

Relevance of School Related Factors to the Job Placement of Engineering Graduates

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ABSTRACT

This study aimed to determine the relevance of school related factors in terms of Faculty and Instruction, Student Services, Organization and Administration, Community Extension, Linkages & Research to the job placement of Engineering graduates. Descriptive type of research as utilized in the study. Results revealed that the engineering graduates believed that community extension, linkages and research have the highest relevance to their job placement followed by student services, faculty and instruction while the organization and administration obtained the least mean score. Employees of higher education institutions should be aware of the image they project while dealing with the students and they should keep on reminding their value as part of the students' development of future engineers and professionals.

Keywords: *research, community service, student services, job placement*

INTRODUCTION

Every aspect of learning is a significant area of delivering instruction that needs to explore as contributory factor for students' development towards employability. As education has been suggested to increase potential employability, the surge in demand for education has been on the rise all over the world (Genc & Copoglu, 2014). School related factor as input to job placement of the graduates is an integral part and mission of the academic community to serve the students with quality (Dotong, 2014). Graduate factors consist of knowledge and skills possessed by the respondents while school factors comprised of: curriculum, placement program, physical and laboratory facilities, OJT program, industry linkages and skills enhancement programs (Loquias, 2015).

Support services of the academic institutions provide other learning experiences that possibly shape the character of the students in one way or another. It can be indirectly affect or influence the attitude of the students on the way employees do business transactions with them. Considering the relevance of school related factors to the job placement of the graduates would give emphasis and significance on the potential contribution of the people within and behind the four walls of the classroom where the teaching and learning processes take place.

Effective teaching strategies can stimulate interest (Aguado, Laguador & Deligero, 2015) and enthusiasm of the learners which also builds confidence and trust to let them achieve higher goals. Teachers have this capability to inspire students from their passion and dedication to transfer knowledge and share their experiences to the fullest extent (Orence & Laguador, 2013; Aguado et al., 2015; Laguador, Deligero & Cueto, 2015). Expertise of the faculty members should always be considered in giving teaching load. Students appreciate great efforts of the teachers and imbibe the values derived from the information learned from them. If ever they will venture in any related job to training and academics, they will try to remember in certain point of time on how they were taught in college and emulate the practices on delivering instructions.

Student services in terms of library, registrar, college dean, student affairs, health, counseling, physical plant and computer laboratories are considered important ingredients in the nourishment of the learners. The process of developing individuals would not be materialized without the strong support of these services. They keep on achieving common goals as partner of academic work units and colleges in honing future engineers and professionals.

The University would like to get higher satisfaction from the students as compelling manifestation of quality and reputation. The way employees treat and deliver their services would have indirect impact to the student's holistic growth as a person and as a part of the community. The culture is an important element of learning as the environment speaks of significant details of the organization. Employees serve as role models and good examples on how students should act and treat others whenever they go and whatever status they reach in life as Lyceans.

The same impact from the organization and administration that are considered in the top and middle management who handle the supervisory positions and they are responsible in maintaining quality and ensuring that the students received the best they deserved from the University. They demonstrate leadership capabilities that will serve as real life examples of democratic administration where they live and belong as part of the organization. The kind of leadership styles they have would be remembered by the graduates whenever they need to share their experiences as first hand information from their background ideas to their employment interviews about leaders.

Furthermore, giving the students the right opportunity to participate in the community extensions programs of the university provides deeper understanding and meaning of volunteerism with clear image of the present condition of the environment and society. Community Extension Program is an activity where an individual can experience a different way of learning (Rubio et al., 2016). They learned how to sympathize in identifying the problems and be part of the proactive solution to the emerging current challenges. Their contribution to the improvement of the quality of living on the adapted community of the University would mean a lot to them as part of their small and great achievements. Knowledge on the community relations would somehow give them in the long run for employment on how to develop community development plans where most of the organizations have activities on corporate social responsibility (Buenviaje, 2013).

