

The Criticality of Vertical Development in NLP Coaching in an Intensely V.U.C.A. World

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Abstract

Introduction: *Practitioners of NLP have been increasingly involved in life and executive coaching in the last 15 years due to a global rise in the demand for coaching. NLP coaches in Singapore have been experiencing the effects of an increasingly Volatile, Uncertain, Complex and Ambiguous (V.U.C.A.) world in their practice. NLP coaches and coachees are grappling with the rapid and complex changes in the global marketplace, with organizational restructuring, the pace of technological changes, a multi-cultural and multi-generational workplace as well as climate change related issues, such as the COVID-19 pandemic.*

This paper provides the findings of a dissertation research hypothesizing that NLP lacks a vertical development concept which is much needed in a V.U.C.A. world. This concept is contrasted against horizontal development, which is based on education- and professional-based competencies, whereas vertical development is based on the different stages of adult maturity development (AMD). The different stages of AMD hold the key to understanding one's worldview and meta-competencies which allow one to adapt and thrive in an ever-increasing V.U.C.A. world.

Objectives: *The central question that this dissertation research aims to address is: "In a V.U.C.A. world, do NLP coaches in Singapore understand the difference between vertical and horizontal development? If so, does understanding their own stage of vertical development (namely AMD) make a difference in the way they self-manage and work with clients?"*

Methods: *The dissertation research uses a mixed-method approach, i.e., qualitative and quantitative approaches. This mixed method explores the impact of V.U.C.A. on NLP coaches (research subjects) through structured open-ended first and second interviews (qualitative). Through the use of an established AMD assessment (quantitative) and debriefing by an external AMD-trained scorer, this research aims to help NLP coaches understand the relationship between their stage/ level of AMD and the demands of the V.U.C.A. world. In the weeks that followed the AMD assessment, a pre- and post-Likert scale self-assessment (quantitative) was developed to help the NLP coaches apply the AMD knowledge. A weekly email follow-up (qualitative) over four weeks drew out the NLP coaches' learning as they applied the AMD checklist.*

Results: *The research uncovered many practical insights, the key ones being: none of the subjects knew about the concepts of horizontal and vertical development (namely AMD); each subject experienced the V.U.C.A. world according to their own stage of AMD; by understanding and applying the AMD knowledge, subjects improved the way they managed themselves and their coachees by 12.53%.*

Conclusions: *In the context of coaching people who experience V.U.C.A. challenges that require higher levels of adult maturity, understanding the difference between horizontal and vertical development, and using the appropriate approach to coach people in different stages of AMD is crucial for getting effective and sustainable results.*

Keywords: *Vertical and Horizontal Development, Adult Maturity Development, Adult Development Theory, V.U.C.A. world*

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I. Introduction

Rise in Coaching Demand

Practitioners of Neuro-Linguistic Programming (NLP) have been increasingly involved in life and executive coaching in the last 15 years due to a global rise in the demand for coaching. This is in line with the Global Coaching Study (2016) of the International Coaching Federation (ICF), which states that the number of trained coaches rose from 1,500 in 1999 to 53,300 in 2016.

Increase in Intractable Coaching Challenges

The researcher has been in NLP training since 1997 and in coaching since 2005. Between 2014 and 2020, the researcher often observed the following about his coachees in his coaching practice:

- a. they are unable to understand and appreciate certain concepts and principles despite many different explanations;
- b. they have tenacious limiting beliefs about people and situations;
- c. they have limited capacity to deal simultaneously with sets of information and tasks which are different and/ or conflicting;
- d. they experience difficulty in sequencing their thoughts and actions in strategic ways;
- e. they have a strong need to predict and control people and situations, in order to feel confident;
- f. they cannot carry out a task properly if there are ambiguities, uncertainties, and conflicting ideas;
- g. they are unaware of or unable to reflect on their own contradictions, incongruences, and self-imposed limitations.

The researcher has a network of professional NLP coaches, and many of them have reported observing the above in their coaches.

Most of the coachees who have faced the above challenges asked for coaching at a time when they were experiencing a lot of stress – mostly related to an excessively high number of changes happening at work, or when feeling trapped in overwhelming situations which they were ill-equipped to handle.

According to Jones (2011), there is a sharp global rise in instances where people feel overwhelmed, grapple with rapid changes and demands, need to manage the diverse expectations of multiple stakeholders, are overloaded with numerous deadlines, and must deal with increasingly complex workplace and marketplace issues.

The V.U.C.A. Phenomenon

The growing complexity of today's workplace and global marketplace has given rise to the V.U.C.A.

phenomenon, or the V.U.C.A. world. The term V.U.C.A., which stands for Volatile, Uncertain, Complex, and Ambiguous, was coined by the U.S. Army War College (Thompson, 1987) and it aptly describes what Singaporean coaches and coachees (and many people elsewhere) are experiencing in their personal and professional lives. To better handle the V.U.C.A. phenomenon, it is imperative that coaches and coachees raise their capacity to handle greater complexity.

There is a need for people to be able to manage constantly-shifting business landscapes affected by geological, biological, social and political systems, and rapid technological shifts – all of which dictate the changes that businesses need to make in order to operate and compete. In addition, the workplace is rife with relational challenges between people of different nationalities and generations. According to Petrie (2011), the difficulties arising from such challenging external and internal working environments not only require rapid horizontal development – i.e., increased education- and work-based knowledge and skills, but also vertical development – i.e., a shift in one's worldview, also known as "adult maturity development" (AMD).

NLP Lacks a Vertical Development Concept and Framework

Based on an experience of more than 20 years of designing and delivering NLP training and 10 years of training coaches, the researcher realized that NLP does not have a concept and framework for addressing issues pertaining to adult maturity development, also known as vertical development. This term is contrasted with horizontal development, which refers to traditional learning, training and development in organizations. This is largely associated with conventional education- and work-based competencies. Vertical development, on the other hand, is the net result of the way we cumulatively make meaning of our life experiences. And these all-encompassing meanings (worldviews) are unique at different stages of adult maturity. Our worldview is the amalgamation of our values, beliefs, and thought patterns – which help us interpret the world and interact with it.

Difference Between Horizontal and Vertical Development

Drawn from practitioners in the field of adult development (McGuire & Rhodes, 2009; Petrie, 2013; Brown, 2017; Rybeck, 2016; Schwinn, 2017; Cook-Greuter, 2004; Murray, 2017), Table 1 below lists major differences between horizontal and vertical development:

Horizontal Development	Vertical Development
What has to be learned is mostly linked to known thinking and behavioral competencies, also known as “functional and technical skills”.	What has to be learned is linked to “stages” of adult maturity; it is about the ways in which one makes meaning of and responds to the world.
Refers to knowledge and skills that deal with clearly defined problems and known techniques to resolve them. The knowledge and skills can be learned from an expert.	Refers to more abstract abilities for dealing with higher complexity and ambiguity, to help one make sense of and manage the world. Such learning can come only from oneself.
Involves learning more of the same, i.e., increased breadth, refinement, or differentiation of existing knowledge or skills which are within one’s current worldview.	Involves learning at a qualitative new level, a capacity that emerges from the co-ordination, re-organization and integration of lower levels of knowledge and skills – moving to a new worldview.
It is more about personal effectiveness and managing expectations; how to navigate well-defined contexts; behavioral and head-based learning.	It is more about interdependence and promoting collective intelligence; how to navigate complex contexts; heart-based and experiential learning.
Refers to adding more knowledge and skills that can be measured through 360° feedback; it is about what a person can do and/or what he/ she knows.	Refers to the ability to process and act in ways that are more complex, systemic, strategic, and interdependent; it is about what a person values and who he/ she is.
Learning is primarily about acquiring mental and behavioral skills, techniques, and tools appropriate for one’s current adult maturity level; who one is remains the same.	Learning involves complex cognitive, moral, and social intelligences – often experienced at a later stage of maturity (indicating vertical growth); one has to grow into a higher/ wiser version of oneself to solve problems.
What has to be learned is an object that can be reflected upon; one would ask: “What cutting-edge knowledge and skills do I need to learn to excel?”	What has to be learned is the subject him/ herself; it has to be brought into one’s awareness first and embodied over time; one would ask: “Who do I need to become to create the future that I want?”
Metaphor: pouring water into a container, which fills up with new content; selecting and downloading software and apps.	Metaphor: enlarging and changing the structure of the container; upgrading to a new computer with a new operating system.

