

# ADAPTIVE PERFORMANCE IN VUCA ERA – WHERE IS RESEARCH GOING?

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## ABSTRACT

*Adaptive performance in the work environment refers to adjusting to and understanding change in the workplace. Adaptive performance can be understood as altering behavior to meet new demands created by the novel and often ill-defined problems resulting from changing and uncertain work situations. Adaptive performance is a context specific term, individual adaptive performance, team-group adaptive performance, organizational adaptive performance. In the volatility, uncertainty, complexity and ambiguity (VUCA) no other performance is relevant due to high speed change. To match and sustain with VUCA situation adaptive performance can play as innermost theme need more research on researches to discover responses. This paper explores how and where the researches on adaptive performance are moving under the constraints and guidelines for VUCA environment. The methodology adopted here is review based content analysis.*

**Key words:** Environment, Skills, Researches, Future skills.

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## 1. INTRODUCTION

*“We cannot direct the wind but we can adjust the sails”.*

We are in the world at the 21<sup>st</sup> century. The characteristics and attributes of 21<sup>st</sup> century symbolizes as it was described in the acronym i.e. VUCA. Contextually we are the VUCA-world. The thematic parlance of VUCA is one that stands for Volatile, Uncertain, Complex and Ambiguous and together these represent how it feels to be doing business and designing strategy in the world right now. According to *Kinsinger & Walch (2012)*, stated that the notion of VUCA was introduced by the U.S. Army War College to describe the more volatile, uncertain, complex and ambiguous, multilateral world which resulted from the end of the Cold War. It is subsequently adopted by the strategic business leaders to describe the chaotic, turbulent, and rapidly changing business environment that has become the “new normal” (*Kishinger, P & Walch, K, 2012*). VUCA is now available as a stand-alone environmental factor which enforces the entities in uncertain times which compels in utilization of the

capacity the leaders to take action in uncertain situation. The four VUCA dimensions can be explained as hereunder;

- (i) Volatility: Dynamic, quick and intense changes in the environment where the challenge is unexpected or unstable and maybe of unknown duration.
- (ii) Uncertainty: A lack of predictability around issues and events where the nature of the event may be known, but it is impossible to predict its presence or outcomes in advance.
- (iii) Complexity: The combination of issues and the chaos that surrounds any organization, in which the situation has many interconnected parts and variables where some of the information may be available or could be predicted, but the volume or nature of it can be too overwhelming to process.
- (iv) Ambiguity: The haziness of reality and the mixed meanings of conditions in which casual relationships are completely unclear where no precedents exist, and have to face “unknown unknowns”.

Organizations and managers are struggling to stay afloat and aligned in the volatile, uncertain, complex, and ambiguous nature of today’s global business environment. Turbulence—the rapid rate of change—is swirling around many of us, that tipping us the way for which we attempt to navigate for safe passage through VUCA (<https://thunderbird.asu.edu>). Due to the volatility, uncertainty, complexity as a result of changes occurring in today’s organizations, adaptive performance has become increasingly important in work environments. According to *Hoover & Feldhusen*, and et.al. (1990), adaptive performance is considered as general intelligence, problem understanding, and problem solving constructs which make unique contributions to creative problem solving performance. A world that requires effective leaders is one with greater implications for sound decision making, high confidence, and ready adaptability.

The adaptive performance is components of Individual performance have attracted the attention of many researchers in line of organizational behavior, human performance sciences, and psychologist of the world. Especially, the behaviorists, the psychologist, the management professionals, the educationists in the world are running behind the uncommon pursuit of exploration in quest of how to instill the adaptive performance among individuals, learners, workers, and in organization. From this deportment the researchers discovering in the pursuit of process, knowledge, and applications of adaptive performance which having abundant evidences be primarily classified with the help of a meta-taxonomy without going too much detail. Obviously, following a simplistic format of classification of available evidences on the study on adaptive performance is posited in the following heads, they are- adaptive performance in education & learning, training, competence; adaptive performance in the context of leadership; adaptive performance in the group behavior and organizational context. A few pioneering studies concentrating on the assessment, processes, and systems perspective of adaptive performance related conditions or the other contexts which cannot be overlooked. Therefore, the following section highlights the evidences of researches on the areas as stated above are furthered here.

