates responsibility in managing him/herself and delivering quality work.
3. Initiative: Thinks ahead of the present to act on future needs and opportunities.
4. Information seeking: Goes beyond the obvious and seeks out information.

Helping and Human Service Cluster

5. Interpersonal understanding: Being aware of what others are feeling and thinking but not saying.
6. Customer service orientation: Acts on behalf of the person being served.

Impact and Influence Cluster

7. Impact and influence: Uses deliberate influence strategies or tactics.

8. Organizational awareness: Being sensitive to the realities of organizational politics and structure.
9. Relationship building: Makes an effort to build personal relationships.

Managerial Cluster

10. Developing others: Works to develop the long-term characteristics and capabilities (not just skills) of others.
11. Directiveness: Sets firm standards for behavior and hold people accountable to them. The intent to make others comply with one's wishes. It includes a theme or tone of "telling people what to do."
12. Teamwork and cooperation: Acts to facilitate the operation of a team of which he or she is a part.
13. Team leadership: Leads groups of people to work together effectively. The intention to take a role as leader of a team or other group.

Cognitive Cluster

14. Analytical thinking: Understands cause-and-effect chains and relationships.
15. Conceptual thinking: Assembles many pieces into a coherent whole. Creates new ways to look at things.

Personal Effectiveness Cluster

16. Self-control: Feels very strong emotion, especially negative emotion such as anger, and keep from expressing it or acting on it.
17. Self-confidence: Takes on risky tasks or conflicts with those in power over that person.
18. Flexibility: Changes gears or drop the expected task when circumstances demand it.
19. Organizational commitment: Chooses to act in accordance with authority, organizational standards, needs, and goals.
20. Integrity: Acts in line with beliefs and values even when it is difficult to do so.

Psychological Safety (Edmondson, 1999, 2004)

“About your section, department, organization, please choose the answer that best corresponds to your response.”

(7 point-scale from “Strongly disagree” to “Strongly agree”)

1. If you make a mistake on this team, it is often held against you (Reverse)
2. Members of this team are able to bring up problems and tough issues
3. People on this team sometimes reject others for being different (Reverse)
4. It is safe to take a risk on this team
5. It is difficult to ask other members of this team for help (Reverse)
6. No one on this team would deliberately act in a way that undermines my efforts
7. Working with members of this team, my unique skills and talents are valued and utilized

Trusting Relationship with Supervisor (McAllister, 1995)

About your supervisor in your current job, please choose the answer that best corresponds to your response.

(7 point-scale from “Strongly disagree” to “Strongly agree”)

Affect-based

1. My supervisor and I have a sharing relationship. We can both freely share our ideas, feelings, and hopes.
2. I can talk freely to my supervisor about difficulties I am having at work and know that (s)he will want to listen.
3. My supervisor and I would both feel a sense of loss if one of us was transferred and we could no longer work together.
4. If I shared my problems with my supervisor, I know (s)he would respond constructively and caringly.
5. I would have to say that my supervisor and I have both made considerable emotional investments in our working relationship.

Cognition-based

6. My supervisor approaches his/her job with professionalism and dedication.

7. Given my supervisor's track record, I see no reason to doubt his/her competence and preparation for the job.
8. I can rely on my supervisor not to make my job more difficult by careless work.
9. Most people, even those who aren't close friends of my supervisor, trust and respect him/her as a coworker.
10. Other work associates of mine who must interact with my supervisor consider him/her to be trustworthy.
11. If people knew more about my supervisor and his/her background, they would be more concerned and monitor his/her performance more closely. (Reverse)

Self-efficacy (Chen, Gully, & Eden, 2001)

“Please choose the answer that best corresponds to your response to the below questions.”

(7 point-scale from “Strongly disagree” to “Strongly agree”)

1. I will be able to achieve most of the goals that I have set for myself
2. When facing difficult tasks, I am certain that I will accomplish them
3. In general, I think that I can obtain outcomes that are important to me
4. I believe I can succeed at most any endeavor to which I set my mind
5. I will be able to successfully overcome many challenges
6. I am confident that I can perform effectively on many different tasks

7. Compared to other people, I can do most tasks very well
8. Even when things are tough, I can perform quite well

Learning Goal Orientations (VandeWalle, 1997)

Please choose the answer that best corresponds to your response to the below questions.

(7 point-scale from “Strongly disagree” to “Strongly agree”)

1. I often read materials related to my work to improve my ability
2. I am willing to select a challenging work assignment that I can learn a lot from
3. I often look for opportunities to develop new skills and knowledge
4. I enjoy challenging and difficult tasks at work where I’ll learn new skills
5. For me, development of my work ability is important enough to take risks
6. I prefer to work in situations that require a high level of ability and talent

Work Engagement (Schaufeli, Bakker, & Salanova, 2006)

About your current job, please choose the answer that best describes how you feel about for the following statements.