Table 1

Horizontal learning is largely about increasing what one knows and strengthening one’s functional and technical skills. It is essential for using known techniques or models to solve clearly-defined problems. Vertical learning, on the other hand, is analogous to worldview transformation: improving how one interprets, reflects, and intuits in any situation. It is essential for addressing complex problems for building high-stakes diverse relationships, and for navigating rapidly changing and uncertain situations. It also develops one’s mental and emotional intelligences, upgrading a person’s overall “operating system” to be wiser, more caring, creative, and resilient.

Cook-Greuter (2013) refers to horizontal development as the advancement within a current meaning-making worldview through a process of adding knowledge, developing skills, and establishing more connections. Vertical development occurs more rarely and it involves a transformation of one’s entire way of perceiving and experiencing the world. It expands what one can be aware of, and therefore increases what one can integrate and act upon. The emergence of new meaning-making systems (worldviews) often has a more powerful influence over perspectives and behaviors than any amount of horizontal growth (Cook-Greuter, 1999).

Implications of Vertical Development in Leadership and Coaching

A study conducted by IBM (2010) on 1,500 CEOs identified that their biggest concern was that their organizations were not equipped to cope with increasingly complex internal and external environments. Some of the challenges for future leaders, as cited by the CEOs, were: a) dealing with information overload; b) understanding the interconnectedness of systems and business communities; c) the dissolution of traditional organizational boundaries; d) new technologies that disrupt old work practices; e) the different expectations of new generations in the workplace; and f) increased globalization resulting in a need for cross-cultural leadership. Each of these concerns increases the complexity of the workplace.

From reviewing leadership literature (Jones, 2011; Petrie, 2011; IBM, 2009 & 2010 study; Brown, 2017; Hagemann & Chartrand, 2009) it appears that leaders in the V.U.C.A. environment are moving away from static behavioral competencies and toward developing more complex abilities such as higher self-awareness and challenging one’s own assumptions, learning agility, thinking in non-linear ways, collaborating with diverse individuals and groups, being

able to take intelligent risk in ambiguous situations, and the ability to hold conflicting perspectives. The observations and reports here point to a concept of managing personal and organizational change that is slowly starting to be recognized, but is still commercially non-mainstream – the concept of vertical development (also known as AMD).

Based on what has been presented so far, without knowing the difference between horizontal and vertical development, a coach may be working very hard to equip his/ her coachees with the “wrong” skills to manage V.U.C.A. situations. In other words, equipping people in V.U.C.A. situations with more horizontal skills will not lead to breakthroughs in performance, because V.U.C.A. situations require them to develop their vertical capacities. As stated earlier metaphorically, vertical development is not about downloading more software and apps, it is about upgrading to a new computer with a new operating system. Coaching someone vertically requires a different approach from coaching someone horizontally.

According to Cook-Greuter (2013), AMD (vertical development) studies and records one’s development from early simple interpretations of reality to ever-more complex views of it. As one moves from earlier to later stages of AMD, viewpoints evolve from simple to more complex, from static to dynamic, from egocentric to socio-centric, to world-centric. Each stage represents a worldview that involves a greater capacity to deal with the mental, emotional, and relational demands of the 21st century. As one becomes more mature, one’s overall creativity, resilience, and acceptance of ambiguity increases, and the need to defend oneself decreases. This naturally results in wiser actions that are more ecological, timely and foresighted.

Decades of AMD research by Loevinger (& Wessler, 1970), Kegan (1982), and Cook-Greuter (1999) have clearly shown that the way in which humans construct meaning becomes more complex over time. With each new stage of meaning-making, new capacities arise, such as: increased cognitive functioning, greater comfort in holding and managing polarities and ambiguities, strengthened self- and interpersonal-awareness, greater understanding and control of emotions. This increase in the overall capacity has been observed in leaders who have access to more creative, adaptive, and sustainable solutions (Eigel & Kuhnert, 2005; Helsing & Howell, 2014). Studies have shown that such leaders and change-agents, especially those at post-conventional stages, have the capacity to successfully manage and lead initiatives, even in

V.U.C.A. situations. Coaches are often change-agents and this research examines whether NLP coaches who are aware of AMD can actually produce more effective and sustainable solutions.

It is premised in the field of AMD that the understanding of one’s stage of adult maturity can help one to effectively improve one’s performance and transcend limitations. Broadly speaking, this can be achieved through one or more of the following strategies: consciously maximizing one’s current stage of development by making fuller use of one’s strengths and redefining one’s weaknesses, healing one’s hidden issues (shadows) from earlier stages, and beginning to build one’s existential “muscles” for the next level of development (Cook-Greuter & Beena, 2018).

AMD Assessments

There are several notable researchers and each has developed their own AMD assessment to determine a person’s stage of AMD: Kegan’s Subject-Object Interview (1994), Cook-Greuter’s Maturity Assessment for Professionals (2004), Torbert’s Global Leadership Profile (2004) and O’Fallon’s STAGES (2010 & 2011). With the exception of Kegan, the other three researchers have developed their assessments based on the work of Loevinger’s Washington University Sentence Completion Test (Loevinger & Wessler, 1970). The latter is a sentence completion test of a projective nature, i.e., a test designed to let a person respond to ambiguous stimuli, so that they reveal and project their hidden presuppositions, emotions, and internal conflicts through the test.

For this research, O’Fallon’s STAGES assessment has been used. It is statistically grounded with a high degree of reproducibility and has demonstrated to be as accurate as Cook-Greuter’s MAP assessment, which is the most extensively validated projective technique on adult development (Lilienfeld et al., 2000). In addition, O’Fallon has incorporated Wilber’s All-Quadrants-All-Lines theory (Wilber, 2005), which has helped to make her model more comprehensive, as it draws more diverse perspectives from different contexts. Another reason for choosing STAGES is that it lends itself better than other AMD theories to the foundations of NLP: both have strong roots in neurological, linguistic, and cognitive studies. A further reason for choosing STAGES is that O’Fallon believes that experiencing certain states of mind can support the development of certain stages (O’Fallon, 2018). This complements well the emphasis that NLP places on state management, which is evident in its robust frameworks and processes on managing states.

Overview of AMD Stages

Table 2 below presents the names of the stages and key characteristics of O’Fallon’s STAGES model and Cook-Greuter’s Leadership Maturity Framework (LMF). The LMF delineates nine stages, whereas the STAGES model has 12 stages. Due to the constraint of space, only six levels are presented here. They represent approximately 94% of the adult population (Cook-Greuter, 2004, 2013).

It is important to clearly state here that horizontal development remains vital to thriving in a V.U.C.A. world. At the same time, what all the change management and development experts mentioned here are saying is that the V.U.C.A. world is fundamentally challenging our current dominant mindset of “what do I need to know and do?” to shift toward “who do I need to become?”. The emphasis is on understanding and expanding our sense of self and identity, which is intimately tied to our worldview.

