An Empirical Study of Learning Agility Factors among Thai Employees in the Thai Context: A Mixed-Methods Approach

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Abstract

The rapidly evolving business environment demands leadership beyond traditional skills. Organizations must identify high-potential leaders with agility, ability, and aspiration to navigate a VUCA world. This capability, known as learning agility, enables individuals to learn from experience and adapt to new challenges. It predicts leadership success and is increasingly valued across roles. Since 2000, researchers have developed numerous learning agility measures within Western contexts. Therefore, this study aimed to explore and propose potential learning agility factors specific to Thailand. This study used a sequential mixed-methods approach. The author reviewed the literature related to learning agility research published between 1997 and 2025 and initially proposed learning agility factors. Subsequently, in-depth interviews were conducted with nine Thai participants who are subject-matter experts and talents from private organizations to explore learning agility factors including Thai value aspects. Then, exploratory factor analysis (EFA) was conducted in a pilot study with 128 participants who are employees from private organizations. From the EFA, the Kaiser-Meyer-Olkin (KMO) was performed for identifying the learning agility factors. Its value of 0.821 suggested sample adequacy for factor analysis. The EFA results identified 8 potential learning agility factors with 45 items: (1) learning exploration and sharing, (2) social competence and agile communication, (3) leading and managing change, (4) result oriented, (5) humility, (6) self-awareness and self-improvement, (7) information literacy, and (8) flexibility and adaptability. Future research should establish the measure's criterion-related validity and generalizability across diverse Thai contexts, also exploring cultural dimensions for broader HR applicability.

Keywords: Learning Agility, Learning Agility Measure, High Potential

1. Introduction

The dynamic and ever-evolving business environment significantly impacts both organizational operations and leadership approaches. Traditional leadership skills are no longer sufficient to ensure success (Kaivo-oja & Lauraeus, 2018). Organizations must identify "high potentials" candidates most likely to succeed in senior positions who possess the agility, ability, and aspiration to lead in a VUCA world (Volatility, Uncertainty, Complexity, and Ambiguity environment) (Downs, 2015). This capacity is commonly referred to as learning agility: the ability to learn from experience and apply those lessons in new and challenging situations (De

Meuse, Dai, & Hallenbeck, 2010; Lombardo & Eichinger, 2000). Individuals with high learning agility effectively navigate unforeseen challenges and crises (Swisher, 2013), and it is recognized as a key predictor of leadership success and one of the most in-demand skills of the 21st century (De Meuse, 2017a). Learning agility is relevant not only for leaders but also for all employees striving to thrive amid change (Burke, Roloff, & Mitchinson, 2016).

Organizations have increasingly used learning agility as a core criterion for assessing leadership potential, often prioritizing it over other attributes such as cultural fit, emotional intelligence, and personality (De Meuse, 2019). More than half of surveyed companies utilized learning agility to identify high potentials (56%) and selected senior executives (51%) (Church, Rotolo, Ginther, & Levine, 2015). Prominent global organizations—including Novartis, Mars, GE, and Mondelez have integrated learning agility into their leadership development strategies (De Meuse, 2019). Furthermore, an IBM study demonstrated that learning agility contributes to business growth, cost reduction, innovation, and workforce productivity (Gravett & Caldwell, 2016).

Scholarly research has extensively examined the relationship between learning agility and leadership success, using various performance measures such as current job performance, leadership potential, promotability, and compensation growth (Connolly, 2001; Dai, De Meuse, Clark, & Cross, 2011; Dries, Vantilborgh, & Pepermans, 2012; Eichinger & Lombardo, 2004). Despite its growing popularity and extensive scholarly examination, existing learning agility measures present several gaps, necessitating further research and refinement.

1.1 Limited Measures in the Thai Context

Current learning agility measures—Choices (Lombardo & Eichinger, 2000), viaEDGE (De Meuse et al., 2011), TALENTx7 (De Meuse & Feng, 2015), and BLAI (Burke et al., 2016) were developed in the Western Context, with minimal Asian representation (e.g., 7.7% in one BLAI study and 1.7% in another (Robinson, Saldanha, & McKoy, 2011)). The validation of viaEDGE measure also had limited Asian samples (De Meuse et al., 2011). These existing measures differ significantly in their factors, raising concerns about their effectiveness (De Meuse, 2019).

1.2 Limited Research in Thai Workplaces

While learning agility has been studied in education (Srinuan & Prachanban, 2022), research on its workplace application in Thailand is scarce, remaining a new concept for Thai HR practitioners.

1.3 Limited Accessibility

Most existing assessments are proprietary, limiting academic research and practical application.

This study directly addressed these gaps by exploring and proposing culturally relevant learning agility factors from Thai participants, aiming to develop an open-access measure specifically for Thai employees.

2. Research Objectives

This study aimed to empirically identify and propose key factors of learning agility relevant to Thai employees. Drawing from a comprehensive literature review, in-depth interviews, and exploratory factor analysis (EFA), this study established the foundational framework for a reliable learning agility measure. Thus, the main research question addressed was “what are potential factors for a learning agility measure for Thai employees?”

3. Theoretical and Related Literature

3.1 High Potentials as Agile Learners

High-potential employees are recognized by senior management as capable of advancing to executive roles (Cope, 1998; Dries & Pepermans, 2007; Pepermans, Vloeberghs,

& Perkisas (2003). Some organizations refer to them as "talents", denoting those with the greatest potential for leadership (Tansley, 2011). High potentials adapt quickly, learn new skills, navigate VUCA environments, take risks, and drive organizational success (Downs, 2015). This study focused on self-perceived high-potential status rather than organizational labels. Employees' perceived value within their organization is shaped by employer recognition, valuable skills, strong reputation, and colleague acceptance.

Research links learning agility to high-potential identification (Burke et al., 2016; Dai et al., 2011; Dries et al., 2012; Lombardo & Eichinger, 2000). While high potentials can be high performers, not all high performers qualify as high potentials (Corporate Leadership Council, 2005).

