

# Correlation of Internship Related Skills and Academic Performance in Selected Engineering Professional Courses

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**Abstract** – *This study aimed to present the final grade of engineering students in Internship and selected professional courses for the past three years (2015-2017); determine the level of Internship Self-Assessment Skills in terms of Management Skills, Interpersonal Skills, Work Skills and Communications Skills; and to test the significant relationship of final grade in selected professional courses and internship with OJT Self-Assessment. Descriptive research method was utilized in the study with the total population of the students who particularly underwent internship program. Results showed that the average performance of the Engineering students for the last three years is very good. Engineering graduating students are very much capable in terms of their interpersonal skills in internship and they are capable in terms of their management, work and communication skills. It also implies that there is a significant difference in the self-assessment among engineering interns in terms of Interpersonal Skills. While there is no significant difference on communication, work and management skills.*

**Keywords** – *Internship, Academic Performance, Engineering, Skills, OJT Performance*

## INTRODUCTION

Internship plays a vital role in molding the students for the real-life world specifically in the challenging work environment which is necessary for students to apply their knowledge, values and skills that are learned in a classroom, this will help them broaden their opportunities to showcase their ability and expertise that can help them to further their career. It hinges on the relationships and connections between the Schools, student, industry and institutions. Thus, internship is one of the requisites in the curriculum integrated by the higher educations, it is commonly undertaken by the undergraduate students. The need to conduct this training will provide them opportunity to improve their academic

knowledge and enhance their craft that are much needed in the workplace after they graduate.

Internships are designed to expand the depth and breadth of academic learning in specific professional courses. It is an opportunity to receive experience in applying theories learned in the classroom to specific experiences in the community and work world. An internship can also heighten the awareness of students in community issues, motivate them to create opportunities, embrace new ideas, and give direction to positive change. A successful internship can give the students valuable information in making decisions about the direction of future studies or employment [1].

An internship is an opportunity to not only use and develop industry-related knowledge and skills, but also to enhance some of the skills that are transferable to any professional work setting. This internship may be the first introduction to the world of work. No matter where the skills and understanding of professionalism of the students lie, internship is a chance for them to develop them even further.

According Kimani, Kara and Njagi [2], the purpose of education is to equip the citizenry with values, skills and knowledge to reshape their society. Education helps an individual develop his/her capabilities, attitudes and behavior that is acceptable to the society. The benefit of quality education is its ability to adapt to the changing needs of the country as the world changes and spearhead the development of human resource and the country's economy. One of the indicators of quality education is cognitive achievement of learners which is evident in students' academic performance.

Acquiring knowledge in a classroom-based environment will never provide students adequate information regarding the complexities, problem analysis and solving that usually involves in a workplace [4]. Immersing the students in a wider range of work environment can help them to fully develop their

communication skills, work skills, interpersonal skills and management skills. These skills can boost their understanding about the industry setting and gaining confidence in their abilities.

Al-Kadri [4] claimed that self-Assessment is the contribution of students in self-perceptions for a greater motivation and criteria to apply to their work and influencing decisions about the level of the students. Self-evaluation can motivate the premium and inspiration dimension of students for the subjects enhance learning and better academic performance, helping them being developed of basic abilities for analysis of their own work.

Students need to self-evaluate to know when they are learning, how much effort they should expend for advancement, when they have been productive, when they are wrong, and which learning techniques function admirably for them [5]. Exact self-assessment empowers students to perceive what they have ached and recognize what needs further work. Students who encounter accomplishment with tolerably difficult and challenging undertakings will ascribe their success to capacity and effort as opposed to outside attributions, for example, fortunes or assistance from different understudies. Making these exclusive attributions is, thus, founded on the capacity of students to self-assess and self-evaluate. This learning enables students to create self-adequacy for future self-efficacy in comparable assignments.