## **2. ADAPTIVE PERFORMANCE IN LEARNING, TRAINING & COMPETENCES**

Performance oriented learning is aimed at developing a set of competencies allowing adaptive behavior to deal successfully with either domain-specific problems or issues arising on the cross sections of different professional fields (*Kommers, P., & et.al., 2008*). The development of adaptive software applications for educational and training purposes has been dominated

by instructional design solutions exploring level of knowledge as a single learner's characteristic determining effective individualization of learning (*Corbalán-Pérez, Kester, and van Merriënboer, 2006; Merrill, 2002; Oughton & Reed, 2000; Wisberg, 2003*). There is indication on the investigation on adaptive performance within specific contexts, particularly training and learning environments. This research tended to utilize a laboratory context and a task-change paradigm wherein AP is indicated by performance on a learned task after difficulty or complexity increases (e.g., *Lang & Bliese, 2009; LePine et al., 2000*). The authors *Han, T. Y., & Williams, K. J. (2008)* also conducted a multilevel investigation of adaptive performance for exploring the connection of individual- and team-level relationships.

### **Adaptive Performance in the Context of Leadership**

In an ever changing (VUCA) environment organizations will need to develop more adaptive and responsive leadership skills across the organization. Leadership is no longer simply the domain of our senior management teams, in which our employees too will need to be equipped to relate, connect and respond to challenges and opportunities. The need for new leadership approaches for leading an organization in complex and uncertain times implies an ability to understand the patterns of cause and effect and connects the dots to uncover opportunities that are not yet clear. However, it involves the ability to perceive what is “over the horizon” of our current field of view accessing deep intuition and using imagination to envision the future point (*www.innovationpeople.co.in*). A study conducted by *Griffin and et.al. (2010)* on leader's vision and the development of adaptive and proactive performance of leaders explained from the longitudinal perspective.

In one of the Harvard Business Review, a study showed a strong link between leadership skills and the bottom line sighting to those companies who can attract the best people, who can lead and problem solve consistently outgrow their competitors. Yet many organizations fail to recognize the talent needed in the organization, struggle to identify potential, or mismanage the development needs of high-potential people. *Bassie, L. & McMurrer, D. (2007)* also mentioned that leadership in context with adaptive performance, need to be able to learn rapidly, continuously communicate and involve, and be flexible in their responses and develop “just-in-time” solutions rather than waiting for perfect solutions.

### **On Adaptive Performance of the Group Behavior**

Individual work performance is a hot issue which plays an important role in our day to day workplace that has not only grasped companies all over the world but also fueled a great deal of research fields of management, occupational health, and work and organizational health (*Waldman, 1994; Evans, 2004; Lerner. D & Mosher, H. R, 2008; Campbell, 1990, Linda Kopman, 2011*). In all the research fields mentioned earlier, individual work performance is an abstract, latent construct that cannot be pointed to or measured directly. On context with adaptive performance, *Viswesvaran and Ones* defined work performance as whole, as “scalable actions, behavior and outcomes that employees engage in or bring about that are linked with and contribute to organizational goals”. On this ongoing globalization of the economy, individual work performance is considered as an important in bringing the light of the current economic recession and sustainable employability (*Linda. K, 2014*). *Charlene. K. Stokes, Tamera R. Schneider, Joseph B, Lyons (2010)* critically evaluated the issue on and detected some criterion for assessment under the caption title “adaptive performance; a criterion problem”. *Han. T. Y & William. K. J (2015)* examined the relationship of adaptive performance at individual and team level, also examined this in the context of group, and also suggested the methods of assessment at multi-level under the caption “multilevel

investigation of adaptive performance". *Burke, and etal, (2006)* made the analysis for team adaptation to made the conceptual analysis.

