

# CONTRIBUTIONS OF ON-THE-JOB TRAINING PROGRAM TO THE SKILLS DEVELOPMENT OF AUTOMOTIVE TECHNOLOGY GRADUATES

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**ABSTRACT:** *This study determines the contribution of the on-the-job training (OJT) program to the Automotive Technology graduates of Surigao del Sur State University (SDSSU), Cantilan Campus in the Academic Year 2014-2018. This further attempted to find out if the OJT program had developed skills among automotive graduates. A descriptive method was used in this study. It is a fact-finding method using the questionnaire in gathering data. The data gathered were randomly selected from the graduates of the school year 2014-2018. The results reveal that there is a development in the cognitive, social and technical skills of the trainee during the OJT based on the data tabulated and computed. There is a significant development between the training program met by the automotive graduates based on the test statistics. It was rated according to the scale and find outstanding. In view of the findings, this study concludes that the on-the-job training program of SDSSU-Cantilan Campus contributed to the development of social, cognitive and technical skills of Automotive Technology graduates from the school year 2014-2018. The study also provides recommendations that may be considered.*

**Keywords:** On-the-job training, contribution, development, social, cognitive, technical, automotive technology, graduates

## 1. INTRODUCTION

In the sojourn of finding relevant and quality education, a skilled trainee and trainer must be developed. One way is through On-The-Job Training (OJT) which measures the competency and skill of the student or trainee. In this process, the students would be able to experience and understand what OJT is. In accordance with Ched Memorandum Order No. 104, Series of 2017, known as Revised Guidelines for Student Internship Program in the Philippines (SIPP), the internship program is meant to provide students with an opportunity to complement their formal learning with practical knowledge, skills, and desirable attitudes and to gain hands-on experience in recognized Host Training Establishment (THE). Moreover, it aims to enhance the knowledge and skill acquired in the 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.

Automotive Technology is one of the major offerings of SDSSU Cantilan Campus where it is one of the fields that would propel learners as a skilled worker of the country and making students as vital agents of hope and success. OJT uses the regular or existing workplace tools, machines, documents, equipment, knowledge and skills necessary for employees to learn to effectively perform his/her skills. It is teaching the skills, knowledge, and competencies that are needed for employees to perform a specific job within the workplace (Heatfield, 2016).

This study is formulated in order to know the contribution of the OJT in SDSSU – Cantilan Campus to the development of the Skills of the Automotive Technology graduates. Moreover, the administration could also yield better output and make decisions to whatever the result of the study would have.

## 2. STATEMENT OF THE PROBLEM

This study will determine the contribution of OJT Program to the development of skills of Automotive Technology graduates of SDSSU – Cantilan Campus in the academic year 2014-2018

Specifically, this sought to answer the following questions:

1. What is the profile of respondents as to:

1.1 sex

1.2 graduation year; and

1.3 employment status

2. Is there a contribution of OJT program to the development of skills of automotive technology graduates categorized into:

2.1 social skills;

2.2 cognitive skills; and

2.3 technical skills.

4. Is there a significant difference in the contributions of the OJT program to the skills development of automotive technology graduates in the SDSSU-Cantilan Campus?

5. Based on the findings, what recommendation may be proposed to the OJT office of the SDSSU-Cantilan Campus?

## 3. HYPOTHESIS

H<sub>01</sub>. At 0.05 level of significance, it is hypothesized that there is no significant difference in the contributions of OJT to the skills development of automotive technology graduates in the SDSSU-Cantilan Campus.

## 4. SIGNIFICANCE OF THE STUDY

The findings of the study would benefit the Automotive Technology graduates to be convinced and be more motivated to pursue the OJT program for the development of skills. The result of the study would help the SDSSU faculty to apply instructional strategies and methods that will match the needs of the industry. Also, this study will contribute to the SDSSU Administration in making decisions, provide support and find ways for the improvement of instruction in automotive technology. Furthermore, this study will inform the community especially the parents and guardian that the OJT of Surigao del Sur State University – Cantilan Campus is accommodating the development of skills of the students.

## 5. SCOPE AND LIMITATION

This study sought to find out the contribution of the OJT to the development of skills of the automotive technology graduates of Surigao del Sur State University – Cantilan Campus. The study was conducted to the automotive graduates of the school year 2014-2018 of the SDSSU-Cantilan Campus. The time frame of study covers one year specifically in the school year 2018-2019. The research was conducted at the Surigao del Sur State University-Cantilan Campus.

