Adaptive Performance Among Malaysian Public University Lecturers

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Abstract. One of the ways for organizations to remain competitive and relevant in their respective industry is through the employment of highly adaptive employees. The ability to act swiftly toward current situational environment needs (such as the adoption of educational technologies) may increase the effectiveness of delivery in teaching and learning. Despite its importance, studies on the adaptive performance field remain inconclusive and the empirical findings remain exclusive to the specific context of the study. In addition, the conceptualization of adaptive performance seeks further conformity, especially from the Malaysian perspective. Thus, this study aimed to identify the factors contributing to adaptive performance among lecturers in Malaysian public universities from the view of individual-based factors and organizational-related factors. The data were collected from February to May 2021 where this study employed an online survey involving 196 respondents and adopted the Self-Determination Theory (SDT) to explain the relationship among the variables. The Smart Partial Least Square Method (Smart-PLS) was used as the statistical tool for measurement model analysis and structural model analysis. The results indicated that individual-based factors (namely: career development and readiness to change), as well as an organizational-related factor (emergent change), were positive and significant factors contributing to adaptive performance. Besides, the finding empirically discovered that career development was the best factor influencing adaptive performance through the Importance-Performance Map Analysis (IPMA) analysis. Thus, the use of the SDT supported self-regulated behaviour such as adaptive performance.

Keywords: Adaptive Performance · Career Development · Emergent Change · Readiness to Change · Self-Determination Theory

1 Introduction

The COVID-19 pandemic has drastically caused many businesses around the globe to change their ways of operation [1]. In the education sector, remote learning is generally known to be one of the alternative methods of teaching and learning using educational

technologies such as virtual classrooms and gamification techniques which require educators to be proactively responsive in lesson delivery. However, due to the COVID-19 pandemic, remote learning has been conducted without proper preparation and planning as well as the absence of the assessment of digital readiness among the lecturers. Although the transformation of the traditional education model has moved to the virtual mode to outreach students in diverse geographical areas as well as increase the diversity of methods of teaching and learning, it poses challenges for educators [2] mainly due to the inability to cope with technological emergence [3].

Besides that, the disrupted outcomes of the pandemic may last longer for the education sector and this may negatively influence the interest and performance of lecturers [4]. This situation happens especially when the need to cope and fully utilize educational technologies in the virtual platforms demands the lecturers to be more innovative and creative in teaching and learning which would consequently exert stress on them [5]. Additionally, there are several reasons associated with the ineffectiveness of teaching and learning in Malaysia including the absence of suitable directions and guidance for the academicians concerning the online teaching approach as well as the lack of capabilities and appropriate utilization of technological tools. Hence, the ability to adapt to the changes either in the social or work environment is seen as a key determinant of success at the individual and organizational levels [6].

Furthermore, The Twelfth Malaysian Plan (12MP) has emphasized the technology-based economy to leverage the adoption of technology in preparing for the high-technology labour market. More specifically, one of the game changers of Policy Enabler 4 of the 12MP is to strengthen the Public Service through intensifying digitalization as recognition of the current talent gaps that further develop a high-performing civil service. In relation to this, adaptive behaviour to embrace technological change is hence crucial for Malaysian university lecturers as they are the key driver of change at the tertiary education level in the nation. However, despite its importance, empirical studies on adaptive performance among lecturers are scarce, especially in understanding self-determine behaviour through individual and environmental-based factors. Therefore, the objectives of this research are twofold. First, it aimed to investigate the effects of career development, readiness to change, and emergent change on adaptive performance, which subsequently would help add to the growing literature on employee performance. Secondly, it aimed to investigate the importance and performance of the three studied variables on adaptive performance from the perspective of the Importance-Performance Map Analysis (henceforth, IPMA) to identify the best factor influencing adaptive performance.

To fill in the limitations from previous studies [7–9] which examined the factors affecting adaptive performance, this present study investigated the factors affecting adaptive performance from a more comprehensive angle by covering a more holistic view, specifically the individual-related factors and organizational-based factor. Following the introduction, this paper will subsequently introduce the underlying concept of the self-determination theory (SDT), followed by the development of the hypotheses. Next, the research methods will be discussed, followed by the analysis and detailed discussion which will include the theoretical implications, practical implications, limitations, and suggestions for future studies.