Level & % population	Cook-Greuter	O’Fallon	Brief & Broad Descriptions	Influencing & Feedback Styles
Level 9: 1.5% Post-Conventional	Construct-Aware	Construct-Aware Stage 5.0	They have complex interactions between nested systems; multi-cultural, cross-paradigmatic; understand evolutionary movement, long time span. They accept paradox, polarities and ambiguity; committed to serving self and others. They embrace what is in the moment, which relieves defensiveness and opens up possibilities.	They creatively redefine things, turn things inside-out, upside down. Dynamic steering. Able and want to generate social transformation. View feedback as part of natural systems, essential, but held lightly.
Level 8: 4% Post-Conventional	Self-Actualizing	Strategist Stage 4.5	Internalized general systems view, “meta-systemic”, able to compare and organize multiple systems. Well-balanced, growth-oriented, able to work with multiple stakeholders. They use higher principles, contexts, to get high-leverage points, not just follow rules. Tolerance of differences. Good at linking theory with practice. Aware of contradictions in system and self. Aware of abuse of their own power.	They lead in reframing and reinterpreting situations so that decisions support overall principle, strategy, integrity, and foresight. Invite feedback for self-actualization. Accept conflict as an inevitable aspect of dynamic multiple relationships.
Level 7: 11% Post-Conventional	Self-Questioning	Pluralist Stage 4.0	They recognize multiple perspectives, have an early awareness of the complexity of systems and cultural conditioning. Treasure individuality, listen to all ideas. See self in relationship context, aware of impact on others. Begin to question their own assumptions and those of others. Talk a lot about “interpretations” rather than truth. May seek changes in life. Can play different roles in different contexts. Systemic & double loop problem-solving.	They adapt or ignore rules when needed, and will probably invent new ones. Prefer to openly discuss issues and air differences. Welcome feedback as necessary for self-knowledge and to uncover hidden aspects of their own behaviors.
Level 6: 29.5% Conventional	Self-Determining	Achiever Stage 3.5	Formal operations stage, clear separation of subject and object. Highly rational, competence-focused. In charge of self as agent of change. Focus on delivery, results, and effectiveness. Longer-term goals and future-oriented. Systematic scientific knowledge. Seek proactive ways around problems. Begin to appreciate multiple views. Value mutuality in relationships.	They provide logical arguments and empirical experience. Good at aligning tasks to goals and securing contractual agreements. They accept feedback with clarification; use feedback to achieve goals and to improve themselves.
Level 5: 36% Conventional	Skill-Centric	Expert Stage 3.0	Abstract operations stage, they begin to take 3 rd person-perspective. ‘I’m separate, others are separate, and different from me.’ Immersed in being competent in their own expertise. Consistent in improving techniques and efficiency. Single-loop problem-solving, dogmatic and perfectionistic. Can get stuck in details. Challenged in prioritizing competing demands. Value high standards, strong opinions. Need to stand out and be respected. They have difficulties with collaboration.	Good at making a strong case for their own position and often overlook other people’s concerns. Focus on details and seek perfection. Take feedback personally, defend own position (allergic to being wrong). Dismiss feedback from others not seen as experts in the same field.
Level 4: 12% Conventional	Group-Centric	Conformist Stage 2.5	Concrete operations stage, focused on concrete manipulations using logical thought operations (rules). Externally focused; rudimentary internal states. Observe protocol and conform to socially expected behavior. Need approval and sense of acceptance. Avoid negative impression and conflict. People at this stage like to help bring people together. Think in simple terms and speak in generalities and clichés.	They reinforce current social norms; encourage and sweet-talk others; get others to conform to norm or protocol. Receive feedback as disapproval, or as a reminder to conform to norms. Feel shame when they violate rules.

Table 2

Connection to NLP Logical Levels

The notion of identity is connected to the NLP framework of logical levels (Dilts, 1996), which is a hierarchy of neurological processes and their capacities within an individual or group. The function of each level is to synthesize, organize, and direct the level below it.

These levels include (from highest to lowest in the hierarchy): vision/ spiritual, identity, values and beliefs, capabilities, behaviors, and environment. The concept stipulates that changing something on an upper level would necessarily cascade downward, precipitating change on the lower levels. Changing something on a

lower level could, but would not necessarily, affect the upper levels. In other words, transforming a person's identity and their concomitant worldview has a far more pervasive impact than changing a person's capabilities or behaviors.

In addition to the fact that NLP lacks an AMD framework, NLP also has very few diagnostic and intervention processes that deal with identity/worldview issues. Most NLP applications are aimed at the levels of "Behaviors, Capabilities, and Values/Beliefs". And NLP coaches typically work inductively from the ground up (i.e., data to concept) and it takes a substantial amount of time before they get to working on a coachee's identity/worldview issues. Without a clear adult maturity framework, coaching someone at the abstract level of identity/worldview is fraught with many challenges. It can be said that AMD provides a map of an adult's worldview at a given stage of development, and shows how one matures over time. Clearly, this is something that NLP does not provide.

Coaching Demand Will Rise in the V.U.C.A. World

The Centre for Creative Leadership states that the demand for executive coaching will continue to rise in the future (Petrie, 2011). One key requirement in a V.U.C.A. world is to increase employee ownership – a sense of accountability and ability to respond – and coaching is an effective engagement process to promote this. Some inherent benefits of coaching include: a) it is the employee, not the coach, who chooses that on which he/she wants to focus; b) the process is customized to each employee; c) the employee "owns" his/her development, while the coach serves as a facilitator; d) the coach is a co-explorer and co-solution-developer, not the authority; and e) it is a developmental process over time, not a one-time event. The last point is important because change is embraced as a daily "active learning" process, sustained over a period of time with regular feedback. This feedback is drawn from implementing agreed-upon strategies in actual work situations.

Purpose of This Research

The purpose of this mixed-method research is to discover how NLP coaches in Singapore are currently handling the challenges of the V.U.C.A. world, and whether having an awareness and understanding of their own AMD could make a positive difference in the way they coach their clients (and in their own personal lives). The research was carried out between February and May 2020, and this timing was ideal as it gathered data on how NLP coaches responded to the pandemic-centered V.U.C.A. world.

This research aims to discover the degree to which NLP coaches are aware of the concepts of "vertical" and "horizontal" development, and how such awareness might change their perspective and approach in coaching. Gathering this information also helps to confirm or refute the thesis that NLP does not have a framework for handling AMD (vertical development) challenges, which is crucial in the age of V.U.C.A. It could also raise the sense of urgency in NLP practitioners worldwide to develop new applications in the domain of vertical development.

II. Method

Overarching Research Question

This research focuses on investigating the personal and professional impact of introducing AMD to NLP coaches in Singapore in an intensifying V.U.C.A. world. The overarching research question is: *"In a V.U.C.A. world, do NLP coaches in Singapore understand the difference between vertical and horizontal development? If so, does understanding their own level of vertical development (namely adult maturity development) make a difference in how they self-manage, and how they work with clients?"*

To give this main research question more clarity, here are the sub-questions that guided this research:

1. How does the V.U.C.A. world impact the personal and professional lives of NLP coaches in Singapore?
2. Do NLP coaches know about the concepts of horizontal and vertical development? And, how do they differentiate between horizontal and vertical development?
3. How do their NLP knowledge and skills help them to deal with the horizontal and vertical development challenges of the V.U.C.A. world?
4. What is the personal and professional impact of introducing AMD to NLP coaches?
5. Did NLP coaches make any progress (during the 4-5 weeks research period) after receiving their AMD reports and debriefing sessions?
6. After introducing AMD to the NLP coaches, were they aware of an inherent "vertical development gap" in the field of NLP?
7. In what ways could AMD enhance the field of NLP?

The research focuses primarily on NLP coaches and explores their level of adult maturity (worldview) in response to the V.U.C.A. world. The research has a direct engagement with coaches, and not their clients, as it is more realistic and measurable to study the impact of AMD on the former, rather than the

latter. Fensel (2016) states that the adult development stage of the coach shapes the way he or she designs their approach toward coachees. Berger (2006) makes it clear that it is empowering for coaches to understand their own AMD stage, as it enables them to understand and appropriately respond to the needs of their clients. In other words, in order for NLP coaches to incorporate AMD into their practice, it is imperative that they first have a good understanding and appreciation of their own stage of AMD.

Research Methodology

A mixed-method approach was selected for this research after careful evaluation. This approach involved collecting, analyzing, and integrating information using quantitative and qualitative methods. Quantitative data includes closed-ended (yes/ no) investigations, which measure attributes, attitudes, and behaviors (e.g., using rating scales, checklists, as well as performance and profiling instruments). By contrast, qualitative data consists largely of open-ended investigations, usually gathered through interviews, focus groups, and observations (Timans, Wouters & Heilbron, 2019).

There are four general types of mixed-method research (Plano Clark et al., 2008): a) sequential explanatory design; b) sequential exploratory design; c) concurrent triangulation design; and d) concurrent nested design. The sequential exploratory design was selected for this research; this starts with qualitative followed by quantitative data gathering and analysis. Priority is given to the qualitative aspect of the study, and its findings are integrated in the interpretation phase of the research. This design is typically used to explore a phenomenon and to expand its qualitative findings of different samples in order to determine its distribution within a chosen population.

