

# FACTORS INFLUENCING GRADUATE EMPLOYABILITY: AN EMPIRICAL INVESTIGATION

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*Abstract: Research on employability skills has gained much attention as employers now are concerned about finding good workers who not only have basic academic skills but also higher order thinking skills like learning, reasoning, thinking creatively, decision making and problem solving. This study attempts to investigate the core skills required by the industry from the graduates. For the purpose of the study, data have been collected with a structured questionnaire survey from the CEOs and HR managers of some selected companies in Bangladesh. Collected data have been analyzed using partial least squares structural equation modeling (PLS-SEM) technique with smart PLS software 2.0M3. The findings reveal that the industry experts have placed the most significance on the soft skills of the graduates followed by problem solving skills, leadership skills and functional skills. As this study has explored the skills of effective graduates from the opinions of industry experts, it provides the taxonomy of graduate skills from demand side view. The outcome of this study might pave the ways for the universities to develop new guidelines so as to make their teaching effective which consequently leads to the development of employability skills among the graduates.*

*Keywords: Graduate employability, Skills, Institution of higher education and employers.*

## Introduction

Employability is described as the degree of accessibility to fulfilling job opportunities by work-ready graduates (Kevin, Stuart, Dely & Jon, 2011). Georgina and Marilyn, (2012) define employability as “A set of attributes, skills and knowledge that all labour market participants should possess to ensure they have the capability of being effective in the workplace – to the benefit of themselves, their employer and the wider economy”. Employability skills are those basic skills necessary for getting, keeping, and doing well on a job (Robinson, 2000). These are the skills, attitudes and actions that enable workers to get along with their fellow workers and supervisors and to make sound, critical decisions. The excellent academic degrees alone are inadequate as the employers now look in fresh graduates for competencies or capabilities in generic skills. However, one of the problems facing institutions is unemployment among the graduates. Employers always complain that the graduate-level job applicants are lacking in generic skills and they want higher education provider emphasize more on developing these skills among students (Pavlin & Svetlik, 2014). Therefore, universities should design and impart the graduate education in a way so that graduates are equipped with the skills required by the

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employers or industry. And it calls for searching the basic skills which will ensure employability of graduates.

In the global economy today, the world is rapidly becoming one interdependent marketplace. This economic reality and challenges require graduates to equip themselves not only with paper qualifications but also with other related skills to enhance their prospects of employment. The objective of education ministry in most of the countries is to produce competent graduates to fulfill national and international manpower needs with 75% of graduates employed in their relevant fields within six months of their graduation (Rosenberg, Heimler & Morote, 2012). This shows the government's serious concern on graduate employability and marketability. But it is a challenge now to ensure the steady rate of employment of graduates. The pressures to produce employable graduates, from students, employers and governments, have placed graduate employability further up the higher education agenda. This results in a need for students to clearly understand how their academic achievements relate to developing skills valued by potential employers. Due to the vast changes taking place in the labor market, including job deterioration, employability has become the central concern for prospective graduates (Sung, Loke & Ramos, 2013) and universities have been criticized for not sufficiently preparing their graduates for employment. It is therefore important to know the skills expectations of the employers from the graduates so as to develop relevant support strategies for their chances of success after university education. Employability research has also focused on how it might be influenced by specific factors such as academic performance (Ng, Schweitzer & Lyons, 2010); graduates' meta-skills, including interpersonal and communication skills (Kaplan, Piskin & Bol, 2010; Kelley & Bridges, 2005); job-specific skills (Huang & Lin, 2011), critical thinking (Reid & Anderson, 2012) and specific personality traits, such as motivation and adaptability. Despite the attention paid to the relationship between education and employability, much of the research into employability remains theoretical and prescriptive (Wickramasinghe & Perera, 2010). Hence, the dilemma of university graduates' employability becomes a critical issue involving different social, economic, cultural and national aspects (Asonitou, 2015; Pavlin & Svetlik, 2014; Garrouste & Rodrigues, 2014; Farcnik & Domadenik, 2012; Gokuladas, 2010). Recent reports also note the lack of empirical data regarding the relationship between skills and employment (Mason, Williams & Cranmer, 2009; Pellegrino & Hilton, 2012; Rosenberg et al., 2012; Mourshed, Farrell & Barton, 2012).