2   Theoretical Background

2.1   Underpinning Theory

Self-determination theory (henceforth, SDT) is the theory that explains the process of internalisation that reflects the means of one translating an external sanction behaviour into a self-regulated behaviour [10]. The SDT also involves the values, attitudes, and governing structures that underline the external sanction behaviour and accept it as one's own [11]. There are three (3) psychological needs namely autonomy, relatedness, and competence to inspire oneself to initiate self-determine behaviour such as adaptive performance. Basically, [12] suggested that humans, as proactive organisms, have natural or intrinsic functioning that can be helped or impeded by the social context. Implying the explanation of SDT to this study, employees' adaptive performance can be enhanced by understanding the factors influencing their adaptive behaviour through understanding the holistic factors that possibly affect adaptive performance, such as individual-based and organisational-related factors. In this context, career development is viewed as autonomy as employees know their course of direction in the future. Meanwhile, for emergent change, it is viewed as competence as for employees to effectively deal with current needs of change, they ought to possess the right knowledge, techniques, and methods. Readiness is viewed as relatedness, because attitude acts as a driver of change and leads to intended behaviours. Thus, in the context of the current study, it is relevant to use the SDT as a basis to further understand Malaysian lecturers' adaptive behaviour.

2.2   Literature Review

Retaining and hiring highly adaptive employees can be regarded as an asset to an organization as they are the driver of change. Therefore, ensuring the employees' adaptive capabilities is one of the beneficial types of investment that is practiced by most organizations. In relation to this, scholars have widely implored the factors affecting employees' adaptive performance. Theoretically, several scholars, [13–15] studied adaptive performance measurement. Practically, the application of adaptive performance construct has been applied in various industries such as hotels, manufacturing, health sectors, etc. In addition, the significant role of adaptive performance has shed light on the practitioners by conducting more empirical studies that investigate factors influencing adaptive performance. For example, several studies have shown that individual-based factors, such as feedback seeking [16], empowerment practice [17], and trait goal orientation, have proven the influence adaptive performance. Also, organizational-related factors, too, are gaining interest among scholars. Factors such as strategic network support [18], inclusive leadership [19], and organizational learning [20] have shown an influence on adaptive performance. However, the findings of the mentioned studies are specified to their contexts and settings, thus, it is worth noting that there is a need to further understand the antecedence of adaptive performance. Furthermore, understanding how one behaves adaptively should not merely be measured through an assessment of one related factor.

Despite numerous numerical research on individual-based factors affecting adaptive performance, studies on readiness to change and career development on adaptive performance remain scarce. In relation to this, the inability to evaluate change and the absence

of readiness to change can be impeding to the organization as it can likewise internally influence the organization through an expansion in vulnerability, tension, stress, as well as resistance. Besides, the perception of the internal organizational environment in carrying out change ought to be directed by a need to introduce and be ready for the change among the employees. In this specific scope of the study, when the lecturers are prepared to change, it permits a positive and proactive disposition toward readiness in supporting change. In addition, in the recent conceptualization of career development as career capital [21], career development rationalizes the self-notion of career development. This explains that in the post-COVID-19 pandemic, a substantial shift in work change was seen, including work from home which demands that lecturers work independently with their own technological devices, virtual platforms, different performance indicators, and many more. As career development is defined as a life-long process that includes a variety of roles during one's working career [22], a person's internal psychological self-hood plays an important role in his or her life career journey. Implying to this study, to remain relevant and competitive, the lecturer must be adaptable knowing what will benefit them in their career life.

Additionally, assessing comprehensive factors affecting adaptive performance would possibly provide better insights into what motivates employees' adaptive behavior. Subsequently, studies on organizational-related factors affecting adaptive have not been overlooked. Emergent change, in this context, treats change as an incremental process of change where the change is embedded through the daily process of work activities. As an organization does not exist in isolation, they need to be able to adapt to the climate that is presented with difficulties and menaces. The effective execution of change is less subject to the detail of the arrangement on grasping the intricacy of the issue. In this way, the organization has to esteem the understanding as well as identify and decipher the signs of the external environments [24]. Thus, recognizing the rapid change in policies and methods in the academic industry, lecturers should continuously emerge changes in daily work activities. Therefore, the variables chosen for this study are based on two main groups which are career development and readiness to change (under the individual-based factors) as well as emergent change (under the organizational-related factor).