3.2 Definition of Learning Agility

Learning agility is increasingly recognized as crucial for leadership success (De Meuse, Dai, & Hallenback, 2010; Silzer & Church, 2009). Lombardo and Eichinger (2000) first introduced the concept, emphasizing the need for leaders to be flexible, adaptable, and capable of learning from experience. They defined learning agility as "the willingness and ability to learn new competencies to perform under first-time, tough, or different conditions" (p. 323). High-learning-agile individuals apply past lessons to new situations, seek feedback, and engage in self-reflection (De Meuse et al., 2010).

De Meuse et al. (2010) later refined the definition by adding "successfully" to emphasize performance under new conditions. However, scholars critiqued these definitions for conflating agility with its antecedents (De Rue, Ashford, & Myers, 2012). Lombardo and Eichinger's (2000) inclusion of "willingness" was seen as mixing motivation with ability, while De Meuse et al.'s (2010) definition implied that failure contradicts agility.

To address these issues, De Rue et al. (2012) redefined learning agility as "the ability to come up to speed quickly in one's understanding of a situation and move across ideas flexibly" (p. 262-263). Despite varying perspectives, scholars agree that learning from experience is central to the concept.

3.3 Evolution of Learning Agility

The concept of learning agility originated in the late 1970s and early 1980s, when researchers sought to identify traits of successful leaders and explore how experiences shape leadership development (De Meuse, 2017b). Studies indicated that developmental opportunities were key to enhancing leadership potential and understanding how individuals learn from experiences became central to the emergence of learning agility.

Early studies, including those by Doug Bray and colleagues at AT&T, showed that low-potential leaders succeeded when given opportunities to learn and practice (Bray, Campbell, & Grant, 1974; Howard & Bray, 1988). In the 1980s and 1990s, the Centre for Creative Leadership (CCL) conducted studies showing that learning from experience differentiates individuals, with those who step out of their comfort zones and embrace challenges growing the most (McCall, Lombardo, & Morrison, 1988).

CCL's research also found that successful executives were distinguished by their willingness and ability to learn from diverse experiences, while derailed executives failed to adapt and relied on past success in similar contexts (De Meuse, 2017b). These findings formed the foundation of learning agility, which emphasizes adaptability, resilience, and learning from mistakes.

Recent study of Srinuan and Prachanban (2022) developed learning agility indicators for graduate students. Their research identified five components and 14 indicators: (1) mental agility (positive thinking, creativity, and critical thinking), (2) people agility (interpersonal relationship and emotional resilience), (3) change agility (readiness for change, curiosity, and

self-improvement), (4) result agility (effectiveness, work motivation, and work adaptability), and (5) self-awareness (self-emotional awareness, realistic self-assessment, and self-confidence). The model of the study was validated with strong statistical support, confirming the validity of the learning agility construct.

3.4 Theoretical Foundation of Learning Agility

3.4.1 Experiential Learning Theory

Experiential Learning Theory (ELT), developed by Kolb (1984), builds on the work of 20th-century scholars like Dewey, Lewin, Piaget, and others to create a holistic model of learning. It views learning as a process where knowledge is created through the transformation of experience, involving both grasping and transforming experience (Kolb, 1984). ELT presents learning as a cyclical process consisting of four stages: Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE).

Individuals have different learning styles based on these stages. Some may learn best through hands-on tasks (Accommodators: AE and CE), others through reflection (Divergers: CE and RO), logic and theory (Assimilators: RO and AC), or problem-solving and decision-making (Convergers: AC and AE). Kolb (1984) suggests that not all individuals master all four modes of learning, as they vary in how they process and apply information.

Kolb (1984) suggests that individuals learn more effectively when they integrate multiple modes of learning, which is referred to as learning flexibility. Therefore, learning agile individuals are those who incorporate various modes of learning and exhibit behaviors aligned with each component of Kolb's learning cycle.

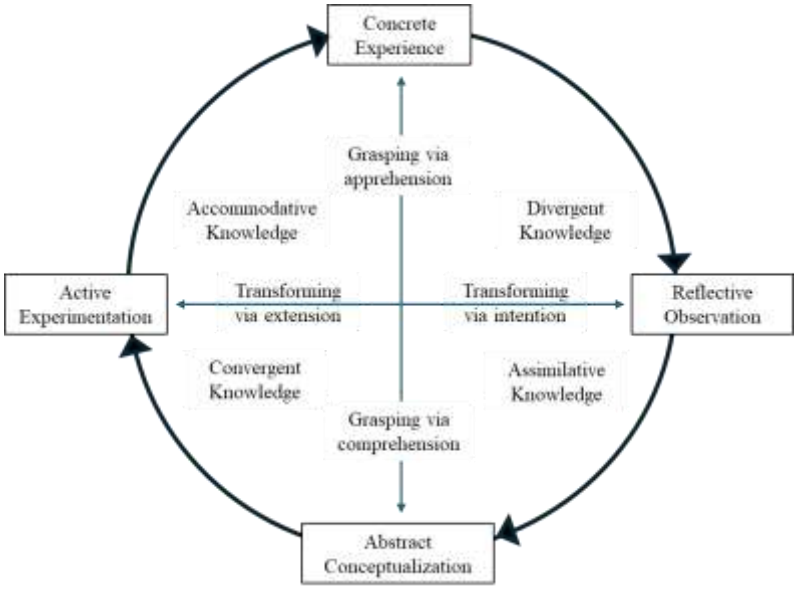

Figure 1 Model of Experiential Learning Process

Note: Adapted from D. A. Kol. (1984). Experiential learning: Experience as the source of learning and development, p. 42. Prentice-Hall.

3.4.2 Learning Goal Orientation

Learning agility entails the willingness to learn from experiences and flexibly apply lessons across diverse situations, with this study focusing on individuals actively seeking challenging work-related experiences. This concept strongly links to learning goal orientation, which emphasizes developing competence through new skill acquisition and experiential learning (VandeWalle, 1997). This orientation highlights effort as central to capability and

success, leading individuals to embrace ambiguity and persist through difficult tasks (Kroll, 1988; Dweck, 1986). Studies indicate that highly agile learners are motivated by growth opportunities (Lim, Yoo, Kim, & Brickell, 2017), and combining learning and performance goal orientations further enhances agility by fostering openness and motivating improvement (DeShon & Gillespie, 2005).