### **On Adaptive Organization**

Performance support systems in business and industry target can increase in individual and organizational performance as learning is expected to occur as a side effect of performance. VUCA is a 'situational diagnostic'. It zooms in on the current context facing organizations and leaders and provides the vital perspectives that are then converted into an action plan. It is an action oriented tool, designed to inform, equip and guide leadership action. The VUCA model identifies the internal and external conditions affecting organizations today. The VUCA Prime was developed by Bob Johansen, distinguished fellow at the Institute for the Future and the author of *Leaders Make the Future: Ten New Leadership Skills for an Uncertain World*. He proposes that the best VUCA leaders are characterized by vision, understanding, clarity, and agility –the "flips" to the VUCA model. It can be seen as the continuum of skills leaders which can develop to help make sense of leading in a VUCA world. HR and talent management professionals can use as the VUCA Prime as a "skill and abilities" blueprint when creating leadership development plans (*Lawrence. K. 2013*). *Linda Koopmans, et.al. (2011)* attempted to describe conceptual frameworks of individual Work Performance made only a review. *Kenney, S. (2009)* stated the strategic aspects addressing the challenges need to face by an adaptive organization in VUCA environment. Kenney stated that to align with changes, an organization need to focus on the five areas to remain relevant and effective in face of change and dynamism. The main key dimensions are- the people- the benefits to youth/talents in organization; secondly, the process- fostering collaboration; thirdly, the strategies of the organization; fourthly, the structure- creating and open collaborative workforce; and in fifth, the technology- enabling knowledge transfer.

### **On Assessment of Adaptive Behavior**

Adaptive behavior assessment or assessment of the daily performance of activities required for personal and social sufficiency. It has typically been assumed that what constitutes individual work performance differs from job to job which result having countless measures of work performance has been used (*Tuber. T & et.al, 2011*). *Calnon, M. K. (1984)* framed the adaptive scale on contributions of race and grade to domain scores on wine lane adaptive behavior scale. *Campbell, V. Smith, R. and Wool, R. (1981)* also constructed adaptive behavior scale for assessing the difference in scores of mentally retarded individual referred for institutionalization. Similarly, *Engleman. D (1974)* conducted study under the title "quantitative study of adaptive behaviour of Ohio educable mentally retarded and normal children". *Given. T. (1998)* also assessed reliability on adaptive behavior scale under the subject of psychology in school. *Helpern. & et.al. (1979)* examined the alternative approaches for adaptive behvaiour. *Harrison, P. L (1981)* stated on mercers adaptive behavior inventory. *Heath, C. P (1986, April)* trends in adaptive behavior research over the past decades stated about where and how the research trend on adaptive behavior moves toward.

The studies on assessment and on the attempt to assess adaptive behavior in the context of mentally retarded person in USA and other western countries had have started since 1967 onward; also observed that since 1981-2014 the trend of constructing such scale was more. Many of such researches attempted during this period was concentrated mostly on adaptiveness of mentally retarded or challenges subjects on interest under the discipline of medical psychology, or in general psychology, as well as in educational psychology. These scales did not concentrate on adaptive performance in the work place.

## **On Adaptive Organization**

In the changing environment, staff roles, responsibilities and working relationships have frequent changes, the definition of job performance has also become more complex, ambiguous and dynamic, and changes in working life even become the normal (*Chan. D, 2001*). In general employee performance, adaptive performance in the work environment refers to adjusting to and understanding change in the workplace Adding another generic word ‘performance’ with the word ‘adaptive’ we get the term “adaptive performance” which denotes the performance in the work environment which refers to adjusting to and understanding change in the workplace (*Pulakos. and et.al 2000*). *Heath. C. P. & Obrzut, J. E. (1984)*, compared the measures of adaptive behaviour in the context mentally deficient persons. *Campbel, J. P. (1990)* in his work modeled the performance prediction problems in industrial and organizational psychology where he/she incorporated adaptive performance issues.

## **Need for Content and Taxonomic Analysis**

Research on adaptive performance has been situated in different literatures, which *Baard et al. (2014)* described as “domain-general” and “domain-specific” (*in D. K. Jundt. et.al., 2014*). There are bounteous numbers of study connecting to the adaptive performance in the contexts selected above. The study connecting to VUCA and adaptive performance of employees, organizations, group, are leadership are also not less than abundant in nature. But, where such bountiful researches do integrate; does these research contents addresses the issues of adaptive performance in context of VUCA environment needs deeper but a methodical analysis. Considering nature of exploration in this study, authors here delve seriously the content analysis of the researches and taxonomical analyses to address where the research is moving- the central query of this paper is.

## **Content Analysis Methodology**

To get an answer of the query raised on how and where the researches on adaptive performance are moving under the constraints and guidelines for VUCA environment here the authors adopted the manual content search techniques in the researches available in net or in websites. Through the content based search, discovered 262 numbers of research papers concentrating the theme adaptive performance and VUCA world. Going through the careful screening in researches the contents connecting to VUCA context in reference to adaptive performance and vice versa were listed in excel to make systematic cum semi empirical type of taxonomy building. Listed words or contents usage with context were detected through preliminary reading exercises then code wise fitted to excel in computer for examining the future course of action that follows in the next section.

