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Engineering Students' Evaluation of their On-the-Job Training Program

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ABSTRACT

This study was conducted to assess the implementation of the On-the-Job Training program of the University of Saint Louis specifically in the Civil Engineering, Electrical Engineering, Electronics Engineering and Computer Engineering programs. The respondents of the study were the 183 Civil Engineering, Electrical Engineering, Electronics Engineering, and Computer Engineering students who had their OJT last summer of school year 2018-2019. The results revealed that the different provisions of the On-the-Job Training program of the School of Engineering, Architecture, and Information Technology Education were implemented but there were some provisions that need to be worked on by the different engineering programs. The OJT program was effective in providing an actual working environment that will help prepare the students with the challenges they will face in their future workplaces. Discussion of major results and implications were also discussed.

Keywords: *OJT Program, Civil Engineering, Electrical Engineering, Electronics Engineering and Computer Engineering*

INTRODUCTION

The engineering world is at the gates of the Fourth Industrial Revolution, a technological revolution that will transform the society in unprecedented ways. This technological revolution is the convergence of multiple digital fields such as robotic, Artificial Intelligence, machine learning, nanotechnology and biotechnology (Wang & Siau, 2019; Yoo, 2017) which is necessary in the advancement of the engineering industry that is usually dictated by a country's labor force. For a country's labor force to compete with the other developed countries in the global market, the characteristic of education presented to its individuals should be in line with the current developments brought by the rapid developments in technology (Adiguzel, 2008; Ismail, 2018). In the face of the Fourth Industrial Revolution; therefore, reasonable efforts are needed to make sure engineering students are equipped with the right skills in order to lead, live and thrive in the society (Marsono, Sugandi, Tuwoso, & Purnomo, 2017; Penprase, 2018).

With the challenge of the Fourth Industrial Revolution, academic institutions especially Higher Educational Institutions (HEI) are then required to produce not only knowledgeable graduates but also skilled graduates (De Chavez, Lumanglas, Rondilla, Salcedo, & Caiga, 2016; Laguador, 2013) to ensure high employability. Employability refers to the ability of the graduate to get a satisfying job, the propensity of the graduate to exhibit attributes that employers anticipate, and the satisfaction of the graduate with their employment (Harvey, 2001). Over the past few years, the employability of graduates has been a major challenge for graduates of HEIs due to the failure to meet the current labor market expectations (Andrews & Higson, 2008; Chetty, 2012; Kalufya & Mwakajinga, 2016). The failure has been blamed to HEIs for producing graduates unfit to the labor market (Mbise, 2014; Alpert, Heaney, & Kuhn, 2009). Hence, it is very important that HEIs especially in developing countries like the Philippines form programs that will allow students to have the necessary knowledge and practical skills in their fields so that they may be able to give reliable services of a good quality (Adiguzel, 2008).

In the interest of producing skilled graduates, HEIs in the Philippines are coming up with programs to ensure that these graduates will have the skills set required to perform today's jobs. Among these programs that are being employed by HEIs is the on-the-job training (OJT) program or internship program. This has been added to the curriculum of different HEIs in order to provide students with a smooth transition from the academic world to the working world (Bukaliya, 2012; Tilakerathne & Madurapperuma, 2013; Jung & Lee, 2017). OJT plays an important role for students before they graduate which serves as a venue to practice the concepts and principles they have learned in developing good attitude and work ethics (De Chavez et al., 2016). It also opens up opportunities to learn more about a particular profession and generate substance in the skills of the students (Pei, Daud, & Jonathan, 2012; Laguador, 2013). More importantly, OJT helps students to become innovative, effective, and globally competitive professionals. For engineering students, OJT program does not only prepare them for the actual working environment but also helps them in deciding in which industrial area to work since engineering programs have many specialized areas (Durgun & Sondikme, 2012).

The University of Saint Louis, as a global learning community, adheres to its mission of preparing its students to become effective and competent missionary graduates across its programs such as Engineering. Engineering students have their OJT during their fourth year summer term. Majority of these students are employed in private companies while some are employed in government agencies. This study then was conducted to assess the On-the-Job Training Program of Civil Engineering, Electrical Engineering, Electronics Engineering and Computer Engineering programs.

Research Objective

This study was conducted to evaluate the implementation of the On-the-Job Training program of the University of Saint Louis specifically in the Civil Engineering, Electrical Engineering, Electronics Engineering and Computer Engineering programs.

Significance of the Study

The findings of the study will contribute greatly to the School of Engineering, Architecture and Information Technology Education as it will assess the implementation of the On-the-Job Training program to SEAITE students. Significant information about the strengths and weaknesses of the program as perceived by the OJT students will be identified in this study. Moreover, the results of the study will serve as basis for the SEAITE department in coming up with measures and interventions to further enhance the implementation of OJT programs of the Civil Engineering, Electrical Engineering, Electronics Engineering and Computer Engineering Program.