3.5 Research Related to Learning Agility

3.5.1 Learning Agility as a Predictor of High-Potential Employees

Research suggests that learning agility is a key predictor of high-potential employees. Lombardo and Eichinger (2000) introduced the concept and conducted studies with 55 managers, finding that managers who successfully changed their behavior had specific learning strategies. They identified four factors: people agility, results agility, mental agility, and change agility that were significantly associated with high potential and avoiding difficulties.

Their study characterized high learning agility individuals as those who actively seek diverse experiences, enjoy complex challenges, learn from them, and integrate new skills into their routines. Similarly, learning agility predicted employee potential beyond job performance, which aligns with Corporate Leadership Council's (2005) finding that 71% of high performers are not high potentials (Dries et al., 2012). Despite this, many organizations still identify high-potential employees based on current performance (Briscoe & Hall, 1999; Dries & Pepermans, 2007). Dries et al. (2012) suggest that learning agility should be used to identify high-potential employees.

3.5.2 Learning Agility as a Predictor of Career Success

Learning agility is increasingly used to identify high-potential talent (Dai, De Meuse, & Tang, 2013; De Meuse et al., 2010). Career success is categorized into objective success (pay and position) and subjective success (job satisfaction) (Judge et al., 1995). Learning agility is linked to objective career success, such as upward mobility and pay increases (Dai et al., 2013).

Learning agility influences both contest mobility based on individual performance and sponsored mobility, where organizations support high-potential individuals. High learning-agile individuals receive more opportunities and promotions (Dai et al., 2013). Continuous learning and skill diversification, which learning agility fosters, are key for sustained career success (Judge, Cable, Boudreau, & Bretz, 1995). Research shows that learning agility positively impacts leadership competence and career outcomes, such as CEO proximity and higher compensation (Dai et al., 2013). It is a strong predictor of career success and a valuable tool for identifying future leaders.

3.5.3 Learning Agility and Employee Performance

The impact of learning agility on employee performance has been a subject of extensive research across diverse industries. For example, a recent study by Park and Lee (2024) investigated 260 clinical nurses from two regional hospitals. Their findings reveal significant positive correlations between learning agility, grit, positive psychological capital, and nursing performance. Similarly, a recent study by Wolor, Suhud, Nurkhin, Hoo, and Rababah (2025), which included 200 respondents from the information technology industry in Indonesia, indicate that learning agility significantly enhances innovative work behavior, subsequently leading to a positive impact on employee performance.

3.6 Learning Agility Factors

Since Lombardo and Eichinger (2000) introduced learning agility as a key indicator of high-potential talent, it has become an important leadership tool. Scholars have proposed various factors of learning agility and developed measures to assess it in organizations for talent

identification. This section outlines the key measures in chronological order: Choices (Lombardo & Eichinger, 2000), viaEDGE (De Meuse et al., 2011), TALENTx7 (De Meuse & Feng, 2015), and BLAI (Burke et al., 2016).

3.6.1 Learning Agility Factors in the Choices and viaEDGE Measures

Lombardo and Eichinger (2000) introduced the concept of learning agility, defining it as "the willingness and ability to learn new competencies to perform under first-time, tough, or different conditions." Their framework outlined four factors of learning agility: people agility, results agility, mental agility, and change agility.

De Meuse et al. (2010) revised the definition of learning agility to include "perform successfully under new or first-time conditions." They added self-awareness as an important factor and introduced the viaEDGE model, which incorporates five factors: people agility, change agility, results agility, mental agility, and self-awareness.

People Agility: Knowing oneself, seeking feedback, handling conflicts, and managing change effectively.

Results Agility: Delivering results under tough conditions and inspiring others to perform beyond expectations.

Mental Agility: The ability to think from fresh perspectives, handle complexity, and explain thinking clearly.

Change Agility: The curiosity and passion to experiment, learn new skills, and drive improvements.

Self-Awareness: Understanding one's strengths, weaknesses, and blind spots, promoting reflection and personal growth.

3.6.2 Learning Agility Factors in the TALENTx7 Measure

De Meuse and Feng (2015) expanded on the learning agility concept by defining it as "the ability and willingness to learn quickly and apply lessons to perform well in new and challenging leadership situations." They proposed seven factors of learning agility, which are measured by the TALENTx7 tool.

Cognitive Perspective: The ability to think critically and strategically, analyzing situations from a broad viewpoint.

Interpersonal Acumen: The skill to interact effectively with diverse people, understanding their motivations, and building confidence.

Change Alacrity: Embracing change, being curious, and continuously improving work.

Drive to Excel: Setting and achieving challenging goals, and delivering exceptional results.

Self-Insight: Understanding one's own capabilities, limitations, and personal values.

Feedback Responsiveness: Actively seeking and applying feedback to improve performance.

Environmental Mindfulness: Observing external surroundings, adapting to new roles, and managing emotions without personal judgment.

While many of these factors mirror those from Lombardo and Eichinger's framework (2000), two new factors feedback responsiveness and environmental mindfulness were added. Feedback responsiveness emphasizes the importance of taking corrective actions after receiving feedback, crucial for improvement in new or ambiguous situations. Environmental mindfulness involves being aware of and adapting to external changes without judgment, enhancing one's ability to perceive situations clearly and make better decisions. In conclusion, these additions reflect the evolving understanding of learning agility, with environmental mindfulness focusing on external stimuli and self-awareness focusing on internal reflection. Both are crucial for leadership development.

3.6.3 Learning Agility Factors in the BLAI Measure

Burke and colleagues expanded the conceptualization of learning agility in the BLAI model, building on De Rue et al. (2012). They defined learning agility as "the willingness and ability to reconfigure activities quickly to meet changing demands in the task environment." This definition integrates both motivation and skill, where learning-agile individuals adapt their behaviors to changing situations. Burke et al. (2016) identified nine factors assessed in the Burke Learning Agility Inventory (BLAI).

Collaborating: Working with others to create learning opportunities.