To understand the evolving industry demands around graduate skills required in an increasingly knowledge-intensive industry environment, it is imperative to explore the skills required by the employers from the graduates. Serious concerns have been expressed about an increasingly wide "gap" between the skills and capabilities of graduates and the requirements for the employment of a mobile and globalized society (Finch, Hamilton & Zehner, 2012). Skill deficiencies have been identified as restricting the employment of graduates including workplace skills such as team work and advanced interpersonal skills (Gray, 2010). To address the skill deficiencies of graduates, there are increasingly calls for identifying ways to enhance their work readiness (Asonitou, 2015). But very few empirical research works have been conducted to identify the most important employability skills from the view point of the employers. Moreover, previous

studies mostly followed a qualitative approach to explore the factors influencing graduate employability; but it is yet to be justified empirically to what extent graduate employability is influenced by these factors. From that ground the present study has been undertaken to identify the employability skills from industry point of view. Specifically, the present study examines perceptions of the employability skills through the eyes of the CEOs and senior managers of some selected industries. Hence the prime objective of this study is to find out what skills employers expect from the graduates. The present study also aims at providing some guidelines on what the Higher Educational Institutions should do to increase the chances of graduate employability.

### **Graduate Employability Skills**

Graduate employability skills are also known as job readiness skills which include a set of achievements, understandings and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations (Latisha, 2010). In addition to being well-grounded in respective fields, graduates should be well-shaped in broader knowledge-base and diverse personal/interpersonal key-skills (Wasimudin, 2012; Matthew, 2008; Ana, 2012). Such attributes and skills include: teamwork, communication, inter/multidisciplinary knowledge, analytical thinking, ingenuity, creativity, technological innovation, business and management skills, leadership, ethics, professionalism, understand work strategies (Somerville et al., 2005; Sheppard, Dominick & Aronson, 2004; Swearingen & Barnes, 2002; & Shuman, Besterfield-Sacre & McGourty, 2005). Nooriah and Zakiyah (2015) state that the employability of graduates is not just determined as the outcome of discipline specific study programme or professional studies, but also the graduates' ability to promote wider skills like communicative, problem solving, interactive skills, showing initiative and efficiency. Employability also includes the aspect of attitude and personal attributes of loyalty, commitment, honesty, punctuality and integrity. However, globally employers are concerned with graduates in terms of work experience, team working and problem solving (Davies, Shury, Winterbotham & Constable, 2012). Generally across all sizes of organization, the most important skills and capabilities when recruiting new graduates are: communication skills, team working skills, integrity, intellectual ability and confidence. Similarly, Maxwell, Macfarlane & Williamson (2010) found communication and problem-solving skills to be highly ranked by employers and urged their involvement in curricula design. Despite differences in approach within each of the nations in the world (Pegg, Hendy & Lawton, 2012), a common theme has been the need to ensure that graduates emerging from the HE system are capable of contributing to national economic growth through their knowledge, skills and creativity. In a survey in the innovation and commercialization industry regarding perceptions of skills in graduates and skills in demand, Collet, Hine & Plessis, (2015) identified ten broad constructs that represent cognitive, interpersonal and intrapersonal skills. Hence it is clear from the above discussion that the most commonly cited employability skills are problem solving skills, soft skills, job specific skills, leadership skills. Moreover some employers focus on academic records of the graduates. The next section discusses these skills and their relationships with employability.

## **Soft Skill**

Educational researchers and employers have placed increasing attention on the importance of soft-skill (Chamorro, Arteché, Bremner, Greven & Furnham, 2010). While discipline-specific knowledge is typically content specific, soft-skill is non-academic skill that is presumed to be useful in a range of working environments (Chamorro et al., 2010). Evidence suggests that soft-skill is an important predictor of employability (Finch et al., 2012; Lievens & Sackett, 2012; Nickson, Commander, Hurrell & Cullen, 2012). Specific soft-skills that may affect employability include the following types of communication skills: written communication skills (Ariana, 2010; Graham, Hampton & Willett, 2010; Andrews & Higson, 2008); verbal communication skills (Gray, 2010); and listening skills (Cooper, 1997; Goby & Lewis, 2000). Communication enables a person to convey information to be received and understood. It is the ability to use language (receptive) and express (expressive) information. Communication skills are generally understood to be the art or technique of persuasion through the use of oral and written language. It includes a large number of experiences, actions and events; also a variety of happening and meanings, as well as technologies. Similarly, professionalism has been identified as contributing to employability (Ashton, 2011; Mat & Zabidi, 2010). No longer is academic achievement sufficient for university graduate employment and there is a requirement for “higher education to produce graduates with highly developed and recognizable transferable skills” (Dickinson, 2000). These skills include listening, communication, teamwork, adaptability, social sensitivity, managing relationships, time management, goal-orientation, and task completion. It also includes the effective development and application of an individual’s intelligence and personality resources (Finch, Hamilton & Mark 2013). The growing body of research indicates that graduates who display these skills signal enhanced employability to potential employers. Scholars have identified interpersonal skills – such as the ability to work effectively in teams – as an important employability factor (Wellman, 2010; Borghans, Wedi & Weinberg, 2008). Finally it can be concluded from the above discussion that soft-skills influence employability. Therefore, it can be hypothesized that;

