
Factors Affecting the Employability of Students: A Case Study at Industrial University of Ho Chi Minh City, Ho Chi Minh City, Viet Nam

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Abstract:

Human resources are the people that work for organizations, and Human Resource Management is concerned with how these people are managed. The aim of this study was to examine the skill factors affecting the employability of students in Economics and Social Sciences sector at Industrial University of Ho Chi Minh City (IUH). To examine the study a literature review has been done on different aspects of training. The findings of this study suggested four factors which affects the employability of students at Industrial University of Ho Chi Minh City.

Key words: Employability, skill training, Soft skills, Hard skills, English skills, high quality education.

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LITERATURE REVIEW

Viet Nam with internal economy has developed rapidly since the adoption of the economic reforms from a central planned economy changing into a market oriented one. So, the higher educational system also needs upgrading to meet the modern requirements of the manpower for the workplace. However, many fresh graduates, who are considered as the outcome of the training process in higher education, still lack the necessary skills required by employers. Today's business environment is becoming more complex, uncertain and competitive. Most employers are likely to hire, to retain and promote workers who dependable, resourceful, ethical, having effective communication, self-directed, willing to work and learn, and having positive attitude. Employers often prefer to see a fine blend of competencies in their staff and, in addition to discipline-based knowledge and skills, adequate levels of soft skills are considered desirable for moving forward in the career. They feel professional and technical skills alone cannot help achieve organizational goals and objectives. It is because their staff at present will be involved in different levels of leadership and decision-making activities. Employees also need to communicate effectively within the organization, with their customers and stakeholders.

Viet Nam is now considered as an emerging market which is experiencing fast changes in the last two decades. However, in order to sustain the growing economy, Vietnam must face the challenge of providing more skilled labor, which can satisfy various demands from different employers. According to Khia (2006), graduates are now in short of both technical know-how and generic skills. Universities are under massive pressure to provide students with more than just discipline-based skills. Universities need to emphasize their efforts to supply "soft skills" needed in various area of

employment. It is a must for universities to work closely with industry to satisfy the needs of employers. According to Bailey et al (Mitchell, 2006) “to succeed in this ever changing, increasingly competitive business environment, organizations must demands employees with competencies which lead to a high return on the employee investment”. Vietnam which is integrating into global economy is expected to face the same challenging task and; in addition, to university graduates, who are considered as the outcome of the training process in higher education, are also weak in planning their future, of impractical professional knowledge and lack of the necessary skills required by the contemporary workplace.

In the field of training, training quality means that graduates have to not only meet the demands of the knowledge, skills and working methodology but also be able to apply theory to practical for the appropriate work that is dynamic and creative in their field of expertise.

Based on the research and above analysis, it can be concluded the factors affecting the employability of students at Industrial University of Ho Chi Minh City in Vietnam (Variable Y) focus on the following main points: Soft skills, Hard skills, English skills, Information technology skills (variable X). Research model includes 04 independent variables (X) and 01 dependent variable (Y).

RESEARCH MODEL & HYPOTHESIS

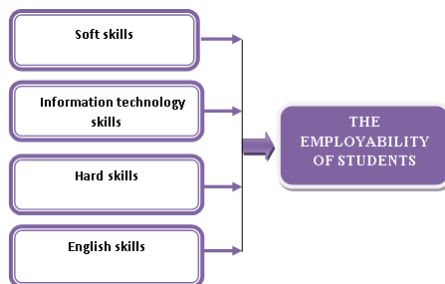


Figure 1: Research model for factors affecting the employability of students at Industrial University of Ho Chi Minh City

Hypothesis H1: There is a close relationship between Soft Skills and the employability of students at Industrial University of Ho Chi Minh City.

Hypothesis H2: There is a close relationship between Information and Technology Skills and the employability of students at Industrial University of Ho Chi Minh City.

Hypothesis H3: There is a close relationship between Hard Skills and the employability of students at Industrial University of Ho Chi Minh City.