Research as another fundamental function of an HEI should be emphasized as one of the culminating activities of the degree program as part of the student outcomes (Camello, 2014). This serves as application of what they have learned from theories, concepts and principles of the discipline. In engineering, designs of prototypes are significant measures of their knowledge and skills on how to create new applications from existing technology. The research activities of the University are integral part of the students' development in order to think critically and objectively analyze problems in offering solutions.

The support of the management in research would have indirect impact to their employment as they realize its essence in the job hiring process. They can highlight their research experience as part of their accomplishment as student during job interviews.

Likewise, the objective of the university to acquire more linkages with local and international industries is to narrow down the gap of job mismatch, making the networks of the university a vital part of the success of the students in employment. The skills needed by the engineering firms and manufacturing companies should be the basis of reviewing and revising the curriculum and integrating new trends from the latest information and innovation in science and engineering. The increasing number of graduates and the conscientious and meticulous employers pose challenges to the graduates in addition to other problems they may encounter in looking for employment (Loquias, 2015). Therefore, this study aimed to determine the relevance of school related factors (Bacay, Dotong & Laguador, 2015) in terms of Faculty and Instruction, Student Services, Organization and Administration, Community Extension, Linkages & Research to the job placement of Engineering graduates. Looking into the school related factors to employment of engineering students in a wider perspective would define the significance of the employees' contribution in every aspect of students' development. The study explores on the probability on obtaining relevant information on how they can improve their performance which will have direct impact to graduates' employment. Developing students' behavior and attitude (Alcantara et al., 2015) from student services would lead this study to integration of higher learning objectives which are not only confined to academic departments but to the support services as well.

METHODS

The respondents of the study were 46 BSCoE, 53 BSIE, 26 BSME and 32 BSECE Graduates from 2009 to 2012. This study will use the total population of the graduates. Questionnaire is the main instrument used in the study. The questionnaire is composed of statements pertaining to the school related factors in terms of Community Extension, Linkages & Research, Organization and Administration, Student Services, Faculty and Instruction. The Lyceum Research Center provided the survey questionnaire as part of the instrument in the tracer study of graduates. The questionnaire was also validated by the research experts in the academe specifically the Research Director and the Dean of Engineering.

The researchers submitted an institutional research proposal to the Research and Statistics Center for review of the research council. After a series of suggestions and recommendations, the proposal was then endorsed to the President for approval and the allotment of research budget and honorarium.

Since the survey instrument used in the study was provided by the Research and Statistics Center, it is already considered valid and reliable. Personal data such as names, addresses and telephone/cellular phone numbers of the graduates from 2009 – 2012 were obtained from their undergraduate theses' index - curriculum vitae.

The respondents were informed on the purpose of the study and were invited to participate in the survey. The researchers administered some of the questionnaires personally, others were sent through electronic mail and social networking sites. The data collected will be classified, tabulated and coded for analysis.

Weighted mean and rank are the statistical tools employed in interpreting the data obtained from the survey. The respondents were given four (4) options to determine the relevance of school related factors to the job placement of the respondents. To arrive at a verbal description of each item, the arbitrary numerical guide was followed: 3.5 – 4.00: Very Relevant; 2.5 – 3.49: Relevant; 1.5 – 2.49: Slightly Relevant; 1.0 – 1.49: Not Relevant.

RESULTS AND DISCUSSION

Table 1. Relevance of School Related Factors to the Job Placement of Respondents in Terms of Faculty and Instruction

Faculty and Instruction	CpE	ECE	IE	ME	WM	VI	Rank
1. Conducts himself in a dignified & professional manner	3.33	3.28	3.35	3.07	3.26	Relevant	4
2. Has good communication skills	3.33	3.22	3.45	3.36	3.34	Relevant	2
3. Teacher has mastery of the subject matter	3.33	3.39	3.32	3.47	3.38	Relevant	1
4. Makes use of various teaching aids	3.29	3.33	3.26	3.33	3.30	Relevant	3
5. Relates subjects to other fields & other life situation	3.25	3.17	2.97	3.27	3.17	Relevant	7
6. Conducts accurate & objective evaluation of student performance	3.29	3.22	3.29	3.13	3.23	Relevant	5
7. Quality of instruction is relevant to the course	3.21	3.11	3.23	3.20	3.19	Relevant	6
Composite Mean	3.29	3.25	3.27	3.26	3.27	Relevant	

Table 1 presents the relevance of school related factors to the job placement of respondents in terms of faculty and instruction. Teachers' mastery of the subject matter is considered the foremost relevant to the job placement of engineering graduates followed by the teachers' communication skills, making use of various teaching aids and conducting a dignified and professional manner. On the other hand, conducting accurate and objective evaluation of student performance, quality of instruction and teachers' capability to relate the subject to other fields and other life situation were considered the least relevant among the indicators of faculty and instruction.