Conceptual Framework

The present study is anchored on the CHED Memorandum Order (CMO) No. 104 series of 2017 entitled the *Revised Guidelines for Student Internship Program in the Philippines (SIPP) for All Program*. The memorandum order is a pursuant in accordance with the pertinent provisions of R.A. No. 7722 or the Higher Education Act of 1994 which mandated the Commission on Higher Education (CHED) to develop and promote policies, systems, procedures and programs that address globalization, changing policies, and liberalization of trade in higher education. According to the guiding principles of this memorandum order, Internship or OJT program is meant to provide students with opportunity to complement their formal learning with practical knowledge, skills and desirable attitudes and to gain hands on experience in recognized Host Training Establishment (HTE). The general objectives of the OJT/Internship program are the following:

a. Strengthen the implementation of the local internship through collaborative effort of the academe-industry linkage among HEIs and partner institution/establishment.
b. Establish the harmonious collaboration/linkages between higher education institutions (HEIs) and the Host Training Establishments (HTEs) for effective implementation of the program to support the educational environment of the student interns.
c. Train student interns under actual work place conditions.

Moreover, internship as part of the curriculum requirement broadens student interns' learning opportunities and acquisition of technical and life skills, practical knowledge, skills and competencies which shall serve as powerful motivator to strengthen the academe-industry linkage. With these, HEIs should come up with their creative academe-industry linkage plan appropriate to degree program requirement. Specifically, the OJT/internship program has the following specific objectives intended for students:

a. Provide students with opportunities to apply relevant knowledge and skills acquired from forma education to actual work setting provided by reputable HTEs in the country;
b. Enhance the knowledge and skill acquired in formal education of student interns through employer-based training, in order for them to become more responsive to the future demands of the labor market;
c. Develop the life skills of the student interns, including those relevant to the values of professionalism and work appreciation. The student interns are expected to acquire soft skills necessary to address the demand of the employers such as communication skills, interpersonal skills, financial literacy, etc.;
d. Acquire a professional work ethic in the course of internship.

METHODS

Research Design

This study utilized descriptive method of research.

Locale of the Study

This study was conducted at the University of Saint Louis, Tuguegarao City, Philippines.

Respondents of the Study

The respondents of the study were Civil Engineering, Electrical Engineering, Electronics Engineering, and Computer Engineering students who had their OJT last summer of SY 2018-2019.

Table 1. Profile of the Respondents

Profile	Frequency (N=183)	Percentage
Program Specialization		
Civil Engineering	113	61.75
Electrical Engineering	26	14.21
Electronics Engineering	24	13.11
Computer Engineering	20	10.93
Place of Assignment (OJT)		
Government Agencies	40	21.86
Private Agencies	143	78.14

Research Instrument

The questionnaire that was used in this study was a modified questionnaire adopted from De La Salle University. The modifications were made to suit to the needs of the present study. Provisions in the CMO No. 104 series of 2017 were likewise considered. The questionnaire evaluates the implementation of the OJT Program by the institution and partner agencies. The said tool consists of 19 items which is divided into three categories which are institutional evaluation (9 items), company evaluation (7 items), and effectiveness of the OJT Program (3 items) with the following scale:

Rating	Qualitative Description
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Disagree
0	Not Applicable

Furthermore, the questionnaire, prior to its administration to target respondents was checked and validated by the members of the University Research and Development Center, Academic Deans, and the Vice President for Academics.

Data Gathering Procedure

All letters were addressed to proper authorities. After approval of the conduct of the study, the researcher went to the target respondents to administer the questionnaire. The respondents answered the survey then analysis and tabulation followed after the gathering of data

Ethical considerations were employed by the researcher such as keeping the confidentiality and anonymity of the respondents, avoiding biases especially in the analysis of data, proper authorities were considered and proper communication was ensured in the study.

Data Analysis

Descriptive statistics was used to analyze the data. Specifically, it utilized the following statistical tools:

Frequency and Percentage was used to describe the profile of the respondent as to the program and to the nature of company where they conducted their OJT. Furthermore, it was used to identify the comments and suggestions of students with regard to their OJT.

Mean was used to assess the OJT program of the School of Engineering, Architecture and Information Technology Education along institutional evaluation, company evaluation, and program effectiveness using the following scale:

	Qualitative Description	
Scale	**Institutional and Company Evaluation**	**Program Effectiveness**
3.50 – 4.00	Fully Implemented (FI)	Very Effective (VE)
2.50 – 3.49	Implemented (I)	Effective (E)
1.50 – 2.49	Partially Implemented (PI)	Slightly Effective (SE)
1.00 – 1.49	Not Implemented (NI)	Not Effective (NE)

RESULTS AND DISCUSSION

Table 2a. Assessment of the On-the-Job Training Program of Civil Engineering Students along Institutional Evaluation

