EMPLOYABILITY SKILLS AND JOB PERFORMANCE OF GRADUATE STUDENTS IN DEVELOPING COUNTRIES: THE MODERATING ROLE OF SKILL-MISMATCH

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ABSTRACT

Previous studies on employability skills and job performance utilised data from employers and students without paying attention to graduates who work concurrently. These studies also presume that having acquired employability skills, one will perform on the job. According to other studies, this is far from reality due to recent mismatches between graduate skills and their jobs. Thus, questions remain as to whether the link between employability skills and job performance has been thoroughly investigated. Against this background, the current study examined the moderation of skill mismatch on the relationship between employability skills and graduate job performance. Data were collected from 580 respondents and analysed using PLS-SEM. It was revealed that skill mismatch moderates this relationship. It was also indicated that the perceptions of graduates who work concurrently were equally relevant for assessing this link. Future studies were, thus, recommended to consider the perceptions of graduates who work concurrently in their respective studies.

Keywords: Employability skills, skill mismatch, job performance, graduate students, employers

INTRODUCTION

The dynamic nature of today's socio-economic and techno-political transformation has compelled most economies to remodel their people management strategies (Chuang, 2020). The effect of this global transformation on the labour market is the call for job content redesign and the demand for employees with corresponding skills (Nicolescu & Nicolescu, 2019). By implication, employees must either reskill or exit the firm, while graduate students must acquire relevant employability skills or remain unemployed after school (Chuang, 2020). Accordingly, industry-academia discourse about Higher Education Institutions (HEIs)'s role in equipping graduates with employability skills has been highlighted (Chuang, 2020). Employers are searching for graduates with teamwork, continuous learning, problem-solving, communication, and critical thinking (Osmani et al., 2019). In that regard, HEIs are responsible for developing graduate programmes and job-ready graduates to meet the new work demands and improve firm performance (Osmani, et al., 2019). This has become necessary because the employability of graduates greatly depends on the match between graduate skill sets and the demands of the jobs as held by the person-job fit theory (Kristof, 1996; Edwards, 1991).

The logic from the preceding arguments is that the acquisition of employability skills from HEIs will obviously enable graduates to drive firm performance (Tsirkas et al., 2020). This assertion is underpinned by the human capital theory, which stipulates that investments in employee's education and training increase their productive capacity and incomes (Becker, 1964; Fugar et al., 2013). Thus, HEIs serve as a source of graduates with skills that are highly valued by the employer (Sarkar, et al., 2020). This notion, however, is far from reality due to the break between graduate employability skills and those required by employers for superior organisational performance (Sarkar et al., 2020; Tsirkas et al., 2020). According to Moore and Morton (2017), however, the disparity between graduate employability skills and job-related skills is not necessarily the source of low job performance at the workplace; it is a mismatch between graduate skill content and the job in which the graduate is engaged. According to the authors, graduates may possess the right skills but are not engaged in the right job. Thus, the low job performance of graduate students may be due to recent mismatches between graduate skills and the jobs they are made to do in their respective organisations. Other studies (Hurrell, 2016; Humburg, & Van der Velden, 2015) have also supported this view, arguing that skill mismatch is the reason for the high rates of graduate' unemployment and low job performance in both developed and developing countries. As a consequence, employers are dissatisfied with the existing graduate employability "skill-gap" (Sarkar et al., 2020; Tsirkas et al., 2020), and have raised concerns about the low job performance of graduate students (Sakar et al., 2020).

While industry-academia continues to debate on employability skills, skills gap, and graduate performance, previous studies (Sarkar et al., 2020; Tsirkas et al., 2020; Nicolescu & Nicolescu, 2019; Pereria et al, 2019) have primarily collected data from employers, graduate students, and job applicants to examine these concepts in the literature. None of these studies considered the particular case of graduate students who are employed at the same time. Consequently, there seems to be a general agreement that the perceptions of employers, graduate students, and job applicants are the benchmark for analyzing employability skills, skill gaps, and graduate performance without any input from the management of educational institutions (Sarkar et al., 2020; Tsirkas et al., 2020; Nicolescu & Nicolescu, 2019). Meanwhile, other studies have shown that such assumptions are questionable (Winterton & Turner, 2019). For instance, in a study that compared the perceptions of employers and management of educational institutions in the UK, Williams et al. (2019) found that although there were areas of consensus among the views of employers and educators, there was equally substantial divergence. On this basis, the authors concluded that graduate employability is a dynamic, ongoing concept that must be examined from all perspectives. Thus, questions remain as to whether the correlation between employability skills and job performance has been thoroughly investigated. Against this background, the current study aimed to examine the moderation of skill mismatch on the relationship between employability skills and job performance of graduates who are working concurrently, as this will extend the framework on graduate employability, skill mismatch, and job performance in the literature.