This mixed method explores the impact of V.U.C.A. on NLP coaches (research subjects) through open-ended first and second interviews (qualitative), and it also examines the aspects of NLP that the coaches use in their practice, as well as the extent to which they use these. Through the use of an established AMD assessment (quantitative) and debriefing by an external AMD-trained scorer, this research aims to help NLP coaches understand the relationship between their level of AMD and the demands of the V.U.C.A. world. In the weeks that followed the AMD assessment, a pre- and post-Likert scale self-assessment (quantitative) was developed to help coaches apply their AMD knowledge. A weekly email follow-up (qualitative) over four weeks drew out the NLP coaches' learning as they applied the suggestions in the AMD checklist.

Research Design

In broad strokes, there were seven phases in this research design:

- Phase 1: Preparation and invitation of subjects.
- Phase 2: Structured open-ended first interview. Subjects answered a set of questions online by typing their answers onto a questionnaire platform (Google Forms). They were supervised by the researcher via Zoom – a web-based video conferencing platform.
- Phase 3: Subjects took an AMD assessment online (STAGES, developed by O'Fallon) – a sentence-completion test, with 36 sentence stems.
- Phase 4: Subjects received a 60-minute debrief session from an AMD scorer via Zoom. Prior to the debrief, subjects received and read their customized reports.
- Phase 5: All NLP coaches completed their first AMD Self-Assessment Checklist; there was a follow-up of four weekly emails. The checklist comprised AMD stage-related healthy attributes and suggestions extracted from Cook-Greuter's (2018) and O'Fallon's (2017 & 2018) work. This Likert-scale checklist was collated and structured by the researcher to help the NLP coaches apply what they knew about their own level of AMD.
- Phase 6: Structured open-ended second interview; subjects answered a different set of questions online by typing their answers onto a questionnaire platform (Google Forms). They were supervised by the researcher via Zoom. Prior to the second interview, subjects completed their second AMD Self-Assessment Checklist – the same checklist used in the first Self-Assessment.
- Phase 7: Data analysis through triangulation, four rounds of coding, clarification and recoding, which eventually led to a set of meaningful and tangible themes.

Additional Details on the Phases of the Research Design

Phase 1: Preparation and invitation of subjects

An informed consent form and a document on "Mitigating Research Bias" were emailed to eight subjects. Both documents were signed and returned by all subjects. Common biases in research were made clear to all subjects; these included acquiescence, social desirability, sponsor, confirmation, leading and wording, halo and horn effect. Possible remedies were also included in the document.

Phase 2: Structured open-ended first interview

The interview questions were guided by a phenomenological approach, designed to draw out the experience of NLP coaches with regards to managing the demands of the V.U.C.A. world in their coaching work.

The structured open-ended questions were based on the guidelines of Bevan (2014), who created three themes to develop his questions: contextualization, apprehending the phenomenon, and clarifying the phenomenon. This structured interview was conducted through Google Forms, with subjects typing their answers onto an online questionnaire. This mitigated biases due to the nature of the relationship between the researcher and the subjects (trainer and students). Asking the same questions in the same sequence to each subject resulted in greater consistency and integrity of the data.

Phase 3: Subjects took the AMD assessment (STAGES) online

This marks the beginning of the quantitative part of the mixed-method research, using a proven psychometric test. The STAGES AMD assessment was created by Terri O'Fallon based on decades of education experience and seven years of research. STAGES is a projective test which involves sentence stems that deal with self-perception, social responses, and interpersonal relationships. The sentence stems allow subjects to project their worldviews into the incomplete sentences. Along with the content, the structure of the sentences and the language used were also assessed. The STAGES assessment identifies a person's main developmental stage – the level from which a person habitually makes sense of his or her experience of the world, and how they react or respond to it. The test is followed by a helpful report that highlights a subject's unique strengths and vulnerabilities, areas of major challenges and potential growth.

Phase 4: Subjects received a 60-minute debrief session

Over a period of two weeks, each subject had a 60-minute debrief session with the STAGES scorer. Subjects were reminded to read their reports thoroughly and prepare useful questions before the debrief session. All sessions were recorded and reviewed by the researcher. Key information from the sessions were recorded in the researcher's field notes, which were integrated into the data analysis phase.

Phase 5: AMD Self-Assessment Checklist, followed by four weekly emails

As an important part of the quantitative research, the researcher created a Likert scale self-assessment checklist to help subjects apply what they have learnt about their own level of AMD. The checklist contains a list of AMD stage-related healthy attributes and suggestions extracted from Cook-Greuter's (2018) and O'Fallon's (2017 & 2018) work. The 1-10 Likert scale describes key healthy mental, emotional, behavioral, and situational management attributes

pertaining to specific AMD levels/ stages. In addition, a weekly email was sent to all subjects to help them describe their weekly learning from applying the suggestions given in the checklist.

Phase 6: Structured open-ended second interview

This phase involved two parts: a) subjects had the chance to relook at their first interview responses to see if their perspective had changed after 4 weeks; where appropriate, they were able to edit their responses or leave them unchanged; b) subjects were asked new and follow-up questions to comment on how their AMD awareness had changed the way they thought, felt and behaved. They were asked to give concrete examples from their 4 weeks of AMD application. They were asked if they thought the field of NLP would benefit from incorporating AMD. Subjects were asked to share their understanding of what unique benefits AMD provided, which NLP does not.

Phase 7: Data analysis through triangulation

The qualitative data analysis is an iterative process involving individual- and group-level review and interpretation (Curry, 2016). After the open reading – without any code or frames in mind – of all the data sets, the researcher identified codes in subsequent readings. These codes were then organized into categories, which were then turned into code structures. The code structures evolved throughout the data analysis. Eventually, several themes emerged, giving an indication as to how they could be used for the research.

There are six major sets of data for analysis and synthesis: a) online first and second interviews; b) partial STAGES sentence stems analysis; c) field notes (researcher's journal); d) key notes from the subjects' STAGES debriefs; e) pre- and post-AMD self-assessment checklist; f) follow-up of four weekly emails on how subjects applied the AMD suggestions.

Triangulation – i.e., multiple methods or multiple data sets – was used for the data analysis of this research, in order to develop a more comprehensive understanding of the phenomena (Patton, 1999). This research employed the following:

a. Method triangulation, i.e., structured open-ended interviews, STAGES assessment, AMD self-assessment checklist and weekly follow-up emails on AMD learning.

b. Investigator triangulation, i.e., ongoing discussion with a dissertation coach trained in AMD, a STAGES scorer/ coach, and a colleague who has undergone AMD training with O'Fallon, the developer of the STAGES model and assessment.

c. Theory Triangulation, i.e., connecting and contrasting theories from AMD, NLP, and the concept of vertical and horizontal development.

Subjects

Research subjects were selected based on the following necessary criteria: a) Singaporean born; b) completed NLP Master Practitioner certification training; c) undergone life and/ or executive coach certification training; d) completed 100 hours of actual coaching; and e) have at least two years of professional coaching experience as an organizational in-house or independent coach.

Due to the unique requirements of this research and the constraint of time, the researcher chose not to investigate how other non-NLP-trained coaches managed AMD challenges connected to V.U.C.A. In addition, the researcher chose not to include NLP coaches from other countries in order to limit the possible interference of cultural factors. This means that this research may not provide broader insights into how the coaching industry or coaches in other nations manage AMD challenges connected to V.U.C.A.

This research uses purposive sampling. This method is most appropriate when only limited numbers of people can serve as primary data sources due to the nature of the research design and objectives (Schutt, 2006) – as is the case for this research. The number of well-trained NLP Master Practitioners in Singapore is small, as there are only two or three companies which consistently conduct advanced Master-Practitioner-level NLP training. In addition, no more than 100 NLP Master Practitioners in Singapore are professionally certified by the International Coaching Federation (ICF) or International Association of Coaching Institutes (ICI).