The importance of communication skills is undoubtedly significant for practicing engineers as communication can be an engineers' strongest ability. Communication skills is seen as essential tool or skill used by all workforce levels in any industry. According to Bhattacharyya [6], the importance of communication skills as a communicative tool is recognized and acknowledged as an indispensable skill by stakeholders from both the industry and education sector, that graduates must be equipped with for future employment needs at the workplace.

Work skills is the ability to do well in a certain duty or task given. Whether it's an internship or an actual job, the key to getting the best out of any work experience is to extract the maximum learning value from what you do. Doing the tasks and obligations confidently can help the student to boost their work skills.

As students make the transition into the world of work, interpersonal skills become increasingly important. Chandrasekaran and Rajesh [7] pointed out that interpersonal abilities are a definite advantage and something employers always look for the ability to assemble associations with everyone around you under any conditions, and the capacity to motivate them to do

what should be done is fundamental. This skill set also includes being able to negotiate, persuade, and instruct people as well as coordinate our actions with them and read their body language, also known as non-verbal cues.

Management skills consist of identifiable sets of actions that individuals perform and that lead to certain outcomes. Understanding and displaying good management skills will help to position you for a successful career no matter what level you're starting at. Learn the essential role that good management skills play in the workplace.

Students can gain skills from work-based learning including amenity learning opportunities and internships. Management skills can be nearly anything that enables you to manage others effectively. While some skills will vary based on your industry, there are several that are universal across nearly every work environment.

### **OBJECTIVES OF THE STUDY**

The purpose of this study is to present the final grade of engineering students in OJT for the past three years (2015-2017). It also aims to determine the level of OJT Self-Assessment Skills as assessed by the students in terms of Management Skills, Interpersonal Skills, Work Skills and Communications Skills; to test the significant difference in the self-assessment and academic performance when they are grouped according to year of graduation, degree program and those with and without INC and to test the significant relationship of final grade in internship and selected professional courses and OJT Self-Assessment; and to propose an action plan based on the findings.

### **METHODS**

#### **Research Design**

In order to gather the needed information, the researcher used the descriptive design method of research. As defined by Martinez, descriptive method involves collecting data to answer questions concerning the current status of the object of a study. This has provided essential knowledge about the nature of the subject. The researchers had to gather all the information and conduct interviews to gather necessary data that are used to achieve the objectives of the study.

#### **Participants of the Study**

Total students who already accomplished on the job training for the last 3 years (2015-2017), comprised of 123 students.

#### **Data Gathering Instrument**

To be able to gather the necessary information and data, the researcher used the survey and questionnaires

from the students on the job training manual for the past 3 years (2015-2017). It is composed of four parts: communication skills, work skills, interpersonal skills and lastly the management skills.

### Procedure

The researcher gathered the entire OJT manual submitted by the students to their respective advisers, where the data needed are collected for analysis. Every student is required to complete the OJT self-assessment skills form attached to their manual. The collected data were classified, tabulated and coded for analysis.

### Data Analysis

The statistical tools were employed in interpreting the data obtained from the survey such as Frequency count and percentage was used to analyze the profile of the respondents with respect to the selected variables. Weighted Mean was used to determine the degree of perception of the student respondents in the school factors related to their self-assessments. Analysis of variance and T-test were used to determine the significant difference on the self-assessment and academic performance when grouped according to the profile of the subjects. Pearson product moment correlation coefficient was used to test the relationship between the self-assessment of skills and selected professional courses. Pearson product moment correlation coefficient was used to test the relationship between the self-assessment of skills and selected professional courses.