This paper questions the reality of assessing the employability skills of graduate students entering the job market without prior work experience, as this may have contributed to the continuing debate between employers and HEI on relevant and irrelevant employability skills. To provide an empirical basis for the assertion, this paper gathered data from graduates who work concurrently. The paper is laid out as follows: the second section presents the theoretical and conceptual literature, while the third section details the choice and justification of research methods used in the study. The fourth section deals with the discussion of results as the conclusions, recommendations, practical implications, and suggestions for future research are presented in the fifth section.

This study is guided by the following research questions:

1. *What influence does employability skills have on graduate job performance?*
2. *Does skill mismatch moderate the link between employability skills and job performance?*

LITERATURE REVIEW

Concept of employability skills

No single skill can fully determine a person's employability (Chevalier, 2003). Employability is a consequence of several skills acting together as one concept. This concept, otherwise called employability skills, consists of the generic skills that make a person more successful on the job (Singh & Jaykumar, 2019). Adeyinka-Ojo (2018) defined employability skills as the personal attributes that allow a person to

cooperate with members of the organisation, make critical decisions and solve challenging problems. The World Economic Forum (2016) identified the 16 most relevant employability skills that every job applicant must possess to perform successfully in the 21st Century job market. They are (1) literacy, (2) numeracy, (3) scientific literacy, (4) financial literacy, (5) ICT literacy, (6) cultural and civic literacy, (7) critical thinking/problem solving, (8) creativity, (9) communication, (10) collaboration, (11) curiosity, (12) initiative, (13) persistence/grit, (14) adaptability, (15) leadership, and (16) social and cultural awareness. These skills are generally clustered into three. The first six are fundamental literacies while the next four (seventh to tenth) are known as competencies. The last six (eleventh to sixteenth) are known as character qualities. Fundamental literacies help students apply core skills to everyday tasks while competencies help them select the best approach for tackling complex challenges. Character qualities help students select the most feasible approach to their changing environment.

In recent years, employability skills have inevitably shifted from being more technically focused to more generic skills such as, critical thinking, teamwork and communication. Generic skills are usually the key competencies relevant to a wide range of performance (Sakar et al., 2020; Hinchliffe, 2006). They are also known as 'soft skills' or core skills (Sakar et al., 2020). Previous scholars categorised soft skills into communication skills (Sakar et al., 2020), team player skills (Sakar et al., 2020), leadership skills (Nusrat & Sultana, 2019), problem-solving skills (De Villiers, 2010), critical thinking and numeracy skills (Aliu & Aigbavboa, 2019), ethical behaviours (Singh & Jaykumar, 2019) and ability to work under pressure (Nusrat & Sultana, 2019).

The relevance of generic skills in graduate employability has consistently been investigated by policymakers, practitioners, scholars and employers (Sakar et al., 2020). Results from Lowden, Hall, Elliot, and Lewin (2011) and Ferns (2012) indicate that employers in both the UK and Australia prefer generic skills as very useful in the workplace. Similarly, having examined the perceptions of business students about employability skills in a developing country context, Mainga, Daniel, and Alamil (2022) found that employers are more satisfied with the academic skills of graduate students at the time of their graduation. Again, having examined graduates' skills and their employability from different European countries, Pereria, Vila-Boas and Rebelo (2019) found that graduate students in those countries agree that interpersonal skills and communication are the most important for job acquisition in their field of study. Wesley et al. (2017) also found that employers prefer to hire graduates with excellent soft skills. In recent times, employers have agreed that graduates who are confident and technically sound are the most preferred for the industry (Jackson, 2012). Notwithstanding these findings, some studies have pointed out that universities do not adequately prepare graduates for employment (Pitan & Adedeji, 2012).

Job performance

Most enterprises have invested much time and resources in recruiting, maintaining, developing, and motivating a highly performing workforce in the belief that their

collective effort will help management meet organisational goals. Previous studies (Opoku, 2023; Campbell et al.,1990) have shown that job performance is a multi-dimensional concept, and therefore, does not have a generally accepted definition. On the most basic level, job performance refers to the behaviours or the outcomes such behaviours (Opoku, 2023). The behavioural aspect of job performance consists of what people do at the workplace or employees' actions while performing the job. Campbell et al. (1990, p. 40) defined the behavioural aspect of job performance as "…synonymous with behaviour. It is something that people do and can be observed and scaled. Performance is what the firm expects employees to do. It is not about an outcome that may or may not be under the control of the employee. It is also not about the results of their actions, it is the action itself". The outcome aspect of job performance on the other hand refers to the consequence, effect, or upshot of the goal-oriented behaviours or actions manifested by the employees. They are the by-product or end result of the person's behaviour on the job.