## **Dimensionality of Contents**

Analysis of interconnected (*figure-1*) contents of the study revealing clustering of study in the nine tracks of concentration where studies were loaded. The studies on the dimensions of adaptive capacities were loaded 200 numbers of contents. Similarly, measuring adaptive performance dimension were loaded by almost 270 numbers of contents. Interestingly, the contents loaded in the leadership and adaptive performance issues revealing highest loads of the contents. Learning as the components of adaptive performance has bearing an important position which is revealing the loads of research contents or components equal to the load of measuring adaptive performance. Developing individual performance dimension loaded almost 160 contents of adaptive performance related researchable components. The loaded components of adaptive performance support system also exhibiting a distinguishable level of

contents adaptation for research connecting to adaptive performance. Adaptability and job performance revealing almost equal significance in attracting the research components of adaptive performance. The aspect ‘ market demand’ connecting to adaptive performance indicates less signification dimension for researchers as revealed among all dimensions selected in this analysis.

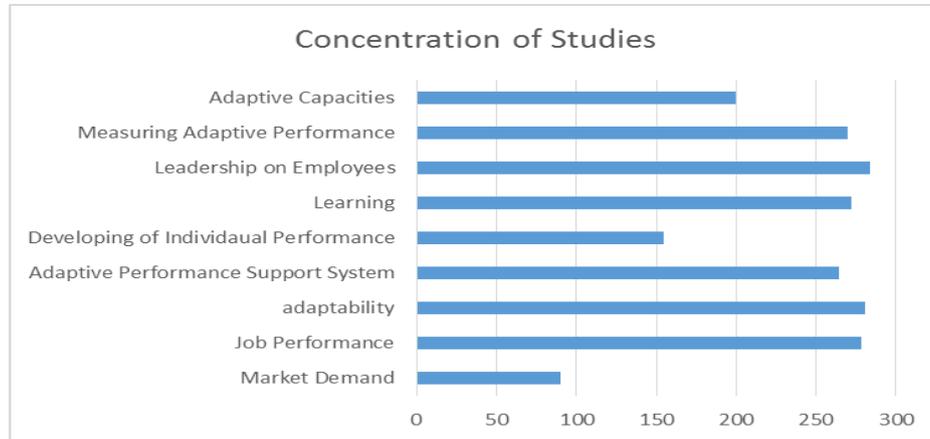


Figure 1

(Source: Author’s Own Source)

75 items used in connection with adaptive performance of individual, group, and in connection of leadership were counted in the researches evidences. These words appeared in multiple times (as appeared numbers in parentheses) in the researches of adaptive performance.

**Thematic Orientation**

Examining the contents integrations to the themes i.e. adaptive performance supports and adaptive orientation of available research contents those are counted the context where there are grouped. The first groups of content-taxa incorporated 25 numbers of terms along with the numbers of counts as they are connected to theme adaptive performance support. 75 items used in connection with adaptive performance of individual, group, and in connection of leadership were counted in the researches evidences. These words appeared in multiple times (as appeared numbers in parentheses) in the researches of adaptive performance. The frequently appearing terminologies in the researches of adaptive performance relating to the VUCA environment are Organizational Performance, Task, Flexibility, Motivation, Coordination, Interpersonal, Cultural, Resilient, Quality, Creativity, Action Oriented, Knowledge, Indicator, Environment, Complexity, Measurement, Validity of task, Originality, Leadership, Reasoning, Innovation, Personality, Conscientiousness, Effectiveness, Positivity (table-1 from analysis).

Table 1

Thematic Orientation	Contents’ Context Counts (Number of orientation and loads in parentheses)
Adaptive Performance Support (25 Terms)	Customer satisfaction(1), generalization(2), customer retention (3), Future Profitability (4), Price Context (5), Customer Retention(6), Service Quality (8), Market (9), Market Science (12), Price Perception (13), Determinants (14), Productivity (16), Reliability (18), Tax and Contextual Performance (19), Rules and Procedure (20), Conceptualization (21), Turnover (22), Production (23), Prediction (23) , Predicting (24), Standardized(25)
Ddddddd1	Psychological dimension(1), Conceptualization(2), Indicator(3), Evaluation(4), Appraisal(5), Measuring(6), Stability of Behavior(8), Social Psychology(9),