**H1:** Soft skill positively and significantly influences graduate employability.

## **Problem Solving Skill**

Problem solving skill refers to the ability to frame problems, putting them in a socio-technical and operational context, the ability to analyze and solve complex problems (Reid & Anderson, 2012). It persists on using knowledge systematically to identify, analyze, formulate, solve, and evaluate complex and multidisciplinary problems – by applying cognitive skills (logical, critical, and creative thinking). Several researchers have identified that problem-solving skills are core to employability (Reid & Anderson, 2012; Stiwne & Jungert, 2010; Wellman, 2010; Fallows & Steven, 2000). Similar to soft-skills, problem-solving skills are important across disciplines and employer type (Stiwne & Jungert, 2010; Wellman, 2010). It incorporates a range of competencies including critical thinking skills (Reid & Anderson, 2012; Halpern, 1998), creativity (Kilgour & Koslow, 2009; Halpern, 1998), and adaptability (Jabr, 2011). Problem solving is a

competency closely related to intelligence (Scherbaum Goldstein, Yusko, Ryan. & Hanges, 2012), which is the best predictor of job performance across a variety of occupations (Schmidt & Hunter, 2004). Intelligence incorporates critical thinking skills, which enable individuals to generate new ideas and reach desired and rational outcomes (Reid & Anderson, 2012). Intelligence resources also involve decision making, problem solving, reasoning and knowing how to learn from previous situations (Reid & Anderson, 2012). Previous empirical studies demonstrate a strong relationship between intellectual resources and employability across a variety of occupations and contexts (Scherbaum et al., 2012; Stiwnne & Jungert, 2010). A consensus exists among scholars that problem solving skills are critical for university graduates. Previous research indicates that employers perceive intellectual capability as a core attribute of all university graduates, which suggests that it is not perceived as unique (Hinchliffe & Jolly, 2011). Cai (2013) suggests that the degree itself becomes a surrogate for ability, and, therefore, the real competitive advantage of intellectual resources may lie in how graduates can combine these capabilities with other resources to maximize value for employers and differentiate themselves from other graduates (Hinchliffe & Jolly, 2011). Cognitive and creative skills, such as problem-solving techniques and developing and evaluating work plans and projects, developing the ability to express oneself, linking creativity to work and team working techniques. Consistent with past research (Reid & Anderson, 2012; Stiwnne and Jungert, 2010; Wellman, 2010; Fallows and Steven, 2000) employers identified problem-solving skill as an important factor when assessing new graduates' employability. Therefore this study hypothesizes that;

**H2:** There is positive and significant relationship between problem solving skill and graduate employability.

### **Functional Skill**

Job-specific skills, including knowledge, skills and passion, are other important factors considered by employers when evaluating graduates (Huang & Lin, 2011; Laker & Powell, 2011; Rosenberg et al., 2012). Specifically, these job-specific resources signal to employers that a graduate possesses the minimum proficiencies required to perform a specific role (Bhaerman & Spill, 1988). Further, Zigarmi Nimon, Houson, & Diehl (2009) contend that job-specific skill is a multi-dimensional construct that incorporates cognition, affect and behavioral-intentions. As such, individuals may have passion for a specific role and/or passion for a specific firm and evidence suggests that job-specific resources related to knowledge, skills and passion are all considerations within the recruitment and selection process. Job-specific functional skills – including job-specific competencies, job-specific technical skills (Rosenberg et al., 2012), are essential when considering an individual's employability (Huang & Lin, 2011; Laker & Powell, 2011; Pang & Ming, 2005). It is important to note that job-specific functional skills are more context specific than soft-skills and problem-solving skills. For the time being, job-specific functional skills become an important employability factor. To be a successful job applicant as a new graduate, job-specific functional skills are important (Laker & Powell, 2011; Smith, 2008). Thus it is hypothesized in this study that;