Job performance may be classified or categorised into task, contextual, adaptive, and counterproductive. Borman and Motowidlo (1993) categorised job performance into task and contextual, defining task performance as any employee behaviour directed at the job itself, and intended to accomplish the job requirements as provided in the job description. They also defined contextual performance as behaviours that are directed towards an individual, group or organisation by a member in the course of performing his assigned task. Pulakos et al. (2002) defined adaptive performance as the extent to which employees successfully modify their thoughts and behaviours to respond to and align with change at the workplace, and in their job duties. A person can adapt to the constantly changing demands of the job in dynamic work situations (Aguinis, 2019). The fourth and final dimension of individual job performance is counterproductive work behaviour. This is defined as deviant employee behaviour that is harmful or potentially harmful to the organisation and its members. Aguinis (2019) defined a counterproductive job performance as behaviours and results that voluntarily violate the norms set by management. Counterproductive behaviours usually threaten the well-being of the enterprise and its members.

Skill mismatch

Perry et al. (2014) defined skill mismatch as a situation where the skills possessed by a worker are different from those required by their jobs. According to Chhinzer and Russo (2017), skill mismatch occurs when the skills preferred by employers differ from those of job seekers or incumbents. Thus, there is a skill mismatch, if for instance, the educational attainment of graduates and the skill requirements of prospective jobs differ (Okolie, Nwosu & Mlanga, 2019). Previous studies (Chhinzer & Russo, 2017; Singh et al., 2019) have confirmed that skill mismatch imposes a significant drag on employment, especially in developing countries, and has become a vehicle for the growing and persistent unemployment situation in most economies (Clarke, 2017). Following the growing concern about skill mismatch, higher education institutions have responded by adding more skills in their academic curricular (Moore & Morton, 2017). Osmani et al. (2019) agree with this state of affairs. According to the authors, existing university curricula do not reflect the current skill requirements of the industry. In their opinion, graduates are required to go beyond

the orthodox work functions by being equipped with broader knowledge and abilities to leverage technology to perform their corporate functions effectively.

Skill mismatch has an adverse effect on the individual employee, the firm, and the entire society. At the personal level, skill mismatch reduces the job satisfaction of employees and increases their intention to quit the firm. At the firm level, it is often the reason for poor organisational performance. It is also the reason why the firm lacks innovation and competitiveness, thereby impeding its productivity and profitability (Albandea & Giret, 2018). Firms may also incur additional costs of recruiting, replacing and training employees who quit as a result of skill mismatch. It is reported that skill mismatch is one of the obstacles to doing business in Africa (Morsy & Mukasa, 2019). At the national level, skill mismatch can result in the country's loss of competitiveness and innovation, thereby worsening the existing unemployment problem in the country.

From the preceding analysis, we can identify three major dimensions of mismatch: (a) skill mismatch at the macro-level, (b) skill mismatch at the micro-level and (c) skill shortages. Skill mismatch at the macro-level is defined as the difference between the aggregate supply of and demand for skills in a particular geographical unit such as a region, country or continent. It occurs when there is a discrepancy between the skills that the working population possess, and the skills needed in the economy. At the micro-level, skill mismatch occurs when the level of skills required by employers is different from the skills possessed by the workforce (Brunello & Wruuck, 2019). The final dimension of skill mismatch relates to specific skill shortages experienced by employers who are recruiting workers for jobs that require specific skills and are unable to do so because those skills are either inadequate or are not available in the labour market (Morsy & Mukasa, 2019).

Employability skills and job performance of graduate students

Previous studies (Venessa & Wenceslao, 2022; Aryania & Widodo, 2020; Bozionelos, 2016; Maripaz & Ombra, 2013) have shown that graduate employability skills have a significant impact on job performance. For instance, Maripaz and Ombra (2013) investigated the effect of employability skills on graduate task performance in selected government institutions in Central Mindanao, the Philippines. Two sets of survey questionnaires were used to collect data from 220 respondents: one set for employers and another set for employees. Although there was a discrepancy in their overall mean scores, the two sets of respondents agreed that employability skills had a significant influence on employee's task performance. Bozionelos (2016) also examined the relationship between employability skills, job performance, mentoring receipt and career success among respondents in small and medium-scale enterprises in three European countries (Greece, Italy, and Poland). The authors found that employability skills have a strong effect on job performance. Aryania and Widodo (2020) also explored the influence of employability skills and job characteristics on the contextual performance of respondents in Jakarta Province, Indonesia. Data were collected from 216 respondents using a survey questionnaire. The data were analysed with descriptive statistics. The study revealed that employability skills significantly directly affect graduate employees' contextual

performance. Similarly, Venessa and Wenceslao (2022) investigated the effect of employability skills on the job performance of graduates at Occidental Mindoro State College. Data were gathered from 40 respondents. The authors found that employability skills have a positive significant effect on graduates' job performance.