The composite mean score of 3.27 implies that the faculty and instruction is considered relevant to the job placement of the engineering graduates. It implies that students significantly learned the lessons if the teachers can impart and deliver the subject matter fluently with an aid of appropriate methods and

fairness in measuring the students' academic performance or knowledge inside the classroom which can formulate a good foundation of their future success in employment. Teaching aids were perceived to be indirectly relevant to the job placement of the respondents because these are only instructional materials as they see it but they never realized that these are the instructional media used by their teachers in order to understand the subject on its most appropriate way (Laguador & Dotong, 2013).

Table 2. Relevance of School Related Factors to the Job Placement of Respondents in Terms of Student Services

Student Services	CpE	ECE	IE	ME	WM	VI	Rank
a. Library services	3.55	3.37	3.38	3.29	3.40	Relevant	4
b. Registrar's Office services	3.00	3.05	3.17	2.92	3.04	Relevant	8
c. College Dean's Office services	3.73	3.47	3.46	3.43	3.52	Very Relevant	1
d. Office of Student Affairs services	3.36	3.26	3.33	3.21	3.29	Relevant	5
e. Health services	3.10	3.11	3.17	2.92	3.08	Relevant	7
f. Counseling and Testing Center	3.55	3.37	3.42	3.36	3.43	Relevant	3
g. Physical Plant and Facilities	3.27	3.21	3.25	3.07	3.20	Relevant	6
h. Computer Laboratories	3.64	3.42	3.46	3.43	3.49	Relevant	2
Composite Mean	3.40	3.28	3.33	3.20	3.30	Relevant	

Table 2 shows the relevance of school related factors to the job placement of respondents in terms of student services. The College Dean's Office service is considered to be very relevant to the job placement of the respondents because the dean's office has the direct contact with the students during their entire college years. The engineering department had the most relevant contribution to the development of the students.

Computer laboratories, counseling and testing center, library services and Office of Student Affairs were also considered relevant to their job placement while physical facilities, health services and registrar's office were considered with the least relevance. The composite mean score of 3.30 implies that the school related factors in terms of student services also contributing to the job placement of the respondents. This implies that the graduates recognized the value of relevance of student support to their employment.

The computed overall composite mean score 1.79 for the relevance of school related factors to the present employment of the respondents showed a slight relevance. Only the College Dean/Office revealed to have relevant implication to the employed graduates of engineering. Extra-curricular activities has a computed composite mean of 2.46; Office of Student Affairs has 2.22; Registrar's Office with 1.56 and Library with 1.53 computed composite mean which obtained "Slight Relevant" verbal interpretation while the Counseling and Testing, Accounting/Cashier's Office and Health Services revealed not relevant to the present employment of the respondents.

Table 3 presents the relevance of school related factors to the job placement of respondents in terms of organization and administration. They also considered the function of the department heads who possess positive attitude towards work, staff and students as relevant to their job placement as well as the adherence of the administration to its vision-mission and institutional values and effectiveness in guiding, training and development of students to improve their performance (An, Laguador & Portugal, 2015). These attitudes manifest in the job placement of the engineering students through proper way of communication of the department heads which contribute to the development of values of the engineering students that turned to be useful in their present job.

Organizational efficiency also contributed to the job placement of the engineering graduates as well as the performance of the school officers and heads within their spheres of responsibility and activities of the institution and colleges. The support of the administration in shaping the character and values of the engineering graduates also contributed to the employability.