Institutional Evaluation	% Responses					Mean	QD
	4	3	2	1	0		
Conduct of an orientation about the OJT program, the requirements and preparations needed, and its expectations	81	30	1	1	0	3.69	FI
Provision of necessary assistance such as referrals or recommendations in finding the company	11	39	35	25	3	2.27	PI
Coordination with the company in the design and supervision of OJT	6	57	30	17	3	2.41	PI
Forging of Memorandum of Agreement (MOA) between USL and the company/agency	57	26	8	17	5	3.00	I
Academic preparations of Students to undertake company assignments and its challenges.	31	73	7	2	0	3.18	I
Regular monitoring of the School/Department through the OJT Coordinator with regard to students' progress in the company	10	45	35	19	4	2.34	PI
Giving of timely feedbacks to OJT students	25	66	21	1	0	3.02	I
Conduct of an OJT program evaluation upon completion of students in their OJT	54	51	6	0	2	3.37	I
Giving of results of company assessment to OJT students	39	55	16	3	0	3.15	I
CATEGORY MEAN	**35**	**49**	**18**	**9**	**2**	**2.94**	**I**

The evaluation of the Civil Engineering students on their OJT program along institutional evaluation is shown in Table 2a. It can be seen from the table that the Civil Engineering students generally assessed their OJT programs as implemented. This means that the Civil Engineering Program sees to it that the provisions necessary to deliver an effective OJT program are carried out. However, they need to exert more effort so that these provisions will be fully implemented.

The results highlight the full implementation of the conduct of an orientation about the OJT program before their deployment on their respective workplaces. The orientation is very important because it provides the OJT students with the valuable information not only about the program itself, but also of other aspects such as the workplace environment, job standards and results, workplace ethical practices and other important issues. OJT orientation is aimed at helping students to transition successfully to their workplaces and to start the process of higher learning. It is conducted to prepare the OJT students and assist them in learning the necessary skills and to better understand the demands of the real work before leaving school (De Chavez et al., 2016; Rothman, 2007).

Meanwhile, it can be noticed from the results that there are provisions that were partially implemented which include the provision of necessary assistance such as referrals or recommendations in

finding the company, coordination with the company in the design and supervision of OJT, and regular monitoring of the School/Department through the OJT Coordinator with regards to students' progress in the company. The Civil Engineering students believe that the SEAITE department through the Civil Engineering program should make an effort in providing list of recommended companies where they can apply as OJT. Moreover, the Civil Engineering program should find industry partners because the university-industry cooperation in an industry-partnered education program like the OJT program is highly important in terms of engineering education (Adiguzel, 2008). With good university-industry cooperation, the OJT coordinator will be able to do regular and proper monitoring of the students' progress.

Table 2b. Assessment of the On-the-Job Training Program of Electrical Engineering Students along Institutional Evaluation

Institutional Evaluation	**% Responses**					**Mean**	**QD**
	4	**3**	**2**	**1**	**0**		
Conduct of an orientation about the OJT program, the requirements and preparations needed, and its expectations	23	3	0	0	0	3.88	FI
Provision of necessary assistance such as referrals or recommendations in finding the company	21	5	0	0	0	3.81	FI
Coordination with the company in the design and supervision of OJT	9	13	4	0	0	3.19	I
Forging of Memorandum of Agreement (MOA) between USL and the company/agency	14	5	1	6	0	3.04	I
Academic preparations of Students to undertake company assignments and its challenges.	15	11	0	0	0	3.58	FI
Regular monitoring of the School/Department through the OJT Coordinator with regard to students' progress in the company	2	13	9	2	0	2.58	I
Giving of timely feedbacks to OJT students	11	14	1	0	0	3.38	I
Conduct of an OJT program evaluation upon completion of students in their OJT	20	6	0	0	0	3.77	FI
Giving of results of company assessment to OJT students	21	4	0	1	0	3.73	FI
CATEGORY MEAN	**15**	**8**	**2**	**1**	**0**	**3.44**	**I**

Table 2b presents the evaluation of the Electrical Engineering students on the OJT program of their department. The students believe that overall, the different provisions on the OJT program of the SEAITE department through the Electrical Engineering program are implemented. The results also highlight the full implementation of the conduct of an orientation program prior to the OJT proper. The OJT program of the Electrical Engineering is also fully implementing the provision on preparing the students academically to undertake company assignments and its challenges. This provision is important because students' academic performances and their OJT performances indicate how well and how valuable the knowledge, theories and skills taught, developed, and inculcated while taking their academic courses which are to be applied in their actual working environment (De Chavez et al., 2016).

Another noticeable highlight of the results of this study is the provision of necessary assistance such as referrals or recommendations in finding the company wherein Electrical Engineering students perceived to be fully implemented in their OJT program. This means that the Electrical Engineering Program is providing their students shortlist of companies where they can take their OJT. The shortlist of companies is important to make sure that the OJT students will be employed in the right company where they can hone their skills. Finding the right company will allow OJT students to gain experience in more than one role and become knowledgeable about different career paths within the company (Ismail, 2018; Durgun & Sondikme, 2012) so that after graduation they may be able to choose an area where they see themselves being successful.