The given scale was used to interpret the result of the data gathered: Scale: 4.50-5.00: Very Much Capable (VMC); 3.50-4.49: Capable (C); 2.50-3.49: Moderately Capable (MC); 1.50- 2.49: Slightly Capable (SC); 1.00-1.49: Not Capable (NC)

## RESULTS AND DISCUSSION

**Table 1 Profile of the Engineering Students (N=121)**

Profile	Category	Frequency	Percent
Year Graduated	2015	41	33.9
	2016	44	36.4
	2017	36	29.8
Degree Program	ECE	9	7.4
	CpE	31	25.6
	ME	23	19.0
	IE	58	47.9
OJT Remark	With INC	53	43.8
	Without INC	68	56.2

Table 1 presents the profile of Engineering students for three school years. There are 44 or 36.4 percent of engineering students who underwent internship in the

year 2016. Meanwhile, there are 41 or 33.9 percent enrolled students in the year 2015 while 36 or 29.8 percent from the year 2017.

As regard to the degree program of the students 58 or 47.9 percent were IE graduates, while the CpE graduates had the frequency of 31 or 25.6 percent, ME graduates had 23 or 19 percent and the lowest frequency is 9 or 7.4 percent from the ECE graduates. In terms of OJT Remark comprised higher frequency of 68 or 56.2 percent are students without INC while 53 or 43.8 percent of the students with INC.

Table 2 shows that there is a 42.1 percent of the engineering students are capable while 38.8 percent of them are very much capable in relaying accurate messages and information from one person to another (4.29). More than half of them or 57.9 percent said that they can comprehensively understand the details of company processes or activities through attentive listening (4.25) while 28.9 percent of them said they are very much capable and only few or 5.8 percent as moderately capable. An individual learns the basics of oral communication right at home. The school environment takes this learning a notch higher by teaching the student how to interact with peers and teachers alike. The quality of communication in student life will define professional communication later in life. A student's ability to communicate effectively can greatly affect their career development in the future workplace. As a university student who is getting ready to start on their chosen career, he or she should take the opportunity in any activities that develop communication skills in a wider and complete aspect so that communication skills can be fully developed. Students need to put in effort to develop their communication skills to be able to succeed in their chosen profession [8].

Moreover, almost 52.9 percent of them are capable in communicating confidently to people with higher position in the industry (4.23) while 30.6 percent of them said they are very much capable but there is 9.1 percent of them still are moderately capable.

Communication skills are vital for a student's academic success and future career prospects. In today's challenging environment, students must not only possess academic expertise, but also the requisite skills to enhance their learning and employability prospects in the future.

In addition, 44.6 percent of them are capable of writing reports, pertinent company documents or even simple letter to communicate with people in the office (4.17) while 32.2 percent of them are highly capable but 14.9 percent of them are moderately capable.

**Table 2. Percentage Distribution of Internship Self-Assessment on Communication Skills**

Communication Skills	NC	SC	MC	C	VMC	WM	VI	Rank
1. I can communicate confidently to people with higher position in the industry.	-	-	9.1	52.9	30.6	4.23	C	3
2. I can express thoroughly my ideas during meetings and business related discussions.	-	.8	22.3	56.2	13.2	3.88	C	5
3. I can comprehensively understand the details of company processes or activities through attentive listening.	-	-	5.8	57.9	28.9	4.25	C	2
4. I can relay accurate messages and information from one person to another.	-	-	11.6	42.1	38.8	4.29	C	1
5. I'm capable of writing reports, pertinent company documents or even simple letter to communicate with people in the office	-	.8	14.9	44.6	32.2	4.17	C	4
<b>Composite Mean</b>	-	0.8	12.74	50.74	28.74	4.17	C	

However, there are 22.3 percent of them are moderately capable in expressing thoroughly their ideas during meetings and business-related discussions while more than half of them or 56.2 percent are capable and only 13.2 percent are very much capable.

The composite mean score of 4.17 implies that the engineering students are capable of performing their communication skills during their internship with 50.74 percent of them majority said they are capable while 28.74 percent of them are very much capable but there is still 12.74 percent as moderately capable and 0.8 percent as slightly capable.