Interpersonal Risk Taking: Confronting differences with others to foster learning and change.

Experimenting: Trying new behaviors to find the most effective ways to perform.

Performance Risk Taking: Seeking new job-related challenges that offer growth opportunities.

Flexibility: Being open to new ideas and proposing solutions.

Reflecting: Slowing down to evaluate one's performance for greater effectiveness.

Feedback Seeking: Actively seeking feedback on one's performance.

Speed: Turning ideas into actions quickly to prevent them from being rejected.

Information Gathering: Staying current in one's field through training and professional development.

While the BLAI shares similarities with the models of Lombardo and Eichinger (2000) and De Meuse and Feng (2015), it has key differences. For example, *collaborating* and *interpersonal risk-taking* are separate in the BLAI, with collaborating focusing on learning through teamwork, and interpersonal risk-taking addressing confrontation and diversity. *Flexibility* in the BLAI is defined as behavioral flexibility, in contrast to its cognitive focus in previous models. *Speed* was also added as a critical factor in the BLAI, which emphasizes the need for rapid response in today's fast-paced work environments. Additionally, *information gathering* was introduced in the BLAI, linking it to learning-goal orientation, where individuals seek continuous development. Overall, the BLAI introduces unique factors like speed and information gathering, highlighting the need for adaptability and continuous learning in leadership roles.

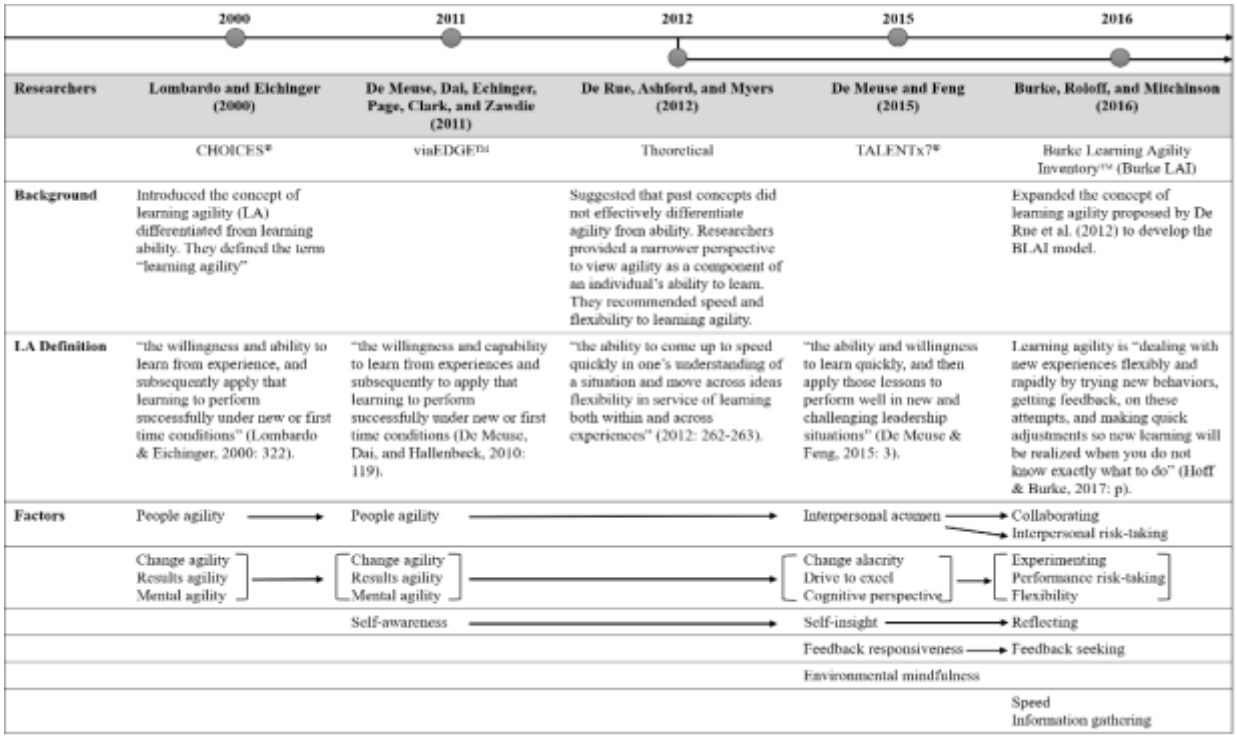

Figure 2 Overall Timeline of Learning Agility

Note. Adapted from Garner II, W.A. (2020). Learning agility differences between managers and project managers of information technology projects". Doctoral dissertation: Capella University: MN.

3.7 Learning Agility Measures

Various empirical studies have utilized different measures to assess learning agility, including Choices (multirater), viaEDGE™ (self-assessment), TALENTx7®, and the Burke Learning Agility Inventory™ (self-assessment). While these measures vary in the number of factors assessed, they share common elements (De Meuse, 2017b). Choices and viaEDGE™, both developed in the early 2000s, assess five factors (De Meuse et al., 2011). TALENTx7®, measuring seven factors, was introduced by De Meuse and Feng (2015) under Leader's Gene Consulting in Shanghai. The Burke Learning Agility Inventory™, assessing nine factors, was developed by Burke et al. (2016) at EASI Consult, a U.S. based firm. Additional learning agility assessments include Prospector® (Center for Creative Leadership), a multirater tool measuring two factors, and Leadership Agility 360™ (ChangeWise), which assesses three action arenas and four leadership agility dimensions (De Meuse, 2017b).

3.8 Proposed Factors of Learning Agility for the Learning Agility Measure Development

To explore learning agility factors, this study reviewed research related to learning agility measures (Choices, viaEDGE, TALENTx7, and BLAI) to analyze and synthesize all learning agility factors. The development process involved several steps as follows.

Step 1: Core Factors from Choices and viaEDGE: The learning agility theories, as proposed in the Choices model (Lombardo & Eichinger, 2000) and viaEDGE (De Meuse et al., 2011), were used as the foundation. The core factors selected from these models include people agility, change agility, results agility, mental agility, and self-awareness.