Hypothesis H4: There is a close relationship between English Skills and the employability of students at Industrial University of Ho Chi Minh City.

RESEARCH METHODOLOGY

The two major research methods, qualitative and quantitative research are focused, specifically, the research process has three stages.

Stage 1, Based on theory and the related results mentioned the above, qualitative research method was used for group discussing and leading experts consulting to select the variables and observed variable groups.

Stage 2, Based on the grouping of factors affecting the employability of students at Industrial University of Ho Chi Minh City in Vietnam, the researcher designed survey questionnaires to collect the opinions of 120 enterprises in Ho Chi Minh City. The research model includes 04 scales, 22 observed variables (questionnaires), using 5- point Likert scale, Distance value = $(\text{Maximum} - \text{Minimum}) / n = (5 - 1) / 5 = 0.8$: 1. Completely disagree; 2. Disagree; 3. No opinion / Normal; 4. Agree; 5. Totally agree. Survey results were entered SPSS 20.0 and Cronbach's Alpha coefficient was used to test reliability of the scale. In this study, sampling and convenience method were used. According to Tho Nguyen Dinh, the formula for

calculating sample size is $n = \sum_{j=1}^m kP_j$. In which m is the scale and Pj is the number of observed variables of the scale. The proportion of the sample compared to 1 analysis variable (k) is 5/1 or 10/1. Thus, the number of samples is larger than "total observed variables" of scale times "5" and less than "total observed variables" of the scale times "10". However, depending on the object of study and research goals, increasing sample size will increase the reliability of data.

Stage 3, after testing the reliability using Cronbach's alpha coefficient, Exploratory Factor Analysis - EFA was analyzed to shrink and summarize the data of the scale. This method is based on extraction ratio factor (Eigenvalue), under which only those factors having ration (Eigenvalue) greater than 1 will be kept, those smaller than one will not show information better than origin variable because after standardizing, each original variance is 1. The method of extracting the main components (Principal components) and original method of factor rotation (Varimax Procedure) were used to minimize the number of variables that have large coefficients for the same factor, which increases explaining the factors. The results then were used to analyze multiple linear regression to test the assumptions of the model, which consider the impact of factors affecting the employability of students at Industrial University of Ho Chi Minh City in Vietnam.

RESEARCH RESULTS

Table 1. Testing the average value for the observed variables

| Code | Observed Variables | Mean |
|------|---|------|
| SO1 | Enterprise needs about time management skills and research of students | 3.19 |
| SO2 | Enterprise needs about the analytical skills and the strategic plan skills and research of students | 3.11 |
| SO3 | Enterprise needs about the interpersonal abilities and the presentation skills of students | 3.24 |

| | | |
|-----|---|------|
| SO4 | Enterprise needs about the leadership/management skills and the teamwork skills of students | 3.28 |
| SO5 | Enterprise needs about the communication and the negotiation skills of students. | 3.27 |
| SO6 | Enterprise needs about the problem solving skills of students | 3.31 |
| HA1 | Enterprise needs about the trained major knowledge of students | 3.09 |
| HA2 | Enterprise needs about the practicum knowledge of students | 3.22 |
| HA3 | Enterprise needs about the Economic - social knowledge of students | 3.26 |
| HA4 | Enterprise needs about the Major knowledge | 3.29 |
| EN1 | Enterprise needs about the English writing and translation skills of students | 3.55 |
| EN2 | Enterprise needs about the English reading skills of students | 3.48 |
| EN3 | Enterprise needs about the English listening skills of students | 3.59 |
| EN4 | Enterprise needs about the English speaking skills of students | 3.36 |
| IT1 | Enterprise needs about the Major software use skills of students | 3.16 |
| IT2 | Enterprise needs about the internet skills of students | 3.22 |
| IT3 | Enterprise needs about the computer typing skills of students | 3.24 |
| IT4 | Enterprise needs about the Data processing skills of students | 3.26 |
| IT5 | Enterprise needs about the PowerPoint processing skills of students | 3.20 |
| GT1 | Enterprise needs about soft skills | 3.35 |
| GT2 | Enterprise needs about the training quality | 3.45 |
| GT3 | Enterprise needs about the trained major knowledge of students | 3.34 |

