



Work Self-Efficacy and Engagement of Vocational Business Education Lecturers

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Abstract: While the job demands-resources theory proposed that work self-efficacy (a salient indicator of personal resources) plays a key role in predicting the work engagement of employees, empirical evidence supporting this assumption is limited, particularly in developing countries such as Nigeria. Against this background, the present study explores the interplay between work self-efficacy and work engagement of vocational business education (VBE) lecturers in public universities. The study adopted a quantitative approach and a survey research design. Data were collected from 139 lecturers in 12 public universities in Nigeria using a structured questionnaire. Pearson correlation coefficient and simple linear regression with a bootstrap bias-correction technique were used to analyse the data collected. The results show that work self-efficacy is positively and significantly correlated with the work engagement (cognitive, emotional, and physical) dimensions of VBE lecturers. Further analysis indicates that work self-efficacy is positively and significantly associated with the aggregate work engagement of VBE lecturers. The findings suggest that work self-efficacy helps foster a high cognitive, emotional, and physical engagement among VBE lecturers in public universities. The findings offer a major practical implication for lecturers and administrators, which suggests that VBE lecturers that are highly resourceful (i.e. self-efficacious) have the motivational potential to experience high engagement and, in turn, perform better on the job.

Keywords: Cognition, emotional engagement, physical engagement, TVET, business education, self-efficacy

1. Introduction

Vocational Business Education (VBE) involves the practice of teaching specific vocational skills to students in secondary schools, technical colleges, and higher education institutions. VBE prepares youth and adults for a broad range of early careers and more advanced educational opportunities (Advance Career and Technical Education, 2017). VBE also aims to prepare students to teach in different professions and occupations including entrepreneurial-related careers. Some of the certifications students may earn in the VBE professions and occupations include certified business education lecturer, business studies teacher, accountant, marketer, and office technologist and manager (Edokpolor & Egbri, 2017; (Edokpolor & Oduma, 2018). These professions and occupations provide further opportunities for beneficiaries to progress into more advanced business professions and occupations. Although one of the missions of Vocational

Education managers includes the recruitment of Business Education lecturers who can perform their job to improve engagement on the job by increasing the cognitive, emotional, and physical involvement of workforce professionals in the workplace. If Business Education lecturers experienced high engagement on the job and performed their jobs as contained in the VBE programme, it will positively influence the actualization of the mission of the VBE Programme.

Generally, almost all lecturers in technical and vocational education and training in Nigeria appear to experience low engagement on the job (Ogbuanya & Chukwuedo, 2017). Many lecturers in technical and vocational education and training-related areas experienced low engagement on the job for several reasons. Some of the reasons include lack of various skills utilization, support and positive encouragement from heads of department and colleagues, freedom in making job decisions and information on the job done (Bakker, 2011), lack of job crafting (Ogbuanya & Chukwuedo, 2017), self-inefficacy (Del Libano, Llorens, Salanova, & Schaufeli, 2012; Consiglio, Borgogni, Di Tecco, & Schaufeli, 2015), and low-performance system (Rhodes & Doering, 1983). Work self-efficacy is arguably the most studied personal attribute in organizational/work psychology that has shown a positive impact on work-related outcomes (Bakker & van Woerkom, 2017). It is concerned with people's beliefs regarding their capability to influence situations, which forms the basis of human motivation and plays an important role in reinforcing workability (Bandura, 1997, 2006). Within the context of this study, work self-efficacy can be referred to as a business education lecturer's self-confidence by involving themselves cognitively, emotionally, and physically on the job. Research has shown that employees who are self-efficacious are more likely to be engaged on the job (Carter, Nesbit, Badham, Parker, & Sung 2016). In the human resource management literature, employees who are self-efficacious are convinced that they can adequately stand up for themselves, are capable of handling unforeseen events, and can resist adversity, challenges, and failure (Bakker & van Wingerden, 2021). By implication, business education lecturers who are self-efficacious can be considered as possessing the same attributes.

In today's dynamic work environment, it is important to ensure that lecturers are engaged at work because of the level of dedication and value provided to the success of students and schools (Park & Johnson, 2019). The educational work environment is characterised by on-the-job challenges ranging from a dearth of office technology and management gadgets to carry out hands-on instructional activities in the workshop and laboratories, overcrowded classrooms, multiple job descriptions, a conflict between work and home activities, excess workload, political instability, skills mismatch, and outdated curricula. These situations seem to expose VBE lecturers to a demanding educational work environment, which further seems to lower their self-efficacy and, in turn, reduce their level of engagement on the job. Therefore, it has become necessary to provide descriptive data on the extent to which work self-efficacy influences each of the work engagement dimensions among the VBE lecturers in universities. However, few studies have been conducted about the work engagement of VBE lecturers in universities. Numerous studies have been conducted regarding the antecedents of lecturers' work engagement such as ensuring a resourceful and challenging work environment; however, the antecedents of lecturers' work engagement need further investigation (Chan, Ho, Ip, & Wong, 2020; Johnson, 2021; Mejia, 2021). Considering the salient role of VBE lecturers in career and workforce development, there is a need to assess work self-efficacy and its impact on work engagement. While work self-efficacy and work engagement have been studied extensively, these variables have not been examined together in the context of VBE lecturers especially in Nigeria despite the low level of lecturers' work engagement as well as the salient role of lecturers' work engagement. Thus, this present study examined the interplay between work self-efficacy and work engagement of VBE lecturers. The results of the study may influence the work-related outcomes of VBE lecturers. Lecturers' work-related outcomes will have an impact on the workforce needs of future VBE graduates and society in general.