Step 2: Reviewing and Comparison: The factors from all models were reviewed, and those with similar or redundant behaviors were excluded. Factors with distinctive behaviors were selected for further process of the study.

Step 3: Renaming and Grouping: Some factors were renamed to group similar behaviors; for instance, people agility was redefined as social competence to encompass communication and collaboration skills. However, factors such as self-awareness and environmental mindfulness retained their original names due to their distinct characteristics.

Following the synthesis, the preliminary learning agility framework comprised 12 factors: (1) self-awareness, (2) social competence, (3) agile communicator, (4) change-driven, (5) experimenting, (6) results-oriented, (7) mental agility, (8) feedback seeking, (9) flexibility, (10) speed, (11) environmental mindfulness, and (12) information gathering, as presented in Table 1.

Table 1 Proposed Learning Agility Factors from the Synthesis Study

Proposed Factor	**Existing Factor**	**Existing Measure**
1. Self-awareness	Reflecting	BLAI
	Self-insight	TALENTx7
	Self-awareness	viaEDGE
2. Social Competence	Interpersonal risk-taking	BLAI
	Flexibility	BLAI
	Change alacrity	TALENTx7
	People agility	Choices, viaEDGE
	Interpersonal acumen	TALENTx7
	Collaborating	BLAI
3. Agile communicator	People agility	Choices, viaEDGE
	Interpersonal acumen	TALENTx7
4. Change-driven	Change agility	Choices, viaEDGE
	Change alacrity	BLAI
	Performance risk taking	TALENTx7
5. Experimenting	Experimenting	BLAI
	Change agility	Choices, viaEDGE
6. Result-oriented	Results agility	Choices, viaEDGE
	Drive to excel	TALENTx7
	Performance risk-taking	BLAI
7. Mental agility	Mental agility	Choices, viaEDGE
	Cognitive perspective	TALENTx7
8. Feedback seeking	Feedback seeking	BLAI
	Feedback responsiveness	TALENTx7
	Self-awareness	viaEDGE
9. Flexibility	Flexibility	BLAI
	Results agility	Choices, viaEDGE
10. Speed	Speed	BLAI
11. Environmental mindfulness	Environmental mindfulness	TALENTx7
12. Information gathering	Information gathering	BLAI

4. Research Methodology

This study used sequential mixed methods. This approach allows one method's findings to be expanded or elaborated upon by the other. Specifically, it involves starting with a qualitative method for exploration and following it with a quantitative method to generalize the results to a larger population (Creswell, 2003).

This study began with qualitative interviews with Thai participants to explore learning agility factors in the Thai context and to gain their insights on learning agility alongside the factors identified through the literature review. Following the qualitative phase, a quantitative method was employed using exploratory factor analysis (EFA) to identify the underlying structure of a large set of variables and determine how observed variables group together into latent factors.

4.1 Population and Sample

Participants were selected to meet the criteria for both qualitative and quantitative methods. In the qualitative phase, purposive sampling was employed to choose participants with relevant experience on the topic. Purposive sampling involves selecting participants with expert knowledge or experience related to research (Creswell, 2013). According to Patton (as cited in Glesne, 2011, p. 44), qualitative researchers select participants purposefully to gather rich, in-depth data. Participants were selected for their expertise and willingness to share information (Marshall, 1996).

In the quantitative phase, the study targeted Thai employees from private organizations in Thailand. High-potential employees were identified based on self-perceived high-potential status, rather than formal employer designations, to ensure a large sample size. Participants assessed their high potential status via a questionnaire.

4.2 Data Collection

This study gathered both qualitative and quantitative data. The qualitative part aimed to explore potential factors for the learning agility measure for Thai employees. Thus, the author sought to interview two groups of participants who were subject matter experts in learning, and the high potentials working in private organizations. Due to the use of a purposive sampling strategy and a small interview group of participants, the qualitative insights obtained are context-specific and not broadly generalizable. Yet, data saturation was achieved with nine participants. The interview processes were conducted with the participants individually. Subsequently, item generation and initial draft for the learning agility factors were created.

For quantitative data, both self-administered online questionnaire and paper-based forms were used. The questionnaire was distributed to employees across various organizations and industries in Thailand. The study received 128 valid questionnaires for the pilot study.

4.3 Data Analysis

The study employed thematic analysis, which involves coding texts to identify emerging themes and patterns (Glesne, 2011; Schwandt, 2014). The process included transcribing voice recordings word-for-word and assigning participant labels (e.g. Participant A to Participant I), numbering each line in the transcripts for dependability and confirmability, listening to recordings and rereading transcripts multiple times, coding data by categorizing emerging patterns and creating a color-coded codebook in an Excel file, and interpreting findings and generating themes based on coded data.

5. Research Results

5.1 Qualitative Study

The qualitative phase aimed to explore potential learning agility factors in the Thai context. The study involved interviews with two groups of participants who were subject matter experts in learning and high-potential employees from private organizations. Interviews were

conducted individually, and the findings were used to generate factors and items, and an initial draft of the learning measure was developed.

5.1.1 Background of Interview Participants

The study included nine interview participants, comprising four professors from public universities and five corporate executives. Among the professors (Participants A, B, C, and D), three are female and one is male, with expertise in areas such as knowledge management, education, learning, and organizational behavior. The remaining participants (E, F, G, H, and I) are high-potential executives from various industries, including real estate, oil and gas, power generation, and automotive. Among these executives, four are male, and one is female.

5.1.2 Qualitative Study Findings

The inductive approach was utilized in the qualitative phase to explore learning agility factors from participants' experiences and perspectives. The interview questions were structured with three main questions per participant group, with probing questions used for deeper insights.

The first group consisting of academic professionals or learning experts were asked: (1) as a learning expert, what are key factors of learning agility? (2) after reviewing the learning agility factors and items, what are your opinions and suggestions about these factors and items? and (3) from your experiences, what Thai values and culture should be included in learning agility factors? The second group consisting of high-potential employees were asked: (1) as you are recognized by your organization as an agile learner, what are your learning approaches or processes? The remaining two questions were the same as those asked to the first group.