Table 3.Relevance of School Related Factors to the Job Placement of Respondents in Terms of Organization and Administration

Organization and Administration	Weighted Mean					Total	Rank
	CpE	ECE	IE	ME	WM	VI	
a. The school officers & heads include within their spheres of responsibility, all the vital activities of the institution and colleges	3.27	3.07	3.14	3.07	3.14	Relevant	6
b. The organization & administrative set-up of the institution and colleges are well integrated and function efficiently	3.18	3.07	3.12	3.33	3.18	Relevant	5
c. Department heads are effective in guiding training and development of students to improve their performance	3.36	3.21	3.24	3.40	3.30	Relevant	3
d. Department heads possess positive attitude towards work, staff and students	3.45	3.42	3.33	3.20	3.35	Relevant	1
e. The administration ensures that training programs for students are adequate and well-organized	3.27	3.13	3.18	3.20	3.20	Relevant	4
f. The administration adheres to its vision-mission and institutional values	3.45	3.29	3.25	3.33	3.33	Relevant	2
Composite Mean	3.33	3.20	3.21	3.26	3.25	Relevant	

Table 4 presents the data on relevance of school related factors to the job placement of respondents in terms of community extension, linkages and research. Engineering graduates considered linkages with other institutions and OJT as relevant to their job placement (Felicien, Ylagan & Buted, 2014; Bernardo, Landicho & Laguador, 2014) as well as the development of research activities in the college and community extension services. Internship program helped them developed more of their skills through the actual application of their knowledge.

Table 4.Relevance of School Related Factors to the Job Placement of Respondents in Terms of Community Extension, Linkages & Research

Community Extension, Linkages & Research	Weighted Mean					Total	Rank
	CpE	ECE	IE	ME	WM	VI	
a. Community Extension services of the college	3.45	3.31	3.29	3.07	3.28	Relevant	3
b. Linkages with Other Institutions and OJT	3.64	3.33	3.27	3.13	3.34	Relevant	1
c. Development of research activities in the college	3.36	3.21	3.24	3.33	3.29	Relevant	2
Composite Mean	3.48	3.29	3.27	3.18	3.31	Relevant	

Research involvement in terms of their design project or thesis served as their culminating activity before graduation that also helped them understand the fundamentals of their present work. These are some of the extra-curricular activities of the college students that helped them develop the sense of volunteerism and responsibility through community extension projects.

According to the study of Laguador and Chavez (2013) that Engineering students with higher level of perseverance and sense of responsibility have also higher perceptions on the impact of community extension projects to their personal values.

CONCLUSION AND RECOMMENDATION

The engineering graduates believed that community extension, linkages and research have the highest relevance to their job placement followed by student services, faculty and instruction while the organization and administration obtained the least mean score. The mastery of the subject matter of the teachers helped them achieved their full potential to let them experience the transfer of knowledge. Faculty teaching should have competency in applied business and/or engineering research and exclusive focus on teaching or pure academic research would prove inadequate to educate the students (Genc & Copoglu, 2014). Good communication skills of the teachers also helped them expressed their ideas during classroom discussions that stimulate their interest on the subject and the degree program.

The College Dean's Office services was perceived very relevant to the job placement of the graduates as the office rendered directly the assistance in coordinating with the companies and providing as character reference. The Department heads also possessed positive attitude towards work, staff and students that gave additional impact and support to the job placement of the engineering graduates. Likewise, linkages with other institutions and OJT helped them directly in getting employed where they were trained to develop more their technical skills needed for the job. It is not totally out of reason to think that college graduates are unable to find jobs because they are not equipped with the knowledge base to tackle the challenges of the current job market (Genc & Copoglu, 2014). It is the competition that makes it difficult for the graduates to get the job they wanted.

Employees of the University should be aware of the image they project while dealing with the students every day. They should keep on reminding their value as part of the development and growth of the students of future engineers and professionals. They have significant role to play in the organization to build the confidence of the students in making business transactions in English in order for them to become well-versed in communicating the universal language. They must provide quality services as the students may emulate the way people in the academic community handle the customers. They must also portray as living good examples to the students as the culture of the organization manifests in the manner that employees act and behave accordingly.

