Students' Perception of Factors Influencing Graduate Employability at a Higher Education Institution in South Africa

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Abstract: In recent years, South Africa has experienced an increase in the number of unemployed graduates while enrolment at institutions of higher learning is growing at a tremendous rate. Such a situation should be considered a worrying factor for both management and students at Higher Learning Institutions. Labour market specialists recommend that one of the most effective ways leading to employable graduates is through an assessment of employability factors within the academic curriculum and streamline the curriculum according to employer's expectation. As previously noted, assessment of factors influencing employability of graduates within academic curriculum is rarely considered an issue of importance by management of Institutions of Higher Learning. The purpose of this study was to assess students' perceptions of employability factors at an Institution of higher education and investigate how employability factors influence employment of graduates. A descriptive case study approach was conducted. A quantitative methodology, through which a structured questionnaire was used to collect data from a sample of at least 120 students at a private Institution of higher learning in Johannesburg, South Africa. SPSS was utilised to conduct descriptive and multivariate analyses including factor analysis, correlations, and regression analyses. Results indicated that, students had a negative perception towards graduate employability factors within the curriculum such as work attitudes, communication skills and exposure to the world of work. A positive correlation was also found to exist between factors affecting graduate employability and employment of graduates. Direction for future research was provided together with recommendations to management of the Institutions of higher learning.

Keywords: Academic curriculum, Employability, Graduate employability, Institutions of Higher Learning
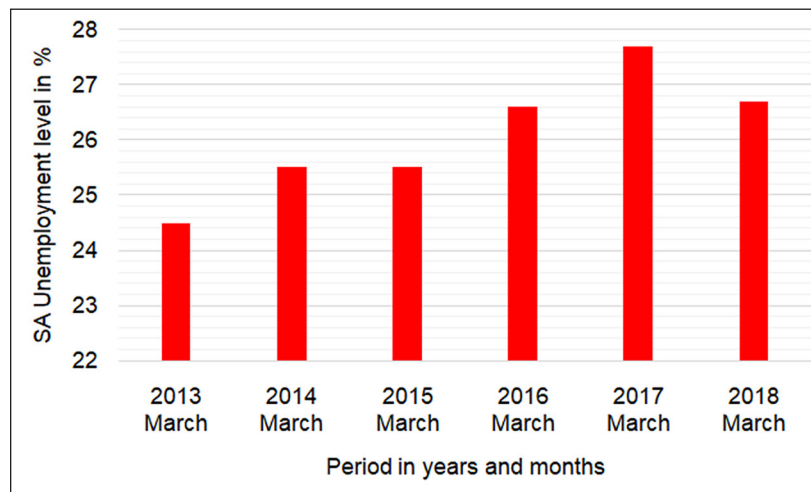
1. Introduction

In recent years, South Africa has experienced an increase in the number of students enrolled at institutions of higher learning while the number of graduate who get employed is going tremendously down (Oluwajodu, Blaauw, Greyling, & Kleynhans 2015). Such a situation should be worrying for management and students at Higher Learning Institutions as it creates future job market uncertainties among graduates. Labour market specialists such as Nel, Werner, Du Plessis, Ngalo, Poisat, Sono, Van Hoek and Botha (2011), Perera and Perera (2009) and Adeyemo, Ogunleye, Oke and Adenle (2010) recommend that one of the most effective way among others to improve employability of graduates is an assessment of employability factors within the academic curriculum and streamline it according to employer's expectation. However, authors such as Perera and Perera (2009) bemoan the fact that most institutions of higher learning are yet to realise the importance of incorporating the voice of their students in developing a curriculum that leads to graduate employability. The literature in South Africa, as it relates to institutions of Higher Learning management also tends to ignore this subject, which should be considered a gap in the body of knowledge. It is therefore, opportune to conduct this study to assess students' perception on factors that influence employability of graduates.