3 Hypothesis Development

3.1 Readiness to Change and Adaptive Performance

The right attitude to change would encourage a positive outcome of change acceptance. Attitudes to change are simply affected by the knowledge of one's own to receive and embrace the change. An employee who has positive beliefs towards readiness to change tends to make sense of the need for change and reflects the degree to perceive whether the changing situation is acceptable or could be possibly improved [7]. Concerning the present study, when the lecturers perceive that they are ready with the right mindset and furnish with basic skills to accept work change, they tend to grow sense-making of the environmental change and develop a positive mindset to embrace new work practices [25]. As a positive attitude leads to positive behaviour, they are more adaptive to environmental changes, such as the adoption of various teaching and learning platforms as

well as new ways of performing job demands. In addition, according to the SDT, how the lecturers translate the external situation can turn into self-regulated behaviour thus leading to adaptive performance.

Furthermore, an employee who is ready to change portrays a positive and proactive attitude to change and a willingness to support change. Hiring like-minded employees is an asset to the organization and would increase the likeability of the organization's survival. In this context, highly ready-to-change lecturers who care about the importance of change would contribute significantly to the relevance of the higher institutions; this will subsequently lead to a highly agile workforce. Therefore, the first hypothesis of this study is:

H1: Readiness to change is significant and positively related to adaptive performance.

3.2 Career Development and Adaptive Performance

Self-belief is the key to adaptive behaviour. An employee who knows their course of life tends to have beliefs in their capabilities which would lead to the desired behaviour. For instance, highly employable employees are the ones who keep on apprising their skills and knowledge through active participation in different developmental activities thus leading to an increase in competitiveness [26]. As career development is connected to the notion of self-hood, employees who are concerned about their careers will take initiative and opportunities for career growth in the future, this will eventually energize them to behave adaptively. Concerning this study, the lecturers who are concerned about their future career growth are more inclined to seek development events and training programs that would support their day-to-day work activities as well as encourage adaptive behaviour. Furthermore, the SDT explicitly mentions that external sanction behaviour shapes internally regulated behaviour. Therefore, the capability to cope with current changes in performing jobs will be an advantage for employees to remain competitive and relevant in the industry. More recently, in the context of the COVID-19 pandemic, the lecturers too, are not excluded from the employability threat. Thus, having concerns about future employability can regulate the lecturers' constant change by performing adaptive behaviour. Therefore, the second hypothesis of this study is:

H2: Career development is significant and positively related to adaptive performance.

3.3 Emergent Change and Adaptive Performance

The emergent change supports adaptive performance as the constant change of core tasks happens incrementally [27]. Ongoing alteration of organizational activities reduces the resistance to change and supports constant change, as employees are required to face unpredictable routines which might cause them to deal with contingencies, breakdowns, and possible opening to new opportunities. Therefore, the ability to integrate small changes to daily work tasks would make it easy for employees to change due to a slight scale of change rather than dynamic change. As argued by [28], the change actor should be empowered to continuously adapt and break down the old logic to the new logic. Implying to this study, the lecturer's ability to keep abreast with current needs, such as the adoption of educational technologies through the integration of daily tasks, will make it easier for them to accept changes. In addition, gradual practice can lead

to positive acceptance of tomorrow's change. Although many studies have found that organizational-related factors have a significant relationship with adaptive performance, to date, no study has investigated the relationship between emergent change to adaptive performance. Therefore, the present study proposed that incremental change (also known as emergent change) will have a significant and positive relationship with adaptive performance. Therefore, the third hypothesis of this study is:

H3: Emergent change is significant and positively related to adaptive performance.

3.4   Research Framework

By integrating the three variables (change readiness, career development, and emergent change), the model is demonstrated in Fig. 1. The presented model attempts to investigate the direct relationship between change readiness, career development, and emergent change with adaptive performance.