REFERENCES

- Aguado, C. L., Garcia, O. B., Laguador, J. M., & Deligero, J. C. L. (2015). Teaching Performance and Extent of Work Values among Faculty Members in one Asian Maritime Academy. *International Journal of Management Sciences*, 5(12), 805-816.
- Aguado, C. L., Laguador, J. M., & Deligero, J. C. L. (2015). Factors Affecting the Choice of School and Students' Level of Interest towards the Maritime Program. *Asian Social Science*, 11(21), 231.
- Alcantara, F., Deligero, J. C. L., & Laguador, J. M. (2015). Profile Aspirations of Maritime Students in one Higher Education in the Philippines. *Asian Journal of Basic and Applied Sciences Vol*, 2(2).
- An, I. L., Laguador, J. M., & Portugal, L. M. (2015). Effectiveness of Training Program Among Liberal Arts Faculty Members In An Asian University. *Asian Journal of Basic and Applied Sciences Vol*, 2(1).

- Bacay, T. E., Dotong, C. I., & Laguador, J. M. (2015). Attitude of Marine Engineering Students on Some School-Related Factors and their Academic Performance in Electro Technology 1 and 2. *Studies in Social Sciences and Humanities*, 2(4), 239-249.
- Bernardo, A. C., Landicho, A., Laguador, J. M. (2014). On-the-Job Training Performance of Students from AB Paralegal Studies for SY 2013-2014, *Studies in Social Sciences and Humanities*, 1(4), 122-129
- Buenviaje, M.G. (2013). Practices of Managing Corporate Social Responsibility: Based from the Best Food Service Establishments, *E-International Scientific Research Journal*, 5(1): 52-60
- Camello, N. C. (2014). Factors Affecting the Engineering Students' Performance in the OBE Assessment Examination in Mathematics, *International Journal of Academic Research in Progressive Education and Development*, 3(2), 87-103.
- Dotong, C. I. (2014). School – Related Factors in the Development of Graduates' Competencies towards Employability, *Journal of Education and Literature*, 1(1), 28-36
- Felicen, S. S., Ylagan, A. P., & Buted, D. R. (2014). A Correlation Study between Student Performance on Travel and Tour Operations Course with CRS and Internship Performance on Travel Agency. *International Journal of Academic Research in Progressive Education and Development*, 3(2), 74-86.
- Genc, I. H., & Copoglu, M. (2014). Employment Enhancing Integrative Graduate Education Model. *International Journal of Advanced Multidisciplinary Research and Review*, 2(3).
- Laguador, J. M., & Chavez, N. H. (2013). Assessment Of Engineering Students' acquired Affective Learning From Involvement In Community Extension Services. *Academic Research International*, 4(3), 188.
- Laguador, J. M., Deligero, J. C. L., & Cueto, A. (2015). Students' evaluation On The Teaching Performance Of Tourism And Hospitality Management Faculty Members. *Asian Journal of Educational Research Vol*, 3(3).
- Laguador, J.M., Dotong, C.I., (2013). Tracer Study of BS Computer Engineering Graduates of Lyceum of the Philippines University, *International Journal of Management, IT and Engineering*, 3(8): 387-401
- Loquias, R. T. (2015). Employability of the Bachelor of Science in Electronics Engineering Graduates of Camarines Sur Polytechnic Colleges. *Asia Pacific Journal of Multidisciplinary Research*, 3(4).
- Macatangay, L. (2013). Tracer Study of BSCS Graduates of Lyceum of the Philippines University from 2004-2009, *Academic Research International*, 4(5): 361-377
- Orence, A. & Laguador, J.M. (2013). Employability of Maritime Graduates of Lyceum of the Philippines University from 2007-2011, *International Journal of Research in Social Science*, 3(3): 142-157
- Rubio, J. A. M. A., Pentinio, C. V. P., Ascan, J. C., Mendoza, M. C. D., Vito, J. V., & Encio, H. A. (2016). Involvement in Community Extension Program of Business Administration Students in one Higher Education Institution in the Philippines. *Asia Pacific Journal of Multidisciplinary Research*, 4(1).