(7 point-scale from “Not at all, feel so” to “Always feel so”)

Vigor

1. When I get up in the morning, I feel like going to work

2. At my work, I feel bursting with energy
3. At my job I feel strong and vigorous

Dedication

4. My job inspires me
5. I am enthusiastic about my job
6. I am proud on the work that I do

Absorption

7. I get carried away when I am working
8. I am immersed in my work
9. I feel happy when I am working intensely

Appendix B: Correlations between Types of Challenging Work Experiences and Competencies

DCP comprises 50 items that are grouped into 10 experience types: “unfamiliar responsibilities,” “new directions,” “inherited problem,” “problem with employees,” “high stakes,” “scope and scale,” “external pressure,” “influence without authority,” “work across cultures,” and “work group diversity.”

DCP has five dimensions: “job transition,” “creating change,” “high levels of responsibility,” “managing boundaries,” and “dealing with diversity.” Each dimension is composed of one to three experience types. The relationships between dimensions and types are:

- Job transition comprises unfamiliar responsibilities.
- Creating change comprises new directions, inherited problems, and problems with employees.
- High levels of responsibility comprise high stakes and scope and scale.
- Managing boundaries comprises external pressure and influence without authority.
- Dealing with diversity comprises work across cultures and work group diversity.

Table 9 shows correlations between types of challenging work experiences and competencies. Stronger relationships are present between specific pairs. For example, high correlations are found for high stakes and self-confidence (correlation = .255, $p < .001$), and for external pressure and organizational awareness (correlation = .253, $p < .001$).

Table 9. Correlations between Types of Challenging Work Experience and Competency

Competency	Challenging Work Experience									
	Unfamiliar responsibilities	New directions	Inherited problem	Problem with employees	High stakes	Scope and scale	External pressure	Influence without authority	Work across cultures	Work group diversity
Analytical thinking	-0.052	0.050	-0.027	-0.044	0.145 **	0.076 †	0.076 †	0.115 *	-0.107 *	0.000
Conceptual thinking	-0.064	0.117 **	0.032	0.014	0.142 **	0.110 *	0.112 *	0.143 **	0.010	0.102 *
Information seeking	0.062	0.180 ***	0.081 †	0.065	0.196 ***	0.173 ***	0.193 ***	0.211 ***	0.071	0.113 *
Achievement orientation	0.024	0.104 *	0.016	0.046	0.204 ***	0.162 ***	0.134 **	0.151 ***	0.031	0.128 **
Customer service orientation	-0.050	0.060	0.007	-0.011	0.175 ***	0.086 †	0.159 ***	0.125 **	0.020	0.083 †
Organizational commitment	-0.008	0.081 †	0.023	-0.022	0.193 ***	0.112 *	0.120 **	0.189 ***	0.006	0.113 *
Self-confidence	0.040	0.182 ***	0.075 †	0.081 †	0.255 ***	0.196 ***	0.167 ***	0.199 ***	0.076 †	0.145 **
Initiative	0.017	0.101 *	0.038	0.066	0.202 ***	0.113 *	0.113 *	0.157 ***	0.043	0.151 ***
Flexibility	-0.076 †	0.025	-0.082 †	-0.061	0.137 **	0.052	0.099 *	0.114 *	-0.070	0.009
Concern for order	0.011	0.120 **	0.030	0.072	0.184 ***	0.144 **	0.148 **	0.157 ***	0.011	0.135 **
Integrity	-0.046	0.066	-0.034	-0.035	0.150 ***	0.066	0.103 *	0.107 *	-0.017	0.067
Self-control	-0.073	0.029	-0.025	-0.003	0.138 **	0.069	0.071	0.089 †	-0.022	0.049
Team leadership	-0.107 *	0.073	-0.035	-0.014	0.161 ***	0.098 *	0.062	0.123 **	-0.047	0.080 †
Directiveness	0.004	0.091 *	0.048	0.033	0.176 ***	0.112 *	0.126 **	0.145 **	0.023	0.129 **
Developing others	0.014	0.154 ***	0.055	0.088 †	0.166 ***	0.137 **	0.112 *	0.138 **	0.057	0.175 ***
Teamwork and cooperation	-0.087 †	-0.004	-0.038	-0.074	0.153 ***	0.092 *	0.057	0.094 *	-0.051	0.043
Impact and influence	-0.006	0.148 **	0.064	0.041	0.200 ***	0.112 *	0.161 ***	0.172 ***	0.031	0.146 **
Interpersonal understanding	-0.058	0.046	-0.037	-0.035	0.131 **	0.062	0.099 *	0.097 *	0.000	0.088 †
Organizational awareness	0.082 †	0.217 ***	0.124 **	0.101 *	0.223 ***	0.158 ***	0.253 ***	0.201 ***	0.181 ***	0.238 ***
Relationship building	0.028	0.087 †	0.028	0.032	0.192 ***	0.101 *	0.176 ***	0.165 ***	0.069	0.104 *

*** $p < .001$ ** $p < .01$ * $p < .05$ † $p < .1$ (two-tailed tests)

Note: Correlations were controlled for control variables. These control variables were suppressed from the output.

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