The issue of the right sample size for non-probability sampling is controversial; it needs to reflect a wide range of research factors in each case. Nevertheless, Saunders et al. (2012) provide generally acceptable guidelines for non-probability sampling: a semi-structured in-depth interview has a range of 5-25; an ethnographic research has a range of 35-36; a grounded theory has a range of 20-35; considering a homogeneous population is about 4-12; and considering a heterogeneous population is about 12-30.

Using the above guidelines, eight subjects is an acceptable sample size for this research, which is considered a semi-structured in-depth interview. The selection of the individuals in this research was based on other important criteria as well: equal gender representation (four women and four men); equal age

group representation (two men and two women aged 35-49, two men and two women aged 50-65).

III. Results

The research involved eight subjects, all professional NLP coaches (either in-house or independent practitioners). In addition to meeting all the criteria mentioned earlier, all subjects are currently certified as coaches by the International Association of Coaching Institutes (ICI), based in Germany.

Table 3 arranges the eight subjects (with their pseudonyms) according to the results of their STAGES assessment, from earlier levels at the top to later levels below. As the table shows, chronological age is not necessarily a determinant of a person's level of adult maturity. 25 percent of the subjects scored at 3.5, 50 percent scored at 4.0 and another 25% scored at 4.5.

Subjects	Gender	Age	STAGE Level	Names of the AMD Levels by Cook-Greuter & O'Fallon	%
Alan	Male	38	3.5	Self-Determining, Achiever	25%
Pam	Female	54	3.5	Self-Determining, Achiever	
Sonny	Male	62	4.0	Self-Questioning, Individualist	50%
Eddie	Male	53	4.0	Self-Questioning, Individualist	
Jenny	Female	62	4.0	Self-Questioning, Individualist	
Thandie	Female	44	4.0	Self-Questioning, Individualist	
Gerald	Male	39	4.5	Self-Actualizing, Strategist	25%
Catherine	Female	47	4.5	Self-Actualizing, Strategist	

Table 3

Major Findings

This section presents the core research findings. Each finding is backed up by substantial quotes from respective subjects, however, due to the constraint of space, they have been excluded here. Below is a summary of the six major findings, with the relevant minor points included.

Finding 1: None of the subjects (NLP coaches) knew about the concepts of vertical and horizontal development, nor about adult maturity development.

- None of the subjects was able to clearly define the difference between horizontal and vertical development.

- Some subjects defined “horizontal and vertical development” in the context of human resource development, which is different from the field of adult maturity development. They saw job-based skills as horizontal, and skills that are generalizable across multiple contexts as vertical. In the context of AMD, both of these exemplify horizontal development.

Finding 2: All eight subjects knew what V.U.C.A. meant, and each experienced it according to his/ her stage of AMD.

- The coaching situations handled by the subjects revealed the subjects’ stage of AMD, as this shows their capacity to manage the number of systems, complexity of systems, intrapersonal and interpersonal awareness, ability to regulate their own thoughts and feelings, and the degree of abstraction and concreteness in their thinking.
- Because every subject (NLP coach) views their world and V.U.C.A. situation through his/ her stage of AMD, having an awareness of their own AMD had large-scale implications on how they led themselves and coached others.

Finding 3: The NLP models and processes most commonly used by the subjects (NLP coaches) revealed that they were largely working on their coachees’ horizontal development.

- Many subjects conflated the abstraction level of values/ beliefs and mindset with that of a worldview. These are at a different level of abstraction, worldview being more all-encompassing, pervasive and ubiquitous compared to values/beliefs and mindset.
- According to Funk (2001), a worldview is the amalgamation of our beliefs and fundamental aspects of reality that ground and influence all our perceptions, thinking, and doing. De Witt (2014) states that most of us are not aware of our worldview, we are blind to our causal hypotheses – the beliefs, prejudices, and modes of thinking we learned as children make up our worldview. In this regard, NLP’s logical level of “identity” matches Funk and De Witt’s definition of “worldview”, as our identity consolidates whole systems of beliefs and values into our sense of self. And within each stage of AMD lies a person’s sense of identity and its concomitant worldview.

- A clearer understanding of the difference between values/ beliefs/ mindset on one hand, and worldview on the other, enabled subjects to approach worldview issues differently. Especially with the help of AMD, the subjects now have a “map” of an adult’s worldview in a given stage of adult development.

Finding 4: The initial improvements made by subjects in applying the AMD checklist provided insights into the key areas of development for each level.

- This segment focuses on the portion of the research that documents the subjects’ four-week learning from applying the suggestions in the AMD checklist. This checklist is the crystallization of Cook-Greuter’s (2014) and O’Fallon’s (2018) extensive body of work. Each descriptor in the checklist is given a scale of 1-10 and subjects self-assess how true it is for them, how well they have mastered it, and/or how frequently they have experienced it. The descriptors were loosely classified into four broad areas of learning:
 - “Minding Your Thoughts” – catching and challenging one’s own worldview presuppositions;
 - “Neuro-Complexity” – expanding and deepening certain cognitive abilities;
 - “Emotional State-Management” – exercising helpful emotions and observing and neutralizing unproductive emotions; and
 - “Verbal Strategies and Managing Key Situations” – practicing specific language patterns, and paying attention to certain key situations to exercise particular skills and abilities.
- Stage 3.5 people are typically challenged in the area of “neuro-complexity”, they attempt to balance effectiveness and efficiency, and show early signs of being able to facilitate and create a shared space to co-create solutions.
- Stage 4.0 people are challenged primarily by “emotional-state management” followed by “minding your thoughts”. They need to be aware that their emotions are tied to their older worldviews and learn how to regulate them. Late-phase 4.0 people begin to embrace polarities and strive to integrate them.
- Stage 4.5 adults are challenged primarily by “minding your thoughts” followed by “emotional-state management”. Although it

looks similar to stage 4.0, the primary challenge of 4.5 is managing “mental presuppositions”, as opposed to managing “emotional states”. In complex and volatile situations, they can remain clear and open in their heads, and “feel their way into knowing”. They become aware of their psychological “shadows” and are actively seeking coaching and therapy.

Finding 5: By understanding their own stage of AMD and applying the suggestions, subjects have collectively improved the way they managed themselves and their coachees by 12.53%.

- Tabulated below are the results of the first and second AMD Self-Assessment Checklists for each subject. Each AMD level has 4 developmental areas: a) Minding Your Thoughts (MYT); b) Neuro-Complexity (NC); c) Emotional/ State Management (ESM); d) Verbal Strategies & Key Situations to Focus on (VS+KS). Also shown below are the total scores of each key developmental area, and the contrast of the first and second assessments in terms of percentage of change. A collective average score of all the eight subjects is shown as well.

Alan, Stage 4.5 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	40	28	35	33	136
Second	43	34	35	34	146
Results	+7.35%				
Pam, Stage 3.5 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	38	27	33	34	132
Second	42	32	35	34	143
Results	+8.33%				
Sonny, Stage 4.0 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	28	28	15	21	92
Second	28	27	16	21	92
Results	0%				
Eddie, Stage 4.0 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	29	37	26	25	117
Second	33	37	29	27	126
Results	+7.69%				
Jenny, Stage 4.0 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	26.5	32.5	18	20.5	97.5
Second	33	33.5	22.5	23.5	112.5
Results	+15.38%				
Thandie, Stage 4.0 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	19	22	18	18	77
Second	25	25	20	20	90
Results	+16.88%				

Gerald, Stage 4.5 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	26	25	15	18	84
Second	34	27	22	22	105
Results	+25.00%				
Catherine, Stage 4.5 of O’Fallon’s STAGES (AMD)					
	MYT	NC	ESM	VS+KS	Total
First	36	31	20	20	107
Second	43	34	26	25	128
Results	+19.63				

Table 4

The average progress made by all the subjects: +12.53%.