Good communication enables students to assimilate more from the learning process by empowering them to ask relevant questions and discuss doubts. Communication skills inculcate professionalism in speaking styles, ways of self-expression and attitudes towards others, and these traits would hold students in good stead in their professional lives. The hallmark of a good student communicator is that he has mastered the art of preparing, organizing and delivering successful oral presentations.

Table 3 shows the percentage of students who are very much capable in learning how to work effectively with the team and carrying out the responsibilities with great feelings of enthusiasm and interest (4.52) is 48.8

while 43 percent of the students are capable, but .8 percent of them are moderately capable. Almost half of them or 49.6 are very much capable in performing confidently with the duties and obligations assigned to them during the training (4.51), whereas 40.5 percent of them are capable and only few or 2.5 percent of them are moderately capable.

Attitude towards work projects a professional image which conveys the energy and enthusiasm. With the attitude, it illustrates the commitment they had in their endeavors. Attitude will allow the individual personalities to shine without compromising the professional presence of the person and through attitude interns can show respect towards others [9].

Furthermore, half of the students or 50.4 percent are capable in accurately executing the commands and achieving the desired goals and output of the task (4.38) where 38.8 percent of them are very much capable of the said work skills and only 3.3 percent are moderately capable.

Moreover, 48.8 percent of the students are capable to perform the tasks with minimal supervision (4.28), the percentage of the students who are very much capable is 34.7 and the students who are moderately capable are 9.1 percent.

**Table 3. Percentage Distribution of Internship Self-Assessment on Work Skills**

Work Skills	NC	SC	MC	C	VMC	WM	VI	Rank
1. I performed confidently the duties and obligations assigned to me during the training.	-	-	2.5	40.5	49.6	4.51	VMC	3
2. I performed the tasks with minimal supervision	-	-	9.1	48.8	34.7	4.28	C	5
3. I accurately execute commands and achieve the desired goals and output of the task	-	-	3.3	50.4	38.8	4.38	C	4
4. I learned how to work effectively with the team.	-	-	.8	43.0	48.8	4.52	VMC	1.5
5. I carried out my responsibilities with great feelings of enthusiasm and interest	-	-	.8	43.0	48.8	4.52	VMC	1.5
<b>Composite Mean</b>	-	-	3.3	45.14	44.14	4.44	C	

Internships provide invaluable professional experience that allows the students to test the theories and concepts that have been introduced to them throughout their college career, not to mention this will increase their chances of being offered a full-time job later on. No matter what major or their preferred industry, employers look for a core set of skills and traits when considering applicants for both internships and entry-level jobs.

With the composite mean score of 4.44 suggests that the engineering students are capable performing their work skills during their internship with 45.14 percent of them said that they are capable while 44.14 percent of them are very much capable while 3.3 percent of them are moderately capable.

Students benefit from internships because the professional work experience makes them more marketable and helps them develop skills they would have difficulty acquiring in the classroom. Employers benefit from internships because they provide them with risk-free-trial access to potential future employees, and schools benefit from them because it helps strengthen their connections to the business community.

Table 4 shows that majority of students or 61.2 percent of them are very much capable to keep the confidential information from people and even industrial operations in order for them to be considered trustworthy (4.66) while the 31.4 percent of the students are capable. More than half of them or 57 percent are very much capable to always stay honest, kind and sociable to the people inside and outside of the company vicinity (4.60) while 33.9 percent are capable, and 1.7 percent are moderately capable. There is 51.2 percent of the engineering students said that they can create a friendly atmosphere during regular conversation with people in the company (4.49) while 35.5 percent of them are

capable but there is 5.8 percent who are moderately capable.

Interpersonal skills are skills in processing and interpreting both verbal and nonverbal information from others in order to respond appropriately. A skilled communicator can select key pieces of a complex idea to express in words, sounds, and images, in order to build shared understanding.