Given the preceding findings, the following hypothesis was formulated.

H_1: Employability skills do not have a significant influence on job performance.

Moderation of skill mismatch between employability skills and job performance

Previous studies (Farzana, Nurul, & Ishak, 2023; Kim & Choi, 2018; Muo, 2016) have shown that skill mismatch is an important variable for understanding and investigating employability skills and job performance. In a study that explored skill mismatch and employability in Nigeria, Muo (2016) found that skill mismatch has led to worsening employability of the youth in Nigeria, thereby posing major challenges to the government and the general society. Farzana, Nurul, and Ishak (2023) also investigated the link between employability skill and job mismatch and their influence on graduate unemployment in Malaysia. The study revealed that employability skills and job mismatches contributed significantly towards graduate unemployment in Malaysia. In another study by Kim and Choi (2018), the effect of job mismatch on employee salary and job performance was investigated. Data were collected from PhD students. The study revealed that job mismatch negatively affected overall remuneration, job satisfaction, and job performance, with income and job satisfaction as moderators on the link between job mismatch and job performance. Lomban and Saerang (2016) also examined the correlation between educational background-mismatch and job performance at the BNI Regional Office, Manado. Data were collected from 13 informants in the BNI, Office. The authors found that mismatches between training, educational background, and job requirements had a detrimental impact on job performance.

Given the preceding results, the following hypothesis was formulated:

H_2: Skill mismatch does not moderate the relationship between employability skills and job performance.

THEORETICAL PERSPECTIVES

This study is underpinned by the human capital theory and person-job fit model. The human capital theory posits that individuals invest in their training and education, and in some cases deliberately vary their job experience across different industries and sectors in order to increase their productive capacity and income (Kulkarni, Lengnick-Hall & Martinez, 2015; Becker, 1993). According to Blair (2018), the human capital theory is critical for understanding workplace performance and the distribution of income. Lepak and Snell (1999) have also shown that firms select different HR interventions for managing their employees based on the strategic value and uniqueness of their human capital. HR managers also use human capital as a signal for assessing applicants' underlying learning ability (Thurow, 1975). They then screen applicants on the basis of these signals. Thus, since academic

qualifications and job experiences are tangible and visible indicators of human capital, these factors play an important role in screening applicants for employment (Lepak & Snell, 1999).

The study is also underpinned by the person-job fit model, which Edwards (1991) proposed. The model stipulates that the job suitability of a person can be assessed by matching his or her abilities with the demands of the job (Kristof, 1996; Edwards, 1991). According to the model, where the match between the attributes of the job seeker and the requirements of the job are balanced, the person is said to be suitable for the job and vice versa (Kristof-Brown et al., 2005). Thus, if the job seeker's ability levels are consistent with those required for performing the job, there will be favourable outcomes for him and his or her employers (McKee-Ryan & Harvey, 2011; Fine & Nevo, 2007). According to Shelton, McKenna, and Darling (2002), when the match between the qualities of job seekers and the requirements of the job are inconsistent during the job search, the job seeker feels more stressed, resulting in some psychological and mental anxieties in the person. The person-job fit model significantly derives from the theory of work adjustment, which holds that the closer the correspondence of the job seeker's abilities with the requirements of the job, the higher the likelihood that he will succeed on the job.

METHODOLOGICAL ISSUES

The study is rooted in the post positivist paradigm, which involves concepts and variables that can be empirically validated to form a basis for generalization. It adopts a quantitative research methodology along with a correlational research design. Through causal studies, the correlational research design facilitates the exploration of causal relationships among variables under study. The population for this study consisted of all 706 MBA/MCOM business students on the sandwich, regular and distance learning programmes at the University of Cape Coast. A sample of 580 consisted of students working and studying concurrently. Thus, the purposive sampling approach was employed in this study since students who work and school at the same time were the target. Other students were not relevant for the study. The closed-ended questionnaire was used for data collection. Divided into four themes (A, B, C, and D), the survey covered demographic features, employability skills, job performance and skill-mismatch, respectively. Data were analysed with the structural equation modelling technique.

Data preparation for the analysis occurred in two phases. Initially, the collected data were edited, coded, and transformed into relevant variables. Subsequently, with the help of the SPSS, the transformed data were screened to reduce basic data entry errors. The processed data were then subjected to analysis using SMART PLS 4.0.8.4. The SMART PLS tool was configured for model formulation as follows. Consistent Bootstrapping and PLS Algorithm were meticulously marshalled with a cap of 5000 iterations. The reflective model was given a 95% confidence range and a matching 5% level of significance due to the non-directional nature of the research objectives, which led to the formulation of 1-tailed test hypotheses.