4   Methodology

In the present research, a cross-sectional study was conducted, where the data were collected using stratified random sampling. Upon the approval and the sampling frame received from the respective registrar of the higher education institutions, the population was stratified into several strata according to the disciplines. Since Research Universities are taken as role models for universities in Malaysia, these universities can be considered as the representatives of higher education institutions in Malaysia. In ensuring representativeness, stratified random sampling was utilized in extracting a sample from the overall population because stratified sampling is utilized to feature contrasts between groups in a population, rather than simple random sampling which treats all individuals from a population as equivalent as well as having an equal likelihood to be sampled [30].

In the present study, strata were established based on faculty members' shared attributes, for example, the faculties of social sciences. Subsequently, the stratum of 'disciplines in social sciences' was chosen with 'Lecturer' and 'Professor' were the lowest and highest designations, respectively. This stratum was chosen to guarantee the homogeneity of the sample in each stratum as well as the heterogeneity of the sample between strata with particular organizations. Since the number of lecturers was different relying upon the faculties, a disproportionate stratified random sampling technique was utilized to guarantee sufficient numbers for analysis even for the smallest group in a population. Thusly, the respondents for this study were randomly chosen from the names
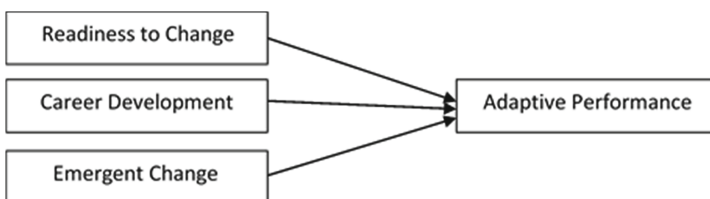

Fig. 1. The Research Framework

gathered from the formula generated on Microsoft Excel. Next, they were requested to respond to a self-administered instrument that was electronically established utilizing Google Forms and was disseminated via their organization's email addresses. The data were collected from February to May 2021, and a total of 196 questionnaires were returned. After a preliminary data screening, such as the assessment of outliers, straightlining responses, and missing data, a total of 196 responses were used as final responses. A majority of the respondents were female (61.2%), Malay (83.2%), married (84.7%), PhD holders (91.3%), had been working in their respective universities for more than fifteen years (48%), and were earning between a monthly salary between RM8,001 and RM10,000 (34.2%).

4.1 Measurement

Adaptive performance. This construct was measured using five dimensions of adaptive performance with 19 items, adapted from [13] on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree). Some examples of the questions are "I use a variety of sources of information to come up with an innovative solution" and "I can analyse possible solutions and their ramifications quickly to select the most appropriate one".

Readiness to change. This construct was measured using 6 items adapted from [30] on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Some examples of the questions are "When changes occur in my institution, I believe that I am ready to cope with them" and "I believe that I am readier to accept changes than my colleagues".

Career Development. This construct was measured using three dimensions of career development with 21 items adapted from [31] on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Some examples of the questions are "I can clearly see what my passions are in my work" and "I know how to find out what my options are, for becoming further educated".

Emergent change. This construct was measured using 5 items adapted from [32] on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Some examples of the questions are "In my organisation, emergent change occurs through continuous learning about our environment" and "In my organisation, emergent change occurs as part of an ongoing process of adapting to our environment".

The data collected was further analysed based on the Partial Least Squares-Structural Equation Modelling (PLS-SEM) using SmartPLS version 3.3.3. Statistical Package for Social Science (SPSS) version 26 was used for data screening. As a requirement in the PLS-SEM analysis, the assessment of the measurement model was first carried out before assessing the structural model.

5   Results

The collected data were gone through a data screening process including the assessment of missing data, outliers, and common method bias. There was no missing data found in the data set. Meanwhile, the assessment of identifying outliers was conducted using the Mahalanobis distance technique as it is the best measure to identify outliers for multivariate [33]. SPSS and Microsoft Excel were adopted to analyse the outliers and

only one response reached the significant threshold alpha level of .001. Thus, a total of 196 responses were further used for the final data. To assess the common method bias, Harman's single-factor test was performed in SPSS. The first eigenvalue obtained was 29.94%, which was lower than the 50% threshold [34]. Thus, the common method bias was not an issue in this study. Next, the data analysis using SmartPLS was carried out for the assessments of firstly: the measurement model and secondly structural model.