Concerning the discussions, the purpose of the present study is twofold:

- First, to explore the interplay between work self-efficacy and work engagement dimensions (cognitive, emotional, and physical) of VBE lecturers, and
- Second, to explore the interplay between work self-efficacy and overall work engagement of VBE lecturers.

While some of the proponents of the Job Demand-Resources (JD-R) theory (e.g. Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007, 2009a, 2009b; Xanthopoulou, Bakker, & Fischbach, 2013) generally propose that work self-efficacy would have a significant positive influence on work engagement among employees, the empirical evidence supporting this assumption is limited, particularly in developing countries such as Nigeria; a gap the present study intended to close. The present study closes the identified gap by empirically exploring the interplay between work self-efficacy and work engagement of VBE lecturers. The present study argues that the higher the VBE lecturers would exert high work self-efficacy, the higher they would experience high work engagement.

The study contributes to the existing literature on work self-efficacy and work engagement in the following ways. First, the study enriches the body of knowledge on work self-efficacy and work engagement by providing understanding and insight on how work self-efficacy influences work engagement of VBE lecturers. Second, the study integrates JD-R theory to depict the interplay between work self-efficacy and work engagement of VBE lecturers.

The remaining part of the manuscript is organised as follows. Details were provided on the underpinning theory, Literature review, and testable hypothetical propositions. Details were further provided on the methodology, results, discussions, conclusions, and implications of the findings.

2. Theoretical Framework

This study is underpinned by the Job Demands-Resources (JD-R) theory postulated by Demerouti, Bakker, Nachreiner, and Schaufeli (2001). The JD-R theory was influenced by the demand-control theory postulated by Karasek (1979). The JD-R theory depicted that positive work outcomes are determined by employees' motivational states which, in turn, are subject to a higher level of the resourceful work environment (Xanthopoulou et al., 2007). This implies that the motivational process of the JD-R theory suggests that job resources are the main antecedents of work engagement. Job resources are those physical, social, or organizational aspects of the job that are functional in achieving work-related goals; reducing demands and the associated physiological and psychological costs; and stimulating personal growth and development (Bakker & Demerouti, 2007). Examples of job resources (e.g., support, autonomy, feedback, or opportunities for career development) have been reported to predict work engagement dimensions (e.g., cognitive, physical, or emotional engagement) (Schaufeli & Bakker, 2004). The intrinsic motivational potential of job resources may help fulfil basic human needs (i.e., need for belonging) and foster individuals' career development (Deci & Ryan, 1985). The extrinsic motivational potential of job resources helps encourage individuals to put in more effort on the job (Gagne' & Deci, 2005). Both intrinsic and extrinsic motivational potentials may help individuals to become more engaged on the job because they derive fulfilment from it (Schaufeli & Bakker, 2004).

The motivational process of the JD-R theory (Xanthopoulou et al., 2007) was expanded by including personal resources. Personal resources were defined as self-evaluations that are generally linked to resiliency and that refer to individuals' sense of ability to control as well as influence their work environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). Personal resources are functional in achieving goals; protecting from threats and the associated physiological and psychological costs; and stimulating personal growth and development (Xanthopoulou et al., 2009a). An example of a personal resource according to the JD-R theory is work self-efficacy, which involves the belief one holds as regards the amount of control one has over his/her work environment (Bandura, 1989, 2000, 2010). The JD-R theory argued that personal resources play the same role as job resources, meaning that personal resources can serve as predictors of work-related outcomes (e.g., work engagement, job satisfaction, and work commitment) among employees (Judge, Locke, & Durham, 1997). Based on the reciprocal nature of the job and personal resources, the authors of this study may expect that VBE lecturers who are self-efficacious would experience higher levels of engagement on the job.

3. Literature Review and Hypotheses Propositions

3.1 Concept of Work Self-Efficacy

Self-efficacy concerns people's beliefs regarding their capability to influence events, which forms the basis of human motivation and plays an important role in reinforcing workability (Bandura, 1997, 2006). Work self-efficacy, on the other hand, is arguably the most studied personal resource that has shown its impact in various work domains (Bakker & van Woerkom, 2017). Work self-efficacy may be defined as the beliefs about an employee's ability to exert work-related tasks. Within the context of this study, work self-efficacy refers to a VBE lecturer's self-confidence in fulfilling work-related tasks. Work self-efficacy can be defined also as a VBE lecturer's beliefs about his/her abilities to control work-related tasks. Work self-efficacy can be seen also as a VBE lecturer's judgments and beliefs in his/her ability to effectively execute and succeed in performing work-related tasks. Work self-efficacy can be defined also as the belief in a VBE lecturer's competence to handle work-related tasks.

