A Study of Employee Learning Agility - The Effects of Individual Differences and The Work and Learning Context

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Abstract

Purpose – During the last decade, learning agility has continued to grow as an important construct in the field of leadership development and talent management. The current academic debates on the construct, however, is less about its relevance to the organization but more about the definitional boundary lines; i.e. what kind of and how much its antecedents play a role. Therefore, this study aims to theoretically explore its relationship with rigorous models of personality (HEXACO) and motivation (goal orientation); as well as how they can interact with the environment, i.e. what kind of learning (or motivational) climate that supports the emergence of learning agility within the organization. The author also presents a model for the learning agility – HEXACO personality traits, goal orientations, motivational climates linkages and propositions to guide future research.

Design/methodology/approach – The author presents a conceptual model proposing HEXACO personality traits and goal orientations as the antecedents of learning agility; and motivational climates as the moderators of the relationship between HEXACO personality traits, goal orientations and learning agility.

Findings – In addition to the conceptual model, the author presents a number of testable propositions for determining how HEXACO personality traits and goal orientations can contribute to learning agility; as well as how motivational climates can interact with those dispositional factors in explaining the learning agility.

Originality/value – A noteworthy future research on learning agility should cover the role of the environment; given the dynamic and complex nature of organizations surrounding the employees. Through motivational climate construct from the achievement goal theory, this study will contribute to the overall body of knowledge of learning agility by investigating the work and learning context surrounding its emergence within an organization. Research investigating the interaction between motivational climate and personality has also been scant. Besides that, the research investigating the relationship between personality, motivation and learning agility are still scant and inconsistent. Most research has not taken advantage yet of the latest models of personality (HEXACO model) and goal orientation (3x2 model) to explain their relationships with learning agility. Therefore, this study is expected to be a valuable theoretical expansion in these lines of research by establishing arguments for testable propositions and future research directions.

Keywords – Learning agility, HEXACO personality trait, goal orientation, motivational climate

Paper type – Conceptual paper

'Learning' is an imperative process toward survival for any complex organism, be it human beings or organizations. This is particularly true nowadays as globalization and digitalization have continued to grow in an unprecedented rate resulting in a continuously changing, dynamic world. In the context of

Organizational Change and Development (OCD) field, these shifts place unique demands on a variety of organizations and require many different capabilities from workers of all hierarchical levels. A number of industry research conducted by Oxford Economics, DDI, The Conference Board, Ernst & Young, Deloitte and Mercer toward organizations globally during the last decade have examined how such transformations in the corporate environment affect workforce needs in the future ("Global Talent 2021", 2012; "Global Leadership Forecast 2018", 2018; "2018 Deloitte Global Human Capital Trends", 2018; "2018 Global Talent Trends Study", 2018). Being agile, innovative, having the ability to consider multiple scenarios, dealing with complexity and managing paradoxes were noted as some of the "in-demand skills" for the next ten year ("Global Talent 2021," 2012). Being "agile" means that employees need to continuously "stay relevant"; i.e. diversifying one's skill set and engaging in continuous adaptation (Hogan, Chamorro-Premuzic & Kaiser, 2013; de Fruyt, Wille & John, 2015). Individuals must accelerate their learning to remain relevant, are encouraged to stretch themselves, try new things and operate outside of their comfort zone ("2018 Global Talent Trends Study," 2018).

Bass & Bass (2008) concluded that when an organization needs to reflect changes in technology and environment, its leadership is critical in orchestrating such process. Therefore, it is obvious that organizations are designating leadership as their top strategic priority and a potential source of competitive advantage, thus investing in its development (Day, Harrison & Halpin, 2009). This study will focus on the construct of *learning agility*. Originated from the issue of identifying next-generation leaders, Eichinger & Lombardo firstly coined the term in 2000 and argued that leadership potential should be a function of individuals' agility to learn from experience. Selection of leadership potential should account for his/her learning agility to adapt to the demands of future roles rather than something that the individual can already demonstrate (i.e. his/her performance in current or past roles). It is the individual's ability and willingness to learn from experience *and* apply what he/she has learned in a new, different – very often challenging – situation that differentiates high potentials from mere performers (Eichinger & Lombardo, 2000).

After introduced for more than a decade, the construct has garnered interest both from the practitioner as well as the academic community. Learning agility has been an increasing part of competency models and high potential frameworks in organizations ("Potential: Who's Doing What," 2015; Church et al., 2015; Rotolo et al., 2018). It receives a lot of market pull and is being applied in the organizations' high potential identification and senior leadership assessment processes (Silzer & Church, 2009; Church & Rotolo, 2013; Finkelstein, Costanza & Goodwin, 2018). Learning agility was found to be positively related to current performance (Eichinger & Lombardo, 2000; Bedford, 2011; Miklos, Herb & Forbringer, 2013) as well as the potential for advancement. Dries, Vantilborgh & Pepermans (2012) found that learning agility is a strong predictor of one being identified as a high potential (i.e. increase his/her likelihood of being identified as a high potential by a factor of 18); even a better predictor than job performance, which is still a predominant aspect of high potential identification processes in many organizations today. A recent meta-analysis study of different learning agility studies conducted during the last 15 years suggests a relatively strong relationship between learning agility and the success of leaders (De Meuse, 2017).

As a relatively new construct, the market interests toward learning agility have been growing very fast beyond robust empirical substantiation. DeRue, Ashford & Myers (2012) suggested that clearer-defined conceptualization of learning agility is critical to understand the nuances and complexities of

the construct and assess its broader organizational impact. As concluded by De Meuse (2015; 2017) and Rotolo et al. (2018), until now researchers have not yet agreed on how to define – nor even measure – the construct of learning agility; as it is still an 'infant' construct and will continue to evolve. Most learning agility studies still hold on to the original model by Eichinger & Lombardo (2000), whereas the rest either establishing their own definition or using consultants' proprietary definition. There are numbers of consulting firms that widely commercialize learning agility assessment, in which all of them define and measure it differently. Nevertheless, there are at least five areas agreed by most of the academic researchers until now (De Meuse, 2017), which are (1) conceptualizing it in terms of learning from experience; (2) viewing it as a multidimensional construct; (3) postulating it as one of the key predictors of leaders' performance and potential, thus (4) playing a key role in the development efforts as well; and finally (5) encouraging additional research to be conducted.

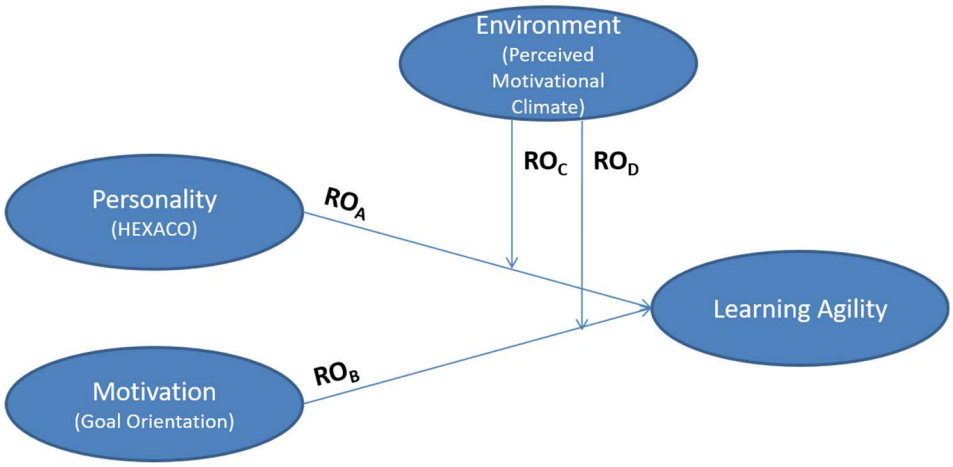
Theoretical background

Learning Agility

In 2012, a seminal work was conducted by DeRue, Ashford & Myers (2012). Aside of defining it more narrowly, their research was also aimed to conceptually clarify several relevant constructs related to learning agility, including individual differences that promote learning agility; cognitive and behavioural processes that underlie it; and organizational environment that enhance the degree in which people engage in agile learning. In terms of individual differences, their exemplary factors here were goal orientation, cognitive ability, and one personality trait of Openness to Experience. The latest development of learning agility model was established by Hoff & Burke (2017) from Teachers College, Columbia University. They 'harmonize' the different streams of learning agility theory by also taking DeRue, Ashford & Myers' (2012) model into account. Learning agility is about "*dealing with new experiences flexibly and rapidly by trying new behaviour, getting feedback on these attempts, and making quick adjustments so new learning will be realized when you do not know exactly what to do*" (Burke, 2016, p. 12). Learning agility can be seen as an integration of ability and motivational aspects to learn from experience and that learning agile individuals adjust their behaviours along with the change in the situation. Aligned with DeRue, Ashford & Myers (2012), Hoff & Burke's (2017) 'agility' is based on two dimensions (flexibility and speed); while 'learning' further comprises of seven dimensions (experimenting, performance risk-taking, interpersonal risk-taking, collaborating, Information gathering, feedback-seeking and reflecting). These nine dimensions – sort of – provide a logical order of behaviours leading to learning agility.