The study is further limited to assessing the contribution of OJT to the social, cognitive and technical skills of respondents. This used a four-point Likert scale, quantitative technique through a self-made questionnaire. The respondents are assumed to answer the questions consciously or unconsciously unbiased.

## 6. METHODOLOGY

This Chapter contains a description of the research design, research respondents and statistical analysis. The problem of this study is to figure out the contribution of OJT to the development of the social, cognitive and technical skills of the graduates of the SDSSU-Cantilan Campus. The respondents of this study were randomly selected from the graduates of the school year 2014-2018. The result in the gathered data had the following scale: five (4) as strongly agree, four (3) means agree, three (2) as disagree, and two (1) as strongly disagree.

The data were tabulated and computed to find the means and variances to determine if there is a contribution of the OJT Program of SDSSU-Cantilan Campus to the development of social, cognitive and technical skills of the students who graduated from the period (2014-2018).

## 7. TREATMENT OF DATA

The gathered findings were presented and calculated using the formulas

$$1.) P = (F/N) \times 100$$

Where:

P = Percentage

F = Number of respondents under each scale

N = Total number of respondents

$$2.) W.M = (\sum FS) / N$$

Where:

W.M = Weighted mean

$\sum$  = Summation symbol

F = number of respondents in each scale

S = Weight (scale)

3.) One –way ANOVA was used to analyze the data gathered for the differences in the perceptions of different groups classified according to a year of graduation and employment status.

Conversion of verbal description was used after the grand mean was computed using the following scale:

3.01 – 4.00	Strongly agree
2.01 – 3.00	Agree
1.01 – 2.00	Disagree
0.00 – 1.00	Strongly disagree

## 8. RESULTS AND DISCUSSION

**Table 1. Profile of Respondents**

	Profile	F (n=54)	%
Sex	Male	54	100
	Female	0	0
Year Graduated	2014	5	9
	2015	12	22
	2016	11	20
	2017	12	22
	2018	14	27
Employment status	Regular	28	52
	Casual	11	21
	Self-employed	15	27
Total		54	100

Table 1 presents the profile of respondents in terms of sex, year graduated, and employment status. All respondent is male, 27% recently graduated in 2018 and 52% are presently regular employees.

Robert Forrester, CEO of Vertu Motors PLC, was the first male in a previously all-female college at Oxford whose alumni include MP Nicky Morgan, and the need to change the industry's appeal to women is high on his agenda.

As a steward of the sixth largest automotive retailer in the UK, he has set up a task force to address the question of why so few women are moving up through the ranks of automotive retail, working with senior women within the business to examine the issue and creating a graduate scheme designed to attract more female students [3].

The U.S. Dept. of Labor's Bureau of Labor Statistics forecasts automotive repair and maintenance industry is expected to add 237,500 new jobs and have a 30 percent growth rate through 2020, making technicians one of the top 20 jobs with relatively high median earnings and the potential for significant job openings over the next decade [7].

**Table 2. OJT Contribution to Social Skill**

Indicators	W.M
1. I learned how to communicate effectively with employees from a variety of backgrounds.	3.46
2. The training has a work environment that allows me to be more creative and innovative.	3.54
3. Training helps identify how to build my current knowledge through interpersonal relationships.	3.76
4. The training was effectively integrated into our organizations.	3.56
5. I learned how to work with people.	3.76
6. I was able to share my learning with my colleagues and ask for help when I need it.	3.70
Composite Mean	3.63

Table 2 shows the contribution of OJT to the development of the social skills of automotive graduates. Results show that the training helps identify how to build current knowledge through interpersonal relationship and the trainees learned how to work with people *strongly* during the OJT. The smallest OJT contribution is on communicating effectively with employees from a variety of backgrounds.

The results of this study supported the conclusion of [1] which showed that the internships helped the students increase their social experiences and gain a sense of social realism. The study further showed that in terms of positive experiences of internships, the students agreed that they had made many friends and acquired valuable skills in interpersonal relationships. They had expanded their perspectives during the internships and believed their efforts were worthwhile. The results depict that internships benefit students in various ways, including knowledge management, interpersonal relationships, and professional experiences.