In other words, the level of a VBE lecturer's motivation in his/her abilities to successfully execute work-related tasks is referred to as work self-efficacy. However, work self-efficacy represents an important personal resource, which ensures success in a professional task as it determines the effort to persist and perform specific work-related tasks. Within this study, work self-efficacy can be conceptualised as VBE lecturers' judgment of their belief in their abilities to effectively execute and succeed in their specific work-related tasks (e.g., work engagement, work commitment, and work satisfaction). High work self-efficacy may increase the work engagement of VBE lecturers and the ability to put in more effort when they are faced with difficulties. However, work self-efficacy reduces work anxiety and increases a positive attitude toward work. This implies that employees (including VBE lecturers) who exert high work self-efficacy are assertive and believe their efforts will produce success.

3.2 Concept of Work Engagement

Rich, Lepine, and Crawford (2010) suggested that work engagement could be characterised by the cognitive, emotional, and physical state of employees at work. In other words, employees can express themselves in three different dimensions, namely: physically, cognitively, and emotionally, at different levels as they perform their work-related tasks. Kahn (2010) noted that engagement at work means employees are physically involved, cognitively vigilant, and emotionally connected to other individuals in the workplace. By implication, employees' involvement in work-related tasks may range from poorly engaged to fully engaged.

Cognitive engagement is based on the idea of effectiveness, that is, employees need to work with logic and consciousness to be more effective at work. Employees who are cognitively engaged would have more positive thoughts about and pay more attention to their work. The frequency and intensity of employees' cognitive processing about work

would be high and, as such, their effectiveness at work would increase. Cognitive engagement is defined as an intentional and actively focused consciousness of employees' work-related tasks characterised by willingly calling their attention to and having positive thoughts about their work-related tasks, to improve their effectiveness on work-related tasks. Emotional engagement is based on the idea of emotional labour at work, i.e., the process of regulating an employee's feelings at work. Employees who are emotionally engaged at work would feel fulfilled about their work and experiencing such positive affect would give them pleasant feelings about their work. Emotional engagement is seen as the willing attachment to work-related tasks that are characterised by having positive feelings, such as pride, enthusiasm, and excitement about actively executing and completing work-related tasks.

Physical engagement refers to bodily participation in any type of work-related task. People exert physical energy to complete work-related tasks. Even though the amount of physical effort spent on different work-related tasks (for example, community service, research, and teaching), the exertion of energy to execute work-related tasks is nonetheless a welcome concept. For example, a physically engaged VBE lecturer would be more energetic during their work shift and would complete the required work-related tasks faster than the other VBE lecturer. In the same vein, a physically engaged VBE researcher would exert more effort in consulting books in the library and writing research articles.

3.3 The Interplay between Work Self-Efficacy and Work Engagement

Self-efficacy at work has been viewed as an important factor for individuals' psychological well-being in general and work-related subjective well-being (Pradhan, Panigrahy, & Jena, 2021). It refers to peoples' perceptions that they can competently overcome job demands in each context and may therefore be an important personal resource (Lipscomb, Chandler, Abshire, Jaramillo, & Kothari, 2021). Self-efficacy seems not only to be associated with resilience but also seems to have a positive effect on both physical and emotional well-being. Employees (which by implication include business education lecturers) who are high in self-efficacy and resilience are convinced that they can adequately stand up for themselves, are capable of handling unforeseen events, and can bounce back from adversity and failure (Bakker & van Wingerden, 2021).

Building on the JD-R theory by Bakker and Demerouti (2017) the researcher of the present study argues that when lecturers increase their resources (such as work self-efficacy), they will be more engaged cognitively, emotionally, and physically in work-related tasks. The study aims to examine the interplay between work self-efficacy and work engagement dimensions.

A more recent study by Bakker and van Wingerden (2021) demonstrated that work self-efficacy is a unique and positive predictor of work engagement dimensions and work self-efficacy becomes more important when employees have trouble on work-related tasks. Similarly, a study by Xanthopoulou, et al., (2013) reported that self-efficacy was particularly related to work engagement dimensions among employees when their emotional demands were high. Studies by Chan, et al., (2017) and Chan, et al., (2020) demonstrated that work self-efficacy was positively and significantly related to work engagement dimensions. Bakker (2011) reported that employees who are cognitively, emotionally, and physically engaged are self-efficacious when carrying out work-related tasks. Costa, Passos and Bakker (2016) found that employees who are engaged exert high energy and a positive attitude while carrying out work-related tasks. These findings explain that when people have more positive views of themselves, they will believe they can meet work demands and achieve their goals despite adversity (Bakker & Demerouti, 2017). These sets of persons have a greater sense of work self-efficacy and resilience that may allow them to persevere and continue to invest themselves in work-related tasks to achieve work goals (Knight, Patterson & Dawson, 2019). Moreover, when employees learned to be more efficacious and use their energy, they may be better able to deal with emotional demands and stay engaged at work in the face of job stressors or job demands.