1. Flexibility: Flexibility is being open to new ideas and proposing new solutions.
2. Speed: Speed is acting on ideas fast so that those not working are discarded and other possibilities are accelerated.
3. Experimenting: Experimenting pertains to trying out new behaviours (i.e. approaches, ideas) to determine what is effective.
4. Performance risk-taking: Performance risk-taking is about seeking new activities (i.e. tasks, assignments, roles) that provide individual opportunities to be challenged.
5. Interpersonal risk-taking: Interpersonal risk-taking pertains to discussing differences with others in ways that lead to learning and change.
6. Collaborating: Collaborating is about finding ways to work with others to generate unique opportunities for learning.
7. Information gathering: Information gathering pertains to 'keeping up,' that is staying relevant and informed about one's professional and work matters, especially those that are subject frequently.
8. Feedback seeking: Feedback seeking is about asking others for feedback on one's idea and overall performance.
9. Reflecting: Reflecting pertains to slowing down to evaluate one's own performance to be more effective.

Given the fluidity of the construct conceptualization, it seems sensible to position this study as a continuation of these latest lines of research. In order to embed learning agility into leadership development best practices and prevent it from becoming another management "fad"; it is critical to ensure that the construct is properly defined, well researched, *consistently* measured and reported back to organizations (Rotolo et al., 2018). Rotolo et al. (2018) concluded that the current academic debates are less about the relevance of learning agility; but more on its definitional boundary lines and the extent to which and how much the antecedents play a role in shaping it. Therefore, this study would like to extend DeRue, Ashford & Myers' (2012) model by theoretically exploring its relationship with more rigorous models of personality and goal orientation; as well as how they can interact with the environment, i.e. what kind of learning climate that supports the emergence of learning agility within the organization.



Proposed Research Model

DeRue, Ashford & Myers (2012) suggested that noteworthy future research should also cover the role of the environment; given the dynamic and complex nature of organizations surrounding the employees. The learning process itself takes place in an environment where meanings are contested, rapidly changing and often ambiguous. Employees learn with and from other individuals with their own sense of meaning and try to shape interpretations based on it (DeRue, Ashford & Myers, 2012). They can fail and, depends on the organization, might punished or still be rewarded. In one organization, performance is narrowly measured by the end result; yet for some other organizations, they also consider the process in achieving it (Hughes, 2009; De Meuse, Dai & Hallenbeck, 2010). Learning in such settings involves real emotions and would be challenging as individuals can experience anxieties for fear of negative consequences, and hence, may hesitate to initiate new ways of thinking and doing (Coutu, 2002; Gavetti & Rivkin, 2005). These complex realities make learning agility.

Personality (HEXACO)

Personality is one of the most important building blocks in explaining human behaviour. Personality itself can be defined as the psychological qualities that influence a person's characteristic behavioural patterns, in stable and distinctive manners (Buchanan & Huczynski, 2017). After being introduced for almost two decades, there was just a handful of research that has shown relationships between

learning agility and personality. Most of the research used the Five-Factor Model (FFM) of personality (Eichinger & Lombardo, 2000; Mitchinson et al., 2012; Mitchinson & Morris, 2014; Allen, 2016) and yielded somewhat conflicting results.

This study would like to propose examining learning agility using a more robust personality model than FFM, which is the HEXACO model (Lee & Ashton, 2004). Despite numerous studies since the 1980s have found only five underlying factors or taxonomy of personality, recent studies conducted in various languages (including English) with larger sets of adjectives have recovered six factors (Lee & Ashton, 2008; Saucier, 2009). The HEXACO model is an improvement over the FFM as it is not just a reorganization of personality facets; it measures a larger number of traits (Hough, Oswald & Ock, 2015). Several follow up studies on HEXACO model, in both organizational and academic settings, concluded that HEXACO factors provide stronger validities or overall R2 than Big Five factors (e.g. Kajonius, 2016; de Vries, de Vries & Born, 2011; Silvia et al., 2011; de Vries et al., 2009; Lee & Ashton, 2008; Marcus et al., 2007; Lee, Ashton & de Vries, 2005). In a recent study, Anglim & O'Connor (2018) suggested that whilst FFM represents a general personality framework that is appropriate to be employed across multiple situations, researchers should be aware of alternative measures (such as the HEXACO) as they could bring novel perspectives into the picture.

By incorporating the theoretical foundation of FFM, Lee & Ashton (2004; 2007) developed the HEXACO model in order to explain human personality traits such as Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O). Honesty-Humility is the factor covering rules, social status, and manipulating behaviours. Emotionality (or Neuroticism in the FFM) is the factor considering fear, stress and worry, and need for emotional support and attachment. Extraversion is the factor concerning social situations, activities, and self-concept. Agreeableness is the factor which covering issues of anger, judgment, compromise and cooperation. Conscientiousness is the factor considering personal discipline, organization, and impulse control. And finally, Openness to Experience is the factor concerning the appreciation toward art and beauty, intellectual curiosity and flexibility or exploration.

Motivation (Goal Orientation)

Besides looking at how personality plays its part in predicting learning agility, this study would like to propose the motivational factors behind why a person engages in agile learning behaviour. Motivation itself has been specifically emphasized as one of the important elements of learning from experience and learning agility (Dominick, Squires & Cervone, 2010; Carette & Anseel, 2012; Arun, Coyle & Hauenstein, 2012). One viable framework that might be suggested by the author is the goal orientation theory. As a form of achievement motivation, the construct of 'goal orientation' itself was firstly coined by Dweck in 1986 (VandeWalle, Cron & Slocum, 2001). Goal orientation can be defined as individuals' propensity to pursue goals related to learning and mastery **or** performance and rewards (Dweck, 1986).

- "Mastery goal orientation" is an individual's desire to increase knowledge and develop competence through effortful learning; and
- "Performance goal orientation" is an individual's desire to gain social favourable judgments of one's competence.

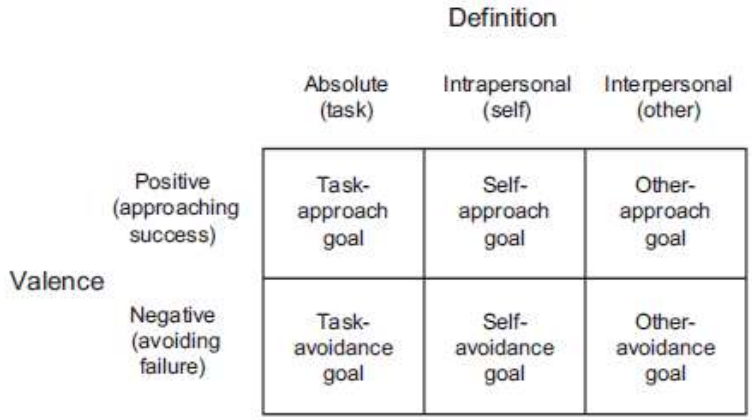
As an illustration, if a person wants to learn something, is it because he/she wants to look better than his/her peers (performance goal orientation) or is it because he/she wants to master the knowledge

and skills (mastery goal orientation)? Therefore, we can say that goal orientation theory aims to explain *why a person wants to engage in specific learning behaviour.*

Although goal orientation has been deemed as a key construct affecting learning agility, the empirical research proving such relationship has been inconsistent (De Meuse, Dai & Hallenbeck, 2010; Mitchinson et al., 2012; De Meuse et al., 2011; Allen, 2016). Besides that, most of them until now has not taken advantage of the latest model of goal orientation as well as fully utilising the 'valence' concept in it. As this study would like to know why an individual engages in learning agile behaviour, it might be important to investigate deeper on 'why' (or the motivational base) as well as 'in what motivational direction' (or valence) he/she is engaging the behaviour. As we will see later in the discussion section, this study proposes to utilise Elliot, Murayama & Pekrun's (2011) latest model of goal orientation. In this model, they separated "mastery goal orientation" into "task-based" and "self-based" categories. "Task-based" goals focus on how individuals are doing relative to the absolute demands of the task or activity (e.g. the degree to which individuals have or have not accomplished the activity, answered correctly, understood the idea, etc.), whereas "self-based" goals focus on how they are doing in relative to their own trajectory (e.g. the degree to which individuals are or are not improving) (Mascret, Elliot & Cury, 2015). "Performance" or "other-based" goal orientations use an interpersonal evaluative referent; thus, competence is defined in terms of doing better or worse against others.