STUDY RESULTS

Measurement model evaluation

The measurement model was evaluated in order to determine the suitability of the indicators for measuring employability skills, skill mismatch, and job performance.

Reliability and validity assessments

As indicated in the methods section, the internal consistency reliability of constructs in this study was measured using both composite reliability statistics and the Cronbach Alpha. The results are presented in Table 1.

Table 1: Construct reliability and validity

	Cronbach's alpha	Composite reliability (rho_A)	Composite reliability (rho_C)	Average Variance Extracted (AVE)
Employability Skills	0.948	0.950	0.954	0.598
Job Performance	0.906	0.910	0.925	0.640
Skills Mismatch	0.900	0.902	0.922	0.628

Source: Field Survey (2024)

As in Table 1, all the Cronbach's Alpha values exceeded 0.7, meaning that the internal consistency of the constructs in this study is reliable (Hair et al., 2019). The values are: employability skills (CA=0.948), job performance (CA=0.906) and skill mismatch (CA=0.900). Although the Cronbach Alpha values are above the minimum (0.7), there is limitation to their use. The limitation is that Cronbach Alpha is sensitive to the volume of items measuring the construct, meaning that adding or deleting items can affect the Cronbach Alpha values (Amusa & Hossana, 2024). Thus, other reliability measures such as the composite reliability were considered. The Cronbach Alpha values in Table 2 indicate that all the constructs in the study have composite reliability score (rho_A) higher than 0.7. These scores are: employability skills (rho_A=0.950), job performance (rho_A=0.910), and skills mismatch (rho_A=0.902). The Composite Reliability (rho_C) of the variables are: employability skills (CR=0.954), job performance (CR=0.925), and skill mismatch (CR=0.922).

As said earlier, the convergent validity in this study was measured with Average Variance Extracted [AVE]. The AVE showed the following results: employability skills (0.598), job performance (0.640), and skills mismatch (0.628). AVE scores must be more than 0.50 in order to explain more than half the change it purports to explain (Hair et al., 2019). All the latent variables in this study had AVE values more than 0.5 (Hair et al., 2019). Thus, the measurement model was fit for the analysis.

Discriminant validity assessment

The measure of the extent to which the constructs were distinct from one another was done using the Heterotrait-Monotrait (HTMT). The HTMT criterion is the most preferred measure of discriminant validity (Hair et al., 2019). The discriminant

validity of a construct is satisfactory when its' HTMT value is below 0.9 (Hair et al., 2019). The HTMT scores for this study are presented in Table 2.

Table 2: Heterotrait-Monotrait Ratio (HTMT)

	Employability Skills	Job Performance	Skills Mismatch
Employability Skills			
Job Performance	0.853		
Skills Mismatch	0.773	0.819	
Skills mismatch x employability skills	0.301	0.368	0.251

Source: Field Survey (2024)

The results in Table 2 indicate that all the constructs had discriminant validity since their values were well below the threshold of 0.9 (Hair et al., 2019).

Collinearity statistics (VIF)

Because reflective models are prone to biases (Hair et al., 2019), it was necessary to test for common method bias using collinearity statistics, otherwise known as the Variance Inflation Factor (VIF) (Afum et al., 2019). According to Afum et al. (2019), the VIF score must be less than 4.999, otherwise the results are tainted by common method bias. The collinearity test results are presented in Table 3.

Table 3: Collinearity statistics (VIF)

	VIF
CP1	2.900
CP2	2.576
CP3	3.317
CP4	2.709
CP5	2.645
CS3	2.535
CS5	3.420
IS1	2.792
IS3	2.577
IS4	2.406
ITS1	2.612
ITS3	2.929
PQ1	3.603
PQ3	2.975
PQ4	2.393
PRMS2	2.469
PRMS3	3.127
SM1	1.987
SM2	2.592
SM3	2.531
SM4	1.947
SM5	3.066

SM6	2.391
SM7	1.889
TP4	1.777
TP5	1.955
TS2	3.541
TS3	2.196
Skills mismatch x employability skills	1.000

Source: Field Survey (2024)

As in Table 3, all the VIF values were less than 4.999. Thus, the structural model in this study is devoid of collinearity and common method bias (Afum et al., 2019).

Structural model

The structural model provided information about the moderation of skill mismatch on the link between employability skills and job performance. Key aspects of the model include measurement loadings, coefficient of determination, effect size, path coefficients, and predictive relevance.