- Subjects reported five positive benefits of AMD:
 - Greater awareness of their own judgments and assumptions. They became better able to turn this awareness into a personal resource and incrementally change their approach to get better results.
 - Gained wider and deeper perspectives in whatever they handled, and were able to incrementally generate more sustainable solutions. This included knowing that certain situations have to be accepted, while others might need the right timing to resolve.
 - Across all levels, with more progress on their own AMD, subjects were able to facilitate shared conversations, hold space for new ideas to emerge, and facilitate co-creation of solutions with their clients.
 - Subjects improved their understanding and appreciation of diversity in people; subjects at post-conventional levels were able to more actively lead people to joint solutions.
 - Subjects who improved their understanding of polarity thinking appeared to have more inner equilibrium and this enabled them to be more creative in solving problems.
- **Important note:** One of the subjects, Sonny, was the exception among the eight subjects because he did not register a change between his first and second AMD self-assessment checklists. This is likely due to his four continuous weeks of illness. Prior to the three continuous weeks of illness, Sonny had another medical challenge in the first week of the AMD checklist application. He had five continuous days of persistent fever, flu, and cough. This

was at the early stage of the pandemic. He self-quarantined for a week, went for a medical check-up, and the doctor confirmed that he was not infected by COVID-19. This was followed by teeth and gum problems, which led to the bacterial gum and sinus infection and a series of complications. On top of all these challenges, Sonny had to learn new technologies with which he was not familiar, as well as lead a technologically-challenged team. Given these medical issues and the fact that Sonny did not show any progress between self-assessments, we can conclude that health is a major factor in determining a person's ability to learn. His mental, emotional, and physical capacities were greatly reduced during the four weeks between the two AMD self-assessments.

Finding 6: All eight NLP coaches benefitted from applying AMD knowledge, and seven of them fully supported the incorporation of AMD into NLP. The remaining subject also supported the incorporation, but needed more evidence to be convinced that AMD would make NLP more effective.

Reasons for supporting the incorporation of AMD into NLP:

- Subjects across all levels recognized the long-term personal development value of AMD, realizing that they could proactively work toward becoming better versions of themselves.
- Across levels, subjects acknowledged the benefits of helping people gain awareness of their own worldview (their level of AMD), including knowing on what to focus in order to develop their ability to solve problems and create solutions.
- Subjects at conventional levels see AMD as an auxiliary module which can give NLP additional perspectives for developing skills and solutions. Subjects at post-conventional levels see AMD as an integral element for expanding worldviews, as it increases one's capacity to thrive in complexity, and it helps one to see a bigger purpose in life.
- The one subject (Sonny) who did not fully support the integration of AMD into NLP needs more evidence to be convinced that AMD would improve the efficacy of NLP. It is worth noting that this subject was intensely ill for three out of the four-week research period.

IV. Discussion

Details of the research findings were presented in the previous segment. In this segment, those findings are now further discussed in order to highlight implications of the research on the field of NLP coaching and the possible avenues for future research. This includes not only the six significant findings, but also the secondary insights, which are indicated in *italics* below.

1. None of the subjects (NLP coaches) knew about the concepts of vertical and horizontal development, nor about adult maturity development. ***NLP coaches were not aware that maturity/ worldviews could be mapped, studied, and operationalized.***

The results collated here confirmed one of the hypotheses of this research, namely that NLP does not have an AMD framework. Prior to the introduction of the STAGES assessment, none of the NLP coaches had a clear understanding of the difference between developing one's maturity/ worldview ("vertical") versus developing one's education- and profession-based knowledge and skills ("horizontal").

All NLP coaches' descriptions of the difference between vertical and horizontal development referred to models, frameworks, knowledge, skills, or applications which, from an AMD perspective, are associated with *horizontal* development. Such developments do not fundamentally change one's relationship to self, others, or the world – i.e., one's *worldview*. In short, extensive acquisition of new skills and/ or knowledge alone does not alter one's worldview. For that, one needs *vertical* development.

Many NLP coaches related the term "maturity" to some form of general wisdom that comes with age, or the notion of being virtuous in the context of spirituality. They also associated a person's level of maturity to a generic form of emotional intelligence – being calmer and more compassionate, non-reactive, more accepting, and having an ability to see or hold more perspectives. The subjects saw "maturity" as something that can only come with accumulated life experience, definitely not something one can proactively develop.

Before being introduced to the STAGES model, none of the NLP coaches knew that their AMD levels correlated with their capacity to perceive, relate, and regulate their cognitive, affective, and conative functions in the meaning-making realms of self, others, and the world-at-large. They had no understanding of, or appreciation for the fact that expanding and enriching one's worldview was synonymous with developing one's maturity, nor of the fact that doing so accelerated one's capacity to deal with V.U.C.A. situations in life.

2. All eight NLP coaches knew what “V.U.C.A.” meant, and each experienced it according to his/ her stage of AMD. *Since every NLP coach looks at the world through their personal AMD lens, having an awareness of their own AMD had profound implications for their coaching effectiveness.*

All the NLP coaches/ subjects were familiar with the term “V.U.C.A.”, and experienced it based on their AMD level. From the data collected and the documentation of the themes that emerged from the coding process, it is safe to say that the NLP coaches in the three relevant levels (3.5, 4.0 and 4.5) view and handle the V.U.C.A. world through specific tendencies connected to their AMD stages. By observing these tendencies and by being familiar with the AMD framework, the coaches began to understand the challenges that clients faced, and they started to make appropriate changes to address the various situations. The information provided below – regarding tendencies and remedies – is drawn from this research and informed by the works of Cook-Greuter (2013) and O’Fallon (2017 & 2018). The information below is by no means the last word on how to coach people at these respective stages, but merely “hints” about what is made possible when using AMD in NLP coaching.

Level 3.5 Natural Tendencies:

- When the pressure of the V.U.C.A. world increases, people at level 3.5 tend to work harder, spend more time on areas that require solutions. They look for “best practices” through reading and/or taking courses in order to get the knowledge and skills they need. They focus on meeting goals in a timely manner – typically using tried and proven methods.
- They tend to have their own plans and ideas in a coaching engagement, and, instead of listening for the emergence of “unplanned” solutions, they tend to talk more with a desire to “sell” their ideas to coachees.

What They Could Do Instead:

- Spend time re-evaluating what is most important to them in a given project, and examine their personal values to reprioritize their routines and commitments. Spend more time tapping into different systems of knowledge and searching for more integrated solutions. Rather than aiming for expediency, make time to go inside themselves and “connect the dots” between the different systems of knowledge. Open themselves more

to learning non-mainstream, leading-edge systems that could solve their problems.

- Start feeling comfortable facilitating shared conversations, asking strategic open-ended questions, and consciously step into the world of the coachee. Through this process, 3.5 coaches create and hold a safe space for clients to share their thoughts and concerns. At appropriate times, they invite clients to co-create solutions.

Level 4.0 Natural Tendencies

- In a discussion with a group of NLP coaches on the topic of how best to handle a V.U.C.A. situation, level 4.0 NLP coaches tended to want to listen to everybody, wanting everyone to contribute. Often, 4.0 NLP coaches spend a lot more time listening to and analyzing contextual influences of the problem (societal, organizational, individual circumstances, etc.). Although they want equality, 4.0 NLP coaches are often unaware that they express strong opinions based on their own values.
- Often, while NLP coaches are handling their own personal V.U.C.A. situation, such as working from home due to the pandemic, they can hear voices in their head and experience the dilemma of wanting to handle their own internal conflicts (values and beliefs), while also wanting to address external issues presented by their clients. They are struggling to maintain their own personal space. Their internal voices can come with strong opinions, often charged with negative emotions.

What They Could Do Instead

- When facilitating group discussions, 4.0 NLP coaches can receive information from the group, and summarize key points, while acknowledging the contributions and concerns of everyone. Be able to establish clear intentions and expectations from the beginning, so that the “agreement frames” can be set for meetings to end with some form of closure and actionable items. The 4.0 NLP coaches can practice distancing themselves from their own thoughts while they hold a larger mental “solution space” that can fulfil their own needs, as well as the needs of the group.
- When handling a personal V.U.C.A. situation, 4.0 coaches can put themselves into an optimum state, through some combination of

breathing exercises, physical relaxation, and visualization. This mind-heart-body alignment enables them to achieve a balanced state, which optimizes their responsiveness to situations. They can center themselves and apply polarity thinking (Johnson, 2014) to help them see the upsides and downsides of a conflict. The 4.0 NLP coaches can then integrate different perspectives to implement the best solution. The practice of observing their internal voices, combined with applying polarity thinking, will slowly turn their voices into useful perspectives – in short, the “voices” become a resource, instead of a liability.