A recent study by Knight, et al., (2019) revealed that work engagement can be increased with several types of motivational variables. In this study, the authors will employ a correlational survey design to examine whether a personal resource variable (i.e., work self-efficacy) would help increase work engagement. Building on the JD-R theory by Bakker & Demerouti (2017), the authors of this present study argued that when VBE lecturers strengthen their beliefs regarding how much control they exert over the work environment (i.e., increase work self-efficacy), they will be more engaged at work. The variable focuses specifically on work self-efficacy as one of the major indicators of personal resources that appear very relevant to dealing with stressful work situations (Xanthopoulou, et al., 2013). Although, some studies have suggested that the work self-efficacy variable may be effective in a work context (Knight, Patterson & Dawson, 2017). However, little is known about the causal impact of work self-efficacy on work engagement, which represents a central assumption in the JD-R theory. Thus, a recent study on work engagement identified five studies that established the interplay between work self-efficacy and work engagement (Knight et al., 2019). Moreover, most studies on correlational survey design appear to ignore the psychological processes responsible for increases in work well-being (such as work engagement). The following research hypotheses were proposed as follows.

- i) Research Hypotheses 1: Work self-efficacy is a significant positive predictor of cognitive engagement of VBE lecturers in public universities.
- ii) Research Hypotheses 2: Work self-efficacy is a significant positive predictor of emotional engagement of VBE lecturers in public universities.

- iii) Research Hypotheses 3: Work self-efficacy is a significant positive predictor of physical engagement of VBE lecturers in public universities.
- iv) Research Hypotheses 4: Work self-efficacy is a significant positive predictor of overall work engagement of VBE lecturers in public universities.

3.4 The Schematic Model

The authors developed a schematic model (Figure 1) upon which the research hypotheses were proposed. The schematic model described the interplay between work self-efficacy and work engagement dimensions (cognitive, emotional, and physical) of VBE lecturers. The schematic model represents a single schematic model that described the interplay between work engagement dimensions (cognitive, emotional, and physical) of VBE lecturers.

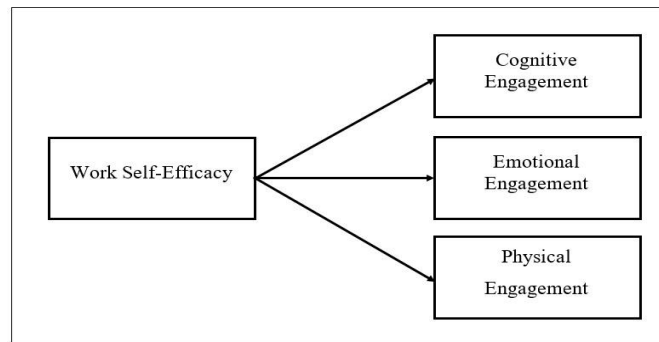


Fig.-1. The proposed schematic model

4. Methodology

4.1 Research Design

The study employed correlational research design. The design was suitable for the study because it helps ascertain the interplay between work self-efficacy and engagement among VBE lecturers. The extent to which the independent variable (i.e., work self-efficacy) can influence the dependent variable (i.e., work engagement) was expressed as correlation coefficient (r).

4.2 Research Participants

The entire number of research participants consisted of 139 VBE lecturers from 12 public universities in Nigeria. The VBE lecturers were considered appropriate for the study because they are expected to engage in high-work performance-related activities such as classroom teaching, course advising, researching, teaching practice supervision, examination supervision, Student Industrial Work Experience Scheme supervision, results' computation and presentation, and functioning as internal and external examiners among other administrative tasks (c.f. Chukwuedo & Igbinedion, 2014; Chukwuemeke & Igbinedion, 2021).

4.3 Sample and Sampling Technique

The convenience sampling technique was used to select participants from 12 public universities in Nigeria. Participants constituted a sample of 139 VBE lecturers. A convenience sampling technique was used because the research participants were VBE lecturers available to the researcher from 12 public universities in Nigeria at the time of this research (Creswell & Guetterman, 2019).

4.4 Data Collection Procedures

Data collection instruments were distributed personally to the participants, with the help of six research assistants who were briefed on the procedure to follow. The participants were contacted via letters before the instruments were administered to them using direct contact mode. The participants were allowed to complete the instruments and were given the chance to return them two weeks later. Copies of the instruments were administered to the VBE lecturers to respond about their experiences since the scales that measure the constructs (i.e., work self-efficacy and work engagement) were self-report measures.