**H3: Functional skill positively and significantly influences graduate employability.**

### **Leadership Skill**

Leadership is a skill rated as very important by industry and, yet, it has been not featured in skills frameworks. Leadership skills include the ability to motivate others to achieve organizational goals (Schermerhorn, 2008). Typical characteristics of effective leadership are responsibility, self-esteem and the ethical qualities of integrity and honesty. Pellegrino and Hilton (2012) describe leadership as an interpersonal skill encompassing leadership, responsibility, assertive communication, self-presentation and social influence with others. On the other hand, Casner-Lotto and Barrington (2006) provide industry-centric terms to describe the concept of leadership as an applied skill that leverages the strengths of others to achieve common goals and as the use of interpersonal skills to coach and develop others. Leadership ranked tenth (out of 20 skills) with approximately 82 per cent of industry regarding the skill as “very important” in new workforce entrants (Casner-Lotto & Barrington, 2006). Moreover, NACE (2013) ranked leadership as second on a list of desired attributes and reports 76 per cent of industries seek evidence of leadership skills on graduates’ résumés. Millennial Branding (2012) reports that 50 per cent of companies are looking for leadership skills in new graduates. A McKinsey meta-survey of US industry reports that employers are already finding management positions difficult to fill (Manyika et al., 2011) due to the lack of leadership skill among graduates. Therefore it is hypothesized in this study that;

**H4: Leadership skill positively and significantly influences graduate employability.**

### **Academic Reputations**

Sometimes employers give value to the applicants’ academic background since academic reputation has a significant impact on a variety of outcomes of interest to employers, policy makers and academics alike. Academic reputation includes institutional image (Pampaloni, 2010); institutional branding (Bennett & Ali-Choudhury, 2009); institutional ranking (Capobianco, 2009); academic records or results (Capobianco, 2009) and program structure (Dalton & Croft, 2003). Comparatively, few studies have explored the relationship between academic reputation and employability. Reputation is a social construct that is defined as the generalized level of esteem for an organization held by a stakeholder (Deephouse & Carter, 2005; Dalton & Croft, 2003). Evidence suggests that academic reputation and its relationship to employability should be considered at three levels. The first level considers institutional-level reputation. Institutions and the ranking systems that have emerged in the past two decades (e.g. Maclean’s University Rankings, Forbes Top Colleges List) influence the employability of new graduates (Capobianco, 2009). Second, scholars have identified that program-level reputation also can influence the perception of employability skills (McGuinness, 2003). For example, the Financial Times (2012) releases an annual ranking of MBA programs which may influence the employability of graduates from these programs. Lastly, individual academic performance (grade-point average) contributes to the employability of a new graduate (Ng et al., 2010) and is frequently used in selection systems for entry-level positions (Rynes, Orlitzky & Bretz, 1997). The academic reputation of a specific school (Harvard)

or a category of schools (Ivy League) may enhance employability of graduates from these institutions (Ng et al., 2010). Therefore, from the above discussion it can be hypothesized that;