Moreover, almost half or 49.6 percent of them are capable to express and share their feelings and experiences with people whom they feel interested to know them more (4.43) while 41.3 percent are very much capable and the 1.7 percent of the students are moderately capable. In addition, the 49.6 percent of the students said that they are capable to understand the needs and feelings of their co-workers (4.34) while 37.2 percent of them are very much capable and 5.8 percent are moderately capable.

Students need to be taught the skills required for interacting effectively with others and then motivated use these skills if students are to become socially competent. Through awareness of how an individual interact with others and with practice students can improve their interpersonal skills.

Table 5 shows that half of the engineering students or 51.2 percent of them interpreted their selves that they are very much capable in managing their behavior and control their emotions in times of pressure and stress at work (4.54) while the 39.7 percent are capable, and the 1.7 percent are moderately capable.

Students who are very much capable in categorizing tasks and responsibilities which needed to be prioritized (4.49) are 49.6 percent while 38.8 percent are capable, and 4.1 percent are moderately capable.

**Table 4. Percentage Distribution of Internship Self-Assessment on Interpersonal Skills**

Interpersonal Skills	NC	SC	MC	C	VMC	WM	VI	Rank
1. I am sensitive enough to understand the needs and feelings of my co-workers	-	-	5.8	49.6	37.2	4.34	C	5
2. I know how to create friendly atmosphere during regular conversation with people in the company.	-	-	5.8	35.5	51.2	4.49	C	3
3. I know how to keep confidential information from people and even industrial operations in order for me to be considered trustworthy.	-	-		31.4	61.2	4.66	VMC	1
4. I can express and share my feelings and experiences with people whom I feel interested to know me more.	-	-	1.7	49.6	41.3	4.43	C	4
5. I always stay honest, kind and sociable to the people inside and outside of the company vicinity.	-	-	1.7	33.9	57.0	4.60	VMC	2
<b>Composite Mean</b>	-	-	3.75	40	49.58	4.50	VMC	

On the other hand, also got 49.6 percent, the students are also very much capable in handling priorities and set deadlines for their goals to be achieved (4.48), while 38 percent of them are capable and only 5 percent of them are moderately capable.

Self-management, which is also referred to as 'self-control' or 'self-regulation', is the ability to regulate one's emotions, thoughts, and behavior effectively in different situations. This includes motivating oneself and setting and working towards personal and academic goals [10]. Students with strong self-management skills arrive to class prepared, pay attention, follow directions, allow others to speak without interruption, and work independently with focus. Self-management is a trait that most of the students need to develop sooner or later. It involves prioritization, time management and focus, adaptability to changing situations and a core work-life balance [11]. Building management skills in school helps the students to balance their work loads and adapt to a more dynamic work place.

Additionally, the more than half of engineering students are very much capable in always going to the work area ahead of time (4.47) with the percentage of 53.7, while 29.8 percent were capable, the students who are moderately capable is 8.3 percent and the remaining .8 percent students are slightly capable. Lastly the students or 47.9 percent of them said that they can manage their time effectively to finish their duties and responsibilities during office hours (4.45), 43 percent of them are very much capable and 1.7 percent of them are moderately capable.

Time management is considered to be a skill that should be mastered by all the individuals at all levels and in all walks of life. Some people keep extremely busy schedules that arise out of their educational

requirements, office work, job duties or household chores. In order to avoid feeling stressed or pressurized due to work, it is required to effectively implement time management.

Yeasmin [12] points out that time management is the heart and soul of the management skills. How a person manages his work depends greatly on how he manages his time. Punctuality and reliability are what the employers are looking for. Time management skills are important because it helps the students to structure their work in a way that allows them to accomplish their goals.

With the composite mean score of 4.49, the table specifies that the engineering students are capable in performing their management skills in their internship, almost half of them are very much capable, the 38.84 percent of students said that they are capable, while 4.16 percent are moderately capable and only .8 percent are slightly capable.