Adaptive Performance (Individuals, Group, Leadership) (75 items)	Motivation(10), Effectiveness(11), Adaptability(12), Conscientiousness(13), Leadership(14), Cognitive Ability(15), Job Description(16), Stabilizing Contextual Performance(17), Flexibility(18), Job Dedication(19), Multi- Dimensional Concept(20), Cognitive Ability(21), Effectiveness(22), Organizational Performance(23), Volunteering(24), Persistence(25), Assistance(26), Conscientiousness(27), Adaptability(28), Capabilities(29), Task(30), Evaluation(31), Reliability(32), Leadership(33), Measuring(34), Variability(35), Job Design(36), Psychological(37), Construct Oriented(38), Personality(39), Personnel Selection(40), Situational Judgment(41), Social Behavior(42), Inventiveness(43), Capabilities(44), Assessment(45), Effectiveness(46), Cognitive Ability(47), Social Behavior(48), Personality(49), Challenging(50), Organizational Performance(51), Task(52), Flexibility(53), Motivation(54), Coordination(55), Interpersonal(56), Cultural(57), Resilient(58), Quality(59), Creativity(60), Action Oriented(61), Knowledge(62), Indicator(63), Environment(64), Complexity(65), Measuring(66), Validity(67), Originality(68), Leadership(69), Reasoning(70), Innovation(71), Personality(72), Conscientiousness(73), Effectiveness(74), Positivity(75).
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(Source: Authors own Compilation form Available Research)

### Alignment of Contents of Researches

The assigned values on the contents (presence with 1 and absence of items in researches as 0) fed to SPSS datasheet to examine clustered components of researches into distinguishable

**Table 2**

	Components	
	Study Concentration Track-1	Study Concentration Track -2
Adaptive Performance Support System	.891	
Measuring Adaptive Performance	.876	
Adaptability	.833	
Leadership on Employees	.696	
Developing of Individual Performance	.424	
Job Performance		.800
Learning		.754
Market		.739
Adaptive Capacities		.270

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Strings Count

b. Rotation converged in 3 iterations.

(Source: authors own source of information compiled)

dimensions through factor analysis. The outcome of the factor analysis revealed groups of factors the first groups of research studies concentrating on adaptive support system; measuring adaptive performance; adaptability; leadership on employees; developing individual performance. The second groups of items link to the adaptive performance to job performance; learning; market; and adaptive capacities.

Furthering the exploration on the contents those fed into SPSS operated the equality of the groups to examine the equality of mean use to terminology under the research dimensions linked to adaptive performance issues. The result showed that job-performance; adaptability; adaptive performance; adaptive capacities emerged as statistically significant terminology of discussion in regards to adaptive performance.

**Table 3** Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Job Performance	.744	15.016	6	262	.000
Adaptability	.597	29.498	6	262	.000
Adaptive Performance	.447	54.024	6	262	.000
Support System					
Adaptive Capacities	.753	14.311	6	262	.000

(Source: Author's own Source of Data and Information Compiled for Analysis)

### 3. FINDINGS-WHERE RESEARCH IS GOING?

Going through the critical examination admixing the content analysis with meta context analysis with an empirical data generated from the contents in the episteme of VUCA era's prime components. The prime components of VUCA in conjugation with adaptive performance require the critical taxonomy on the issues of those researches which were reviewed. This study revealing the critical picture dimensional paradigms and components of research paradigms of the common researches of collected from variety of sources that speaking apparently where the researches on adaptive performance in the common context of application of terminology are spinning. As the now we in the 2<sup>nd</sup> decade of VUCA century observation on the adaptive performance context will provide the picture of spinning of the research in future if the research evidence collected from the classified archives for a conclusive meta-analysis. The researches in VUCA environment have been concentrating on job performance, adaptability, adaptive performance support system, adaptive capacities as the averagely used issue of exploration and understanding. Beyond measuring adaptive performance, the leadership issues on employees, developing of individual performance, and learning, emerge as the core theme in the context of adaptive performance in VUCA environment. Considering the limitation of the present study, it is presumed that the findings from the content based taxonomic analysis would have given more pragmatic features. An analysis of research papers as the contents for analysis selected from an archive journal for a specific period or from the more specified studies resources on VUCA environment may give clearer picture on meta-analysis, which need to be undertaken for future research.

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