The provision where the OJT program of the Electrical Engineering should improve is on the regular monitoring of the OJT Coordinator with regard to students' progress in the company. The OJT coordinator should see to it that OJT students are properly monitored because this is one of the qualities of good OJT or internship programs (Marinas, Igret & Marinas, 2014; Garcia & Puig, 2011). On the other hand, the SEAITE department should adequately select the OJT coordinator who does not only monitor the OJT, but who also does actively counsel students involved in this off-campus learning experience. The OJT coordinator should have experience in working with private companies and he should also know and understand the "culture" of every enterprise where a student is placed, guiding the student not only in the technical aspects of his work, but also in the typical way of behaving within the organization (Garcia & Puig, 2011).

Table 2c. Assessment of the On-the-Job Training Program of Electronics Engineering Students along Institutional Evaluation

Institutional Evaluation	**% Responses**					**Mean**	**QD**
	4	**3**	**2**	**1**	**0**		
Conduct of an orientation about the OJT program, the requirements and preparations needed, and its expectations	19	5	0	0	0	3.79	FI
Provision of necessary assistance such as referrals or recommendations in finding the company	10	9	5	0	0	3.21	I
Coordination with the company in the design and supervision of OJT	5	14	5	0	0	3.00	I
Forging of Memorandum of Agreement (MOA) between USL and the company/agency	9	4	5	1	5	2.46	PI
Academic preparations of Students to undertake company assignments and its challenges.	8	14	2	0	0	3.25	I
Regular monitoring of the School/Department through the OJT Coordinator with regard to students' progress in the company	5	18	1	0	0	3.17	I
Giving of timely feedbacks to OJT students	7	15	2	0	0	3.21	I
Conduct of an OJT program evaluation upon completion of students in their OJT	15	9	0	0	0	3.63	FI
Giving of results of company assessment to OJT students	12	10	2	0	0	3.42	I
CATEGORY MEAN	**10**	**11**	**2**	**0**	**1**	**3.24**	**I**

Table 2c shows the assessment of Electronics Engineering students on their OJT program along institutional evaluation. It can be seen from the table that the Electronics Engineering OJT students believed that overall, the different provisions of their OJT programs are implemented. It is also shown in the table that the conduct of orientation on the OJT program is fully implemented in the field of Electronics Engineering. This orientation is a pre-placement seminar which provides the training and skills that students need to learn in order to correctly respond to situations they could potentially encounter during their placement (Jackel, 2011).

Another provision that is fully implemented in the OJT program of the Electronics Engineering program is the conduct of an OJT program evaluation upon completion of students in their OJT. The evaluation of OJT programs is one of the predictors of the quality of OJT programs in an educational institution (Alpert et al., 2009; Marinas et al., 2014). The OJT program evaluation is conducted to determine if a program area is performing its obligations and responsibilities over the OJT students. Moreover, the evaluation will reveal what are the areas of concerns in the OJT program that must be addressed in order to have an effective program. It will serve as basis for the school/department in planning activities for the improvement of the delivery of the OJT program.

One area of concern from the results of the study is the partial implementation of forging of Memorandum of Agreement (MOA) between USL and the company/agency. Some of the Electronic Engineering students answered not applicable in this item of the questionnaire which implies that there was no forging of MOA between USL and the company/agency. MOA refers to an agreement executed between the HEI and partner company specifying the detailed role and responsibilities of all concerned parties, safety of student interns, training plan, learning objectives and method of evaluation (**CHED**). The SEAITE department through the OJT coordinator should make it a point that before the deployment of the OJT students, the MOA should have been executed and duly notarized. According to Maertz, Stoeberl & Marks (2014), it is the obligation of the school to inform employing organizations of their legal obligations to OJT students through the MOA.

Table 2d. Assessment of the On-the-Job Training Program of Computer Engineering Students along Institutional Evaluation

Institutional Evaluation	% Responses					Mean	QD
	4	3	2	1	0		
Conduct of an orientation about the OJT program, the requirements and preparations needed, and its expectations	19	1	0	0	0	3.95	FI
Provision of necessary assistance such as referrals or recommendations in finding the company	7	8	1	3	7	1.95	PI
Coordination with the company in the design and supervision of OJT	7	8	4	1	0	3.05	I
Forging of Memorandum of Agreement (MOA) between USL and the company/agency	20	0	0	0	0	4.00	FI
Academic preparations of Students to undertake company assignments and its challenges.	6	8	1	5	0	2.75	I
Regular monitoring of the School/Department through the OJT Coordinator with regard to students' progress in the company	1	4	3	12	0	1.70	PI

Giving of timely feedbacks to OJT students	5	9	0	6	0	2.65	I
Conduct of an OJT program evaluation upon completion of students in their OJT	18	2	0	0	0	3.90	FI
Giving of results of company assessment to OJT students	10	10	0	0	0	3.50	FI
CATEGORY MEAN	**10**	**5**	**1**	**3**	**1**	**3.05**	**I**

The assessment of the Computer Engineering students on their OJT program along institutional evaluation is presented in Table 2d. It can be seen from the table that overall; the different provisions of the OJT programs are implemented. The results of the present study highlight the conduct of an orientation about the OJT program and the forging of Memorandum of Agreement (MOA) between USL and the company/agency. These two provisions are equally important as these are the things needed to be done before the deployment of the OJT students in their respective workplaces.