As a result, there were 15 themes emerging from the interviews, as shown in Table 2. Three themes – humility, hospitality, and fun-loving related to Thai cultural aspects were also proposed. Additionally, participants suggested that information gathering was insufficient as agile learners need to select, analyze, and apply information. Therefore, this study renamed the factor to information literacy to reflect this broader scope.

Table 2 Themes of Learning Agility Emerging from the Qualitative Study

Theme	Code
Theme 1: Self-awareness	Code 1.1 Self-awareness
	Code 1.2 Willingness to learn
	Code 1.3 Self-reflection
Theme 2: Social competence	Code 2.1 Open-mindedness
	Code 2.2 Understanding others
	Code 2.3 Social acumen
	Code 2.4 Collaboration
Theme 3: Agile communicator	Code 3.1 Effective communication
	Code 3.2 Convincing others
Theme 4: Change-driven	Code 4.1 Embracing change
	Code 4.2 Driving change
Theme 5: Experimenting	Code 5.1 Trying new ways
	Code 5.2 Creating supportive environments
Theme 6: Result-oriented	Code 6.1 Self-motivation to achieve goals
	Code 6.2 Perseverance
	Code 6.3 Empowering and inspiring others
Theme 7: Mental agility	Code 7.1 Strategic thinking
	Code 7.2 Critical thinking
	Code 7.3 Problem-solving

Theme 8: Feedback seeking	n/a
Theme 9: Flexibility	Code 9.1 Receptiveness Code 9.2 Adaptability Code 9.3 Multi-tasking
Theme 10: Speed	n/a
Theme 11: Environmental mindfulness	Code 10.1 Speed of learning Code 10.2 Proactiveness
Theme 12: Information literacy	n/a
Theme 13: Humility	n/a
Theme 14: Hospitality	n/a
Theme 15: Fun-loving	n/a

5.1.3 Content Validity Assessment

After generating items based on themes and codes from the qualitative study, a content validity assessment was conducted. Four PhD graduates with expertise in the subject and familiarity with the study participated in the IOC process. This study used the item value equal or greater than 0.5, which is acceptable (Brown, 2005). Based on the IOC analysis and expert feedback, modifications were made. As a result, 66 of 81 learning agility items were retained for further analysis.

5.1.4 Pilot Study

There were 128 participants in the pilot study. These participants were employees working in different private companies and industries. The questionnaire participants were 61 men (47.6%), 64 women (50.0%), and 3 unidentified gender (2.3%). The average age range was between 31 and 40 years (50.0%), followed by 41 and 50 (25%), 20 and 30 years (20.3%), and more than 50 years (4.6%). The majority of the participants had a Bachelor's degree (59.3%), followed by a Master's degree (39.0%).

The two highest percentages for the range of employment years in their current company were less than 5 years (69.5%) and 5-10 years (17.1%). Most participants had 11-15 years of total employment years (31.2%), followed by 5-10 years (21.0%). The participants were almost evenly distributed among the two work positions: Officer to Senior Officer (38.2%) and Manager to Senior Manager (37.5%). Most of the participants were from finance/banking/brokerage/insurance industry (55.4%).

5.1.5 Item Analysis

Item discrimination was tested using an independent t-test. To retain items for further analysis, item discrimination needed to have $p \leq 0.05$ and t-ratio > 2.00. (Bhanthumnavin, 2008). Further, item-total correlation was performed to verify whether any item in the developed scale was inconsistent with the average set of items. Any item that had an item-total correlation value less than 0.3 or greater than 0.8 was removed.

In the item analysis of learning agility (LA), three items which were SA2, SA6, and HU4 had coefficient values (r) below 0.3, indicating that they did not contribute effectively to the overall construct. As a result, these items were removed from the study, as shown in Table 3. Therefore, there were 63 items remaining for further analysis. The scale indicated good internal consistency with the Cronbach's Alpha 0.959 meaning that the items reliably measure the same underlying construct.

Table 3 Three Removed Items from Item Analysis

Dimensions	Items	Mean	SD	*t*	*p*	*r*	Selection
Self-awareness	SA2	4.33	0.77	**1.947**	0.000	**0.270**	**Removed**
Self-awareness	SA6	3.84	0.77	4.341	0.000	**0.256**	**Removed**

Humility	HU4	3.95	0.72	3.861	0.000	**0.269**	**Removed**

5.1.6 Exploratory Factor Analysis

The aim of exploratory factor analysis (EFA) was to examine the loading patterns of learning agility items. In this EFA stage, the author performed three steps. First, the author assessed the suitability of the data with the Kaiser-Meyer-Olkin (KMO) to examine if the data was appropriate or not to be analyzed further. If the value of KMO is equal to or greater than 0 with significant values (sig) or probability (*p*) is less than 0.05, then it means the data is eligible for factor analysis (Napitupulu, Kadar, & Jati, 2017). Second, eigenvalue was performed. Third, principal component analysis and varimax rotation were chosen as the tests because the number of variables loaded highly on one factor, and the number of factors needed to explain one variable are minimized (Thompson, 2004).

Table 4 demonstrates the KMO was 0.821 with *p* value 0.000. A value of 0.821 suggests that the sample of 128 is adequately suited for factor analysis. Thus, factor analysis can be performed.

Table 4 KMO and Bartlett's Test for 128 Samples in Pilot Test of Learning Agility

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.821**
Bartlett's Test of Sphericity	Approx. Chi-Square	5151.747
	df	1953
	Sig.	0.000

Then, the total variance explained by the factor analysis can be derived from both the initial eigenvalues and the rotation sums of squared loadings (RSSL). De Vellis (2003) states that an "eigenvalue represents the amount of information captured by a factor" (p. 61) and any factor with an eigenvalue less than 1.0 should be removed from the scale (Kaiser, 1960). The cumulative percentage of the 63 learning agility items grouped into 11 components.

Total variance explanation analysis was conducted to determine the extent to which each component accounts for the overall variance both before and after rotation. Overall, the total explanation of variance of the 11 components of learning agility scale was 62.23%, as shown in Table 5.