(Source: The researcher's collecting data and SPSS)

The result showed that the descriptive statistics from Operational years showed that there were 120 enterprises to be interviewed in Ho Chi Minh City from 4/2016 to 8/2016. All questions for enterprises answered and minimum value was 1, maximum value was 5. Standard deviation was around 1.0 and mean value was around 3.0. This showed that data was very good for researching.

Table 2: Cronbach's Alpha

| Model | Code | Factors | Cronbach's Alpha |
|-------|------|------------------------|------------------|
| IDV | SO | Soft skills | 0.820 |
| | HA | Hard skills | 0.816 |
| | EN | English skills | 0.824 |
| | IT | Information technology | 0.819 |
| DV | GT | Employability | 0.822 |

(Source: The researcher's collecting data and SPSS)

The test results scale shows that the scale has good accuracy with Cronbach's alpha coefficient > 0.6 and the correlation coefficients of the total variables of measurement variables meet the allowed standard (> 0.3), the scale will be accepted. The observed variables are used for factor analysis to discover in the next step.

Table 3: KMO and Bartlett's Test

| | | |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .841 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 7898.141 |
| | df | 201 |
| | Sig. | .000 |

KMO & Bartlett's test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0,6. For Factor Analysis recommended suitable, the Bartlett's Test of Sphericity must be less than 0,05.

Table 4. Exploratory Factor Analysis (EFA)

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---------------------|---------------|-------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative% | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 9.92 | 39.544 | 41.544 | 9.92 | 1544 | 41.544 | 3.028 | 13.761 | 13.761 |
| 2 | 1.681 | 8.094 | 48.638 | 1.681 | 8.094 | 48.638 | 2.944 | 13.383 | 27.144 |
| 3 | 1.319 | 5.986 | 54.625 | 1.319 | 5.986 | 54.625 | 2.918 | 13.263 | 40.407 |
| 4 | 1.227 | 5.548 | 64.474 | 1.227 | 5.548 | 64.474 | 2.771 | 12.595 | 64.474 |

(Source: The researcher's collecting data and SPSS)

The table showed that Cumulative percent was statistically significant and high data reliability was 64.474 % (> 50 %). As a

result, the total variance explained by the solution is smaller; however, the addition of this structure to the factor model makes these methods ideal for examining relationships between the variables. The table revealed that Kaiser-Meyer-Olkin Measure of Sampling Adequacy was statistically significant and high data reliability ($KMO = 0.841 > 0.6$). This result was very good for data analysis.

Table 5: Rotated Component Matrixa

| Code | Component | | | |
|------|-----------|------|------|------|
| | 1 | 2 | 3 | 4 |
| HA | .773 | | | |
| HA | .825 | | | |
| HA | .789 | | | |
| HA | .853 | | | |
| SO4 | | .964 | | |
| SO2 | | .851 | | |
| SO3 | | .888 | | |
| SO1 | | .823 | | |
| SO5 | | .829 | | |
| IT1 | | | .972 | |
| IT4 | | | .891 | |
| IT2 | | | .829 | |
| IT5 | | | .893 | |
| IT3 | | | .878 | |
| EN3 | | | | .888 |
| EN4 | | | | .892 |
| EN2 | | | | .795 |
| EN1 | | | | .971 |

(Source: The researcher's collecting data and SPSS)

The analysis results in Rotated Component Matrixa Table showed all observed variables can be divided into 4 groups of factors and variables have Loading Factor coefficient > 0.5 . This showed that the analytical data are consistent and qualified to conduct multiple regression analysis with four independent variables respectively: English skills, Soft skills, information - technology skills and hard skills. Cronbach's alpha coefficients

of the overall scales of independent factors are > 0.6 ; therefore, the scale meets standard and statistical significance.