Another noticeable highlights from the result of the study are the full implementation of the conduct of OJT program evaluation upon completion of student OJT and giving of results of company assessment to OJT students. It is important that OJT students are given their evaluation ratings so that they can reflect on their training performance in terms of knowledge, skills, attitude and personality (Felicen, Rasa, Sumanga, & Buted, 2014; Hurst & Good, 2010; Paulins, 2008). The students can look into the things that they can improve on while they are still in school so that after graduation they may be able to show good performances in their job. After all, the assessment of OJT students from supervisor itself is a quality of an effective OJT program (Marinas et al., 2014; Maertz et al., 2014).

From the results of this study, provision of necessary assistance such as referrals or recommendations in finding the company and regular monitoring of the School/Department through the OJT Coordinator with regard to students' progress in the company was perceived by Computer Engineering OJT students to be partially implemented. These two provisions should be improved in the implementation of the OJT program in the computer engineering area because these are necessary in achieving a quality and effective OJT program (Adiguzel, 2008). The OJT coordinator should keep in touch with the OJT students to know if they are encountering some problems in their respective OJT companies. This way the OJT coordinator may be able to help them define their goals, maximize their learning opportunities, provide counsel, and aid them in reflecting on their learning experiences (Maertz et al., 2014).

Table 3a. Assessment of the On-the-Job Training Program of Civil Engineering Students along Company Evaluation

Company Evaluation	**% Responses**					**Mean**	**QD**
	4	**3**	**2**	**1**	**0**		
Appropriateness of the type of training required and or/desired	50	50	8	4	1	3.27	I
Design of the training to meet the course objectives and expectations.	38	61	8	5	1	3.15	I
Coordination with USL, through the OJT Coordinator, in the design and supervision of the OJT	23	49	32	8	1	2.75	I
Company Treatment to OJT students	78	30	3	2	0	3.63	FI

Facilitation of the training, including the provision of the necessary resources/facilities needed to achieve the objectives of the OJT program	56	44	11	2	0	3.36	I
Assigned a supervisor to oversee OJT students' work	62	42	7	2	0	3.45	I
Supervision of the Supervisor through regular meeting, consultation or advise	53	50	10	0	0	3.38	I
CATEGORY MEAN	51	47	11	3	0	3.29	I

Table 3a shows the assessment of Civil Engineering students on the OJT program along company evaluation. It can be seen on the table that overall, the provisions with regard to obligations of companies where the OJT students took their OJT are all implemented. This result highlights the full implementation on the provision with regard to the company treatment to OJT students. This implies that the companies were able to provide a good working environment to the OJT students. A healthy working environment influences the student motivation and happiness when doing their tasks. The good working environment can be achieved when a company treats the OJT as a part of their organizational staff where they are involved in planning process or inviting them to staff meetings (Hurst & Good, 2010; Maertz et al., 2014). These activities will make them feel that they belong to the organization even if they are just OJT students.

The coordination with USL, through the OJT Coordinator, in the design and supervision of the OJT was implemented in the OJT program of the civil engineering; however, it turned the lowest mean score among the provisions. The OJT program will significantly improve if there is a close collaboration (Alpert et al., 2009), and clear and frequent communication (Maertz et al., 2014) between the OJT coordinator and the company because it will foster and cultivate the school-company relationship. The school could use this partnership and bear fruits in the future such as full-time employment placements, sponsorships and even donations by the company (Maertz et al., 2014).

Table 3b. Assessment of the On-the-Job Training Program of Electrical Engineering Students along Company Evaluation

Company Evaluation	**% Responses**					**Mean**	**QD**
	4	**3**	**2**	**1**	**0**		
Appropriateness of the type of training required and or/desired	18	8	0	0	0	3.69	FI
Design of the training to meet the course objectives and expectations.	15	11	0	0	0	3.58	FI
Coordination with USL, through the OJT Coordinator, in the design and supervision of the OJT	10	13	3	0	0	3.27	I
Company Treatment to OJT students	21	5	0	0	0	3.81	FI
Facilitation of the training, including the provision of the necessary resources/facilities needed to achieve the objectives of the OJT program	22	4	0	0	0	3.85	FI
Assigned a supervisor to oversee OJT students' work	21	5	0	0	0	3.81	FI
Supervision of the Supervisor through regular meeting, consultation or advise	20	6	0	0	0	3.77	FI
CATEGORY MEAN	18	7	0	0	0	3.68	FI

The assessment of the OJT program of Electrical Engineering Students along company evaluation is presented in Table 3b. In general, provisions with regard to responsibilities and duties of companies and partner agencies of USL are fully implemented. It is clear from the results that the OJT students have undergone training from the companies where they experience the real-world problems. The training and managing of students with an orientation similar to that of other employees are important to the success of the OJT program (Alpert et al., 2009; Maertz et al., 2014). Moreover, the work content training and access to development opportunities will improve the learning of the OJT students towards their prospective careers (Maertz et al., 2014).