Unfavourable economic conditions (i.e. lack of capital, high inflation levels and interest rates, lower incomes and production levels) has persistently led to high statistics of unemployment in most developing countries (Adeyemo *et al*., 2010; Okebukola, 2007). On the other hand, institutions of higher education have increased their enrolment levels. Thus, the situation has created an unbearable situation where by there is an increase in number of graduates while opportunities are constantly diminishing. Mukherjee (2016) argues that graduate employability in developing countries is affected by both supply and demand factors. Supply side explains such factors outside the control of graduates but the industry. As already mentioned, lack of capital, high

Figure 1: Unemployment Level in South Africa 2013 – 2018

Source**:** Statistics South Africa (2018) and Trading Economics (2018)

inflation levels and interest rates are some of the factors that lead to a decrease in production level and an increase in cyclical unemployment levels (Guru, 2016; Mukherjee, 2016). The demand side factors also contribute significantly to high rates of unemployment. According to Mukherjee (2016), demand side factors reflect the nature of job seekers. In this study, graduates represent job seekers. With reference to the demand side, employability of graduates relies on their ability to meet the skill set needed by the industry. When graduates fail to get employed due to lack of skills, it is called structural unemployment (Adeyemo *et al*., 2010). This study puts attention to factors influencing employability from the demand side with special attention to contributions of institutions of higher learning. Therefore, it is upon this background that the study aimed at assessing students' perceptions of employability factors at an institution of higher education and investigated how employability factors influence graduate employment. The next section zooms into the South African labour market and explores the unemployment rate. South Africa is not immune to unemployment problems that are widely faced by developing economies. Unemployment in South Africa is not mainly due to frictional reasons (labour force voluntarily abandoning work) but cyclical and structural factors as already explained in the previous section.

The statistics as released by Statistics South Africa (2018) and Trading economics (2018) shows that there have been an increase in the level of unemployment in South Africa from 2013 to 2016. The trend is disturbing as sources (Stats SA, 2016;

Trading Economics, 2016) further shows that, of the unemployed, 50% are those at the age of 25 and below. Despite the rate of unemployment at this high, statistics also shows that the industry is in dare search of skills and curriculum in most educational institutions of higher learning is unable to provide (Horwitz, 2014). Analysis made on the currently existing education institutions versus graduate employability has also shown that going to an institution of higher learning has seized to be a determining factor for securing employment. It is upon this background that this current study seeks to assess students' perception of factors influencing graduate employability and at an Institution of higher education. See Figure 1.

The concept of graduate employability is defined as the ability of graduates to penetrate into the labour market while obtaining jobs that are related to the skills they have graduated for at Educational Institutions. This definition is further supported by Rothwell and Arnold (2007); Perera and Perera (2009); Shumilova (2011); and Crossman and Clarke (2010), who stated that employability refers to the ability to acquire a job and partake to duties corresponding to what was learned in formal education. On the opposite end of the concept is unemployment. The concept of graduate employability has raised so many concerns; especially in developing States (Mukherjee, 2016; Guru, 2016) where unemployment rates are climaxing. As already discussed, causes of unemployment in South Africa are both structural and cyclical. This present study dwells on structural unemployment, a factor explained on incompatibility of graduates to requirements

of employability. In this study, factors leading to students' incompatibility will be based on conditions at higher education institutions. The next section will explore theories and factors of employability.

2. Theories of Employability

Well known theories of employability include the human capital theory and the signalling theory (Shumilova & Cai, 2011; Pavlin, 2010; Wiers-Jenssen, 2008; Allen *et al*., 2009). The human capital theory and the signalling theory are important explaining factors for employment. These theories are briefly explained as follows.

2.1 Human Capital Theory

The human capital theory as advocated by Shumilova and Cai (2011) states that employability is a measure that is used to measure the quality of education received. Thus, higher education quality results in easy employability. The human capital theories are crucial in this study that seeks to understand students' perception towards employability factors at an Institution of higher education.

2.2 Signalling Theory

The signalling theory as suggest that the level of education possessed by a job candidate is simply a sign of the level of efficacy to be expected from the bearer (Pavlin, 2010; Wiers-Jenssen, 2008). This particular theory is related to the human capital theory in the sense that both value education as an input into employment. Similarly, to the human capital theory, the signalling is also of great significance to this present study due to the emphasis that it gives on the significance of education towards employability. It is also upon this background that factors affecting employability of graduates are explored from the qualification awarding institution. Therefore, the next section looks at factors that affect employability at a higher education institution.