**Table 3. OJT Contribution to Cognitive Skill**

Indicators	W.M
1. Training gives clear direction for learning	3.54
2. Training gives appropriate recognition of existing knowledge	3.61
3. Employees gained the knowledge they needed from the training	3.61
4. It has many opportunities to learn new things	3.59
5. Continuously learning and trying to improve themselves	3.65
6. Training helps to manage to increase the understanding	3.61
Composite Mean	3.60

Table 3 depicts the OJT contribution to the development of the cognitive skills of automotive graduates. Results show that trainees strongly agree that they are continuously learning and they are trying to improve themselves. The smallest OJT contribution is in a clear direction for learning. Researchers agree that cognitive intelligence or technical skills are needed, but not sufficient to have success in executing complex professional tasks and that interpersonal and intrapersonal skills improve performance. Some authors hold that cognitive skill is the basic determinant of labor market outcomes. In contrast, other researchers have stated that "Non-cognitive ability is as important, if not more important, than cognitive ability." Globalization and world-class competitiveness require teamwork skills, occupational competencies, applying theoretical learning in practical solutions, routine and non-routine problem solving, the ability to deal with uncertainty, verbal and written communication skills, the understanding of needs of external and internal customers, and the ability to engage with external suppliers, among other skills [5].

**Table 4. OJT Contribution to Technical Skill**

Indicators	W. M
1. The training helps me on how to build my skills.	3.67
2. Training gives appropriate recognition of existing skills.	3.52
3. The training focused on relevant skills.	3.63
4. The training helps to manage change by improving the skills and abilities needed to adjust in a new situation.	3.54
5. The training makes me a productive worker	3.69
6. The training encourages to work to the best of my abilities	3.04
7. The training is able to maximize my potential.	3.50
8. It helps to develop my skills and abilities	3.81
9. I was able to obtain new skills.	3.52
Composite Mean	3.62

Table 4 describes the OJT contribution to the development of the technical skills of automotive technology graduates. Results show that the trainees *strongly agree* that the training helps to develop their skills and abilities. It also shows that the training encourages to work to the best of their abilities has the smallest contribution.

Overall, students perceived that both the internship and their university studies have contributed to their skills

development and the combination was effective in terms of enhancing both technical skills and problem-solving skills [4].

**Table 5. Overall OJT Contributions to Development of Skills**

Variables	W.M
Social skills	3.63
Cognitive skills	3.60
Technical skills	3.62
Composite Mean	3.62

Table 5 presents the overall OJT contribution to the development of skills of automotive technology graduates in the SDSSU-Canitlan Campus. The results show that the trainees strongly agree that OJT contributed to the development of skills including social, cognitive and technical. Contribution to the development of social skills has the highest weighted mean and the smallest contribution is to the development of cognitive skills.

Self-understanding, reflective thinking and recognizing relational benefits can be enhanced by participation in experiential activities, such as internships [2]. Using a survey, focus group, and individual interview data, the study of [8] finds that the programs provide students with career development skills while increasing students' confidence in career exploration and decision making. Internships, in particular, were perceived by students to increase their ability to discern a career area of choice and to increase confidence in pursuing that career.

**Table 6. Differences on OJT Contributions to the development of skills grouped according to Graduation year.**

Variables	Year	Mean	F	p	D	I
Social skills	2014	3.73	1.34	0.28	A	NS
	2015	3.56				
	2016	3.58				
	2017	3.61				
	2018	3.71				
Cognitive skills	2014	3.63	3.73	0.02	R	S
	2015	3.78				
	2016	3.64				
	2017	3.56				
	2018	3.45				
Technical skills	2014	3.64	0.87	0.49	A	NS
	2015	3.48				
	2016	3.59				
	2017	3.64				
	2018	3.72				
Overall	2014	3.67	0.44	0.78	A	NS
	2015	3.59				
	2016	3.60				
	2017	3.61				
	2018	3.64				

Legend: D – Decision; A – accept; R – reject; I – interpretation; S – Significant; NS – not significant

Table 6 displays the results of ANOVA on differences in OJT contribution to the development of skills grouped according to graduation year. The results show that at 0.05 level of significance, there is no significant difference of OJT contribution to the development of social, technical and

overall skills of trainees, as indicated by p values  $>.05$ . Thus, acceptance of the hypothesis. This implied that from 2014-2015, the OJT program implementation was consistent to the development of the social and technical skills of automotive technology graduates.