The provision that the electrical engineering OJT program through the partner agencies could improve upon is the provision on the supervision of the supervisor through regular meeting, consultation or advice. Supervision with frequent and constructive feedbacks by company supervisors to OJT students is crucial in the success of an OJT program and in making a positive bond between the OJT student and the company (Coco, 2000; Maertz et al., 2014; Cook, Parker, & Pettjohn, 2004). It is much easier for OJT students to adjust to the demands and requirements of the workplace if they work with supervisors. Plus, with coaching and careful monitoring, student learning outcomes are maximized (Alpert et al., 2009). The supervisor's support is indeed very significant because they provide adequate direction and motivations to the OJT student which will make them feel valued; thus, producing an effective OJT program (Cook, Parker, & Pettjohn, 2004).

Table 3c. Assessment of the On-the-Job Training Program of Electronics Engineering Students along Company Evaluation

Company Evaluation	**% Responses**					**Mean**	**QD**
	4	**3**	**2**	**1**	**0**		
Appropriateness of the type of training required and or/desired	14	10	0	0	0	3.58	FI
Design of the training to meet the course objectives and expectations.	10	13	1	0	0	3.38	I
Coordination with USL, through the OJT Coordinator, in the design and supervision of the OJT	5	13	5	1	0	2.92	I
Company Treatment to OJT students	20	4	0	0	0	3.83	FI
Facilitation of the training, including the provision of the necessary resources/facilities needed to achieve the objectives of the OJT program	14	10	0	0	0	3.58	FI
Assigned a supervisor to oversee OJT students' work	6	18	0	0	0	3.25	I
Supervision of the Supervisor through regular meeting, consultation or advise	13	11	0	0	0	3.54	FI
CATEGORY MEAN	12	11	1	0	0	3.44	I

Table 3c shows the evaluation of the Electronics Engineering students to the different companies. It can be seen on the table that overall, the different companies implement all the provisions needed for an effective OJT program. The electrical engineering students believe that they experienced the training that they desired from the companies. This is important because OJT experience is considered to be the top priority for OJT students (Hurst & Good, 2010). Moreover, the school also wants their OJT students to achieve their desired learning outcomes while maintaining high academic standards, consistency and the application of theory (Alpert et al., 2009). It is expected from companies to help in continually refining the

OJT program and provide OJT students with realistic workplace scenarios that clarify work expectations and maximize the fit between what the OJT student wants and what the company provides (Hurst & Good, 2010).

In the table, the lowest mean was the assigning of a supervisor to oversee OJT students' work. The OJT program of the electronics engineering should make it a point that the companies where they deploy their students are willing to give supervisors that is willing to help them out in the company. In fact, some interns may need constant supervision and reinforcement due to lack of knowledge, skills, and abilities, confidence, or initiative (Maertz et al., 2014). Such lack of guidance can dissipate the academic goals of the internship, thereby decreasing the value of the OJT program.

Table 3d. Assessment of the On-the-Job Training Program of Computer Engineering Students along Company Evaluation

Company Evaluation	% Responses					Mean	QD
	4	3	2	1	0		
Appropriateness of the type of training required and or/desired	2	3	8	6	1	1.95	PI
Designed of the training to meet the course objectives and expectations.	2	6	5	5	2	2.05	PI
Coordination with USL, through the OJT Coordinator, in the design and supervision of the OJT	5	8	3	4	0	2.7	I
Company Treatment to OJT students	18	2	0	0	0	3.9	FI
Facilitation of the training, including the provision of the necessary resources/facilities needed to achieve the objectives of the OJT program	13	6	1	0	0	3.6	FI
Assigned a supervisor to oversee OJT students' work	16	3	1	0	0	3.75	FI
Supervision of the Supervisor through regular meeting, consultation or advise	10	8	2	0	0	3.4	I
CATEGORY MEAN	9	5	3	2	0	3.05	I

The assessment on the OJT Program of Computer Engineering students along company evaluation is shown on Table 3d. It can be seen on the table that overall, the provisions with regard to the obligations of the company are implemented. The computer engineering students believed that the assigning of a supervisor to oversee their work was fully implemented. This implies that the companies were able to assign supervisors in the workplace who have available time and competency to develop young talent. It is necessary that a company should consider assigning a mentor/supervisor to OJT students to maximize the possibility of a successful OJT program (Hurst & Good, 2010). The OJT supervisor that is designated by the company is the one who explains the rationale behind the goals of the company and the assignments that are given to the OJT students (Maertz et al., 2014).

It can be noticed from the table that the computer engineering students believe that the type of training that they desire and the design of the training was only partially implemented in the company where they were deployed. The computer engineering program has a wide area of specialization and this result implies that the area where the students want to learn does not fit with their workplaces during their OJT. This is something that the OJT program of the computer engineering should address to minimize the

potential pitfalls that might occur during the OJT (Maertz et al., 2014). The school, OJT students, and company will greatly benefit if there is a better matching and selection process from both the OJT students and the potential employers (Rigsby, 2013).