4.5 Instruments

Two structured psychological scales (e.g., work self-efficacy and work engagement) were used for the data collection. The VBE lecturers rated their work self-efficacy and engagement experiences on a 4-point Likert scale ranging from 4 =

always to 1 = never. Work self-efficacy was measured using 3 items constructed by the authors, one of which reads: “I feel confident when I am about to perform administrative tasks”. While work engagement was measured using 16 items developed by Rich et al., (2010), which reflect each of Kahn’s (1990) work engagement sub-scales (e.g. cognitive engagement, emotional engagement, and physical engagement). One of the items for cognitive engagement reads: “my mind is often full of ideas about my work”, one of the items for emotional engagement reads: “I feel very delighted about what I am doing whenever I am working”, and one of the items for physical engagement reads: “I have a great deal of stamina for my work”. Cronbach’s alpha was used to determine the internal consistency of the items of work self-efficacy and work engagement. The coefficient alpha values yielded the reliabilities for each variable. The coefficients alpha values for work self-efficacy were .829, cognitive engagement was .875, emotional engagement was .948 and physical engagement was .902.

Of the 139 VBE lecturers who completed the questionnaire, 85 (61%) were male and 54 (39%) were female. Also, 66 (47%) were experts in office technology and management education; 47 (34%) were experts in accounting education; 16 (12%) were experts in marketing education, and 10 (7%) were experts in entrepreneurship education. Furthermore, 15 (11%) were less than 26 years; 36 (26%) were within the age range of 26 to 35 years; 34 (24%) were within the age range of 36 to 45 years; 24 (17%) were within the age range of 46 to 55 years; 22 (16%) were within the age range of 36 to 45 years, and 12 (9%) were within the age range of 66 years and above.

4.5.1 Data Analysis

Data were analysed using the Statistical Package for Social Sciences (SPSS) version 23.0. The statistical tools employed were Pearson product-moment correlation coefficient (PPMCC), simple linear regression, and bias-corrected bootstrap estimates. PPMCC was used to address the research questions. Simple linear regression was employed to test the hypothetical propositions. The bias-corrected bootstrap technique was employed to test the significance of the direct effects. The direct effects are significant when the confidence interval (CI) excludes zero.

The decision criteria for the use of PPMCC were based on a range of coefficient values (r) recommended by Uzoagulu (2011) as follows: Coefficients r-value between ± .2 and ± .4 means low correlation and ± .0 and ± .2 means very low correlation. Note that when a coefficient r-value is a positive value, it is a positive relationship, which means that as one variable increases the other increases. For regression estimates, a probability of the value p less than or equal to .05 means significant (accept the research hypothesis) while a probability of the value p greater than .05 means not significant (reject the research hypothesis). For the BC bootstrap, if the values of the confidence interval (CI) (lower limit - LL and upper limit - UL) fall within the same axis (i.e. not including zero value), it means significant (accept the research hypothesis). If CI values are across axes (i.e. including zero value), it means not significant (reject the research hypothesis).

5. Results

The results of the data analyses of research questions were presented as follows.

Research Question 1: What is the degree of correlation between work self-efficacy and cognitive engagement of VBE lecturers in public universities?

Table 1 - Mean, standard deviation, bootstrap, and Pearson’s correlation between work self-efficacy and cognitive engagement of VBE lecturers

Variables	5000 Resample Bootstrap Iterations					r
	M	SD	BCa 95% Confidence Interval			
			Bias: M(SD)	Lower: M(SD)	Upper: M(SD)	
Work Self-Efficacy	6.194	.693	-.0036(-.01304)	5.907(.444)	6.482(.921)	.197
Cognitive Engagement	13.597	.755	-.0089(-.03218)	12.971(.172)	14.216(.241)	

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation

Table 1 showed the results of the Pearson correlation between work self-efficacy and cognitive engagement of VBE lecturers. The Table further showed the mean responses on work self-efficacy (M = 6.194) and cognitive engagement (M = 13.597). Hence, the 5000-resample bootstrap means responses were relatively negligible, and this implies that a larger sample size of up to 5000 VBE lecturers’ mean responses on work self-efficacy and cognitive engagement clustered around the mean responses of 139 respondents. The correlation coefficient (r = .197) showed a very low correlation between work self-efficacy and cognitive engagement.

Research Question 2: What is the degree of correlation between work self-efficacy and emotional engagement of VBE lecturers in public universities?