**H5:** There exists a positive and significant association between academic reputation and graduate employability.

### **Research Design and Methodology**

The present study aims at identifying the key skills of graduates from the employers' point of view. Through extensive literature review, a number of variables have been extracted as the factors affecting the employability of graduates. Soft skills, problem solving skills, functional skills, academic reputation and leadership skills are the most commonly found requirements for graduate employability in literature. The items for the above mentioned variables have been adopted from previous studies. Each item represents the content of definition for the respective constructs. For the content validity of the items, a pilot study was conducted by four academicians and ten senior HR managers of some renowned companies to make comments on the clarity and appropriateness of the measures developed for the study. After getting their feedback, the items were adjusted and used for the main study and it revealed good reliability and validity of the items. The items were measured with 5 point Likert scale with response options ranging from strongly agree (5) to strongly disagree (1). Data were collected with a structured questionnaire survey. The survey included 25 items that measured the five determinants of graduate employability. There were five items for soft skills; six items for problem solving skills, five items for leadership skills, four items for academic reputation, five items for functional skills and finally ten items were used for measuring graduate employability. Moreover, respondents were asked to provide their opinions on what institutions should do for producing industry ready graduates. Respondents' confidentiality was maintained, and results of the study were reported with aggregate data. The participants selected to take part in the survey are only known to the researchers. Data were collected from the industry experts who are involved in recruiting fresh graduates. A total of 315 sets of questionnaire were distributed among the CEOs and HR managers of some selected companies in Bangladesh and 252 sets were found to be in usable condition. They were surveyed to find out the pertinent characteristics of graduates who are going to be employed. Among the total respondents, 117 were the managing directors or CEOs and the remaining 135 were the HR managers of different companies. The survey was conducted in December 2016 and January, 2017. Collected data were analyzed using partial least squares structural equation modeling (PLS-SEM) with the support of the software Smart PLS 2.0 M3 (Ringle et al., 2012). Structural equation modeling is a second-generation multivariate statistical analysis that has been gaining attention in the areas of both environmental management (Murillo- Garcés & Rivera, 2011; Pereira et al., 2012) and operations management (Peng & Lai, 2012). PLS was used in this study as it is the most appropriate method of data analysis for social science research (Hair et al., 2010). Additionally a statement by Tabachnick & Fidell, (2007) stated that PLS-SEM is one of the most powerful statistical tools in social and behavioural sciences that have the ability to test several relationships simultaneously.

Collected data were keyed in SPSS and converted to comma delimited for PLS analysis. The findings of measurement model (outer model) were used for the reliability and validity test of data. The hypotheses were tested with the findings of structural model (inner model).

### **PLS – SEM Analysis Findings**

There are two parts in PLS SEM analysis; measurement model and structural model. In the first part, measurement model gives the values of items loadings, Cronbach alpha for reliability test, values for content validity, path coefficient and coefficient of determination. On the other hand structural model gives the values of t-statistics, items significance and predictive relevance. These two models' output has been discussed in the next section.

#### **Measurement Model (Outer Model)**

In the measurement model of PLS analysis constructs are measured on the basis of some criteria that are necessary for validating the results. The criteria include reliability and validity of data that are measured in terms of Cronbach alpha value, composite reliability, outer loadings and average variance extracted (AVE). Values for all these criteria have been shown in table 4.1. The construct validity consists of convergent validity that includes the analysis of average variance extracted (AVE), factor loading, Cronbach's alpha and Composite Reliability. Hair et al., (2010) suggested that items having loadings more than 0.5 are acceptable. It is clearly shown in Table 4.1, that all items loadings are greater than 0.6, indicating convergent validity at the indicator level. So it meets the threshold set by the researchers. Nunally (1979), proposed that Cronbach alpha value more than 0.7 is acceptable and above 0.8 is a good scale for exploratory purposes. In this study, Cronbach alpha values of all the constructs are above 0.7 and some have values more than 0.8. So the data of this study represented good internal consistency. In PLS-SEM analysis using composite reliability as the indicator's internal consistency is recommended by Hair et al., (2010). According to Fornell and Larcker (1981) acceptable value for composite reliability is greater than 0.7. The model posed good internal consistency as the composite reliability value for all the constructs is higher than 0.8. So it is clear from the statistical values of measurement model that all the constructs have good internal consistency. Finally, average variance extracted (AVE) was analyzed to examine the construct convergent validity. The average variance extracted (AVE) echoes the variance captured by the indicators relative to measurement error. According to Ringle et al., (2012), the average variances extracted (AVE) values ranged between 0.5 and 0.7 indicates a good level of construct validity of the measures. Table 4.1 showed that all the constructs have the recommended average variance extracted (AVE) value which is 0.5 and more; and it indicates construct level validity.