Table 4a. Effectiveness of the OJT Program of Civil Engineering Students

Program Effectiveness	% Responses					Mean	QD
	4	3	2	1	0		
Exposure to real world problems and practice	52	56	3	2	0	3.29	E
Development of self-confidence, self-motivation, and positive attitude towards work.	56	49	6	2	0	3.41	E
Improvement of personal skills and human relations.	68	37	6	2	0	3.51	VE
CATEGORY MEAN	59	47	5	2	0	3.44	E

The effectiveness of the OJT program to Civil Engineering students is shown in Table 4a. It can be seen from the table that the OJT program is very effective for civil engineering students in improving their personal skills. The improvement of personal skills among students is considered to be one of the benefits of having OJT program because students develop decision making skills (Bukaliya, 2012), interpersonal skills (Ismail, 2018), creativity (Galloway, Marks, & Chillas, 2014), and critical thinking skills (Bukaliya, 2012) which are needed when they become professionals. OJT program is also effective in enhancing the time management capability of students which is a skill that employers seek. Time management is the process of planning and exercising conscious control of time spent on specific activities, especially to increase effectiveness, efficiency, and productivity (Alpert et al., 2009). Moreover, OJT program improve the communication skill of students (Galloway et al., 2014; Alpert et al., 2009). It can be inferred then from the results that the OJT students were able to gain a deep understanding of the skills and knowledge required in their future workplaces.

Table 4b. Effectiveness of the OJT Program of Electrical Engineering Students

Program Effectiveness	% Responses					Mean	QD
	4	3	2	1	0		
Exposure to real world problems and practice	19	7	0	0	0	3.73	VE
Development of self-confidence, self-motivation, and positive attitude towards work.	20	6	0	0	0	3.77	VE
Improvement of personal skills and human relations.	16	10	0	0	0	3.62	VE
CATEGORY MEAN	18	8	0	0	0	3.71	VE

Table 4b shows the effectiveness of the OJT program of Electrical Engineering students.it is clear from the result that the OJT program is very effective for the electrical engineering students to gain valuable real-world experiences and to solve real-world problems in the workplace. These experiences will reduce their adjustment period that is required when starting employment (Ismail, 2018; Alpert et al., 2009; Bukaliya, 2012). Also, the OJT program enables them to learn outcomes regarding the engineering world and to become aware of the difficulties that they might encounter; thus, giving them an initial perspective into their future job. The OJT program is also a way for students to learn new systems, methods, and

techniques as well as new tools and equipment use in the industry (Adiguzel, 2008). After the OJT, the students can share these new things that they learned to the school which can be beneficial in updating the curriculum (Dobratz, Singh, & Abbey, 2014).

Table 4c. Effectiveness of the OJT Program of Electronics Engineering Students

Program Effectiveness	% Responses					Mean	QD
	4	3	2	1	0		
Exposure to real world problems and practice	15	9	0	0	0	3.63	VE
Development of self-confidence, self-motivation, and positive attitude towards work.	16	8	0	0	0	3.67	VE
Improvement of personal skills and human relations.	16	8	0	0	0	3.67	VE
CATEGORY MEAN	16	8	0	0	0	3.65	VE

Table 4c presents the effectiveness of the OJT Program of Electronics Engineering students. The results reveal that Electronics Engineering students perceive that the OJT program is also effective in the improvement of their personal skills and human relations. OJT program significantly contributes to the development of not only team-working skills but also customer management skills (Ismail, 2018) and customer service skills (Galloway et al., 2014) of students. During OJT, students learn proper conduct and practice hospitality and etiquette. They become conscious of the need of proper greetings and introductions (Felicen et al., 2014) when they deal with other people that indicate professionalism. It is then clear from the results that the OJT program of the Electronics Engineering is very effective in inculcating respect to OJT students through proper conduct.

Table 4d. Effectiveness of the OJT Program of Computer Engineering Students

Program Effectiveness	% Responses					Mean	QD
	4	3	2	1	0		
Exposure to real world problems and practice	14	4	2	0	0	3.60	VE
Development of self-confidence, self-motivation, and positive attitude towards work.	15	4	1	0	0	3.70	VE
Improvement of personal skills and human relations.	11	6	3	0	0	3.40	E
CATEGORY MEAN	13	5	2	0	0	3.57	VE

The effectiveness of the OJT program of Computer Engineering students is shown in Table 4d. It can be seen in the table that the OJT program of the Computer Engineering is very effective in the development of self-confidence, self-motivation, and positive attitude towards work of the OJT students. The development of these abilities is useful for budding professionals (Dobratz et al., 2014; Elarde & Chong, 2012). Aside from these abilities, OJT program also develops patience and industrial discipline of students (Adiguzel, 2008). These abilities will contribute to OJT students' positive attitude that conveys energy and enthusiasm to work. Positive attitude would encourage OJT students to shine without sacrificing their personality (Felicen et al., 2014). It can be gleaned in the table that the Computer

Engineering students developed these abilities and attitudes as one of the requirements when they are in the actual job or work (De Chavez et al., 2016).