These competence definitions (which consist of "task," "self" and "other" / perceived competence components) are then crossed with a valence of competence (desirable possibility or success and undesirable possibility or failure). These positive and negative possibilities are integrally linked to approach and avoidance tendencies (Mascret, Elliot & Cury, 2015). Approach-based goal orientations focus on success and the individual's tendency involves moving forward or maintaining this positive possibility. On the contrary, avoidance-based goal orientations focus on failure and individual's tendency involves moving away or hindering this negative possibility (Elliot, Murayama & Pekrun, 2011). Therefore, there are now six distinct goal orientations:

- A 'task-approach' mastery goal orientation that focuses on attaining task-based competence (e.g. 'do the task correctly'),
- A 'task-avoidance' mastery goal orientation that focuses to avoid task-based incompetence (e.g. 'avoid doing the task incorrectly'),
- A 'self-approach' mastery goal orientation that focuses on the attainment of self-based perceived competence (e.g. 'do better than before'),
- A 'self-avoidance' mastery goal orientation that focuses on avoiding self-based perceived incompetence (e.g. 'avoid doing worse than before'),
- An 'other-approach' performance goal orientation that focuses on the attainment of other-based perceived competence (e.g. 'do better than others'),
- And finally an 'other-avoidance' performance goal orientation that focuses on avoiding other-based perceived incompetence (e.g. 'avoid doing worse than others').



The 3 x 2 goal orientation model (Elliot, Murayama & Pekrun, 2011, p. 634)

Environment (Perceived Motivational Climate)

Finally, this study would like to also scrutinize the intra-organizational 'contextual' factors that might affect learning agility. Past research (e.g. De Meuse, Dai & Hallenbeck, 2010) has tried to explore the organizational consequences of learning agility; however, less attention has been directed to understand the environmental factors within that organization which might support or impede the emergence of learning agility (DeRue, Ashford & Myers, 2012). There are numbers of literature on the moderating roles of learning climate in explaining individual's behaviour and performance in organizational setting (e.g. Penney, David & Witt, 2011; Tett & Burnet, 2003; Černe et al., 2017; Černe et al., 2014; Birkeland & Nerstad, 2016; Buch, Nerstad & Säfvenbom, 2017; Škerlavaj et al., 2017; Nerstad et al., 2018a). As this study considers personality and motivation as the antecedents of learning agility, the author believes that much can be gained by looking into the learning climate that might moderate the personality – learning agility and goal orientation – learning agility relationships.

Bearing the same theoretical root with the above-mentioned goal orientation theory, this study suggests employing motivational climates (Ames, 1992a; Nicholls, 1984) as the moderating variable. Motivational climates might serve as a context as they are built on employees' shared perceptions of the existing organizational criteria for success and failure. These climates describe which goals to achieve and how they are evaluated (Ames & Ames, 1984). They have the potential to affect the salience of individuals' goals; thus leading to distinct patterns of behaviour, affect, cognition and performance (Ames & Archer, 1988). Shaped by the organization's policies, practices and procedures (Nerstad, Roberts & Richardsen, 2013); they aid employees' understanding of what behaviours that are expected and rewarded (Černe et al., 2014; 2017). Such climates also have been found influencing employees' moral orientations, social norms and actions toward their colleague in an achievement setting (i.e. working with or working against them) (Roberts, 2012).

There are two types of motivational climate which are mastery and performance climate. Mastery climate fosters employees' effort and cooperation in learning, development and skill mastery (Ames, 1992a; 1992b; Nicholls, 1984). This climate contributes to the development of 'collaborative learning' peer norms and positive relationships with significant others (Ames & Ames, 1984). It has been found to promote intrinsic motivation (e.g. Buch, Nerstad & Säfvenbom, 2017), workplace performance, more adaptive behaviours or achievement strategies, more mature level of social–moral or ethical

reasoning, higher degree of learning enjoyment and well-being, higher level of engagement, task perseverance and persistence in the face of difficulty, as well as lesser knowledge-hiding behaviour (Ntoumanis & Biddle, 1999; Van De Pol, Kavussanu & Ring, 2012; Roberts, 2012; Nerstad, Roberts & Richardsen, 2013; Černe et al., 2014; 2017). Poortvliet et al. (2009) also found that in mastery goal reward structures, employees are encouraged to openly share high-quality information (including their failures) regardless of the other's performance level.

On the contrary, performance climate accentuates normative criteria for success (Nicholls, 1984; Roberts, 2012); that mistakes and poor performance will be 'punished.' This climate fosters forced social comparison and intra-team competition; thus, only those who are the best performers are publicly acknowledged as successful (Ames & Ames, 1984; Newton & Duda, 1999; Černe et al., 2014; 2017). The term 'normative' here refers to the criteria of success and failure is being other-referenced (Ames, 1992a; Roberts, 2012). Several studies (e.g. Ntoumanis & Biddle, 1999; Cumming et al., 2007; Buch, Nerstad & Säfvenbom, 2017) suggest a negative relationship of this climate with intrinsic motivation; as behaviour is conducted due to external reward rather than for the sake of the behaviour itself. In this climate, individuals are primarily motivated to perform better than their colleagues and overwhelmed by comparative information, thus negative interdependence among employees might be established (Ames & Ames, 1984; Černe et al., 2014; 2017). They perceive their peers as competitors and may view knowledge sharing behaviour as reducing their own advantage (Poortvliet & Giebels, 2012).

Discussion and hypotheses for future research

RO_A: Personality trait as an antecedent of learning agility

Previous research exploring the relationship between personality and learning agility (Eichinger & Lombardo, 2000; Mitchinson et al., 2012; Mitchinson & Morris, 2014; Allen, 2016) suggested that individuals high in learning agility are more open to new experiences and ways of doing things (high Openness to Experience), more open to the sensory stimulation of other people or the situation itself (high Extraversion) and more process-driven in terms of achieving goals (high Conscientiousness). Additionally, they are likely to have good ability to remain calm and focus when dealing with stress (low Neuroticism) and have fewer accommodating behaviours (low Agreeableness).

Regarding the above-mentioned HEXACO model, the author argues all factors to be positively correlated with learning agility, except for Conscientiousness and Emotionality (or Neuroticism in the FFM). Individuals high in Honesty-Humility (H) avoids social manipulation, breaking the rules and feel no special entitlement to self-importance (Lee & Ashton, 2004; 2007). It has been found positively related with ethical or pro-social behaviour (Ashton & Lee, 2008) but negatively with psychopathy, egoism, pretentiousness, immorality and "Machiavellianism" traits (de Vries & van Kampen, 2010). Compared to FFM, this "H" trait might yield additional insights to explain the learning agile behaviour. Given several learning agility dimensions are closely related to non-self-promoting, collaborative learning behaviours and even tend to "show one's own weaknesses" to others (e.g. "interpersonal risk-taking", "collaborating", "feedback seeking"); a high degree of Honesty-Humility might be more supportive toward these dimensions rather than the low one. Therefore, a hypothesis that might be investigated further in future empirical research is:

1. H_1A_1: The Honesty-Humility (H) trait of the HEXACO personality model positively predicts learning agility.

Individuals high in Extraversion (X) feel positive about themselves, enthusiastic, energized and confident in interacting or leading others (Lee & Ashton, 2004; 2007). A high degree of this trait in a corporate learning situation might pose an answer toward the above-mentioned learning anxieties and hesitation (Coutu, 2002; Gavetti & Rivkin, 2005). Individuals high in Agreeableness (A) are forgiving, non-judgemental, willing to compromise and cooperate with others, and able to control their temper (Lee & Ashton, 2004; 2007). In contrast with the previous findings, agile learners should be individuals with considerable focus on building their relationship with others. They are more in getting along with others, being cooperative and willing to compromise their interests; rather than portraying non-accommodating behaviours (De Meuse, 2017). Finally, individuals high in Openness to Experience (O) are inquisitive about various domains of knowledge, use their imagination freely, and take an interest in creative ideas or people (Lee & Ashton, 2004; 2007). Being open to new experiences might contradict previous Individuals' learning and experiences, thus forcing them to be "flexible" toward new scenarios (DeRue, Ashford & Myers, 2012). It is found related to motivation to learn (Major, Turner & Fletcher, 2006), individual and organizational proactivity (Neal et al., 2011), academic success (Komarraju et al., 2011), artistic and scientific creativity (Feist, 1998), intelligence (Moutafi, Furnham & Crump, 2006) and motivation toward intellectual pursuits to increase knowledge (Furnham & Chamorro-Premuzic, 2008). Therefore, hypotheses that might be investigated further in future empirical research are:

2. H_1A_3: The Extraversion (X) trait of the HEXACO personality model positively predicts learning agility.
3. H_1A_4: The Agreeableness (A) trait of the HEXACO personality model positively predicts learning agility.
4. H_1A_6: The Openness to Experience (O) trait of the HEXACO personality model positively predicts learning agility.