Outer loadings

Outer loadings are the itemised reliability coefficients for a reflective model (Afum et al., 2019). They are the standardised path weights, ranging from 0 to 1. To obtain a save and sound reflective model, path loadings must be greater than 0.70 (Garson, 2016). According to Hair et al. (2019), the greater the loadings, the more robust and reliable is the model. The model's outer loadings are presented in Table 4.

Table 4: Outer loading

	Original sample (O)	Standard deviation (STDEV)	T-statistics (|O/STDEV|)	P values
CP1 <- Job Performance	0.893	0.021	42.867	0.000
CP2 <- Job Performance	0.663	0.033	20.344	0.000
CP3 <- Job Performance	0.723	0.029	24.705	0.000
CP4 <- Job Performance	0.700	0.029	24.198	0.000
CP5 <- Job Performance	0.802	0.026	31.292	0.000
CS3 <- Employability Skills	0.659	0.041	16.100	0.000
CS5 <- Employability Skills	0.720	0.033	21.667	0.000
IS1 <- Employability Skills	0.837	0.026	32.483	0.000
IS3 <- Employability Skills	0.754	0.037	20.598	0.000
IS4 <- Employability Skills	0.664	0.036	18.515	0.000
ITS1 <- Employability Skills	0.745	0.041	18.400	0.000
ITS3 <- Employability Skills	0.829	0.030	27.654	0.000
PQ1 <- Employability Skills	0.843	0.027	31.538	0.000
PQ3 <- Employability Skills	0.680	0.037	18.503	0.000
PQ4 <- Employability Skills	0.679	0.036	18.685	0.000
PRMS2 <- Employability Skills	0.685	0.035	19.351	0.000
PRMS3 <- Employability Skills	0.793	0.030	26.751	0.000

SM1 <- Skills Mismatch	0.792	0.038	21.037	0.000
SM2 <- Skills Mismatch	0.911	0.023	39.943	0.000
SM3 <- Skills Mismatch	0.729	0.034	21.272	0.000
SM4 <- Skills Mismatch	0.629	0.046	13.710	0.000
SM5 <- Skills Mismatch	0.710	0.031	23.224	0.000
SM6 <- Skills Mismatch	0.747	0.037	19.970	0.000
SM7 <- Skills Mismatch	0.710	0.040	17.625	0.000
TP4 <- Job Performance	0.691	0.033	20.691	0.000
TP5 <- Job Performance	0.819	0.027	30.820	0.000
TS2 <- Employability Skills	0.771	0.029	26.505	0.000
TS3 <- Employability Skills	0.820	0.027	30.732	0.000
Skills Mismatch x Employability Skills -> Skills Mismatch x Employability Skills	1.000	0.000	n/a	n/a

Source: Field Survey (2024)

As in Table 4, almost all the indicators had loadings more than 0.7. These results, especially as attested by their respective p-values, show that most indicators strongly and perfectly measured the constructs they purported to measure. All the outer loadings were statistically significant ($p<0.05$). Thus, in all instances, T-Statistics for the indicators were more than 1.96. According to Hair et al (2019), an item with factor loadings above 0.5 can be retained if the corresponding AVE value is 0.50 or greater than 0.50. The items with a threshold of less than 0.7 were therefore, retained since their deletion will not improve CA and CR (Hair et al., 2016).

Coefficient of determination (R^2)

A coefficient of determination (R^2) explains the variation in a dependent variable that is attributable to changes in the independent variable. Values closer to 1 imply that the independent variable is powerful in predicting the dependent variable and vice versa. The R^2 results for this study are presented in Table 5.