Table 2 - Mean, standard deviation, bootstrap, and Pearson's correlation between work self-efficacy and emotional engagement of VBE lecturers

Variables	5000 Resample Bootstrap Iterations					
	M	SD	BCa 95% Confidence Interval			r
			Bias: M(SD)	Lower: M(SD)	Upper: M(SD)	
Work Self-Efficacy	6.194	.693	-.0036(-.01304)	5.907(.444)	6.482(.921)	.324
Emotional Engagement	12.648	.405	-.0021(-.03197)	12.1151(.706)	13.216(.971)	

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation

Table 2 showed the results of the Pearson correlation between work self-efficacy and emotional engagement of VBE lecturers. The Table further showed the mean responses on work self-efficacy ($M = 6.194$) and emotional engagement ($M = 12.648$). Hence, the 5000-resample bootstrap means responses were relatively negligible, and this implies that a larger sample size of up to 5000 VBE lecturers' mean responses on work self-efficacy and cognitive engagement clustered around the mean responses of 139 respondents. The correlation coefficient ($r = .324$) showed a low correlation between work self-efficacy and emotional engagement.

Research Question 3: What is the degree of correlation between work self-efficacy and physical engagement of VBE lecturers in public universities?

Table 3 - Mean, standard deviation, bootstrap, and Pearson's correlation between work self-efficacy and physical engagement of VBE lecturers

Variables	5000 Resample Bootstrap Iterations					
	M	SD	BCa 95% Confidence Interval			r
			Bias: M(SD)	Lower: M(SD)	Upper: M(SD)	
Work Self-Efficacy	6.194	.693	-.0036(-.01304)	5.907(.444)	6.482(.921)	.392
Physical Engagement	8.166	.289	-.0008(-.02204)	7.784(.838)	8.554(.663)	

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation

Table 3 showed the results of the Pearson correlation between work self-efficacy and physical engagement of VBE lecturers. The Table further showed the mean responses on work self-efficacy ($M = 6.194$) and physical engagement ($M = 8.166$). Hence, the 5000-resample bootstrap means responses were relatively negligible, and this implies that a larger sample size of up to 5000 VBE lecturers' mean responses on work self-efficacy and physical engagement clustered around the mean responses of 139 respondents. The correlation coefficient ($r = .392$) showed a low correlation between work self-efficacy and physical engagement.

Research Question 4: What is the degree of correlation between work self-efficacy and overall work engagement of VBE lecturers in public universities?

Table 4 - Mean, standard deviation, bootstrap, and Pearson's correlation between work self-efficacy and overall work engagement of VBE lecturers

Variables	5000 Resample Bootstrap Iterations					
	M	SD	BCa 95% Confidence Interval			r
			Bias: M(SD)	Lower: M(SD)	Upper: M(SD)	
Work Self-Efficacy	6.194	.693	-.0036(-.01304)	5.907(.444)	6.482(.921)	.325
Overall Work Engagement	34.410	.422	-.0118(-.07705)	33.029(.760)	35.806(.782)	

Note. BCa = bias-corrected and accelerated estimates, M = mean, SD = standard deviation

Table 4 showed the results of the Pearson correlation between work self-efficacy and overall work engagement of VBE lecturers. The Table further showed the mean responses on work self-efficacy ($M = 6.194$) and overall work engagement ($M = 34.410$). Hence, the 5000-resample bootstrap means responses were relatively negligible, and this implies that a larger sample size of up to 5000 VBE lecturers' mean responses on work self-efficacy and overall work engagement clustered around the mean responses of 139 respondents. The correlation coefficient ($r = .325$) showed a low correlation between work self-efficacy and overall work engagement.

6. Hypotheses Testing

The results of data analyses of the hypotheses were presented as follows.

Research Hypotheses 1: Work self-efficacy is a significant positive predictor of the cognitive engagement of VBE lecturers in public universities.

Table 5 - Regression estimates of work self-efficacy predicting cognitive engagement of VBE lecturers

Model	Coefficients		Bootstrap with <i>BCa</i> 95% <i>CI</i>						
	<i>MS</i>	<i>F</i>	Beta	<i>T</i>	<i>P</i>	<i>Bias</i>	<i>P</i>	Lower	Upper
Work Self-Efficacy	-		.197	2.352	.020	-.009	.054	-.022	.848
Regression	75.518	5.533							
Residual	13.649								
Summary	<i>R</i> Square = .039, Adjusted <i>R</i> Square = .032, <i>df</i> = 1, 137								

Note. *BCa* = bias-corrected and accelerated estimates, *CI* = confidence interval

Results presented in Table 5 showed the regression estimates of work self-efficacy predicting the cognitive engagement of VBE lecturers. The results showed that work self-efficacy significantly predicts cognitive engagement: $F(1, 137) = 5.533, \beta = .197, t = 2.352, p < .05$. The results of the 5000-resample bootstrap coefficients were not significant (bias = -.009, $p > .05$) with a relatively negligible bias. All in all, there is a significant relationship between work self-efficacy and the cognitive engagement of VBE lecturers.

Research Hypotheses 2: Work self-efficacy is a significant positive predictor of the emotional engagement of VBE lecturers in public universities.