3. Empirical Studies on Factors Affecting Employability and Development of a Research Gap

Different authors such as Perera and Perera (2009), Adeyemo *et al*. (2010) have contributed towards various factors that influence employability of graduates such as work attitudes, computer skills,

communication skills and work environment exposure. These factors are further explained in the next subsections. A number of authors including Adeyemo *et al*. (2010), Perera and Perera (2009), Okebukola (2007), Shimilova and Cai (2011), Crossman and Clarke (2010), Lindberg (2008), Rothwell and Arnold (2007), Dilrukshi *et al*. (2005), Teichler (2009), Badillo-Amador, García-Sánchez and Vila (2005), and Shmarov and Fedyukin (2004) have done extensive work in the area of graduate employability. These studies reflected various findings and these became of major interest to this current study. In a study carried out by Dilrukshi *et al*. (2005) in Sri Lanka, it was found that inadequate communication skills that include written and oral communication is a major barrier in obtaining employment. The finding was also echoed by Perera and Perera (2009) who also carried a study in Sri Lanka that found inability to communicate to be a major problem in securing employment by graduate. Since these similar findings emanated from findings of studies that were carried out within the same country it became important to carry out this current study that was aimed at understanding whether communication has an influence in securing employment or not.

Adeyemo *et al*. (2010) found that computer skills are essential in helping graduates to secure employment. It was also important for this study to test whether computer skills such as micro-soft word, excel, powerpoint and access have an impact towards graduate employability or not. Hence, this study tested computer skills as one of the factors affecting employability within this study. In another finding, Adeyemo *et al*. (2010) found attitude related to work such as being cooperative, helpful, honest, reliable, effectiveness and efficient to be critical skills that are considered as suitable for one to get employment. This study also seeks to test the same dimension and find out whether attitudes related to work has an influence towards graduate employability in South Africa particularly at an institution of higher learning in Johannesburg. Another interesting finding that led to this present study is that of Perera and Perera (2009) who also found exposure to the world of work to be a critical element in securing graduate employability. Through this finding, this research sought to find out what could be the perception of students regarding the variable of exposure to work place at an institution of higher learning in Johannesburg. This section clearly shows extant literature related to this current study and

Figure 2: Conceptual Theoretical Model
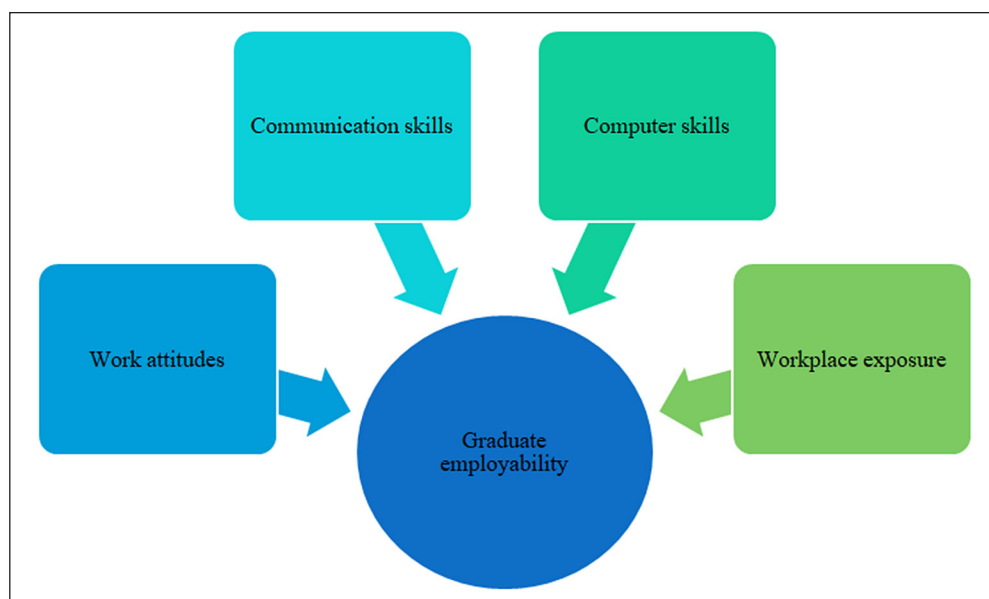
Source: Perera & Perera (2009)

the development of research gap that led to the research problem and research question as given below.