5.1 Measurement Model

The purpose of the measurement model assessment is to inspect convergent validity, discriminant validity, and internal consistency reliability. Nonetheless, before testing the model, the full collinearity test for the constructs was checked. As recommended by [35], the Variance Inflation Factor (VIF) was calculated through the full collinearity test for all latent variables in the model. Referring to Table 1, the VIF values for all the constructs in the model were below the threshold value of 5 [36]. Hence, it was confirmed that there is no collinearity issue in this study and ascertained that there is no possibility of misleading results.

5.2 Convergent Validity

The convergent validity process involves the analyses of factor loadings, Average Variance Extracted (AVE), and composite reliability. For the assessment of factor loadings, there were seven (7) items deleted from the adaptive performance construct and one item deleted from the emergent change construct. Items coded as AP1, AP2, AP3, AP8, AP9, AP12, and AP13 were deleted due to low AVE for the scoring of the adaptive performance construct, after the omitted items, the calculated algorithm was re-run and the minimum AVE was achieved. Meanwhile, an item coded as EC4 was omitted from the emergent change construct due to its low loading (below 0.4). Although some items contained loadings between 0.40 and 0.70, they were not deleted as the value of AVEs is above 0.50 [37]. As for all constructs consisting of factor loadings that were at least above 0.40, the AVEs were above 0.50, and the composite reliabilities were above 0.70. As a result, the measurement model was convergently valid. Table 1 illustrates the summary of the factor loadings, AVE, and VIF for all the studied constructs.

5.3 Internal Consistency

In the present study, internal consistency analysis measurement was used to identify the extent to which a variable is consistent with what it was intended to measure. Cronbach's alpha and Composite Reliability (CR) were used in this study with a threshold value that should be 0.8 and above for Cronbach's alpha [38] and 0.7 for composite reliability [33]. Referring to Table 1, the scored values for Cronbach's alpha for construct adaptive performance, career development, emergent change, and change readiness were 0.913, 0.957, 0.808, and 0.868, respectively. While for the composite reliability, the value was 0.926 for the adaptive performance construct, 0.961 for the career development construct, 0.875 for the emergent change construct, and finally 0.901 for the change readiness construct. These values indicate that all constructs showed good internal consistency. Table 1 presents the summary of internal consistency values for all constructs.

Table 1. Summary of Measurement Model Results

Construct	Items	Loadings	Cronbach alpha	CR	AVE	VIF
Adaptive Performance	AP4	0.654	0.913	0.926	0.512	2.349
	AP5	0.748				
	AP6	0.665				
	AP7	0.752				
	AP10	0.649				
	AP11	0.741				
	AP14	0.743				
	AP15	0.773				
	AP16	0.724				
	AP17	0.744				
	AP18	0.716				
	AP19	0.662				
Career Development	CD1	0.677	0.957	0.961	0.543	2.095
	CD2	0.771				
	CD3	0.762				
	CD4	0.744				
	CD5	0.684				
	CD6	0.818				
	CD7	0.761				
	CD8	0.588				
	CD9	0.621				
	CD10	0.783				
	CD11	0.727				
	CD12	0.765				
	CD13	0.768				
	CD14	0.721				
	CD15	0.809				
	CD16	0.781				
	CD17	0.644				
	CD18	0.78				
	CD19	0.734				
	CD20	0.727				

(*continued*)

Table 1. (*continued*)

Construct	Items	Loadings	Cronbach alpha	CR	AVE	VIF
	CD21	0.757				
Emergent Change	EC1	0.836	0.808	0.875	0.641	1.43
	EC2	0.861				
	EC3	0.887				
	EC5	0.58				
Readiness to Change	RC1	0.845	0.868	0.901	0.603	1.75
	RC2	0.782				
	RC3	0.803				
	RC4	0.73				
	RC5	0.683				
	RC6	0.804				

Table 2. Mean, Standard Deviation, and Latent Variable Correlation

	Mean	SD	AP	CD	EC	RtC
Adaptive performance	5.57	0.72	**0.913**			
Career Development	4.31	0.53	0.702	**0.957**		
Emergent Change	3.92	0.55	0.49	0.412	**0.808**	
Readiness to change	3.94	0.67	0.591	0.551	0.486	**0.868**