Level 4.5 Natural Tendencies

- In a coaching session, a 4.5 coach tends to see more capacities in the coachee, more so than the coachee sees in himself/ herself. Coachees often have difficulty being honest if they do not perform according to the coach’s expectations. In other words, the coachee/ client often feels pressure to perform. The constant desire of the NLP coach to help the coachee evolve – urging them to be congruent, “to walk their talk” – creates another stress point and barrier between the NLP coach and his/ her coachee.
- In V.U.C.A. situations, when 4.5 NLP coaches have to work with multiple stakeholders, hold multiple expectations, and adhere to their own values, while dealing with an organization that may hold opposing values, they often experience a deep conflict between what they are supposed to do and the high standards to which they hold themselves. The 4.5 NLP coach often wants to quit in such situations, justifying their moral grounds, or can feel deeply frustrated by not being able to be congruent to do their best.

What They Could Do Instead

- The 4.5 coach can form a realistic expectation of the coachee’s ability to carry out a task by asking the coachee to carefully evaluate their priorities and capacities. In fact, 4.5 NLP coaches can factor in buffer time to cater for the unexpected. More importantly, the 4.5 NLP coach can make time to find “less-is-more” solutions by looking at all the systems impinging on the coachee’s life, and finding the high leverage points for change with the coachee. Above all, the 4.5 NLP coach can accept the limitations of specific situations

faced by the coachee, and can embrace the wisdom of patiently sensing the right time to act.

- In highly V.U.C.A. situations, the 4.5 NLP coach can trust that their feelings of ambivalence and confusion are part of the lesson they need to learn in order to grow. This comes from a regular practice of surrendering their ideals, trusting that the situation will present the solution when the timing is right. They can choose to focus on balancing the wisdom of readiness and acceptance. This involves first aligning their mind and body through breathing, followed by structuring their questions through a multi-dimensional framework – using different time zones, perceptual positions, and knowledge frames to gather information from the different stakeholders – so that the next best step can be conceived.

As stated earlier, since every NLP coach views the world through their particular AMD lens, having an awareness, understanding, and mastery of their own AMD level has wide-scale implications. If progress milestones are clear, NLP coaches can proactively work toward greater mastery within their own stage. The report received by all subjects in the STAGES assessment also pointed out their “shadow” issues on which they may need to work. When some degree of integration work has been achieved, the NLP coaches can work toward moving to the next level, increasing their capacity to impact the world.

3. The NLP models and processes most commonly used by the subjects (NLP coaches) revealed they were largely working on their coachees’ horizontal development. ***Many NLP coaches conflate different levels of logical abstraction, such as worldviews, mindsets, and values/ beliefs.***

The NLP models and processes most often used by NLP coaches in response to V.U.C.A. situations are: S.O.A.R. model, S.C.O.R.E. model, Reframing, NLP Presuppositions, and State Management Techniques. On a few occasions, NLP applications were used by the NLP coaches to help clients question their own assumptions or beliefs about a particular work situation. However, the data shows that the NLP coaches did not use these models and processes to expand or redefine their clients’ worldview; instead, they used them to help clients complete a particular task or resolve an immediate problem – i.e., to improve *horizontal* (education- and work-based skills) development.

Core issues revolve around these two notions:

a) NLP coaches are not aware of AMD – that a person’s worldview/ adult maturity level can be mapped, studied, and operationalized; b) NLP coaches conflate different levels of logical abstraction, such as worldviews, mindsets, and values/beliefs. In Dilts’ (& Delozier, 2000) definition of logical levels, which is built on Bateson’s (1972) classification of logical types, a person’s identity and its concomitant worldview involve a much higher level of abstraction than that of values and beliefs. Neurologically speaking, values and beliefs are far less pervasive compared to neurological activation at the level of worldviews and identity. Consequently, the approach to handling worldview/identity issues would be structurally different from handling values and beliefs.

4. The initial improvements made by subjects in applying the AMD checklist provided insights into the key areas of development for each level. ***These developmental areas appear to be connected to the multiple intelligences.***

While attempting to organize and structure the broad range of “developmental descriptors”, i.e., suggestions for growth for each AMD stage (extracted from the works of Cook-Greuter and O’Fallon), the researcher noticed a relationship between the multiple “intelligences” (spiritual, mental, emotional, and physical) and the four key areas of the AMD self-assessment checklist. Below are some of the researcher’s thoughts on this relationship:

- ***Minding Your Thoughts:*** focuses on catching and challenging one’s own worldview presuppositions. Essentially, it helps the subject to be mindful or self-aware of certain “tendencies” (such as judgments, assumptions, preoccupations, virtues, and ideals) related to their level of AMD. This seems to loosely correlate with “spiritual intelligence”, the development of greater self-awareness, wisdom, and compassion. These are more abstract (non-sensory) ideas or qualities, often connected to higher meaning/ purpose in life.
- ***Neuro-Complexity:*** deals with expanding and deepening specific cognitive patterns. Essentially, it helps subjects exercise specific mental capacities – e.g., expanding their ability to observe, process, and connect different knowledge systems. This seems to correlate with several key aspects of “mental intelligence”.

- ***Emotional/ State Management:*** focuses on exercising certain helpful emotions or observing and neutralizing specific unproductive ones. Essentially, it helps learners tap into their intrapersonal and interpersonal resources. This seems to correspond to the conventionally known “emotional intelligence” – the ability to manage one’s own emotions and to influence the emotions of others.
- ***Verbal Strategies and Key Situations:*** refers to practicing specific language patterns, paying attention to key situations, and exercising particular skills or abilities. Essentially, this helps learners to connect what they know to their behavior, so they can execute and express themselves optimally at the appropriate place and time. This loosely corresponds to some form of “physical intelligence”, the ability to smoothly execute complex behaviors.

Based on the subjects’ responses, the progress they have made on their AMD relied on two factors: a) usability and efficacy of the AMD checklist; and b) their existing NLP knowledge and skills helped them to operationalize suggestions from the checklist. The subjects’ NLP training programs were built on the framework of the multiple intelligences and, therefore, they were able to employ their cognitive, affective, and conative functions to operationalize the AMD checklist suggestions. This research suggests that by expanding and enriching one’s multiple intelligences, one can improve their AMD. More research needs to be done in this area to substantiate or refute the efficacy of multiple intelligences on AMD.

5. By understanding their own level of AMD and applying the suggestions, subjects have collectively improved the way they manage themselves and their coachees by 12.53%. ***A person’s learning strategy can be out of step with their level of AMD.***

There are four subjects (NLP coaches) who scored at AMD stage 4.0, and the way they handled the suggestions in the STAGES report and AMD self-assessment checklist were distinctly different. The way in which two of the subjects at AMD stage 4.0 understand the field of AMD, and utilize the suggestions given in the report and checklist gave rise to another hypothesis: can a person’s learning strategy be “out of step” with their level of AMD?

For example, Sonny and Eddie’s comments on the weekly follow-up emails revealed difficulties in

understanding the theory and practice of AMD. On the other hand, Jenny and Thandie (AMD stage 4.0) were both able to understand and appreciate AMD from the onset of the research. From the AMD literature Lynam's (2014) research showed that people at stage 3.5 tend to find AMD models too complex and cumbersome to use in work settings. On more than two occasions, both Sony and Eddie commented that the AMD model needed to be made simpler, even though they benefited from applying some of the suggestions stated in the AMD checklist. Scoring at stage 4.0, Sonny and Eddie generally operate from a post-conventional worldview, however, their learning strategy seemed to be tied to more conventional methods.

People at stage 4.0 tend to think inclusively, engaging several systems at once, and they can also correlate and connect with different systems. Unlike goal-oriented people at 3.5, those at 4.0 tend to be more process-oriented. They tend to think more in terms of "both/ and", and they value more subjective rather than objective thinking. People at stage 4.0 prefer other ways of knowing: e.g., somatic learning, emotional intelligence, and intuition. They prefer more non-directive and collaborative learning, and are more interested in qualitative rather than quantitative methods.