Table 6 - Regression estimates of work self-efficacy predicting emotional engagement of VBE lecturers

Model	Coefficients		Bootstrap with <i>BCa</i> 95% <i>CI</i>						
	<i>MS</i>	<i>F</i>	Beta	<i>T</i>	<i>P</i>	<i>Bias</i>	<i>P</i>	Lower	Upper
Work Self-Efficacy	-		.324	4.004	.000	-.016	.005	.170	1.067
Regression	167.567	16.029							
Residual	10.454								
Summary	<i>R</i> Square = .105, Adjusted <i>R</i> Square = .098, <i>df</i> = 1, 137								

Note. *BCa* = bias-corrected and accelerated estimates, *CI* = confidence interval

Results presented in Table 6 showed the regression estimates of work self-efficacy predicting the emotional engagement of VBE lecturers. The results showed that work self-efficacy significantly predicts emotional engagement: $F(1, 137) = 16.029, \beta = .324, t = 4.004, p < .05$. The results of the 5000-resample bootstrap coefficients were also significant (bias = -.016, $p < .05$) with a relatively negligible bias. By and large, there is a significant relationship between work self-efficacy and the emotional engagement of VBE lecturers.

Research Hypotheses 3: Work self-efficacy is a significant positive predictor of physical engagement of VBE lecturers in public universities.

Table 7 - Regression estimates of work self-efficacy predicting physical engagement of VBE lecturers

Model	Coefficients		Bootstrap with <i>BCa</i> 95% <i>CI</i>						
	<i>MS</i>	<i>F</i>	Beta	<i>T</i>	<i>P</i>	<i>Bias</i>	<i>P</i>	Lower	Upper
Work Self-Efficacy	-		.392	4.982	.000	-.009	.001	.201	.814
Regression	110.937	24.823							
Residual	4.469								
Summary	<i>R</i> Square = .153, Adjusted <i>R</i> Square = .147, <i>df</i> = 1, 137								

Note. *BCa* = bias-corrected and accelerated estimates, *CI* = confidence interval

Results presented in Table 7 showed the regression estimates of work self-efficacy predicting the physical engagement of VBE lecturers. The results showed that work self-efficacy significantly predicts physical engagement: $F(1, 137) = 24.823, \beta = .392, t = 4.982, p < .05$. The results of the 5000-resample bootstrap coefficients were also significant (bias = -.009, $p < .05$) with a relatively negligible bias. By and large, there is a significant relationship between work self-efficacy and the physical engagement of VBE lecturers.

Research Hypotheses 4: Work self-efficacy is a significant positive predictor of overall work engagement of VBE lecturers in public universities.

Table 8 - Regression estimates of work self-efficacy predicting overall work engagement of VBE lecturers

Model	Coefficients		Bootstrap with <i>BCa</i> 95% <i>CI</i>						
	<i>MS</i>	<i>F</i>	Beta	<i>T</i>	<i>P</i>	<i>Bias</i>	<i>P</i>	Lower	Upper
Work Self-Efficacy	-		.325	4.024	.000	-.009	.010	.405	2.683
Regression	1034.750	16.196							
Residual	63.890								
Summary	<i>R</i> Square = .106, Adjusted <i>R</i> Square = .099, <i>df</i> = 1, 137								

Note. *BCa* = bias-corrected and accelerated estimates, *CI* = confidence interval

Results presented in Table 8 showed the regression estimates of work self-efficacy predicting the aggregate work engagement of VBE lecturers. The results showed that work self-efficacy significantly predicts overall work engagement: $F(1, 137) = 16.196$, $\beta = .325$, $t = 4.024$, $p < .05$. The results of the 5000-resample bootstrap coefficients were also significant (bias = $-.009$, $p < .05$) with a relatively negligible bias. All in all, there is a significant relationship between work self-efficacy and the overall work engagement of VBE lecturers.

7. Discussion

The study aimed at supporting the assumptions of the JD-R theory (Xanthopoulou, et al., 2007, 2009a, 2009b) by examining the role of a personal resource indicator (e.g., work self-efficacy) concerning the basic propositions of the JD-R theory. The present study contributed significantly to the theoretical development of the JD-R model because it establishes one of its central assumptions.

Results of research questions showed that there was a positive interplay between work self-efficacy and work engagement dimensions (e.g., cognitive, emotional, and physical engagement) among VBE lecturers in universities in South-South Nigeria. The results of the corresponding hypotheses showed a significant interplay between work self-efficacy and work engagement dimensions (e.g., cognitive, emotional, and physical engagement) among VBE lecturers in universities in South-South Nigeria. This implies that if VBE lecturers exert a high level of work self-efficacy, they will equally be engaged in work-related tasks. Previous studies (e.g., Judge et al., 1997; Griffin, Neal, & Parker, 2007; Luthans, Avolio, Walumbwa, & Li, 2005; Xanthopoulou, et al., 2007) supported the underlying prediction of the model that work self-efficacy is the most salient predictor of work engagement. This may be why Xanthopoulou, et al., (2007) assumed that employees who feel efficacious are important to their organization, optimistic about their future, and, consequently, engaged on the job. Similarly, theorists (e.g. Hobfoll, 2002; Luthans & Youssef, 2007) depicted that work self-efficacy has been recognised as a crucial factor that predicts employees' psychological well-being in general and work-related well-being in particular. This assertion further means that employees or people who are more self-efficacious will exert a significant degree of active engagement in their work tasks.