On the contrary, individuals low in Emotionality (E) are not deterred by the prospect of physical harm and feel little worry even in stressful situations (Lee & Ashton, 2004; 2007). They are more likely to have good ability to remain calm and focus when dealing with stress. Individuals that score low in Conscientiousness scale do not put their focus in orderly surroundings or schedules and comfortable with work that might contain some errors (Lee & Ashton, 2004; 2007). In contrast with the previous findings, agile learners should embrace complexity, examine issues from a broad, high-level perspective and tend to be non-linear thinkers; rather than organized, planful and detail-oriented individuals (De Meuse, 2017). Research by Brown and Sitzman (2011) found that planning (a key part of Conscientiousness trait) was not significantly related to self-regulated learning. Another research by Sanderson et al. (2016) also supported this notion by finding Conscientiousness to be negatively related to multi-tasking ability. Therefore, hypotheses that might be investigated further in future empirical research are:

5. H_1A_2: The Emotionality (E) trait of the HEXACO personality model negatively predicts learning agility.

6. H_1A_5: The Conscientiousness (C) trait of the HEXACO personality model negatively predicts learning agility.

RO_B: Goal orientation as an antecedent of learning agility

As this study proposes to utilise the latest model of goal orientation (i.e. 3 x 2 goal orientation model), it is important to look into specific literature and hypothesize the relationship between each of the orientation with learning agility. Since being introduced in 2011 by Elliot, Murayama & Pekrun, there have been just a handful of empirical studies utilising this model and validating its relationship with learning-related constructs (e.g. Elliot, Murayama & Pekrun, 2011; Gillet et al., 2015; Lüftenegger et al., 2016; Méndez-Giménez et al., 2017; Ning, 2018). Their research is summarised in the table below.

Task-approach mastery goal orientation has been found positively related to learning efficacy (i.e. learner's belief toward his/her capacity in achieving his/her learning goals), intrinsic motivation to learn (Elliot, Murayama & Pekrun, 2011); and the individual's self-determination (Méndez-Giménez et al., 2017). This orientation has also found to be related significantly with several learning emotions, such as positive affects (i.e. enthusiast, inspired and determined) (Gillet et al., 2015), learning enjoyment and inversely with learning boredom (Lüftenegger et al., 2016). In relations to the learning outcome itself, this orientation was found to be related to academic achievement (Lüftenegger et al., 2016). Regarding the learning process undergone by an individual, this orientation has found to positively affect cognitive engagement or absorption (Elliot, Murayama & Pekrun, 2011; Gillet et al., 2015). In a recent research of the model in the context of Hong Kong, Ning (2018) found that this orientation also positively relates to 'deep' strategies to learn (as opposed to 'surface' strategy); which are intention to understand for oneself (i.e. look for a deeper meaning of the knowledge) and relate ideas (i.e. make sense of things by linking them to what he/she knows already). Such increased intentions to understand deeper and relate ideas might be contributive toward the speed and flexibility dimensions of learning agility. Finally, this orientation was also found to positively related to instrumental help-seeking (i.e. seek help to solve a problem by him/herself; which is opposed to executive help-seeking which is more to directly solve the problem without his/her personal involvement) (Ning, 2018). In overall, these significant and positive relationships toward learning efficacy, motivation, positive affect and enjoyment, as well as absorption or engagement in the learning process itself might suggest a positive relationship between task-approach mastery goal orientation with learning agility. Similar like task-approach orientation, self-approach mastery goal orientation was also found to be positively related to one's self-determination (Méndez-Giménez et al., 2017), level of energy and engagement in the learning process (Elliot, Murayama & Pekrun, 2011; Gillet et al., 2015), learning enjoyment (Lüftenegger et al., 2016), as well as the same 'understanding' strategy (Ning, 2018). Therefore, the assumed relationship of this orientation with learning agility might also be a positive one. Hypotheses that might be investigated further in future empirical research are:

7. H_1B_1: The task-approach mastery goal orientation positively predicts learning agility.
8. H_1B_2: The self-approach mastery goal orientation positively predicts learning agility.

As for task-avoidance and self-avoidance mastery goal orientations, their postulated relationships with learning agility might not be as clear; since these orientations themselves call for further relationship investigation, especially with achievement-relevant dependent variables (Elliot,

Murayama & Pekrun, 2011; Méndez-Giménez et al., 2017). The research findings suggesting the relationship between the two orientations and learning-related constructs are scant compared to task-approach and self-approach orientations. Task-avoidance orientation was found to be negatively related to self-determination (Méndez-Giménez et al., 2017) and positively related to the induction of learning anxiety (Gillet et al., 2015). However, at the same time, it was also related to positive affect and engagement (Gillet et al., 2015); thus making the hypothesized relationship with learning agility less apparent. Similarly, self-avoidance orientation was also found to be related to the inhibition of learning energy and exam performance achievement (Elliot, Murayama & Pekrun, 2011). However, at the same time, this orientation was also related to learning enjoyment (Gillet et al., 2015) and instrumental help-seeking (Ning, 2018). Despite the above inconsistencies; considering the mechanism of the competence valence accentuated by Elliot, Murayama & Pekrun (2011); the relationship between these two orientations and learning agility might still be a negative one.

Compared to task-approach and self-approach orientations those regularly 'remind' and use success as the hub of one's regulatory activity, these two avoidance orientations use failure as the hub; thus evoking and perpetuating threat, anxiety and vigilance, as he/she is repeatedly reminded of the possibility of failing (Pekrun et al., 2006; 2009). While the mechanism in approach orientations tends to promote commitment, absorption and broad and open approach to task engagement; the aversive mechanism in avoidance orientations tends to prompt self-worth concerns that prevent absorption and interfere with task attention (Elliot, Murayama & Pekrun, 2011). Moreover, cognitive activity toward failure avoidance might be quite rigid and restricted. Thus, Elliot et al. (2005) concluded that approach-based goals pursuit might feel more 'positive' and facilitate more efficient and effective task engagement. The above notions also correspond with Regulatory Fit Theory (RFT) that examines the relationship between one's motivation and the way in which he/she goes about achieving his / her goal (Higgins, 1997). This goal pursuit theory differentiates between two separate and independent motivational orientations of "promotion" and "prevention". A "promotion" focus concentrates in success or gains and emphasizes hopes, accomplishments and advancement needs. On the other hand, a "prevention" focus concentrates in failure or losses and emphasizes safety, responsibility and security needs. Therefore, hypotheses that might be investigated further in future empirical research are:

9. H_1B_3: The task-avoidance mastery goal orientation negatively predicts learning agility.
10. H_1B_4: The self-avoidance mastery goal orientation negatively predicts learning agility.