3.1 The Conceptual Model

The conceptual theoretical model given in Figure 2 is grounded on the human capital and signalling theory. It conceptualise the relationship between factors influencing graduate employability. Graduate employability is the dependent variable while employability factors (work attitudes, communication skills, computer skills and exposure to work environment) are independent variables. The model that was tested is illustrated in Figure 2.

4. Research Methods

Since the study focused on understanding students' perception on factors that influence employability of graduates at private higher institution in Johannesburg, a graduate employability conceptual framework developed from literature (Perera & Perera, 2009) was utilised. This study adopted a descriptive case study design utilising the quantitative methodology.

4.1 Data Collection

An adapted instrument, as developed by Perera and Perera (2009) was used to collect data. The self-completion questionnaire was administered to a sample of students at the higher education institution in Johannesburg. Before carrying out the research, a pilot study was carried out from about 10 students at the campus to assess if questions were clear and understandable. Since permission to conduct the study was already granted, research assistants assisted by distributing questionnaires at the campus. Collection boxes were placed on the entrance of the institution so that students could deposit the completed questionnaires.

4.2 Sampling

Data was collected from the education institution campus in Johannesburg. The campus had a total enrolment of 520 students in August 2016. As such, a sample of at least 120 students participated in the study. Raosoft was utilised to determine the minimum sample size so as to maintain at least 5 per cent margin of error and 95 per cent confidence interval (Raosoft, 2014). Similarly, to previous similar studies (e.g. Rukuni, 2015; Rukuni & Shambare, 2015), the convenience sampling method envisaged was deemed not to compromise the quality of research because the sample was comprised of homogenous elements of students at one Institution of Higher learning (Calder, Phillips & Tybout, 1981).

4.3 Data Analysis

SPSS v.24 was utilised to conduct descriptive and multivariate analyses including factor analysis,

Table 1: Perceived Graduate Employability Factors on all Respondents – Descriptive (N = 120)

	Dimensions and Items	Mean	Standard Deviation
	Work Related Attitudes	2.62	1.08
WA1	Education at my institution help me to be cooperative / helpful skills towards others	2.64	1.02
WA2	Am taught to be dedicated, honest and reliable at my institution	2.54	1.08
WA3	Am taught to be effective and efficient when doing work at my institution	2.50	1.04
WA4	Am taught to follow directives and regulations at my institution	2.58	1.05
WA5	Am taught to be enthusiastic and polite towards mates at my institution	2.88	1.23
	Work Computer Related Skills	2.43	1.33
WCS1	Am taught how to use computer programmes at my institution	2.33	1.34
WCS2	Am taught how to utilise basic computer typing programmes (i.e. Microsoft word) at my institution	2.36	1.29
WCS3	Am taught how to utilise basic spread sheet programmes (i.e. Microsoft excel) at my institution	2.50	1.33
WCS4	Am taught how to utilize basic power point programme (i.e. Microsoft power point) at my institution	2.55	1.36
	Work Communication Skills	2.80	1.14
CS1	My institution taught me how to be effective in oral communication skills	2.86	1.06
CS2	My institution taught me how to be effective in basic writing and reading skills	2.77	1.12
CS3	My institution taught me how to be competent in English language	2.81	1.23
CS4	My institution taught me to develop good interpersonal communication skills	2.77	1.15
	Exposure to Work Environment	3.29	1.15
EW1	My institution sent me for industrial attachment (experiential learning)	3.83	1.11
EW2	My institution taught me about expectations of prospective employers	3.24	1.20
EW3	Am taught about the nature and competitiveness of the labour market	3.02	1.21
EW4	There is career guidance provided at my institution	3.03	1.18
EW5	Special links with industry experts are provided at my institution	3.33	1.09
	Graduate Employability	2.78	1.07
GE1	Am confident that communication skills provided to me by my school will help me to secure employment	2.77	0.99
GE2	Am confident that computer skills provided to me by my institution will assist me to get employed	2.67	1.09
GE3	Am confident that exposure to work environment provided will assist me to get employed	2.91	1.15

Source: Authors

5. Findings and Discussion

5.1 Descriptive Statistics of Students' Perception on Factors Affecting Employability

correlations, and regression analyses to assess students' perception on employability factors and their relation to graduate employability as well as testing the hypotheses.