Table 6. Analysis of multiple linear regressions

| <i>Model</i> | <i>R</i> | <i>R Square</i> | <i>Adjusted R Square</i> | <i>Std. Error of the Estimate</i> | <i>Durbin-Watson</i> |
|---|----------|-----------------|--------------------------|-----------------------------------|----------------------|
| 1 | .854a | .549 | .822 | .811 | 1.428 |
| a. Predictors: (Constant), X4, X3, X2, X1 | | | | | |
| b. Dependent Variable: GT | | | | | |

(Source: The researcher's collecting data and SPSS)

The above result shows the correlation coefficient adjustment: $R^2 = 0.822$ (verification F, sig. < 0.05); which means 82.2 % of the variable Y shift is explained by the nine independent variables (X_i). Coefficient Durbin - Watson (d) = 1.428; some observers, $n = 120$, parameter $k = 4$, the level of significance of 0.01 (99%), in the statistical tables Durbin - Watson, dL (less statistical value) = 1.623 and dU (statistical value over) = 1.725. So $(dL = 1.623) < (d = 1.428) < [4 - (dU = 1.725) = 2.275]$ proved that the model has no autocorrelation.

Table 7. ANOVA

| <i>Model</i> | | <i>Sum of Squares</i> | <i>df</i> | <i>Mean Square</i> | <i>F</i> | <i>Sig.</i> |
|--------------|------------|-----------------------|-----------|--------------------|----------|-------------|
| 1 | Regression | 13.522 | 3 | 75,323 | 73.200 | .000b |
| | Residual | 106.478 | 116 | .388 | | |
| | Total | 120.000 | 120 | | | |

(Source: The researcher's collecting data and SPSS)

Accreditation ANOVA is to assess the relevance of the theoretical regression model. The test results $F = 73.200$ value and $Sig. = 0.000 < 0.05$ shows the building model is consistent with the data set and the variables included in the model are related to the dependent variable. Generally, regression analysis is 99% reliability, corresponding to the selected variables with statistically significant at the $P < 0.01$; the results also show that all variables satisfy the demand.

Verification of conformity of the model show that multicollinearity phenomenon does not violate (VIF <10).

Table 8: Factors affecting the employability of students

| <i>M O D E L</i> | <i>Unstandardized Coefficients</i> | | <i>Standardized Coefficients</i> | <i>t</i> | <i>Sig.</i> | <i>Collinearity Statistics</i> | |
|----------------------------------|------------------------------------|-----------------|----------------------------------|----------|-------------|--------------------------------|------------|
| | <i>B</i> | <i>StdError</i> | <i>Beta</i> | | | <i>Tolerance</i> | <i>VIF</i> |
| X1 | .122 | .055 | .778 | 2.002 | .000 | 1.000 | 1.003 |
| X2 | .239 | .062 | .409 | 1.783 | .000 | 1.000 | 1.000 |
| X3 | .214 | .042 | .095 | 2.844 | .000 | 1.000 | 1.002 |
| X4 | .125 | .070 | .263 | 3.121 | .000 | 1.000 | 1.000 |

(Source: The researcher's collecting data and SPSS)

The results of regression analysis showed the factors affecting the employability of students in Economics and Social Sciences sector at Industrial University of Ho Chi Minh City (IUH) and expressed the following impact levels: (1) Soft skills: $\beta = 0.778$; (2) Information and technology skills: $\beta = 0.409$; (3) Hard skills: $\beta = 0.263$; and (4) English skills: $\beta = 0.095$. This finding is the basis for proposing solutions enhancing the employability of students in Economics and Social Sciences sector at Industrial University of Ho Chi Minh City in the next time.