While mastery goal-oriented individuals focus on building new competencies, performance goal-oriented individuals focus on meeting the expected standard of those competencies (VandeWalle, 1997). Although performance orientation, in general, is often assumed to have a negative impact on learning, other-approach performance goal orientation might positively contribute to learning agile behaviours (VandeWalle, Cron & Slocum, 2001; DeRue, Ashford & Myers, 2012). It was found to be positively related to one's innovative behaviour and personal bricolage (Davis et al., 2013), learning efficacy (Elliot, Murayama & Pekrun, 2011), elicitation of engagement, positive affect (Gillet et al., 2015) and learning enjoyment (Lüftenegger et al., 2016). This orientation was found to be positively related to learning outcomes in three different studies, such as with exam performance (Elliot, Murayama & Pekrun, 2011), academic achievement (Lüftenegger et al., 2016) and cumulative GPA (Ning, 2018). DeRue, Ashford & Myers (2012) postulated that the combination of mastery and this

orientation will enable individuals to learn from experience and use the lessons generated to improve their performance, thus maximizing their learning agility. The mastery orientation will establish the flexibility and openness to new insights from the experience, and this orientation should encourage them to incorporate those new lessons fast into their behaviours and routines to eventually improve their performance. Therefore, a hypothesis that might be investigated further in future empirical research is:

11. H_1B_5: The other-approach performance goal orientation positively predicts learning agility.

On the other hand, other-avoidance performance goal orientation has been shown to negatively relate to the effect of performance feedback, as well as the performance after the feedback (VandeWalle, Cron & Slocum, 2001). It was negatively related to individuals' self-efficacy and goal setting level. It has also been demonstrated having a negative correlation with personal bricolage (Davis et al., 2013). One explanation of this was a person with this orientation often avoids adaptive behaviour or challenging role, out of a desire to avoid failure of the newly adopted behaviour and being criticized for that. Research on self-regulated learning behaviours also showed that this orientation was negatively related to individuals' cognition, meta-cognition and motivation; affecting their self-regulated behaviours as well as actual performance (Porath & Bateman, 2006). It was also found to be negatively related to one's learning efficacy (Elliot, Murayama & Pekrun, 2011), thus explaining its contributions toward negative learning emotions, such as worry (Elliot, Murayama & Pekrun, 2011) and anxiety (Gillet et al., 2015). This orientation was found to be negatively related to two learning outcomes, which were exam performance (Elliot, Murayama & Pekrun, 2011) and cumulative GPA (Ning, 2018). Therefore, contrary to mastery and other-approach performance goal orientations, this orientation might negatively relate to learning agility, primarily due to avoidance toward failure and being criticized by others. Therefore, a hypothesis that might be investigated further in future empirical research is:

12. H_1B_6: The other-avoidance performance goal orientation negatively predicts learning agility.

Learning-related Constructs (DV) \ Goal Orientation (IV)		Task-approach Mastery GO	Task-avoidance Mastery GO	Self-approach Mastery GO	Self-avoidance Mastery GO	Other-approach Performance GO	Other-avoidance Performance GO	Scholar(s)
Learning Efficacy and Motivation								
Learning Efficacy	Relationship	+	-	-	-	+	-	Elliot, Murayama & Pekrun (2011)
	Significant?	Y	N	N	N	Y	Y	
Intrinsic Motivation	Relationship	+	-	-	+	+	-	
	Significant?	Y	N	N	N	N	N	
Academic Motivation / Self Determination Index	Relationship	+	-	+	-	-	+	Méndez-Giménez et al. (2017)
	Significant?	Y	Y	Y	N	Y	N	
Learning Emotions								
Learning Excitement / Energy in Class	Relationship	-	+	+	-	+	-	Elliot, Murayama & Pekrun (2011)
	Significant?	N	N	Y	Y	N	N	
Worry about Exams (Inverse)	Relationship	-	-	+	-	-	+	
	Significant?	N	N	N	N	N	Y	
Learning Anxiety (Inverse)	Relationship	+	+	+	+	+	+	Gillet et al. (2015)
	Significant?	N	Y	N	N	N	Y	
Course Positive Affect	Relationship - Sample #1	+	+	+	-	+	+	
	Significant? - Sample #1	Y	N	N	N	N	N	
	Relationship - Sample #2	+	+	+	+	+	+	
	Significant? - Sample #2	Y	Y	N	N	Y	Y	
Learning Enjoyment	Relationship	+	-	+	+	+	+	Lüftenegger et al. (2016)
	Significant?	Y	N	Y	Y	Y	Y	
Learning Boredom (Inverse)	Relationship	-	-	-	-	+	+	
	Significant?	Y	N	N	N	N	N	
Absorption in Learning Process								
Absorption in Class	Relationship	+	-	-	+	+	-	Elliot, Murayama & Pekrun (2011)
	Significant?	Y	N	N	N	N	N	
Course Engagement	Relationship - Sample #1	+	+	+	+	+	+	Gillet et al. (2015)
	Significant? - Sample #1	Y	N	Y	N	N	N	
	Relationship - Sample #2	+	+	+	-	+	+	
	Significant? - Sample #2	Y	Y	N	N	Y	Y	
Learning Strategy								
Deep Strategy - Understanding	Relationship	+	-	+	+	-	+	Ning (2018)
	Significant?	N	N	Y	N	N	N	
Deep Strategy - Relating Ideas	Relationship	+	-	-	+	+	+	
	Significant?	Y	N	N	N	N	N	
Instrumental Help-seeking	Relationship	+	+	+	+	+	-	
	Significant?	Y	N	N	Y	N	N	
Learning Outcome								
Exam Performance	Relationship	+	+	-	-	+	-	Elliot, Murayama & Pekrun (2011)
	Significant?	N	N	N	Y	Y	Y	
Academic Achievement	Relationship	+	N/A	-	N/A	+	N/A	Lüftenegger et al. (2016)
	Significant?	Y	N/A	N	N/A	Y	N/A	
Cummulative GPA	Relationship	+	+	-	+	+	-	Ning (2018)
	Significant?	N	N	N	N	Y	Y	

Summation of empirical research utilising 3 x 2 goal orientation model

RO_C: The interactive roles of mastery and performance climates in personality – learning agility relationship

Using trait activation theory (Tett & Guterman, 2000; Tett & Burnett, 2003; Christiansen & Tett, 2008; Penney, David & Witt, 2011), moderating roles of motivational climates toward personality – learning agility relationship can be established. Trait activation theory posits that dormant personality trait will manifest as trait-expressive work behaviour (i.e. such as learning agility) as a response to trait-relevant situational cue in the environment. This is also in alignment with Lewin's (1936) Equation that personality traits and situation interact with each other and cannot be separated. Employees are more drawn to and derive intrinsic satisfaction from an organizational environment that allows them to effortlessly express their personality traits (Tett & Burnett, 2003). Such personality-job 'fit' might eventually lead to higher employee satisfaction, well-being and better job performance (Penney,

David & Witt, 2011). Aside of the relevancy of the situation, the 'activation' process itself might also lead to increased job performance – as well as the subsequent extrinsic rewards – if the personality traits are valued on the job or expected by the organization (Judge & Zapata, 2015). Based on the literature review, research investigating the interaction between motivational climate and personality has been scant. Therefore, this study is expected to be a valuable theoretical expansion in this line of research.

Sometimes referred as the personality of the organization, organizational climate – in general – are inferred from macro-level organizational characteristics (e.g. structure, process, policy and reward systems) (Schneider, Brief & Guzzo, 1996). Summarized in the table below, the various climate elements provide unique opportunities for personality trait expressions; as well as indications to fit people with their preferred work environments. Trait activation theory postulates that climate elements operating at the organizational level can be relevant to personality expression in several ways; namely 'demands,' 'distracters' and 'constraints' (Tett & Burnett, 2003). These situational features are generally ongoing and definitive parts of the work context; therefore, stably affecting the relationship between personality trait and valued work behaviour (i.e. learning agility). Organizational / job 'demands' can be defined as opportunities to act in a positively valued way (Tett & Burnett, 2003). Demands include roles, responsibilities and daily tasks found in a job description; as well as behavioural expectations within the group and organizational norms. Their moderating strengths closely relate to which and how the behaviours are rewarded (i.e. the rewards system) (Tett & Burnett, 2003). In contrary to 'demands,' 'distracters' and 'constraints' work the other way around. 'Distracter' is positively related to the personality trait itself, but it might interfere and possibly weaken the relationship between the trait and valued work behaviour. A 'constraint' on the other hand, negatively relates to the personality trait and its presence restricts the behavioural expression of the trait as well as the relationship with the valued work behaviour.