4.4 Validity and Reliability

Although a previously validated and reliable data collection instrument was used (Evanschitzky, Baumgarth, Hubbard, & Armstrong, 2007), further tests of validity and reliability were conducted using Cronbach's alpha and factor analysis, respectively. The supervisor as well as the pilot study were consulted for inputs and recommendations in order to verify and ensure that the questionnaire comply with the guidelines and ethical requirements of scientific research.

Table 1 presents findings relating to students' perception on factors affecting graduate employability at the Higher education Institution on each of the 21 items, each of the four dimensions, and overall graduate employability. A five-point Likert scale with 1 = 'Strongly agree' and 5 = 'Strongly disagree' was used to measure each item relating to students' perception of factors affecting graduate employability. Perceptions on each of the four dimensions were calculated as a summated average of the items used under each dimension. Student's perception of graduate employability was calculated as a summated average of all the items used

Table 2: Results of Validity and Reliability Analysis on 21 Graduate Employability Items

	Factors				
	1	2	3	4	5
WA1	.62				
WA2	.60				
WA3	.57				
WA4	.64				
WA5	.59				
WCS1		.47			
WCS2		.51			
WCS3		.50			
WCS4		.60			
CS1			.67		
CS2			.67		
CS3			.65		
CS4			.69		
EW1				.54	
EW2				.66	
EW3				.65	
EW4				.53	
EW5				.53	
GE1					.68
GE2					.62
GE3					.67
α	.82	.93	.88	.87	.77

Source: Authors

under the dimension. It is important to note that in this study a scale of 1.0 to 2.49 indicate represents good performance on a factor affecting employability, while 2.51 to 5.0 indicates poor performance. Therefore, the higher the score the poorer the performance.

At the sub dimensional level, Table 1 on the previous page shows that five of the variables representing factors affecting graduate employability (work attitudes (WA), communication skills (CS) and exposure to work environment (EW)) were perceived as bad. This was deduced from mean values WA (2.62), CS (2.8) and EW (3.29) that were above mean 2.5. On the other side, computer skills (WCS) had a mean value at 2.43 that was below 2.5. Hence, it was found to be having a positive influence towards graduate employability. The results show that graduate employability tested at the institution such as work attitudes, computer skills and communication skills are perceived to be bad while computer skills were found to be in the right state.

5.2 Validity and Reliability Analysis

In order to ensure the validity and reliability of the used research instrument, confirmatory factor

analysis and reliability test was conducted using SPSS version 24. All items in the instrument were measured and had a value more than 0.4 demonstrating evidence that the tool utilised was valid. The results of the analysis are shown in Table 2.

After testing for validity, reliability test followed through the use of Cronbach's Alpha coefficient. All items were above 0.7 a minimum threshold recommended by Field (2009). After having established both the construct validity and reliability of the questionnaire, it was concluded that the items used to measure factors affecting graduate employability and graduate employability constructs were reliable. Thus, researchers proceeded with further analysis.