Table 5 Total Variance Explained of 11 Components of Learning Agility

Component	**Initial Eigenvalues**			**Rotation Sums of Squared Loadings**		
	Total	**Variance (%)**	**Cumulative (%)**	**Total**	**Variance (%)**	**Cumulative (%)**
1	18.413	29.227	29.227	5.917	9.392	9.392
2	4.179	6.634	35.860	5.005	7.944	17.336
3	2.794	4.435	40.295	4.865	7.722	25.058
4	2.330	3.699	43.994	3.933	6.243	31.301
5	2.189	3.475	47.469	3.873	6.148	37.449
6	1.802	2.860	50.329	3.727	5.915	43.365
7	1.796	2.850	53.179	3.070	4.873	48.237
8	1.623	2.576	55.755	3.025	4.801	53.039
9	1.425	2.262	58.017	2.184	3.467	56.505
10	1.334	2.118	60.135	1.950	3.095	59.600
11	1.322	2.098	62.233	1.659	2.633	62.233

Then, the factor loadings and cross-loadings of the remaining items were examined. Any items that demonstrated a factor-loading value greater than 0.45 on its hypothesized dimension were retained for further analysis. Cross-loadings were also considered in this stage. For this examination, any items that had high factor cross-loadings above 0.45 were excluded from the learning agility scale.

Two items (IL1 and AC3) had cross-loading values greater than 0.45; therefore, these items were removed from the study. Furthermore, this study removed 13 items that had a factor-loading less than 0.45 (SC7, CD1, CD2, CD3, EX1, RO5, MA2, MA4, SP2, SP3, EM1, EM3, and HU3). In addition, this study removed three isolated items (AC5, RO4, and MA3) that did not correlate with any other items in the factor analysis. This phenomenon may be caused by ambiguity of the items causing the questionnaire participants to interpret their definitions in various ways (Tinsley & Brown, 2000).

Therefore, learning agility components were reduced from 15 to 11. Additionally, the study removed three isolated items previously mentioned (AC5, RO4, and MA3), leaving 8 components and 45 items of learning agility scale. Then, the second round of EFA was conducted to examine factor loadings of the remaining 45 items of learning agility. The results revealed that all items had a satisfactory factor-loading value greater than 0.45, as shown in Table 6. As a result, all 45 items were retained for further analysis.

Table 6 Pilot Study Rotated Component Matrix for the 45 Items of Learning Agility

Item	Component							
	1	2	3	4	5	6	7	8
FL3	**0.742**	0.137	0.206	0.084	0.083	0.212	0.056	-0.001
FL1	**0.739**	0.119	0.213	0.179	0.023	0.034	0.094	0.238
FL2	**0.673**	0.090	0.303	0.143	0.145	0.253	0.051	0.289
EX4	**0.660**	0.272	0.032	-0.003	0.265	0.021	0.146	0.041
EX3	**0.605**	0.122	-0.013	-0.012	0.094	0.083	0.249	0.026
EX2	**0.567**	-0.005	0.131	0.179	0.281	0.196	0.149	-0.040
HO3	**0.541**	0.149	0.042	0.311	-0.187	0.142	0.024	0.096
HO2	**0.509**	0.193	0.034	0.370	-0.086	0.037	0.179	-0.093
SC8	0.222	**0.771**	0.172	0.084	0.046	-0.101	0.061	-0.055
SC4	0.166	**0.727**	0.207	0.104	-0.030	0.079	0.037	0.009
SC3	0.128	**0.674**	0.021	0.178	0.092	0.032	0.014	0.054
SC5	0.200	**0.648**	0.069	0.099	0.057	0.189	-0.005	-0.112
AC4	-0.029	**0.573**	0.416	0.003	0.215	0.082	0.289	0.026
AC1	-0.069	**0.557**	0.271	0.156	0.277	-0.075	0.259	0.161
SC2	0.062	**0.537**	0.016	0.305	-0.068	0.135	-0.002	0.467
AC2	0.006	**0.534**	0.219	-0.166	0.256	0.239	0.288	0.216
SC6	0.363	**0.470**	0.278	0.008	0.146	0.015	-0.194	0.227
SP4	0.189	0.075	**0.725**	0.128	0.215	0.079	0.103	0.081
CD5	0.220	0.201	**0.704**	0.194	-0.097	-0.016	0.133	0.210
SP5	0.107	0.242	**0.641**	0.049	0.255	0.040	0.101	-0.079
SP6	0.067	0.322	**0.571**	0.013	0.413	0.278	-0.074	-0.061
CD4	0.199	0.229	**0.558**	0.078	-0.093	0.032	0.249	0.084
RO6	0.102	0.217	**0.515**	0.058	0.263	0.235	0.142	0.057
RO3	0.162	0.247	0.212	**0.665**	0.226	0.053	0.048	0.008
FB2	0.081	0.075	0.152	**0.644**	-0.031	0.179	0.348	0.077
RO1	0.169	0.168	0.256	**0.643**	-0.109	0.156	0.328	0.079
RO2	0.236	-0.014	0.166	**0.601**	0.260	0.190	-0.059	0.034
HU2	0.107	0.047	0.173	0.145	**0.747**	0.033	0.060	0.007

Item	Component							
	1	2	3	4	5	6	7	8
HU1	0.170	0.135	-0.017	0.097	**0.727**	0.259	0.185	0.142
SC1	0.054	0.208	0.123	-0.108	**0.663**	0.208	-0.051	0.173
HO1	0.347	0.274	0.031	-0.031	**0.532**	0.199	-0.002	-0.275
SA1	0.100	0.070	0.079	0.052	0.024	**0.774**	0.140	0.240
FS2	0.178	0.099	-0.142	0.183	0.049	**0.750**	0.128	0.090
FB1	0.163	0.112	0.187	0.117	0.128	**0.575**	0.216	0.107
FS1	0.189	-0.024	0.294	0.180	-0.053	**0.531**	0.242	0.112
SA5	0.021	-0.065	0.133	0.419	0.134	**0.473**	-0.142	0.219
SA3	0.354	0.063	0.150	0.166	0.224	**0.466**	-0.067	0.386
SA4	0.328	0.051	0.201	0.160	-0.023	**0.461**	-0.089	0.376
IL4	0.285	0.148	0.004	0.387	0.231	-0.043	**0.603**	0.352
MA1	0.054	0.310	0.337	0.158	0.153	0.049	**0.593**	-0.053
IL3	0.421	-0.037	0.105	0.341	-0.014	0.071	**0.491**	0.411
IL2	0.253	-0.033	0.299	0.347	0.279	-0.054	**0.468**	0.294
FB3	0.125	0.203	0.129	0.164	0.049	0.090	0.080	**0.763**
EM2	0.082	0.241	0.306	0.003	0.152	0.032	0.018	**0.671**
SP1	0.375	0.218	0.181	0.019	0.399	0.237	-0.027	**0.528**