Management skills can be defined as certain attributes or abilities that an executive should possess in order to fulfill specific tasks in an organization. They include the capacity to perform their duties in an organization while avoiding crisis situations and promptly solving problems when they occur. Management skills can be developed through learning and practical experience [13].

As seen from Table 6, it reveals that the students excel in On-the-Job Training with a total mean grade of 1.67 ( $\sigma = 0.30762$ ) with the verbal interpretation of Very Good. Meanwhile the English course obtained a good mean score of 2.07 ( $\sigma = 0.4204$ ) in second rank. In like manner, third in rank is Engineering Management which has the mean grade of 2.51 ( $\sigma = 0.45575$ ), followed by Safety Management with the mean grade of 2.61 ( $\sigma = 0.38706$ ) and lastly Ethics got the mean grade of 2.73 ( $\sigma = 0.31389$ ), with the verbal interpretation of Fair.

**Table 5. Percentage Distribution of Internship Self-Assessment on Management Skills**

Management Skills	NC	SC	MC	C	VMC	WM	VI	Rank
1. I can manage my time effectively to finish my duties and responsibilities during office hours.	-	-	1.7	47.9	43.0	4.45	C	5
2. I can go to the work area always ahead of time.	-	.8	8.3	29.8	53.7	4.47	C	4
3. I can categorize tasks and responsibilities which need to be prioritized.	-	-	4.1	38.8	49.6	4.49	C	2
4. I can handle priorities and set deadlines for the goals to achieve.	-	-	5.0	38.0	49.6	4.48	C	3
5. I can manage my behavior and control my emotions in times of pressure and stress at work.	-	-	1.7	39.7	51.2	4.54	VMC	1
<b>Composite Mean</b>	-	.8	4.16	38.84	49.42	4.49	C	

**Table 6. Academic Performance of the Trainees**

Academic Performance	WM	VI	SD	Rank
1. On-the-Job Training	1.67	Very Good	0.30762	1
2. English	2.07	Good	0.4204	2
3. Safety Management	2.61	Fair	0.38706	4
4. Engineering Management	2.51	Fair	0.45575	3
5. Ethics	2.73	Fair	0.31389	5

Scale: 1.00-2.00: Very Good; 2.01-2.50: Good; 2.51-3.00: Fair; Below 3: Poor

The students' grade in Ethics got the lowest rank most probably due to the span of time the students has to study. The College of Engineering offers Ethics every summer class, although the students take the same number of hours like the usual semester, the student may have given more importance on their thesis rather than the minor courses. The students learned to spend their time wisely, since this era is mostly revolving around technology, most of the students spend their free time on their gadgets rather than studying in the library or doing what is necessary. Time management is a highly important matter as demands are placed upon any hard-working person with responsibility [14]. The academic performance of the Engineering students shows that curriculum plays a vital role on the delivery of appropriate instruction to ensure the quality of knowledge, skills and values as possible outcomes of learning process being undertaken by the university [15].

Table 7 shows that there is significant difference in the self-assessment among Engineering interns in terms of interpersonal skills as denoted by the computed p-value of 0.020 which is less than 0.05 alpha level. Result showed that those students graduated from batch 2015

have significantly higher assessment of their interpersonal skills than 2016 which obtained significantly lower self-assessment rating.

Meanwhile, there is no significant difference on communication, work and management skills as denoted by the computed p-values which are greater than 0.05 alpha level. This signifies that their self-assessment on the following skills across all three batches of engineering graduates have diverse response on how they capable they are on performing their duties and responsibilities using communication, work and management skills.

Likewise, there is a significant difference on the academic performance of the engineering interns in terms of their final grades in OJT and safety management as denoted by the computed p-values of less than 0.05 alpha level. Result shows that those student graduates from batch 2015 have significantly higher final grades in OJT than those from batch 2016 while those from batch 2016 have significantly higher final grades in Safety Management than those graduates from batch 2015. Meanwhile, the average grade of graduates from batch 2017 is considered almost in between the grades of 2015 and 2016. Furthermore, there is no significant difference on the final grades of the engineering students in terms of their courses in English, Engineering management and Ethics.