**Table 4.1: Reliability and Validity Test Results**

Constructs	items	Factor loadings	Cronbach alpha	Composite Reliability	Average Variance Extracted
Soft Skills (SS)	SS1	0.897	0.812	0.854	0.562
	SS2	0.795			
	SS3	0.810			
	SS4	0.761			
	SS5	0.807			
Problem Solving Skills (PS)	PS1	0.901	0.815	0.875	0.573
	PS2	0.785			
	PS3	0.739			
	PS4	0.862			
	PS5	0.789			
Functional Skills (FS)	FS1	0.788	0.725	0.828	0.538
	FS2	0.798			
	FS4	0.856			
	FS4	0.758			
Academic Reputations (AR)	AR1	0.816	0.803	0.879	0.526
	AR2	0.789			
	AR3	0.786			
Leadership skills (LS)	LS1	0.723	0.859	0.911	0.622
	LS2	0.789			
	LS3	0.712			
	LS4	0.639			
Employability (EM)	EM1	0.691	0.825	0.901	0.601
	EM2	0.758			
	EM3	0.745			
	EM4	0.823			
	EM5	0.812			
	EM6	0.736			
	EM7	0.745			
	EM8	0.763			
	EM9	0.752			

A total of five items were deleted for low item loadings (one item from problem solving skill, one from academic reputation, one from leadership skills, one from functional skills and one item from graduate employability).

**Discriminant validity** was also tested using smart PLS 2.0M3 software. Table 4.2 shows the discriminant validity output of the study. According to Compeau et al., (1999), the average variance shared between each construct and its indicators should be greater than the variance shared between the construct and other construct. When the square root of AVE is higher than the estimated correlations among each pair of constructs, **discriminant validity** is established. The measurement model also demonstrates good **discriminant validity** since the square root of the AVE for each construct was higher than its correlation with other factors. Table 4.2 shows that the values of square root of AVE

for each construct are higher in that particular diagonal and it indicates good discriminant validity.

**Table 4.2:** Discriminant Validity Output

Constructs	SS	PS	FS	AR	LS	EM
Soft Skills (SS)	<b>0.821</b>					
Problem Solving Skills (PS)	0.231	<b>0.819</b>				
Functional Skills (FS)	0.368	0.297	<b>0.811</b>			
Academic Reputation (AR)	0.423	0.369	0.239	<b>0.878</b>		
Leadership Skills (LS)	0.412	0.255	0.329	<b>0.421</b>	<b>0.789</b>	
Employability (EM)	0.339	0.269	0.332	<b>0.265</b>	<b>0.499</b>	<b>0.798</b>

So the above description reveals that the values of Cronbach's **alpha** are above the minimum level, composite reliability values for all the **constructs** are above the acceptable range, item loading, AVE and square root of AVE **are also** within the acceptable range. Finally it can be said that the data of this study **have good** reliability and validity.

### Coefficient of Determination ( $R^2$ )

The coefficient of determination ( $R^2$ ) value indicates how **much variation in endogenous** variable is caused by the exogenous variables. The present study **got a  $R^2$  value of 0.630** for employability which indicates that employability is **63% influenced by soft skills, problem solving skills, functional skills, leadership skills and academic reputation**. The remaining 37% might be influenced by other factors that have **not been considered** in this study.

### Results of Hypotheses Testing (Structural Model)

The structural path model was used to test the hypotheses of the **present study**. The statistical significance of the structure coefficients was **explored in a bootstrapping analysis** similar to the procedure used in evaluating the **indicator weights** of the measurement model. Table 4.3 demonstrates the hypotheses testing results in details. In the structural model soft skill was found to be positively and **significantly correlated** with graduate employability. So hypothesis one gets **strong support from the empirical data**. The corresponding positive path coefficient is 0.497 and **t-value for this variable is 3.828** which is significant at 1% level of significance. H2 is **also supported** as the path coefficient is positive (0.414) and the value is significant at **1% level** which implies that problem solving skill is positively and **significantly correlated** with graduate employability. The structural model output also supports H3 **since the path coefficient (0.296)** is positive and it is significant at 5% level ( $p; 0.045$ ). **Hence**, it is proved through this study that functional skill is a vital determinant of **graduate employability**. Again the positive path coefficient of 0.311 for the path with **leadership skill** and employability is significant at 5 % level ( $p; 0.021$ ). The t-value for leadership skill demonstrates that this skill is statistically significant in influencing graduate employability. So hypothesis 4 is also supported.