Note: AP = Adaptive Performance; CD = Career Development; EC = Emergent Change; RtC = Readiness to Change

5.4   Mean, Standard Deviation, and Latent Variable Correlation

Table 2 summarizes the values of the mean, standard deviation (SD), and the construct's correlation. Since adaptive performance was measured using a seven-point Likert scale, the mean value score for this study was 5.57 which indicated that the respondents somewhat agreed with adaptive performance. While for the remaining constructs that were measured using a five-point Likert scale, the scored mean value should be less than five. The mean value for career development was 4.31 which specified that most of the respondents agreed with the items in the construct. Meanwhile, for emergent change and readiness to change, the mean value scored were 3.92 and 3.94, respectively, signifying that the respondents agreed with the statement of items of both constructs.

5.5   Discriminant Validity

The Heterotrait-Monotrait (HTMT) Ratio analysis was adopted as a statistical tool to assess discriminant validity. The threshold values are HTMT0.85 value of 0.85 [39] or

Table 3. Heterotrait-Monotrait (HTMT) Ratio for the Constructs

	AP	CD	EC	RtC
Adaptive Performance				
Career Development	0.742			
Emergent Change	0.555	0.464		
Readiness to Change	0.654	0.597	0.56	

Note: AP = Adaptive Performance; CD = Career Development; EC = Emergent Change; RtC = Readiness to Change

HTMT0.90 value of 0.90 to avoid the problem of discriminant validity [40]. Table 3 presents that all constructs passed HTMT analysis which indicated that discriminant validity was established.

6   Structural Model Assessment

Accordingly, after all analyses in measurement model assessment achieved a satisfactory result, the structural model assessment took place. The process of bootstrapping 5,000 resamples was conducted and the structural model assessment consisted of checking the collinearity, path coefficients, coefficient of determination, effect size, and predictive relevance. The VIF values for all studied constructs were below 5, indicating that there were no issues of collinearity.

Next, the assessment of path coefficients among the studied variables. As shown in Table 4, career development ($\beta = 0.506$, $p < 0.05$), emergent change ($\beta = 0.169$, $p < 0.05$), and readiness to change ($\beta = 0.23$, $p < 0.05$) were found to be significant and positively related to adaptive performance; thus, all hypotheses (H1, H2, H3) were supported. With regard to the effect size, career development ($f^2 = 0.402$) suggests a large effect size, meanwhile for emergent change ($f^2 = 0.049$) and readiness to change ($f^2 = 0.077$) indicate a small effect size on adaptive performance as the score exceeded the minimum threshold of 0.02 [41]. Figure 2 illustrates the measurement model assessment using the SmartPLS while Table 4 tabulates the summary of findings for hypothesis testing.

6.1   Predictive Relevance

The R-square analysis was used to identify the contribution of all studied variables to adaptive performance. The R-square value was 0.574, suggesting that the studied variables (namely career development, emergent change, and readiness to change) contributed 57.4% of variance to adaptive performance.