In table 8, there is no significant difference on the self-assessment in terms of skills among Engineering students as denoted by the computed p-values which are greater than 0.05 alpha level. Result showed that the reported variance between degree programs is not enough to consider the differences. The self-assessment across all four-degree programs obtained varying degrees on how they are capable of accomplishing the assigned tasks to them.

**Table 7. Difference on the Self-Assessment and Academic Performance of Engineering Students when Grouped according to Year Graduated**

	2015	2016	2017	f-value	p-value	VI
<b>Self-Assessment</b>						
1. Communication	4.30	4.05	4.18	2.679	.073	Not Significant
2. Work	4.49	4.37	4.48	.958	.7	Not Significant
3. Interpersonal	4.63	4.40	4.51	4.033	.020	Significant
4. Management	4.54	4.38	4.56	2.220	.113	Not Significant
<b>Academic Performance</b>						
1. OJT	1.58	1.79	1.64	5.710	.004	Significant
2. English	2.12	2.02	2.08	.626	.537	Not Significant
3. Safety Management	2.69	2.48	2.67	3.775	.026	Significant
4. Engineering Mgmt	2.59	2.46	2.49	.871	.421	Not Significant
5. Ethics	2.76	2.73	2.70	.289	.749	Not Significant

\*Significant at p-value < 0.05

**Table 8. Difference on the Self-Assessment and Academic Performance of Engineering Students when Grouped according to Degree Program**

	ECE	CpE	ME	IE	f-value	p-value	Interpretation
<b>Self-Assessment</b>							
1. Communication	4.36	4.14	4.17	4.14	.535	.659	Not Significant
2. Work	4.58	4.58	4.35	4.40	1.820	.148	Not Significant
3. Interpersonal	4.53	4.59	4.39	4.50	1.174	.323	Not Significant
4. Management	4.44	4.50	4.35	4.54	1.017	.388	Not Significant
<b>Academic Performance</b>							
1. OJT	1.69	1.62	1.52	1.76	3.930	.010	Significant
2. English	1.63	2.27	1.67	2.19	21.782	.000	Significant
3. Safety Management	2.31	2.69	2.28	2.74	12.835	.000	Significant
4. Engineering Mgmt	2.00	2.68	1.98	2.71	36.567	.000	Significant
5. Ethics	2.28	2.68	2.87	2.77	10.322	.000	Significant

\*Significant at  $p\text{-value} < 0.05$

However, there is a significant difference on the academic performance of the engineering interns in terms of their final grades in OJT, English, Safety Management, Engineering Management and Ethics as denoted by the computed p-values of less than 0.05 alpha level.

Results showed that Mechanical Engineering students obtained a significantly higher final grade in OJT, Safety Management and Engineering Management compared to significantly lower grades of Industrial Engineering students.

Meanwhile, Electronics Engineering students obtained significantly higher grade in English compared to significantly lower grade of Computer Engineering students. Furthermore, Electronics Engineering students obtained significantly higher grade in Ethics compared to significantly lower grade of Mechanical Engineering students.

Meanwhile in table 9 below shows that there is a significant difference on the self-assessment in terms of interpersonal skills among engineering when they are grouped according to their OJT remarks as denoted by the computed p-value of less than 0.05 alpha level. Result

showed that those engineering students without INC have significantly higher level of interpersonal skills than those with INC remark in OJT. Meanwhile, there is no significant difference in their self-assessment in terms of communication, work and management skills.

When it comes of academic performance, there is no significant difference on their final grades in OJT, English, Safety management, Engineering Management and Ethics as denoted by the computed p-values of greater than 0.05 alpha level. This signifies that those students with high academic performance can still obtain INC remarks on their OJT not only those with low academic performance.