Being open to new knowledge and using one's own experience to learn in more personal ways, does not seem to describe Eddie's and Sonny's learning strategy. They tended to keep to what they knew, rather than being open to new untested knowledge systems. Both wanted to know from the start about the research objectives and, on multiple occasions during the research, they wanted more clarity. They tended to be more supportive of NLP than of AMD, and did not readily see how AMD could enhance NLP.

In summary, if a person's learning strategy can be out of step with his/ her assessed AMD level, then focusing on helping that person expand their learning strategy could dramatically improve their ability to learn new knowledge and skills, which is crucial in a V.U.C.A. world. Despite an extensive literature review, the researcher did not find any literature on whether one's learning strategy could be out of step with one's AMD level. This may be an important topic for future research.

6. All eight NLP coaches benefitted from applying AMD knowledge, and seven of them fully supported the incorporation of AMD into NLP. The remaining subject also supported the incorporation, but needed more evidence to be convinced that AMD would make NLP more effective. *It is only through long-term*

self-observation that people can begin to unveil aspects of their current selves.

As indicated from the research subjects' post-interviews, having a framework for long-term personal developmental is important for NLP coaches. They recognize that an investment in their own future as a wise and resourceful coach would serve not only themselves, but also their clients. Across the levels, data shows that as people mature, they gain more awareness of their own thoughts, feelings, assumptions, and beliefs. This brings them closer to recognizing their own worldview.

Data from this research explain why it is difficult for people at the NLP logical level of "identity" to see and describe themselves clearly. Kegan's (1982 & 1994) subject-object theory explains how a person's previous self becomes the object of their awareness. Only through a process of long-term self-observation ("mindfulness", in Buddhist terms) can people begin to unveil aspects of their current selves.

To a large extent, as one develops adult maturity, a fundamental shift occurs: their intention and attention tend to move away from relying on willpower ("forcing" things to happen), and they prefer to learn from their own moment-to-moment awareness. This allows awareness to work in non-judgmental ways, at both conscious and unconscious levels, creating inner space for self-inquiry and the discovery of the roots of behavioral patterns. Over time, systems of beliefs and worldviews can be transformed and transcended.

AMD provides a framework that guides people to see and understand these different levels or versions of themselves. The capacity to solve problems and create solutions through mindfulness training is long overdue. In fact, it is only recently that K. Nielsen (2020), president of the International Association of Coaching Institutes (ICI), began to offer mindfulness training as a certification course for coaches and trainers.

Future Research

1. **Study the Efficacy of NLP in Improving AMD Outcomes.** Longer-range studies of about 9-12 months could be carried out, using an NLP coaching approach to determine how much progress NLP coaches could make using AMD pre- and post-assessments. To confirm the results more definitely, this research should include a controlled group of coaches who are not NLP trained.

2. **Identify Quantifiable Progress Milestones for Each Stage.** An important question arises from this research, one not yet answered within the AMD community: how does one measure progress within each

level/ stage? The researcher put this question to several AMD practitioners and developers, and none was able to provide a clear answer. An extensive literature review on this topic did not yield any clear framework that describes “progress milestones” for each level/ stage. A rough framework of developmental milestones with clear mental, emotional, and behavioral descriptors would help practitioners of AMD to channel their attention to work on important skills, blind-spots, fixations, and untapped potentials. The framework would need to be worded in a language that is appropriate for each level/ stage.

3. Study the Correlation between Multiple Intelligences and AMD. With roots in cognitive, affective, and behavioral psychology, artificial intelligence, and linguistic studies, it would not be difficult for NLP to expand and integrate the field of multiple intelligences. Based on his own research into multiple intelligences, the researcher sees the importance of developing one’s intelligences holistically. People can connect to spirituality via the pathways of IQ, EQ, and PQ. Similarly, SQ can be expressed through the pathways of all intelligences. In short, expanding one’s adult maturity/ worldview seems to involve all of one’s intelligences. Improving one’s weakest intelligences can have a profound impact on one’s overall adult maturity.

4. Refinement of the AMD Checklist and Daily Practice. As an interim development prior to the longer-range study of identifying quantifiable progress milestones, a more in-depth study on how to improve the current AMD self-assessment checklist would be very beneficial. The classification of the four areas of development could be more clearly defined and presented in a language that is appropriate for each AMD level/ stage. Suggestions could be articulated more clearly, according to the respective level/stage. The improved AMD checklist can be tested with another group of NLP coaches over a period of 4-5 weeks, with constant feedback to further refine it.

5. Evolving NLP with the V.U.C.A. Concept. In the course of this study, the researcher realized that there isn’t any NLP literature on how NLP is adapting itself in the midst of an accelerating V.U.C.A. world. The speed and complexity of change have drastically increased in the last ten years. The world is in the midst of the fourth industrial revolution, namely the acceleration of artificial intelligence and automation. This will be the main driving force of the economy going forward, drastically changing the workforce and work culture in the years ahead. The conditions and context

that created NLP have dramatically changed. The approach that NLP takes to uncover information, to predict and respond to changes, and to develop solutions needs to incorporate a V.U.C.A. perspective. Given the increasing rate of V.U.C.A., answering the following questions is urgent for NLP practitioners: a) What NLP models, techniques, and processes are already obsolete in the context of a V.U.C.A. world?; b) How can NLP be reformulated to be more effective and relevant in today’s world?; c) Does NLP need to re-define the way in which outcomes are set, how feedback is obtained, and how to adapt strategies to achieve desired outcomes?; d) How can V.U.C.A. be used as a concept for generating new NLP models?; e) What is NLP’s approach to developing V.U.C.A.-ready leaders, consultants, or coaches? Clear answers to these questions would enable NLP practitioners to address V.U.C.A. challenges confidently in their personal and professional lives. It would greatly help NLP to remain valuable, relevant, and impactful in the decades ahead.

V. Conclusions

This research has generated useful answers to two main questions: (1) are NLP coaches in Singapore aware of the difference between horizontal and vertical development in the midst of the current V.U.C.A. world? Specifically, would being aware of the concept of “vertical development” help NLP coaches to manage V.U.C.A. challenges more effectively? (2) Would the introduction of AMD to NLP coaches produce a quantifiable positive difference in the way they manage themselves and their coachees?

Test subjects (NLP coaches) in this research were not aware of the pervasive impact of worldview change on a person’s life experience. They were not aware that working on the clients’ education-based or work-based “content competencies” (horizontal development) would not develop their “container capacities” (vertical development), which are needed to manage V.U.C.A. with finesse and confidence. These “container capacities” are referred to as “meta-competencies” by Petrie (2011) and “wisdom skills” by Murray (2017). “Container capacities” refer to one’s ability to expand and enrich one’s worldview, to shift one’s overall perspective in life, in ways that allow for greater capacity to manage V.U.C.A.

This research is the first of its kind in the field of NLP, exploring the effects of introducing AMD to NLP coaches. It showed that NLP coaches were able to quantifiably improve the way they managed their own personal and professional lives with AMD. As a result

of participating in this research, NLP coaches became aware that working on the key developmental areas of the AMD checklist on a daily basis – “Minding Your Thoughts”, “Neuro-Complexity”, “Emotional/ State Management”, and “Verbal Strategies and Key Situations” – helped them to better manage V.U.C.A. situations. It has helped them to handle personal and work relationships more effectively, widen their personal creativity and resourcefulness, and increase their self-appreciation.

This study has offered the NLP community compelling reasons to incorporate AMD into the NLP conceptual framework and methodology. If adopted, adding AMD knowledge to NLP would give practitioners more robust and time-saving ways to work on identity and worldview issues. The bottom-up (inductive) approach of NLP can now be complemented with AMD’s top-down (deductive) approach so that identity/ worldview issues can be handled more definitively and effectively.

It is the aim of this research to awaken NLP practitioners worldwide to the importance of integrating AMD into field of NLP, and to start reinventing its methodology, framework, and processes to be able to thrive in the V.U.C.A. world.

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