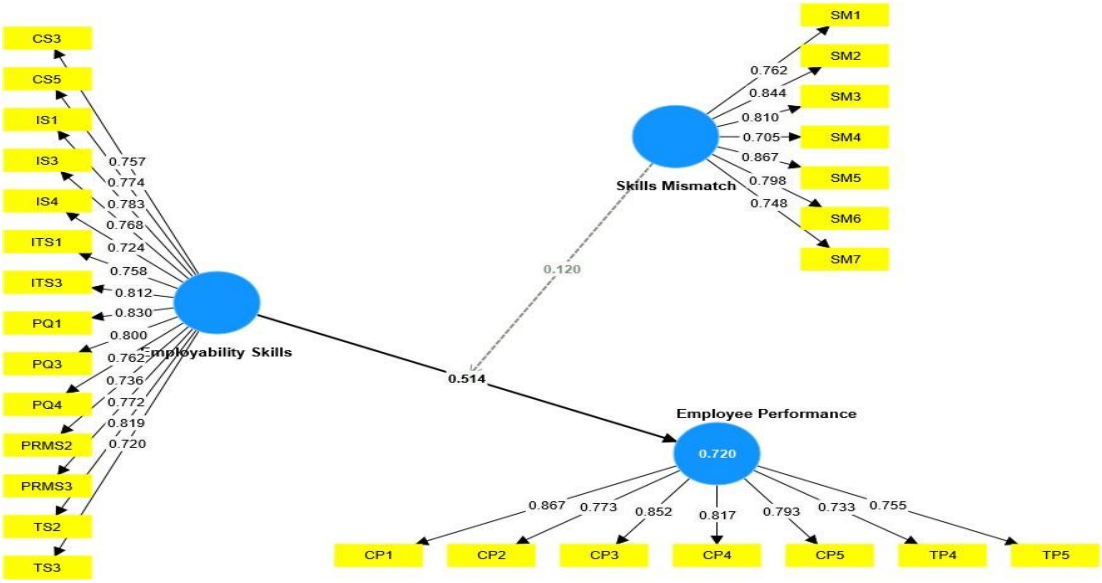
Table 5: R-Square

	R-Square	R-Square adjusted
Job Performance	0.720	0.717

Source: Field Survey (2024)

The results in Table 5 show that employability skills accounted for a strong positive change in job performance (R^2 = 0.720) when all other factors, not taken into consideration in this study, but which also affect job performance are controlled for. Thus, a 72% change in job performance is explained by changes in employability skills. Pictorially, the model is presented in Figure 1.

Figure 1: Measurement model results



Source: Field Survey (2024)

Effect size (F^2)

The effect size for this study was computed using the F^2. The effect size is strong, moderate, or mild when the F^2 is at least 0.350, 0.150, or 0.020 respectively (Henseler, 2017; Cohen, 1988). Table 6 presents the effect sizes (F^2) for this study.

Table 6: Effect size (F^2)

	Job Performance
Employability Skills	0.448
Skills Mismatch	0.225
Skills Mismatch x Employability Skills	0.039

Source: Field Survey (2024)

The results in Table 6 show that the structural path of employability skills on job performance experienced a strong and considerable effect size, recording a corresponding F^2 value of 0.448. The result (Table 6) also indicates that the effect size for skills mismatch on job performance is F^2 = 0.225. Finally, the results also signal that skill mismatch and job performance attained a moderate effect size of 0.039.

Predictive relevance (Q^2)

The Q^2 statistic was used to assess the predictive relevance of the structural model. A Q^2 value greater than 0 means that the exogenous variables have predictive relevance for the endogenous construct (Hair et al., 2019). In estimating the cross-validated redundancy values for the model, the q-predict approach was adopted. The results are presented in Table 7.

Table 7: Predictive relevance (Q^2)

	Q^2predict	RMSE	MAE
Job Performance	0.703	0.548	0.399

Source: Field Survey (2024)

Table 7 indicates that job performance has predictive relevance. All the Q^2 Construct Cross Validated Redundancy scores of job performance were more than zero (0), indicating the predictive relevance of the exogenous construct (employability skills) to the endogenous construct (job performance). Thus, all the exogenous constructs effectively explained the model.

Specific direct effect model path coefficient and decision on hypotheses

To make decisions about the hypotheses in this study, the p-value, t-statistics and path coefficients were computed. Conventional decision rules were followed in assessing the path coefficients between the exogenous and endogenous constructs. A statistic that is more than or equal to 1.96 or a p-value that is less than or equal to 5% were taken into consideration. Following hypothesis 1, the authors assessed the direct effects of employability skills on job performance. The beta score, t-statistic and p-values are presented in Table 8.

Table 8: Path coefficient

	Beta	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Employability Skills -> job Performance	0.520	0.087	5.977	0.000
Skills Mismatch -> job Performance	0.395	0.085	4.668	0.000

Source: Field Survey (2024)

The results in Table 8 indicate that employability skills are significant positive predictors of job performance (Beta = 0.520; t-stat = 5.977; p = 0.000; p < 0.050). Finally, the results in Table 8 imply that skill mismatch strongly contributes to the positive change in job performance (Beta = 0.395; t-stat = 4.668; p = 0.000; p < 0.050).

Moderating effect and decision on hypotheses

This section investigated the moderating role of skill mismatch on the link between employability skills and job performance, following hypothesis 2, which stated that, *skill mismatch does not moderate the link between employability skills and job performance.* The details are presented in Table 9.