**Table 4.3: Structural model output**

Hypotheses	Hypothesized paths	Standardized coefficients	T Statistics	P value
H1	SS > EM	0.497	3.828	0.000
H2	PS > EM	0.414	3.236	0.000
H3	FS > EM	0.296	1.991	0.045
H4	LS > EM	0.311	2.693	0.021
H5	AR > EM	0.109	0.965	0.825

**Hypothesis five is not supported** as the path coefficient value is insignificant ( $p > 0.05$ ). **The path coefficient** shows a positive value of 0.109 but it is not significant. So the **academic reputation** of graduates is not a significant factor of employability. So the **findings support** four hypotheses out of five developed for this study.

### **Discussion**

**To secure** a good job in highly competitive market, graduates must possess some basic **skills** valued by the industry. The present study tried to identify the most important skills required by the employers from the graduates who are going to be recruited. It also explored to what extent different dimensions of skills can influence graduate employability. This study reveals some astounding findings as to the skills in enhancing the chances of graduate employability. The results showed that the five skills considered in this study can influence graduate employability to a greater extent. Out of the five skills extracted through extensive literature review, four were found to be the significant contributors to graduate employability. Among the four, soft skill (t; 3.828; p; 0.000) was found to be the most significant followed by problem solving skill (t; 3.236; p; 0.000), leadership skill (t; 2.693; p; 0.021) and functional skill (t; 1.991; p; 0.045). The respondents (employers) placed significant importance on the soft skills of the graduates. This finding is in line with the previous findings where it was evident that soft-skill is an important predictor of employability (Finch et al., 2012; Lievens and Sackett, 2012; Nickson et al., 2012; Rynes et al., 1997). Employers give importance on some specific soft skills like the communication skills including written communication skills, verbal communication skills and listening skills; similarly, professionalism and interpersonal skills – such as the ability to work effectively in teams as contributing to employability. Therefore graduates should not only focus on the academic issues or job specific skills; rather they should develop good communication skills, professionalism and interpersonal skills to survive in the competitive job market. Another important skill valued by the employers is the problem solving skill. The present study revealed that problem solving skill is a significant predictor of graduate employability. Empirical data collected from industry showed that employers want the graduates to have critical thinking ability, ability to solve problems and creativity in thinking. It means that graduates should exercise imaginative power to come up with new ideas and to solve the problems faced by the organization. Analytical ability is also an important dimension of problem solving skill. Therefore, graduates should develop these skills to secure a job position in the

competitive job market. It is also evident in this study that functional skill is important for the employers while they are recruiting fresh graduates. This finding is consistent with that of Huang and Lin, (2011), Laker and Powell, (2011), Smith (2008), Pang and To Ming, (2005) who also suggested that graduates should have the basic job specific skills to perform the tasks assigned to them. The job specific or functional skill requires graduates to apply knowledge and skills, essential for effective professional practices, into real-world settings. This study revealed that academic reputation is not a significant factor of graduate employability. Though it is positively related to employability, from the industry point of view, graduates' academic reputation is not that much important to the employers. Few studies concluded that academic reputation bears some importance on a variety of outcomes of interest to employers and policy makers, but this study showed that it is not significant. Therefore, the findings of this study indicate that employers don't give much importance on the institutional image or academic results of the candidates; rather they expect soft skills, functional skill and problem solving skills from the graduates. Again the hypothesis testing results revealed that leadership skill is positively and significantly related to the employability of graduates. Hence, the employers want the graduates to possess leadership skill encompassing responsibility, assertive communication, self-presentation and social influence with others.

### **Implications of the Findings**

The present study has a number of meaningful implications. Practically, this study provides significant insights into the employability issues of graduates as it explored the pertinent skills graduates need to be employed. From the findings of this study, graduates come to know that they must have strong command on soft skill which is closely related to good communication skills in term of oral, written and listening. For communicating effectively, expressing thoughts, ideas, wants and emotions in a straight forward, non-hesitant way, graduates must possess this skill. The present study provides evidence from the employers' point of view that soft skill is one of the most essential requirements of the job market and the graduates should develop this skill so that they can be in the good book of the employers. This study also informs the potential job seekers that they should have strong problem solving skill, leadership skill and job specific functional skills. Knowing the skill requirements earlier might help the graduates to equip themselves as per the demand of the job market. On the other hand, the findings of this study can be used by the institutions providing higher education to develop their curriculum so as to provide industry ready manpower thus minimize the skilled workforce crisis of the country. The findings of this study enrich the existing body of knowledge in the field of graduate employability since there exist limited empirical evidences related to the determinants of graduate employability. The items used in this study represent the variables under investigations quite well which confirms the validity of the constructs. Therefore, this is a valuable addition in the literature and future researchers might use these variables for examining their influence in relation to employability in different geographical contexts.