Total variance explanation was also examined for the 8 learning agility components in the second round of EFA. Total variance explanation analysis was conducted to determine the extent to which each component accounts for the overall variance both before and after rotation. Overall, the total explanation of variance of the 8 components of the learning agility scale was 58.27%, as shown in Table 7.

Table 7 Total Variance Explained of 8 Components of Learning Agility

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
1	13.308	29.574	29.574	4.757	10.572	10.572
2	3.481	7.736	37.310	4.467	9.927	20.499
3	2.398	5.330	42.639	3.778	8.395	28.894
4	2.031	4.514	47.153	3.517	7.815	36.709
5	1.660	3.688	50.841	2.656	5.902	42.611
6	1.559	3.465	54.306	2.574	5.720	48.332
7	1.453	3.229	57.535	2.259	5.019	53.351
8	1.341	2.980	60.515	2.215	4.922	58.273

Finally, this study identified 8 learning agility factors and 45 items. Several learning agility items were regrouped into a new factor, leading the author to assign a new name to each factor that accurately reflects the items within it. Some codes assigned to the items were also renamed. For example, the factor 1 *"learning exploration and sharing",* old codes were renamed as follows: FL1 > LS1, FL2 > LS2, FL3 > LS3, EX2 > LS4, EX3 > LS5, EX4 > LS6, HO2 > LS7, and HO3 > LS8); the factor 3 *"leading and managing change"*, CD4 > LC1, CD5 > LC2, RO6 > LC3, SP4 > LC4, SP5 > LC5, and SP6 > LC6.

The following 8 learning agility factors answered the research question *"what are potential factors for the learning agility measure for Thai employees?"*

Factor 1: Learning exploration and sharing (8 items)

Factor 2: Social competence and agile communication (9 items)

Factor 3: Leading and managing change (6 items)
Factor 4: Result-oriented (4 items)
Factor 5: Humility (4 items)
Factor 6: Self-awareness and self-improvement (7 items)
Factor 7: Information literacy (4 items)
Factor 8: Flexibility and adaptability (3 items)

6. Conclusions

This study aimed to explore, identify, and propose key factors of learning agility of Thai employees by using a sequential mixed-methods approach starting with qualitative study through in-depth interviews with nine participants, following by quantitative study through exploratory factor analysis (EFA) in a pilot study with 128 participants. The findings demonstrated that there were 8 potential learning agility factors: (1) learning exploration and sharing, (2) social competence and agile communication, (3) leading and managing change, (4) result-oriented, (5) humility, (6) self-awareness and self-improvement, (7) information literacy, and (8) flexibility and adaptability.

This study addressed key research gaps. First, it integrated existing measures with Thai values and cultural aspects to create a contextually relevant learning agility measure. Second, it expanded learning agility research to Thai population. Third, it developed an open-access assessment for research and practice. Lastly, it provided empirical research on learning agility in Thailand, bridging an academic and practical knowledge gap for HR practitioners in the region.

7. Discussions

This study identified 8 learning agility factors, comprising a total of 45 items. Of these, 23 items were adapted from existing measures, while the remaining 22 emerged as novel contributions from the current study. Nine of these 22 items, encompassing aspects like social competence and agile communication, leading and managing change, self-awareness and self-improvement, and information literacy, showed consistency with established Western learning agility frameworks. A key differentiation, however, arose from 13 items that distinctly reflected fundamental Thai cultural values, including fun-loving, hospitality, humility, and flexibility. Among these, “humility” and “fun-loving” stood out as a particularly significant and culturally specific contribution. Humility highlights the importance of acknowledging one’s limitations and kindness, and fun-loving aligns with the value of “sanook” to foster engagement and social connection in learning. These two factors were not found in Western learning agility measures.

This study also refined the definition of learning agility for Thai employees by removing several existing items, which further distinguished it from Western perspectives. For instance, the exclusion of “I perform well under first time or tough situations” suggests that for Thais, learning agility prioritizes the willingness and ability to learn and to transform experiences, rather than focusing on immediate success in unfamiliar or challenging situations. This finding aligns with both learning goal orientation (VandeWalle, 1997) and Kolb’s Experiential Learning Theory (Kolb, 1984). Furthermore, the removal of most “mental agility” elements such as critical thinking, root cause analysis, and comfort with uncertainty implies these skills might be less prevalent or emphasized, possibly due to cultural factors such as high-power distance and a preference for quick solutions. This contributes to a more culturally specific interpretation of learning agility in Thailand compared to Western concepts.

8. Recommendations for Future Research and Practices

This study identified potential learning agility factors for Thai employees. The 8 factors, comprising 45 items tested through EFA, should undergo confirmatory factor analysis

(CFA) to test the validity and reliability of these factors and items. Future research should rigorously examine the criterion-related validity of the proposed learning agility measure by investigating its correlation with established indicators such as job performance, leadership potential, or productivity. Conducting these investigations across diverse industries and various segments of the Thai workforce will be crucial for assessing the measure's generalizability and practical utility within the Thai context. Additionally, future research could investigate learning agility factors by integrating context-specific cultural dimensions to broaden the applicability of learning agility research within applied settings. Besides, the further validated measure can be utilized by HR practitioners for recruitment, talent identification, succession planning, and leadership development within a specific context.

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