5.3 The Correlation and Regression Analysis

Correlation and regression are most suitable for a study which seeks to test a relationship between variables for example this current study that tested the relationship between factors affecting graduate employability factors and graduate employability. Correlation and regression are also usually used for larger sample size, for example 120 used in this

Table 3: Correlation Analysis

Dimensions		Overall graduate employability
Work related attitudes	r	0.52
	p	0.000*
	N	120
Computer skills	r	0.49
	p	0.000*
	N	120
Communication skills	r	0.45
	p	0.000*
	N	120
Exposure to work environment	r	0.52
	p	0.000*
	N	120
P < 0.001*		

Source: Authors

study. A likert scale was also used for responses which is another necessary condition for correlation and regression analysis utilised to test the relationship in this study. To test the hypothesised relationships given in Figure 2, thus between employability factors (work attitudes, communication skills, computer skills and exposure to work environment) and graduate employability, correlation and regression analyses were performed. Note that overall graduate employability as a dependent variable was measured as a summated average of three items, namely 'Am confident that communication skills provided to me by my school will help me to secure employment', 'Am confident that computer skills provided to me by my institution will assist me to get employed', and 'Am confident that exposure to work environment provided will assist me to get employed'. A five-point Likert scale with 1 = 'Strongly agree' and 5 = 'Strongly disagree' was also used to measure items graduate employability.

5.3.1 Correlation Analysis Among Factors of Affecting Graduate Employability and Graduate Employability
Results on correlation analysis that was used to test the strength of the relationship between factors affecting graduate employability (independent variables) and graduate employability (dependent variable) are shown in Table 4 on the following page. Also note that values represented as (r) pearson correlation indicates the strength of the relationship between variables, 0 standing for no relationship, 0.1 to 0.4 for weak positive relationship, 0.5 standing

for moderate relationship and 0.6 to 1 standing for a strong positive relationship. The p value indicates the probability that r value is only seen by chance; hence a lower p value means that the r value is not seen by change.

Correlation results shown on Table 3 show that all factors affecting graduate employability (work attitudes, communication skills, computer skills and exposure to work environment) are positively related to overall graduate employability. This evidenced by positive p values of all the factors ranging from 0.45 to 0.52 as well as p value that is below 0.001. The next section presents result of regression analysis that was conducted to test hypothesized relationships in this study.

5.3.2 Regression Analysis and testing of Hypotheses
Given that this study had four hypotheses and a Likert scale research instrument with responses in continuous form, conducting regression analyses was necessary. Table 4 on the next page presents result of regression analysis and the four hypotheses are tested as follows:

Following the results from regression analyses ($p < 0.001$, R = 0.55) Hypotheses H1 that states that there is positive relationship between work related attitude and graduate employability is accepted at 0.000 significance level. This implies that an increase in work related attitudes for example being dedicated, honest and reliable are important factors considered to increase the possibility of a graduate

Table 4: Regression Analysis
Dependent variable: Overall graduate employability

	SEB	R²	β	t	Sig	Hypothesis
(Constant)	0.68			5.40		
Perceived work attitudes	0.05	0.31	0.55	7.21	0.000*	Accept H1
(Constant)	0.48			11.85		
Perceived computer skills	0.04	0.24	0.49	6.18	0.000*	Accept H2
(Constant)	0.67			7.36		
Perceived communication	0.06	0.20	0.45	5.44	0.000*	Accept H3
(Constant)	0.76			4.49		
Perceived work exposure	0.04	0.28	0.52	6.69	0.000*	Accept H4
P < 0.001*						

Source: Authors

getting employed. The finding was similar to that of Adeyemo *et al.* (2010) who also found the same attitudes to be playing a significant role towards graduate employability.

Following the results from regression analyses (p < 0.001, R = 0.49) Hypotheses H2 that states that there is positive relationship between computer skills and graduate employability is accepted at 0.000 significance level. This also means that an increase in the knowledge of computer skills such as Microsoft word, excel, powerpoint and access is crucial for a graduate to be employed. This finding echoed that of Perera and Perera (2009) and Adeyemo *et al.* (2010) that found computer related skills to be essential in securing graduate employability.

Following the results from regression analyses (p < 0.001, R = 0.45) Hypotheses H3 that states that there is positive relationship between communication skills and graduate employability is accepted at 0.000 significance level. This tells that an increase in communication skills such as effective oral and written skills are crucial for a graduate to be employed. Dilrukshi *et al.* (2005) also found effective oral and written communication to be vital towards employability of graduates.

Following the results from regression analyses (p < 0.001, R = 0.52) Hypotheses H4 that states that there is positive relationship between exposure to work and graduate employability is accepted at 0.000 significance level. This implies that an increase in work exposure, for career guidance, experiential learning is crucial for a graduate to be employed. Perera and Perera (2009) found prior exposure to work environment to be important in determining graduate employability.