6.2   Importance-Performance Map Analysis (IPMA)

To complement the PLS-SEM analysis, the IPMA was carried out to analyse the importance and performance of each variable to adaptive performance. Through the IPMA,
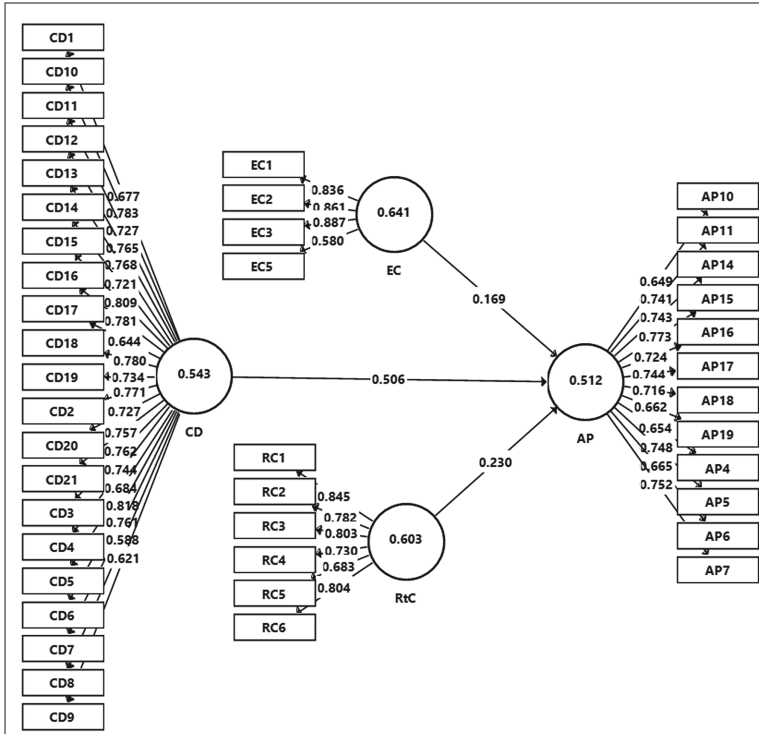
Fig. 2. Structural Model Assessment

Table 4. Hypotheses Testing

	Hypotheses	Beta	t-value	p-values	95% confidence interval	Effect size	Results
H1	CD - AP	0.506	8.501	0.000	0.606	0.402 (large)	Supported
H2	EC - AP	0.169	2.88	0.002	0.266	0.049 (small)	Supported
H3	RtC - AP	0.23	3.968	0.000	0.324	0.077 (small)	supported

Note: AP = Adaptive Performance; CD = Career Development; EC = Emergent Change; RtC = Readiness to Change

low-performing but important variables could be identified for improvement purposes. The standardized total effects (importance) and the standardized latent variable scores (performance) are shown in Table 5.

In terms of importance, career development (0.738) scored the highest, followed by readiness to change (0.254), and emergent change (0.202). In terms of performance, career development (83.811) scored the highest, followed by emergent change (77.272), and lastly, readiness to change (73.52). This result indicates that career development had a higher score of performance and importance that affects adaptive performance

Table 5. The Importance-Performance Map Analysis

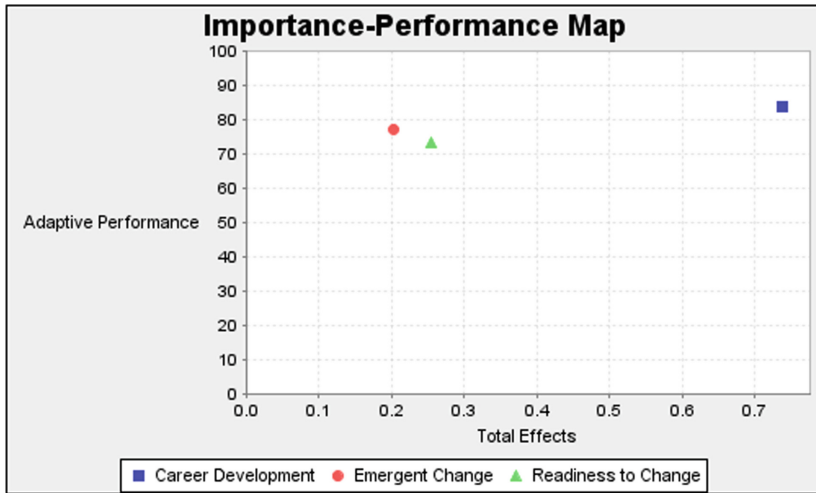| Construct	Total Effect (importance)	Latent Variables Score (Performances)
Career Development	0.738	83.811
Emergent Change	0.202	77.272
Readiness to Change	0.254	73.52

Fig. 3. The IPMA Chart

among the lecturers in Malaysian public universities. Meanwhile, both emergent change and readiness to change scored slightly different between performance and importance where emergent change was ranked the second for performance and readiness to change was ranked the second for importance. The result suggests that career development was the best factor influencing adaptive performance among the lecturers in Malaysian public universities. Whereas, the remaining variables, such as emergent change and readiness to change, were found to be the factors that have the potential for improvement. Figure 3 illustrates the IPMA chart for the studied variables.