## **Responsibilities of Higher Educational Institutions**

Different studies have referred to the difficulties and challenges facing higher education systems with regard to preparing employable graduates (Natalia et al., 2015; Tarvid, 2015; Abou-Setta, 2014; Sung et al., 2013; Clarke, 2008). The educational process in different schools has been criticized for not developing graduates with employability skills. When students enter university today, it is critical for them to recognize that their formal education is only one dimension. Instead, students must constantly be assessing highly dynamic employer needs and how these capabilities can be developed both inside and outside the classroom. The institutions also have a role in providing employability enhancement and encouraging students to undertake other activities away from their core studies (Pegg et al., 2012). It is high time for the higher education sector to ensure that the employability of graduates is given serious consideration throughout the university education. Our research findings suggest that employers are placing considerable importance on the capacity of graduates to demonstrate that they possess a wide range of skills. Among them, soft skill is found to be the most important followed by problem-solving skill, functional skill and leadership skill. Therefore, universities should adapt themselves to produce a type of human resource that responds to the market needs or skills and qualifications (Afonso et al., 2012; Andrews & Russell, 2012). Adapting universities' curricula to match labor market needs, is crucial in increasing the chances of employability for graduates. This requires more attention to the type of skills people in the business sector would like university graduates to have (Azevedo, Apfelthaler & Hurst, 2012; Jackson & Chapman, 2012; Warraich & Ameen, 2011). Tran (2015) suggested that not only universities but also employers and other related stakeholders should acknowledge the changes in society, should be aware of the cultural features at work, and should see their responsibility in the employability process. They all should make an effort to create a mutual understanding, to collaborate and to enhance the development of graduate employability. In a case study about the strategies of building bridges between university and industry, Meredith and Burkle (2008) found that both parties feel that they benefit from building bridges between universities and industry. Thus, linking university students and industry in joint projects would increase the potential for a fuller learning experience for the students which will increase their employability chances.

Teaching effectiveness directly affects the degree to which the student can master the subject or courses taught, which (if managed properly) encompassing sustaining the development of the pertinent attributes, skills and knowledge the employers (in the industry) evaluate to determine who they will hire/recruit/employ. Thus there appear to be a linear relationship between teaching effectiveness and employability. It was also proved in a study by Shuib (2016) that employability of fresh graduates is significantly influenced by teaching effectiveness. On the other hand, the statistical findings of the study revealed that lecturers' ability is the most important factor followed by teaching methods and materials and course characteristics for teaching effectiveness. Therefore institutions providing higher education should recruit good quality lecturers who have strong command in respective field of knowledge; and by imparting the best market

required knowledge they can produce industry ready graduates. Another responsibility of universities is that they should put forth efforts to develop an effective course curriculum based on market needs and provide it to the students so that the best teaching outcome can be achieved. Finally, teaching methods and materials might also play an important role in imparting knowledge to university students. The process of teaching and physical facilities that support both academic and non-academic activities are expected to generate positive effect on teaching outcome (Sung et al., 2013; Clarke, 2008). Therefore, institutions providing higher education should make all sorts of arrangements for making teaching effective which consequently leads to the increased chances of graduate employability.

### Conclusion

Employable graduates must possess the pertinent attributes, skills and knowledge which ensure they have the capability of being effective in the workplace to benefit themselves, their employers in the industry and society. Policymakers and educational institutions in the world are very much concerned about the employability of the passing out graduates; but the empirical research literatures are very scarce on the determinants of graduate employability from market side view. Moreover, the literatures on the determinants of graduate employability are full of qualitative evidences. For this reason the findings of this study are important for the potential job seekers and also for the institutions of higher learning in the sense that they can at least know which skills are most important for getting good jobs. The present study also made some recommendations which might help produce human resources that are capable of competing regionally and globally. Though the findings of this research have some implications for the students, policy makers and educational institutions, it is not without any criticisms. One limitation of this study is that the findings are based on the data only from Bangladesh and other countries have not been considered. Since employability is a global phenomenon, the findings might not represent the picture of whole industry in the world. Further studies can be conducted collecting data from different countries to explore other issues that might play a vital role in enhancing the chances of graduate employability.

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