CONCLUSIONS AND RECOMMENDATIONS

In this research, the results had the Variance Inflation Factor (VIF) and Tolerance shown to be the following VIF < 10. ($1 < VIF < 10$). This showed that there was not multicollinearity. We had the components: X1, X2, X3 and X4 affecting the employability of students in Economics and Social Sciences sector at Industrial University of Ho Chi Minh City with significance level of 5 %. This result is the basis for Industrial University of Ho Chi Minh City to have strategies enhancing competitiveness in regional and international integration trend.

Recommendations for the improvement of English skills:

To promote to the maximum the visual media, support for learning. There should be activities that encourage people to learn new information processing. These activities will help students learn more effectively than passive activities, such as listening. The teachers should help students build personal significance of the knowledge that they have presented. Learners also need to be able to consider, discuss and use these ideas into their own significance and should make all those ideas. The teacher must be the manager, be liable situations formed to promote communication activities. The students must take responsibility for their own learning. In addition, up to student self-assessment rather than teacher assessment. The evaluation of teachers can make students fear and difficult to progress. Have not we should ask students to self-assess all or part of their work, and only in the evaluation of teacher self-evaluation if it unsatisfactory. The IUH based on practical needs periodic assessment of training programs designed to take the supplements, so that programs to ensure integration and advanced training towards what society needs. The program must be directed to the appropriate training 03 issues such as knowledge, skills, and attitudes, depending on the different sectors and proportion, knowledge, different skills. The IUH should have a roadmap and adequate resources to perform for this problem. The IUH continued to increase investment in infrastructure for training following: Investment and enhance the operational efficiency of the library, the IUH's web; Equipped with tools, machinery and supplies for the laboratory; Prioritize resources to build the model of forging craft and apprenticeship of students; Promote the Socialization of the modeling profession wrought, practice in IUH regularly organize seminars, training courses, improve their training for teachers. Creating favorable conditions for teachers have the opportunity to practice English in a native

environment. Find orientation course constitute an innovative but consistent with his conditions.

Recommendations for the improvement of Hard Skills:

The IUH based on practical needs periodic assessment of training programs designed to take the supplements, so that programs to ensure integration and advanced training towards what society needs. The program must be directed to the appropriate training 03 issues such as knowledge, skills, and attitudes, depending on the different sectors and proportion, knowledge, different skills. The IUH should have a roadmap and adequate resources to perform for this problem. The IUH continued to increase investment in infrastructure for training following: Investment and enhance the operational efficiency of the library, the IUH's web; Equipped with tools, machinery and supplies for the laboratory; Prioritize resources to build the model of forging craft and apprenticeship of students; Promote the Socialization of the modeling profession wrought, practice in IUH.

Recommendations for the improvement of Information Technology skills:

To enhance the improvement of information and technology skills can meet the needs of use, consistent with the development of society following: First, there should be a reasonable distribution between basic training and practical technology training between theory and practice. Therefore, training programs, lectures must have open, flexible components to complement the knowledge of new technologies. Secondly, propaganda and instruction of students learning English. Students use English well will ease in self-study new technologies, increasing the competitiveness of human resources, easy to find the right professional job with a high income. Third, promote applied research for students. One of

the basic criteria and assess the most important quality of a university's research and development capabilities. There should be policies and specific measures to strengthen the cooperation between IUH and businesses, through which the practical problems will be solved through research.

Recommendations for the improvement of soft skills:

The IUH had more attention to demand collective action of students to be able to organize more and more frequent extracurricular activities help students develop their skills. Innovation and application of learning methods to enhance the skills of students, as enhanced form large group exercises, presentations, seminars... Join th international seminar: This is an ideal opportunity for students to meet and interact, to catch up with global knowledge warehouse. Besides, the international workshops participants also facilitate students establish, expand the relationship. If parents have planned for the study, the event is an opportunity to help children adapt to international communication environment, develop the ability to listen to spoken English and be familiar with the working environment in the economic groups with foreign element.

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