7 Discussion

Career development is a notion of self-directed behaviour, where one puts efforts to gain as many skills and competencies to do work better presently and for the future. The results of this study empirically supported that individual-related factors, such as career development, do have a significant relationship to adaptive performance. The educational industry will keep on changing and demand its actor to be highly adaptable toward the current environmental needs. For lecturers to remain relevant and employed in the future, their self-belief and endless effort to develop work skills and increase

knowledge to execute their daily work activities such as the adoption of educational technologies are deemed important. When one knows and understands the need for change, they must get ready knowing that their career will benefit from the self-change behaviour [21]. Implying to this study, the empirical findings showed that keeping abreast and adapting to the current trends of educational technologies through self-notion career development will assist the lecturers' adaptive performance. In addition, in an attempt to leverage the adoption of technology at the tertiary education level and in the hope for a successful transformation of technological emergence, one should be able to effectively utilize different platforms in teaching and learning. Furthermore, the IPMA analysis found that career development is the best factor affecting adaptive performance which supports that lecturers who know their course of career life will be more adaptive.

In the meantime, emergent change, too, showed a significant and positive relationship with adaptive performance. Additionally, embedding changes through daily work activities encourages incremental changes which will subsequently reduce the cost of changes such as resistance to adapt. Besides, the unknown of the future can cause stress, especially with the absence of readiness for technological usage. As argued by [42] environmental dynamism can influence employee performance. Thus, merging educational technologies into a daily routine can assist in breaking traditional practices and inspire proactive behaviour which leads to high adaptive performance among lecturers. In relation to that, a theory such as social cognitive theory argues that attitude may lead to intentional behaviour [43]. Thus, an attitude such as readiness to change empirically shows a positive and significant relationship with adaptive performance. Indeed, the right attitude would lead to success, thus, when employees are ready to go through positive attitudes to embrace changes, they tend to accept and behave accordingly better than those who show otherwise. In conclusion, this paper has achieved the two objectives set for the study.

8 Implications

8.1 Theoretical Implications

Firstly, the findings of the study are consistent with the SDT in explaining how the three studied variables (career development, emergent change, and readiness to change) influence adaptive performance. Thus, self-regulated behaviour, such as adaptive performance, can be influenced by individual-based factors and organisational-related factors. Secondly, the conceptualisation of adaptive performance has been further improved towards the context of this study. There were seven (7) deleted items from the adaptive performance construct to achieve the minimum Average Variance Extraction (AVE). Hence, the improved adaptive performance measurement can provide a wider and validated context for the Malaysian setting. Thirdly, the study provides empirical support that individual-based factors and organisational-related factors are positively related to adaptive performance. Overall, when the lecturers knew that their course of direction for their career, owned the ability to change and possessed good attitudes towards change, it empirically proves that these are the factors of adaptive performance.

8.2 Practical Implications

In relation to the practical contribution, recognizing the reasons why and how employees are behaving in the organization can assist the management to make good decisions and support employees' positive attitudes. With regard to this study, the universities' top management can support their lecturers' career development to inspire them for behaving adaptively by being mindful of the lecturer's strengths and passions at work since career development is viewed as a self-notion in the SDT. Next, recognizing the factors influencing adaptive performance is a response to the national agenda of the National e-Learning Policy (DePAN) to fulfil the Globalised Online Learning (GOL) of the Malaysian Education Blueprint. Hence, this study assists in further understanding the factors that influence adaptive performance particularly, to the adoption of virtual methods of job activities.

9 Limitations and Future Research

Like any other study, this study, too, has its limitations. The data was collected at a single point in time which rendered its inability to establish causality between the studied variables and adaptive performance. Although the SDT assists in explaining the causal effects, future studies may consider using a longitudinal study to empirically determine the causal effects, especially during the COVID-19 pandemic. Next, the generalization of the findings should be treated with caution as the specification on the measurement of adaptive performance in this study was due to its deletion of seven items to achieve its minimum AVE for the context of the study. Furthermore, future studies may re-test the instrument to confirm its utilization in the Malaysian context. Finally, future studies may also add different variables to tap deeper into what factors influence adaptive performance, for example, looking from the angle of situational factors that might have a relationship with adaptive performance.

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