Table 9: Moderating effect of skill mismatch

	Beta	Standard Deviation (STDEV)	T-Statistics (|O/STDEV|)	P values
Skills Mismatch x Employability Skills -> Job Performance	0.130	0.047	2.795	0.005

Source: Field Survey (2024)

The results in Table 9 are: β: = 0.130; and P-value = 0.005. By comparing these results with those in Table 8, we have observed that whereas the simple effect of

employability skills on job performance was β:0.520 (Table 8), the beta value has dropped to β:0.130 (Table 9) when the moderator (skill mismatch) was included in the analysis. This means that for higher levels of skills mismatch (e.g., skill mismatch is increased by one standard deviation unit), the correlation between employability skills and job performance will decrease by the size of skill mismatch and vice versa.

DISCUSSION OF RESULTS

This paper examined the moderation of skill mismatch on the link between employability skills and job performance. This section discusses the results of the study. The discussions are organized into two, to reflect the two hypotheses that the authors formulated.

Employability skills and job performance

The results in Table 8 and Figure 1 (β:0.520; P-value:0.000) show that employability skills have significant positive correlation with job performance. The positive coefficient (β:0.520) show that as employability skills improve, the job performance of graduate students also improves. Although 16 critical employability skills were identified (World Economic Forum, 2015), these were organized into three broad categories – fundamental literacies, competencies, and character qualities. Thus, the results imply that a change in any of these skills will influence the job performance of graduate students at the workplace. By extension, the results indicate that changes in employee skills would lead to changes in their job performance. As the p-value (0.000) (Table 8 and Figure 1) is less than 0.05, it means that the relationship between employability skills and job performance is significant. By implication, hypothesis 1 – "*Employability skills do not have significant influence on job performance"* is rejected.

The results in this study are consistent with previous studies (Venessa & Wenceslao, 2022; Maripaz & Ombra, 2013) which found that employability skills have significant direct effect on task and contextual performance of graduate employees in the Philippines. The results also support the findings of Aryania and Widodo (2020) and Bozionelos (2016) who found a strong correlation between employability skills and job performance in Europe (Greece, Italy, and Poland) and Indonesia respectively. The results imply that any attempt to improve the job performance of graduate students, will require Higher Educational Institutions to provide students with employability skills that comprises of fundamental literacies, competencies, and quality character components.

The results in Table 8 and Figure 1 (β:0.520; P-value:0.000) also support the position of the human capital theory which posits that people invest in their training and education, and in some cases deliberately vary their job experience across different industries and sectors in order to increase their productive capacity and income (Blair, 2018; Kulkarni, Lengnick-Hall & Martinez, 2014; Becker, 1993; Thurow, 1975). The ability to perform on the job is in part a function of the skills possessed by the graduate student, and these skills are acquired only through training and development which are the core issues underlying human capital theory. In

summary, job performance and distribution of income are primarily dictated by the demands of the human capital theory.

Employability skills, skill mismatch and job performance

The authors also examined the moderation of skill mismatch on the correlation between employability skills and job performance. The results in Table 9 and Figure 1 (β: 0.130; P-value: 0.005) show that skill mismatch moderates the relationship between employability skills and job performance. As a result, the null hypothesis, *"Skill mismatch does not moderate the link between employability skills and job performance"* is rejected. The results in Table 9 and Figure 1 are consistent with previous findings (Kim & Choi, 2018; Lomban & Saerang, 2016) that skill mismatch has significant positive influence on job performance. The results in Table 9 and Figure 1 support the position of the person-job fit model (Edwards, 1991) which stipulates that job suitability may be assessed by matching the abilities of the job seeker with the demands of the job being searched for. Thus, where the match between the attributes of the individual and the requirements of the job are balanced, the person is said to be suitable for successful performance (Kristof-Brown et al., 2005). By implication, if the skill possessed by the graduate are used on non-related jobs (skill mismatch), the performance of the graduate may be hampered.

CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

This study explored the moderation of skill mismatch on the correlation between employability skills and job performance. Data were collected from 580 MBA/MCOM business students who work concurrently while pursuing various degrees in the University of Cape Coast. The literature review and empirical results of this study support the idea that skill mismatch moderates the link between employability skills and job performance. This is one area which makes this study a novelty in the literature. No study in the literature has considered the moderating effect of skill mismatch on the link between employability skills and job performance, although scholars and practitioners all over the globe attest to the challenge of skill mismatch at the workplace in recent times. The results in this study support the findings of previous studies that employability skills have a strong positive effect on job performance. By implication, this study confirmed the idea that Higher Educational Institutions and HR managers cannot improve the job performance of graduate students unless they radically redesign their curricular to incorporate more skill development programmes. The study also reveals that skill mismatch negatively impacts on job performance, and need to be carefully looked at. As the study was restricted to only graduate students who work concurrently (another area which makes this study a novelty), future studies may look at the case of employers, institutions, fresh graduates and graduates who work concurrently in a single comparative study.

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