Personality Trait - Valued Work Behaviour relationship	O'reilly, Chatman & Caldwell (1991), Ostroff (1993)			Judge & Zapata (2015)
	Related organizational climate elements **A: O'reilly, Chatman & Caldwell (1991)** **B: Ostroff (1993)**	**Organizational demands that strengthening the relationship**	**Organizational distracters and constraints that restricting the relationship**	**Job demands that strengthening the relationship**
Honesty	*Relatively unexplored*			
Emotional Stability	A: Decisiveness B: Innovativeness, Autonomy	Atmosphere of uncertainty; rapid organizational growth or change, e.g. management restructuring	Culture of predictability; stress-free culture	Dealing with unpleasant or angry people (Sig, +); social skills requirement (Sig, +)
eXtraversion	A: Aggresiveness, Outcome orientation, Team orientation B: Participation, Warmth	Human relations; festivity; recognition	Autonomy; reserved, segmented or exclusive atmosphere; requirement to be solitude and staying low-profile	Social skills requirement (Sig, +); level of competition requirement (Sig, +); dealing with unpleasant or angry people (Sig, +); attention to detail requirement (Sig, -)
Agreeableness	A: Supportiveness, Team orientation B: Cooperation, Warmth	Friendliness; sensitivity; organizational citizenship	Autonomy; aggresiveness; mechanistic atmosphere; downsizing	Social skills requirement (Sig, +); level of competition requirement (Sig, -); dealing with unpleasant or angry people (Sig, +); attention to detail requirement (Sig, +); independence in completing work (Sig, +)
Conscientiousness	A: Detail orientation, Outcome orientation B: Achievement, Hierarchy, Structure	Compliance to the standards or regulations; presence of competitive environment that accentuates success and promotion; loyalty	Organizational change; company-wide collaboration; highly formalized bureaucracy that limits promotion opportunities	Independence in completing work (Sig, +); attention to detail requirement (Sig, -); innovation / creativity requirement (Sig, +); dealing with unpleasant or angry people (Sig, +)
Openness to experience	A: Innovativeness B: Participation, Growth, Innovativeness	Workforce diversity; risky business appetite; involvement in strategic planning process; cutting-edge organizational image	Rules or authority; structured or hierarchical, bureaucratic, stable, secure, cautious atmosphere	Innovation / creativity requirement (Sig, +); independence in completing work (Sig, +)

Summation of empirical research relating organizational climate elements with Big Five personality traits

Empirical research relating organizational climate elements with FFM personality traits have been done by O'Reilly, Chatman & Caldwell (1991), Ostroff (1993), Tett & Guterman (2000), Vermetten, Lodewijks & Vermunt (2001) and more recently by Judge & Zapata (2015). O'Reilly, Chatman & Caldwell (1991) offered a taxonomy of eight organizational climates: (1) Innovative, (2) Detail-oriented, (3) Outcome-oriented, (4) Aggressive, (5) Supportive, (6) Team-oriented, (7) Decisive and (8) Reward-oriented. Ostroff (1993) offered a similar taxonomy of nine organizational climate dimensions: (1) Participation, (2) Cooperation, (3) Warmth, (4) Growth, (5) Innovation, (6) Autonomy, (7) Achievement, (8) Hierarchy and (9) Structure. By triangulating our knowledge on motivational climates with how these organizational climate elements affecting the personality trait – valued work behaviour relationship (i.e. learning agility); we can postulate several interaction hypotheses as follow.

Regarding the Honesty-Humility trait, according to Lee & Ashton (2004), a person with a high degree of Honesty-Humility avoids manipulating others, seeks no elevation in terms of social status and doesn't develop a strong sense of self-importance. Thus, in this study, the trait is postulated to be positively related to learning agility, as learning agility appreciates the communal or collaborative

effort to knowledge creation and mastery (Hoff & Burke, 2017). Being in a mastery climate validates these dispositions (Ames, 1992a, 1992b; Nicholls, 1984) and might strengthen the positive relationship between Honesty-Humility and learning agility. On the contrary, being in a performance climate might weaken this positive relationship as the climate upholds a different set of social values (Nicholls, 1984; Roberts, 2012), i.e. personal winning and recognition, competition among colleagues, etc. (Ames & Ames, 1984; Černe et al., 2014; 2017). Therefore, a hypothesis that might be investigated further in future empirical research is:

13. H_1C_1: The relationship between Honesty-Humility (H) trait of HEXACO personality model and learning agility is moderated by motivational climates. The higher the mastery climate, the more positive the relationship; the higher the performance climate, the less positive the relationship.

As we can see from the table above, the relationship between Emotional Stability trait and valued work behaviour (i.e. performance) is strengthened when there is rapid growth, change and uncertainty within the organization (i.e. Innovativeness element; Ostroff, 1993). On the contrary, when the environment is predictable and stress-free, the organization doesn't 'necessitate' such personality trait; thus, the relationship between the trait and valued work behaviour is restricted (Tett & Burnett, 2003). Judge & Zapata (2015) also found that Emotional Stability was significantly valued in occupations requiring strong social skills, particularly those that require dealing with unpleasant people. Finally, Vermetten, Lodewijks & Vermunt (2001) found that Emotional Stability was negatively correlated with ego or performance orientation. In this study, a high degree of Emotionality or Neuroticism trait (i.e. inverse trait of Emotional Stability), that is shown by anxiety toward life's stresses and emotional dependency (Lee & Ashton, 2004), is hypothesized to negatively affect a person's learning agility; as learning agility requires Emotional Stability, i.e. some degree of comfort with uncertainty, pressure and conflict management with the competing colleagues. Being in performance climate which is more political (Ames, 1992b; Dragoni, 2005), stressful, uncertain and demands more conflict resolution skills might strengthen the negative relationship between Emotionality with learning agility. On the contrary, being in a mastery climate which is more psychologically-safe (Edmondson, 2003; Detert & Edmondson; 2011), predictable and less stressful might weaken the negative relationship. Therefore, a hypothesis that might be investigated further in future empirical research is:

14. H_1C_2: The relationship between Emotionality (E) trait of HEXACO personality model and learning agility is moderated by motivational climates. The higher the mastery climate, the less negative the relationship; the higher the performance climate, the more negative the relationship.

As for the Extraversion trait, the relationship between the trait and valued work behaviour (i.e. performance) is strengthened when there are demands for human relations within the organization (i.e. Team-orientation, O'reilly, Chatman & Caldwell, 1991; Participation and Warmth elements, Ostroff, 1993). An organization with Team-orientation climate element stresses collaboration (O'reilly, Chatman & Caldwell, 1991). On the contrary, when the organizational atmosphere is autonomous, reserved, segmented or exclusive; or if there are requirements to be solitude and staying low-profile, the relationship between Extraversion trait and valued work behaviour is restricted (Tett & Burnett, 2003). Similarly, Judge & Zapata (2015) found that Extraversion was significantly valued in occupations requiring strong social skills. A high degree of Extraversion in a person might lead to him/her feeling

positively about him/herself, feeling confident when leading or addressing groups of people, enjoying social gatherings and interactions and experiencing positive feelings of enthusiasm (Lee & Ashton, 2004). In this study, the trait is postulated to positively affect his/her learning agility as it calls for human relationships and collaborations within the knowledge accumulation process; as well as requiring a high degree of social skills. As opposed to an introvert, being an extravert means that he/she generates energy from his/her outward social surroundings (Costa & McCrae, 1992). Being in mastery climate – which is more 'festive' – might generate such enthusiasm and energy, thus strengthening the positive relationship between Extraversion with learning agility. Being in performance climate, which has a more autonomous, reserved and segmented atmosphere, might weaken the positive relationship. Therefore, a hypothesis that might be investigated further in future empirical research is:

15. H_1C_3: The relationship between Extraversion (X) trait of HEXACO personality model and learning agility is moderated by motivational climates. The higher the mastery climate, the more positive the relationship; the higher the performance climate, the less positive the relationship.

As we can see from the table above, the relationship between Agreeableness trait and valued work behaviour (i.e. performance) is strengthened when there is friendliness, sensitivity and citizenship within the organization (i.e. Supportiveness and Team-orientation, O'reilly, Chatman & Caldwell, 1991; Cooperation and Warmth elements, Ostroff, 1993). An organization with Supportive climate element emphasizes information sharing, praising good performance and supporting workers (O'reilly, Chatman & Caldwell, 1991). On the contrary, when the environment is autonomous and aggressive, the relationship between Agreeableness and valued work behaviour is restricted (Tett & Burnett, 2003). Judge & Zapata (2015) also found that Agreeableness was positively valued in occupations requiring strong social skills and dealing with unpleasant people; but negatively valued in competitive occupations. Vermetten, Lodewijks & Vermunt (2001) also found that Agreeableness was positively correlated with the task or mastery orientation, and negatively correlated with the ego or performance orientation. A high degree of Agreeableness might influence a person to be more lenient in judging others, more willing to compromise and cooperate with others (Lee & Ashton, 2004). He/she doesn't hold grudges against those who might have offended them and are not stubborn in defending their point of view. Thus, in this study, the trait is postulated to be positively related to learning agility. Being in a mastery climate might help in strengthening this positive relationship as this climate might be perceived as friendlier and calls for a higher degree of sensitivity and organizational citizenship behaviour (Roberts, 2012). With its focus on communal effort and cooperative interdependence among individuals, a mastery climate is more likely to facilitate the satisfaction of such need of relatedness; or the need to be connected to others (Gagné & Deci, 2005). On the contrary, a performance climate is more likely to promote competitive interdependence among individuals due to interpersonal competition; thus, may undermine the need for relatedness (Černe et al., 2014; 2017). Being in a performance climate might then weaken the positive relationship as it is more of an autonomous climate and involves more competition and aggressiveness (Nicholls, 1984; Roberts, 2012). Therefore, a hypothesis that might be investigated further in future empirical research is:

16. H_1C_4: The relationship between Agreeableness (A) trait of HEXACO personality model and learning agility is moderated by motivational climates. The higher the mastery climate, the more positive the relationship; the higher the performance climate, the less positive the relationship.