For table 10, it shows that there is a significant relationship between the skills assessment in terms of communication, interpersonal and management skills and the final grade in terms of OJT among engineering students as denoted by the computed p-values of less than 0.05 alpha level. Result showed that those students with higher final grades in OJT are also those students with high level of skills assessment in terms of communication, interpersonal and management skills.

**Table 9. Difference on the Self-Assessment and Academic Performance of Engineering Students when Grouped according to OJT Remark**

	With INC	w/out INC	t-value	p-value	Interpretation
<b>Self-Assessment</b>					
1. Communication	4.07	4.24	-1.871	.064	Not Significant
2. Work	4.38	4.49	-1.476	.143	Not Significant
3. Interpersonal	4.40	4.59	-2.836	.005	Significant
4. Management	4.43	4.53	-1.306	.194	Not Significant
<b>Academic Performance</b>					
1. OJT	1.85	1.54	-.198	.843	Not Significant
2. English	2.06	2.08	.026	.980	Not Significant
3. Safety Management	2.61	2.61	.482	.630	Not Significant
4. Engineering Mgmt	2.53	2.49	-1.068	.288	Not Significant
5. Ethics	2.69	2.76	-1.068	.288	Not Significant

\*Significant at  $p\text{-value} < 0.05$



**Table 10. Significant Relationship Between Academic Performance and Skills Assessment**

		Communication	Work	Interpersonal	Management
OJT	r-value	.278(**)	.141	.219(*)	.206(*)
	p-value	.003	.138	.020	.029
English	r-value	.063	-.016	.078	-.046
	p-value	.509	.867	.415	.630
Safety Mgmt	r-value	.027	-.018	.037	-.047
	p-value	.781	.853	.701	.625
Engineering mgmt	r-value	-.035	-.097	-.013	-.095
	p-value	.718	.307	.889	.317
Ethics	r-value	.024	-.029	.168	.018
	p-value	.799	.760	.076	.849

\*\* Correlation is significant at the 0.01 level (2-tailed); \* Correlation is significant at the 0.05 level (2-tailed).

Meanwhile, there is no significant relationship on the academic performance of students in English, Safety Management, Engineering Management and Ethics and their skills assessment. This signifies that those students with either high or low academic performance have varying degrees of assessment on their capability to perform their responsibilities in the company.

## CONCLUSIONS

The researcher concluded that there is an average enrolment of 40 students per school year in the internship of the College of Engineering where majority are Computer Engineering students and without INC mark in the OJT and graduating students are very much capable in terms of their interpersonal skills in internship and they are capable in terms of their management, work and communication skills. Engineering interns have a very good performance in terms of their final grades in On-the-Job training course.

Batch 2015 Graduates have significantly higher assessment in Interpersonal skill and academic performance in OJT when compare to batch 2016 while batch 2016 has significantly higher grade in Safety Management. Also, Mechanical Engineering students have significantly higher academic performance in OJT, Safety Management and Engineering Management compared to Industrial Engineering while Electronics Engineering students have significantly higher academic performance in English and Ethics compared to IE.

Meanwhile those students without INC in OJT have significantly higher assessment on interpersonal skills compared to those with INC mark and with high academic performance in OJT have higher communication, interpersonal and management skills assessment.

## RECOMMENDATION

The researcher recommends that English teachers may further enhance the communication skills of the

students through intensified instruction of giving enough classroom exercises and activities designed to boost their confidence in both writing and oral communications and improve communication skills and interactions with others would provide a better opportunity for the students to gain confidence in the workplace.

While the Department Chair or the program head may consistently seek the advice of the alumni regarding the latest trend in the work environment to enhance the graduating students work skills. Also, engineering students should be more involved on programs, trainings or workshops that can boost their attitude towards work and to be engaged in working with other people and must understand the value of having appropriate attitude towards work through making a classroom as an example of a workplace where they can exercise and practice their leadership skills.

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