The regression coefficients are illustrated in Table 4 above. SEB is the standard error coefficient, R is the pearson coefficient (r) equivalent to Beta (β) shows the direction and strength of a relation either positive or negative. Sig (p value) is the probability that R is seen only by chance. The lower the significant value the higher the chances that r value will always be seen, hence reliability of results.

6. Conclusion and Recommendations

With regard to objective 1 that aimed at assessing students' perception of factors affecting graduate employability at an institution of higher learning, it can be concluded that students had a negative perception on factors (work exposure, communication skills and work attitudes) influencing graduate employability except for computer related skills. On objective 2 which sought to assess the influence of factors affecting graduate employability on employment of graduates, it can be concluded that there is a positive relationship between graduate employability factors and graduate employability. The results show that all dimensions representing factors affecting graduate employability are positively related to graduate employability. It can also be concluded that factors affecting graduate employability influence employment of graduates at varying levels. This is obtained from the explanatory power of each dimension. In this research, work related attitudes with R2 = 0.31 was found to be having a higher influence on graduate employability than the rest. It was followed by work exposure with R2 = 0.28, computer skills R2 = 0.24; and communication with R2 = 0.20, respectively. On the research question: "To what extent do factors within the curriculum at the Institution of higher learning influence graduate employability?", it can be concluded that factors within the academic curriculum at an institution of

higher education influence graduate employability to a large extent. Findings led to the conclusion that students had a negative perception towards factors influencing employability of graduates at the institution of higher learning. It is therefore important for management of these institution to take note of the recommendations given in this section. These are:

6.1 Student Need to be Exposed to the World of Work Before Graduating

Findings showed that students are not exposed to the world of work before leaving the institution. This has a negative influence towards their chances of securing employment. It is therefore recommended that students should be assisted to get experiential learning. Linking students with influential industry experts is also an important component that needs to be considered. The institution should also carry out career seminars and invite captains of industry to teach students about various expectations of employers.

6.2 Develop Students' Work Related Attitudes

It is recommended that management of the institution should ensure that curriculum assist in developing attitudes expected by employers. These include cooperation, dedication, following of directives and politeness. Hence, the curriculum should be blended with such aspects as it will help to produce all rounded job market candidates.

6.3 Develop Students' Communication Skills

It is also recommended that students should be taught how to conduct effective oral and written communication. This is an important aspect that determines employability of graduates. Graduates who leave the institution with such ability will have a competitive advantage in the job market.

6.4 Improve on Computer Skills Given to Students

The institution also needs to develop students' computer skills in areas such as Microsoft Power point and Microsoft access. These will give graduates from the institution a competitive advantage in the industry.

These recommendations are given above are meant to assist management of the higher education institution to prepare their students so that they do not become part of unemployment statistics. The next section looks at the limitations of this study. The purpose of this research was to assess students' perception towards factors affecting graduate employability and how these factors influence employment of graduates. A review of the literature indicated a gap within the body of knowledge with respect to factors affecting graduate employability and employment of graduates at an institution of higher education learning in Johannesburg. In line with this gap within the body of knowledge, the research question and several hypotheses were formulated. Section 3 discussed the methodology used to answer the research questions. Section 4 outlined the data analysis procedures and findings thereof. Conclusions of the findings, recommendations and suggestions for further research were highlighted in section 5. The objective of the study was to investigate and attempt to answer the question: "*To what extent do factors within the curriculum at the Institution of higher learning influence graduate employability?*"

Data analysis presented interesting findings. It was found that students had a negative perception towards work related attitudes, communication skills and work exposure aspects in the curriculum. On the other hand, it was also found that students had a positive perception towards computer skills. The four factors that are work related attitudes, communication skills and work exposure; and computer skills (Perera & Perera, 2009) were also tested as to whether they had any direct influence on success on graduate employability. The results provided evidence that all factors influenced employability of graduates at varying levels. Thus a positive correlation was observed to directly influence graduate employability.

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