As for the Conscientiousness trait, the relationship between the trait and valued work behaviour (i.e. performance) is strengthened when there are demands for compliance to standards or regulations within the organization, as well as the presence of a competitive environment that accentuates success and promotion. (i.e. Detail-orientation and Outcome-orientation, O'reilly, Chatman & Caldwell, 1991; Achievement, Hierarchy and Structure elements, Ostroff, 1993). Detail-oriented organizations favour analysis and precision in handling details, and outcome-oriented organizations are demanding and bet on achieving results (O'reilly, Chatman & Caldwell, 1991). On the contrary, when there is organizational change, company-wide collaboration or limitation toward that promotion opportunity, the relationship between Conscientiousness trait and valued work behaviour is restricted (Tett & Burnett, 2003). Similarly, Judge & Zapata (2015) found that Conscientiousness was significantly valued in occupations requiring independent effort to complete work. A person with high Conscientiousness organizes his/her time and physical surrounding, works in a disciplined way toward his/her goals, strives for accuracy and perfection, and deliberates carefully when making decisions (Lee & Ashton, 2004). These positive qualities – however – are postulated to be against learning agility in this study. As mentioned before, learning agility necessitates one to be comfortable when making an error, embraces complexity, examines issues from a broad, high-level perspective and tends to be non-linear thinkers; rather than organized, planful and detail-oriented individual (De Meuse, 2017). Being in a mastery climate which accentuates organizational change and company-wide collaboration might weaken the negative relationship. On the contrary, being in a performance climate which signals compliance to external standards and competition that accentuates personal success and promotion might strengthen the negative relationship. Therefore, a hypothesis that might be investigated further in future empirical research is:

17. H_1C_5: The relationship between Conscientiousness (C) trait of HEXACO personality model and learning agility is moderated by motivational climates. The higher the mastery climate, the less negative the relationship; the higher the performance climate, the more negative the relationship.

Finally, as we can see from the table above, the relationship between Openness to Experience trait and valued work behaviour (i.e. performance) is strengthened when there is workforce diversity, innovativeness, participation (e.g. in strategic planning process) and growth within the organization (O'reilly, Chatman & Caldwell, 1991; Ostroff, 1993). The innovative organization here is characterized by risk-taking and experimentation (O'reilly, Chatman & Caldwell, 1991). On the contrary, when the environment involves rules, authority, structure and hierarchy, the relationship between the trait and valued work behaviour are restricted (Tett & Burnett, 2003). Judge & Zapata (2015) also found that the trait was significantly valued in occupations requiring innovation or creativity. Finally, Vermetten, Lodewijks & Vermunt (2001) found that the trait was positively correlated with a task or mastery orientation. An individual that is high in this trait is motivated to pursue and scrutinize various domains of knowledge; being original, creative and having imagination; prefers for a variety of activities over a strict routine and takes an interest in novel ideas or people. In contrary, an individual with low Openness to Experience shows little intellectual inquisition, avoid creative pursuits and un-attracted to unconventional beliefs (McCrae & John, 1992; McRae, 2004; Lee & Ashton, 2004; Friedman & Schustack, 2016). In this study, the high Openness to Experience qualities are postulated to be positively related to learning agility as learning agility requires a degree of flexibility and openness to new knowledge, ideas and experiences (Hoff & Burke, 2017). In a mastery climate, one might

experience a requirement of innovation or creativity, participation, growth and a diversity of perspectives that might strengthen the expression of this trait toward learning agility. On the contrary, in a performance climate, the climate might provide a greater number of rules and structure; as well as focusing more on the individual winning over his/her colleague; thus, this climate might weaken the relationship between Openness to Experience and learning agility. Therefore, a hypothesis that might be investigated further in future empirical research is:

18. H_1C_6: The relationship between Openness to Experience (O) trait of HEXACO personality model and learning agility is moderated by motivational climates. The higher the mastery climate, the more positive the relationship; the higher the performance climate, the less positive the relationship.

Goal orientations	**Hypothesized relationship with learning agility**	**Hypothesized interaction effect of mastery climate toward personality traits - learning agility relationship**	**Hypothesized interaction effect of performance climate toward personality traits - learning agility relationship**
Honesty	Positive	Strengthening	Weakening
Emotionality / Neuroticism (Inv. of Emotional Stability)	Negative	Weakening	Strengthening
eXtraversion	Positive	Strengthening	Weakening
Agreeableness	Positive	Strengthening	Weakening
Conscientiousness	Negative	Weakening	Strengthening
Openness to experience	Positive	Strengthening	Weakening

Hypothesized interaction effects of mastery and performance climates in personality – learning agility relationships

RO_D: The interactive roles of mastery and performance climates in goal orientation – learning agility relationship

Aligned with Lewin's (1936) emphasis on the interaction between the person and his/her environment to explain his/her behaviour, the moderating roles of mastery and performance climates toward goal orientation – learning agility relationship might be explained by person-environment fit theory. According to this theory, a 'match' between individual disposition (i.e. goal orientation) and his/her environment (i.e. the nature of the motivational climate) are supportive toward his/her performance (e.g. such as in Buch et al., 2016). A performance-oriented individual might respond more positively in a climate that 'matches' their disposition, i.e. a performance climate; while a mastery-oriented individual might respond more positively in a mastery climate (Roberts, 2012). This notion is also apparent as goal orientation and motivational climate bear the same theoretical root of achievement goal theory (Ames, 1992a).

In the context of learning, individual with high-performance goal orientation was motivated to learn due to 'other-referenced' standards of competence (VandeWalle, 1997; Elliot, Murayama & Pekrun, 2013). A performance climate itself is likely to be perceived as more 'controlling' toward such externally-specified standards; thus, reducing his/her feeling of autonomy and shifting the individual toward a more external locus of causality (Ryan & Deci, 2002). Therefore, being in a performance climate that offers some sort of external validations of these standards – rather than for the sake of

the learning itself – provides 'a means to an end' and is more likely to 'fit' and appeal to the individual. Beside validation, the emphasis of performance climate on social comparison, competition and personal achievement is also more likely to be welcomed by a performance-oriented individual (Roberts, 2012; Buch et al., 2016). The latter might be primarily due to the individual's interest to demonstrate his/her competence and superiority to others (Newton & Duda, 1999; Cumming et al., 2007).

This scenario, however, might not be true if they are in a mastery climate; as its criteria (i.e. emphasis on participation, learning and trying hard to do one's best; Ames, 1992a; 1992b; Nicholls, 1984) should to a lesser extent satisfy such need to outperform others (Buch et al., 2016). On the other hand, when the individual's level of mastery orientation is high, a mastery climate is more likely to be welcomed by him/her. The above criteria of 'success' in a mastery climate match the individual's intrinsic or 'self-referenced' interest to improve his/her own competency and thereby feel successful in doing it (Van De Pol, Kavussanu & Ring, 2012). The above criteria of failure and success in a mastery climate are self-referenced and task-involving, rather than other-referenced and ego-involving (Ames, 1992b; Boyce, Gano-Overway & Campbell, 2009). Thus, a mastery climate is likely to facilitate satisfaction of such need for competence improvement; or "feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capacities" (Ryan & Deci, 2002, p. 7).

Despite some inconsistencies, as we can see from the table below, several recent empirical studies (e.g. Nerstad, Roberts & Richardsen, 2013; Buch et al., 2016; Buch, Nerstad & Säfvenbom, 2017) apparently have supported this notion of person-environment fit. Nerstad, Roberts & Richardsen (2013) found that mastery orientation was positively related to mastery climate, but not with performance climate. On the other hand, performance orientation was positively related to performance climate but negatively related to mastery climate.