Hobfoll (1989) postulated that work engagement dimensions such as cognitive, emotional, and physical engagement are determined especially by individual factors. However, work self-efficacy is a major indicator of individual factors. The study by Judge, Van Vianen, and De Pater (2004) has shown that work self-efficacy has a strong positive relationship with the different aspects of work-related well-being (e.g., work engagement). Previous studies (e.g. Chen, Gully, & Eden, 2001; Pierce, Gardner, Cummings, & Dunham, 1989; Scheier & Carver, 1992) have specifically revealed that this work self-efficacy is not only related to demand resilience, but also has a positive impact on cognitive, physical and emotional engagement.

8. Conclusion and Limitation

As regards the findings of the present study, it is concluded that work self-efficacy is a significant positive but low predictor of work engagement dimensions. In this regard, work self-efficacy has become a welcome concept or construct, since it is a major predictor of cognitive, physical, and emotional engagement. The authors, therefore, anticipate that the study findings will stimulate more rigorous empirical studies covering work self-efficacy, cognitive engagement, physical engagement, and emotional engagement to be conducted in other tertiary institutions such as the college of education, polytechnic, or innovation enterprise to determine whether the study will be consistent with the results obtained.

As opined by researchers and scholars, there is no research without limitations. Thus, this study has addressed some obvious limitations. However, the study provided descriptive data on the extent to which work self-efficacy influences each of the work engagement dimensions among the VBE lecturers in universities. First, because of the type of data that was collected from respondents (i.e. data collected through correlational and quantitative approaches), causal inference cannot be established. The authors, therefore, recommend that future research should adopt an experimental or longitudinal approach to improve on the existing result or provide a better result. Second, because the sample size ($N=139$) used in the study, which was drawn from the public (i.e. federal and state) universities in South-South, Nigeria, caution should be exercised in generalizing the result of the study. The authors, therefore, recommend that future research should employ a proportional sampling procedure that would incorporate all the geopolitical zones (e.g., South-East,

South-West, North-East, North-West, and North-Central) to ensure the balanced representation of samples from all public (i.e. federal and state) universities in Nigeria. Third, because of the homogenous nature of the respondents (i.e. the VBE lecturers) only, caution should be applied when generalising the result to lecturers in other fields of study. The authors, therefore, recommend that future studies should include other categories of lecturers or respondents from other fields of study. Finally, because of the wide range between LL and UL values, which may imply slight measurement error, caution should be applied when discussing the result of the study. The authors, therefore, recommend that future studies should carefully analyse the data that will be collected from the respondents to avoid measurement errors as well as to close the gap between the LL and UL. Nevertheless, the used 5000 resample bootstrap technique was relevant which paved the way for absolute generalization of results to abate the limitation of using the respondents only from the public universities in South-South. However, the validity and reliability of the psychological scales (i.e., the research instruments) for data collection were acceptable. Despite the limitations, the findings of this study contributed to the JD-R theory by providing empirical data on the extent to which work self-efficacy influence work engagement among VBE lecturers in universities.

9. Implications of Findings

This study focused on the extent to which work self-efficacy can predict work engagement, which is a relative area of research inquiry that is devoid of much empirical support, especially in the context of developing countries such as Nigeria. The findings of the present study supported the assumptions of the JD-R theory by providing a model that examined the relationships between work self-efficacy and the indicators of work engagement. For instance, one of the assumptions of the JD-R theory is that employees that are highly resourceful or efficacious have the motivational potential to experience high cognitive, physical, and emotional engagement on the job. This implies that work self-efficacy is a motivational factor that fosters cognitive, physical, and emotional engagement among VBE lecturers. Therefore, future empirical studies should focus on this relationship by examining the extent to which different aspects of personal resources predict work well-being.

The findings of the study also provided some practical implications for university administrators/managers. University administrators/managers could increase the cognitive, physical, and emotional engagement of VBE lecturers via increased work self-efficacy. They could help sustain high work self-efficacy by ensuring adequate implementation of a dynamic and resourceful work environment, which could increase or provide the opportunity for the VBE lecturers to experience high levels of cognitive, physical, and emotional engagement on the job. Therefore, a dynamic and resourceful work environment should be carefully implemented for the VBE lecturers to continually experience high levels of cognitive, physical, and emotional engagement on the job. Also, devising strategic means of creating a dynamic and resourceful work environment should be one of the core goals and missions of the VBE programme in the university system. In turn, this would provide an opportunity for VBE lecturers to exert high levels of self-efficacy and engagement on the job. Furthermore, the VBE lecturers should continually make effort to improve or develop their work skills and competencies by attending workshops/seminars or participating in academic conferences, as this would help to increase their self-confidence and make them engage on the job.

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