Comments and Suggestions of SEAITE Students Regarding their OJTs

Placement in Company

The most common theme that was found from the responses of the students is the provision of necessary assistance such as referrals or recommendation of company where the students can take their OJT. Most students in previous studies also felt confused on who should arrange the OJT. They believe that the faculty should be responsible for arranging their OJT placement (Bukaliya, 2012; Gashaw, 2018). Some of the responses of the respondents are as follows:

OJT13 – Please do provide companies that are capable of attaining the objectives of OJT.

OJT32 – The school should recommend and help students to apply as OJT at different companies.

OJT37 – Assist the OJT's or help the students find companies for their OJT.

OJT61 – Promote necessary assistance such as referrals or recommendation in finding the company for OJT.

OJT75 – Provide referrals or recommendations in finding for the suited company for OJT.

Monitoring of the OJT by the OJT Coordinator

One important issue that is revealed from the study is the monitoring of the OJT coordinator on the OJT progress of the students and this result ties well with previous studies which believe that the degree of OJT coordinator or adviser participation is a critical OJT issue. An informal meeting between the student and OJT coordinator is valuable, as they allow students to gain feedback and share experiences (Alpert et al., 2009; Maertz et al., 2014). Some of the responses of the respondents are as follows:

OJT70 – The coordinator should also visit the OJTs.

OJT164 – The adviser should accompany the OJTs and guide them.

OJT165 – I hope the OJT adviser meet the students who will take the OJT to give a little advice.

Mismatch between Company and Student

Despite all the potential benefits, OJT programs also have their shortcomings. One of the shortcomings found out in the study is the mismatch between the companies with the course of the student. This finding is consistent with other studies where there is a poor match between the OJT student and host organization which diminishes the OJT experience (Alpert et al., 2009). Some of the responses of the respondents are as follows:

OJT169 – The school should recommend companies that are inclined with our course.

OJT175 – The company should consider the trainees' different courses or field in order to distribute the work properly which is inclined to the course of the trainee.

OJT183 – I highly recommend the company (iWave Inc.) for OJT, especially for IT students.

Duration of the OJT Program

Another issue brought out by the students is the duration of the OJT program. There is, however, some contradictions with regard to the duration of the OJT program in different researches. A study reveals that students may not want too much time on the OJT, as they may have to balance this with other responsibilities including other classes or a paid part-time job (Alpert et al., 2009). Other results show that OJT period was too short and the majority of students think that the most appropriate internship period should be six months (Bukaliya, 2012; Mihail, 2006). The findings of this study are in accordance with the latter findings. Some of the responses of the respondents are as follows:

OJT36 – OJT must be one semester so that the student may develop his/her potential for its future. I also suggest that instead of 240 hours it will turn into 300-540 hours. The given required number of hours of OJT was so small.

OJT73 – It would be better if the minimum hours will be more than 250 hours, or 300 hours at least.

School Relationship with the Company

Another theme that was found out in the study is the relationship between the school and the company. The OJT students believe that the school needs to nurture its coordination and connection with the companies. This finding supports previous studies that suggest close coordination between school and company to cultivate their relationship (Alpert et al., 2009; Maertz et al., 2014). Some of the responses of the respondents are as follows:

OJT33 – The school should directly coordinate with the companies and not the students themselves.

OJT50 – University connection to the companies should be strengthened so that there will be a good result on the student prior the OJT proper.

Course Offerings Prior the OJT

It was found out from the responses of the OJT students that they need some courses prior the OJT proper. The OJT program of the engineering is given during the fourth year summer term which still leaves a full academic year. This means that there are still courses that they have not finished before their OJT. Some of the responses of the respondents are as follows:

OJT104 – It is recommended that students undergo/enroll the course Construction Methods and Project Management to better facilitate the transition of the students into the OJT. This course could better supplement the skills and knowledge of the students to become effective during their OJT.

OJT157 – I suggest some subjects will be taught earlier to provide basic knowledge on the different works the students will encounter in the field.

CONCLUSION

The study concludes that the different provisions of On-the-Job Training program of the School of Engineering, Architecture and Information Technology Education is implemented; however, there are some provisions that need to be worked on by the different engineering programs to guarantee its full implementation. Also, the OJT program was effective in providing an actual working environment which will help prepare the students in the challenges they will face with the current industries.

RECOMMENDATIONS

The different program coordinators of the SEAITE Department should double their effort in looking for possible linkages from the industry so that they may be able to provide the students list of companies where they can take their OJT.

The curriculum of the different programs of the SEAITE department should be revisited regularly to align the courses that are offered prior the OJT of the students. The courses that are deemed necessary by the previous OJT students should be offered before the OJT program.

The OJT program of the different department should be handled by an OJT coordinator who has industry experience so that the OJT coordinator can share and transfer to the students the actual knowledge and skills from the industry. Also, the OJT coordinator should maximize the use of technology in monitoring the students such as creating social media groups where the OJT can post their learning in their work.

SEAIDITE Department may consider the development of an OJT Manual which will have the roles and responsibilities of all the academe stakeholders.

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