Scholars	**Variable:** / **Variable:**	**Mastery Climate**	**Performance Climate**
Nerstad, Roberts & Richardsen, 2013	**Mastery Orientation**		
	Study 1	Desc: Sig (+)	Desc: Sig (+)
	Study 2	Desc: Sig (+); Reg: Sig (+)	Desc: Not Sig (+); Reg: Not Sig (+)
	Study 3	Desc: Not Sig (+)	Desc: Not Sig (+)
	Performance Orientation		
	Study 1	Desc: Sig (-)	Desc: Sig (+)
	Study 2	Desc: Not Sig (-); Reg: Not Sig (+)	Desc: Sig (+); Reg: Sig (+)
	Study 3	Desc: Sig (-)	Desc: Sig (+)

In alignment, in a two-wave longitudinal study of 141 pupils from three military academies, Buch, Nerstad & Säfvenbom (2017) also found that performance climate negatively moderated mastery climate and intrinsic motivation. Their findings suggested a positive relationship between mastery climate and increased intrinsic motivation only when combined with a low perception of a performance climate. Thus, introducing a performance climate along with mastery climate can be an undermining motivational strategy. In contrary to the current study, Buch et al. (2016) investigated the moderating roles of goal orientations toward motivational climate – performance relationship. They found that the mastery climate – performance relationship was strengthened by high mastery and low performance orientations; and performance climate – performance relationship was

strengthened by low mastery and high-performance orientations. They also found that the first combination (high mastery and low performance orientations) also negatively moderated the above performance climate – performance relationship. For this specific finding, they argued that the presence of an external rewarding mechanism in performance climate might 'overcrowd' the internal motivational disposition of individuals with high mastery orientation. Finally, the presence of high mastery and high-performance orientations or low mastery and low performance orientations yielded inconclusive results in their research.

Scholars	**Variable:** / **Moderator:**	**Mastery Climate - Maximal Oxygen Uptake**	**Performance Climate - Maximal Oxygen Uptake**
Buch et al., 2016	High Mastery Orientation, High Performance Orientation	Positive (but not significant)	Negative
	High Mastery Orientation, Low Performance Orientation	Positive	Negative
	Low Mastery Orientation, High Performance Orientation	Positive	Positive
	Low Mastery Orientation, Low Performance Orientation	Negative	Negative
Scholars	**Variable:** / **Moderator:**	**Mastery Climate - Intrinsic Motivation**	**N/A**
Buch, Nerstad & Säfvenbom, 2017	Mastery Climate	N/A	N/A
	Performance Climate	Negative	N/A

As we can see from the table below, mastery and performance climates have also been studied as moderators toward several construct relationships, such as knowledge hiding – creativity (Černe et al., 2014), knowledge hiding – innovative work behaviour (Černe et al., 2017), obsessive passion – incivility instigation (Birkeland & Nerstad, 2016) and employee development practice – work effort, work quality and turnover intention (Nerstad et al., 2018a). Mastery climate has been found to weaken the negative relationship between knowledge hiding behaviour and employee creativity while performance climate strengthening the negative relationship between those constructs (Černe et al., 2014). Knowledge hiding predicted lower levels of employee creativity when the mastery climate was low, but not when it was high. On the contrary, within groups in which employee perceived higher levels of performance climate, the relationship between knowledge hiding and employee creativity was more negative. Mastery climate has also been found to weaken the negative relationship between knowledge hiding behaviour and innovative work behaviour (Černe et al., 2017). Knowledge hiding also predicted lower levels of innovative work behaviour when the mastery climate was low, but not when it was high. Birkeland & Nerstad (2016) found that obsessive passion and incivility instigation was moderated by mastery climate. Obsessive people (which was postulated to 'fit' better in performance climate) might feel the person-environment unfit in mastery climate; thus, staying in mastery climate might challenge his/her normative status, threaten his/her motive and encouraging him/her to be uncivil. Finally, Nerstad et al. (2018a) have found that the relationships between employee development practice and work effort, work quality and turnover intention were moderated by motivational climates. A combination of high mastery and low performance climates has been found significantly moderating employee development practice – work effort relationships. Performance climate, on the other hand, strengthens employee's turnover intention as well as possibly creating 'message confusion' between employee development practice (which was a more typical organizational practice of mastery climate) and its expected work outcomes (effort and quality).

Scholars	Moderator: / Variable:	Mastery Climate	Performance Climate
Černe et al., 2014	Knowledge Hiding - Creativity	Less Negative	More Negative
Černe et al., 2017	Knowledge Hiding - Innovative Work Behavior	Less Negative	N/A
Birkeland & Nerstad, 2016	Obsessive Passion - Incivility Instigation	Positive	N/A
Nerstad et al., 2018a	PEDP - Work Effort	Not significant, Significant --> Hi MC, Lo PC	Positive
	PEDP - Work Quality	Not significant	Positive
	PEDP - Turnover Intention (Negative)	Not significant	Less Negative

Based on these research findings, a set of hypotheses can be established. As we have seen before, in this study, both mastery and performance goal orientations are postulated to have positive relationships with learning agility; yet, it is the valence that makes the difference (Higgins, 1997; Elliot et al., 2005; Pekrun et al., 2006; 2009; Elliot, Murayama & Pekrun, 2011). Achieving a person-environment fit (i.e. being in a climate that 'matches' one's individual disposition) might contribute to strengthening the relationship between goal orientation and learning agility; and vice versa. Therefore, hypotheses that might be investigated further in future empirical research are:

19. H_1D_1: The relationship between task-approach mastery goal orientation and learning agility is moderated by motivational climates. The higher the mastery climate, the more positive the relationship; the higher the performance climate, the less positive the relationship.
20. H_1D_2: The relationship between task-avoidance mastery goal orientation and learning agility is moderated by motivational climates. The higher the mastery climate, the less negative the relationship; the higher the performance climate, the more negative the relationship.
21. H_1D_3: The relationship between self-approach mastery goal orientation and learning agility is moderated by motivational climates. The higher the mastery climate, the more positive the relationship; the higher the performance climate, the less positive the relationship.
22. H_1D_4: The relationship between self-avoidance mastery goal orientation and learning agility is moderated by motivational climates. The higher the mastery climate, the less negative the relationship; the higher the performance climate, the more negative the relationship.
23. H_1D_5: The relationship between other-approach performance goal orientation and learning agility is moderated by motivational climates. The higher the mastery climate, the less positive the relationship; the higher the performance climate, the more positive the relationship.
24. H_1D_6: The relationship between other-avoidance performance goal orientation and learning agility is moderated by motivational climates. The higher the mastery climate, the more negative the relationship; the higher the performance climate, the less negative the relationship.

Goal orientations	Hypothesized relationship with learning agility	Hypothesized interaction effect of mastery climate toward goal orientation - learning agility relationship	Hypothesized interaction effect of performance climate toward goal orientation - learning agility relationship
Task-approach Mastery	Positive	Strengthening	Weakening
Task-avoidance Mastery	Negative	Weakening	Strengthening
Self-approach Mastery	Positive	Strengthening	Weakening
Self-avoidance Mastery	Negative	Weakening	Strengthening
Other-approach Performance	Positive	Weakening	Strengthening
Other-avoidance Performance	Negative	Strengthening	Weakening

Hypothesized interaction effects of mastery and performance climates in goal orientation – learning agility relationships

Conclusion

As globalization and digitalization have continued to grow in an unprecedented rate; in the context of Organizational Change and Development (OCD) field; have placed unique demands on a variety of organizations and required many different capabilities from workers of all hierarchical levels. Learning agility, one of the deemed new capabilities, has continued to grow as an important construct. As concluded by Rotolo et al. (2018), the current academic debates on the construct is less about its relevance to the organization but more about the definitional boundary lines; i.e. what kind of and how much its antecedents play a role.

As suggested by DeRue, Ashford & Myers (2012), a noteworthy future research on learning agility should cover the role of the environment; given the dynamic and complex nature of organizations surrounding the employees. In order to contribute to the ongoing debate, as well as addressing the above-mentioned suggestion; this study has explored the theoretical relationships between personality (HEXACO), motivation (goal orientation) and learning agility. Through motivational climate construct from the achievement goal theory, this study has contributed to the overall body of knowledge of learning agility by investigating the work and learning context surrounding its emergence within an organization. A model for the learning agility – HEXACO personality traits, goal orientations, motivational climates linkages and 24 testable propositions to guide future research have also been presented.

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