Results further show that at 0.05, there is a significant difference in the perceptions of the different groups as to OJT contributions to their cognitive skills, as indicated by the p-value of 0.02. As shown in the group mean, trainees who graduated in 2015-2016 have higher assessments than those who graduated in 2014, 2017 and 2018.

Structured work experience and employer involvement in degree course design and delivery were found to have positive effects on graduates' outcomes, in their ability to find graduate-level jobs within six months of graduation [6].

**Table 7. Differences on OJT Contributions to the development of skills grouped according to Employment Status**

Variables		Mean	F	p	D	I
Social skills	Regular	3.58	2.20	0.15	A	NS
	Casual	3.77				
	Self-employed	3.61				
Cognitive skills	Regular	3.64	1.97	0.17	A	NS
	Casual	3.48				
	Self-employed	3.61				
Technical skills	Regular	3.60	0.75	0.48	A	NS
	Casual	3.69				
	Self-employed	3.59				
Overall	Regular	3.61	0.56	0.58	A	NS
	Casual	3.65				
	Self-employed	3.60				

Legend: D – Decision; A – accept; R – reject; I – interpretation;  
S – significant; NS – not significant

Table 7 shows the results of ANOVA on differences in OJT contribution to the development of skills grouped according to employment status. The results show that at 0.05 level of significance, there is no significant difference of OJT contribution to the development of social, cognitive, technical and overall skills of trainees, as indicated by p values  $>.05$ . Thus, acceptance of the hypothesis. This implied that from regardless of employment status, the OJT program implementation was consistent to the development of skills of automotive technology graduates.

## 9. FINDINGS

From the results discussed, the following summaries of findings are presented:

1. Respondents are all-male, 27% recently graduated in 2018 and 52% are presently regular employees.
2. Results show the training helps identify how to build current knowledge through interpersonal relationships and the trainees learned how to work with people *strongly* during the OJT. It also showed that those trainees strongly agree that they are continuously learning and they are trying to improve themselves. It also helps to develop their skills and abilities. Contribution to the development of social skills has the highest weighted mean and the smallest contribution is to the development of cognitive skills.
3. Using one-way ANOVA, it was analyzed that there is a significant difference on the perceptions of the different groups according to a year of graduation as

to OJT contributions to their cognitive skills. It was also found out that there is no significant difference of OJT contribution to the development of social, cognitive, technical and overall skills of trainees when grouped according to employment status.

4. The study provides recommendations that the university's ojt office may be considered.

## 10. CONCLUSION

In the light of the above findings, it can be concluded that the on-the-job training program of SDSSU-Cantilan Campus contributed to the development of social, cognitive and technical skills of Automotive Technology graduates from the school year 2014-2018.

## 11. RECOMMENDATIONS

Based on the findings of the study, the following recommendations may be considered:

1. On-the-job training should always be assessed and evaluated to find out the strengths and weaknesses of trainees and for the trainees' skills development.
2. The administration may look into the indicator(s) that needs to be improved in order to produce competitive graduates.
3. Other researchers may conduct parallel research in other programs.
4. Further investigation is needed on the contribution of on-the-job training to the development of skills of students.

## 12. REFERENCES

- [1] Chen, Hu, Wang, and Chen (2011) A study of the effects of internship experiences on the behavioral intentions of college students majoring in leisure management in Taiwan. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 10(2), 61 – 73 72 [4] Z. T Salim, U Hashim, MKM Arshad, MA Fakhri, ET Salim " Zinc oxide flakes-corolla lobes like nano combined structure for SAW applications" *Materials Research Bulletin* **86**: 215-219 (2017) using spray pyrolysis method" *J Mater Sci: Mater Electron* 27:13105–13112 (2016)
- [2] Clegg, J. Stevenson, & J. Willott, Staff conceptions of curricular and extracurricular activities in higher education. *Higher Education*, 59 (5), 615-626 (2010).
- [3] Ennis, Lynda (2015, February 19). Why aren't there more women in the automotive industry? [Web blog post]. Retrieved from <https://www.linkedin.com/pulse/why-arent-more-women-automotive-industry-lynda-ennis>.
- [4] Galloway, L., Marks, A., & Chillas, S. (2014). The use of internships to foster employability, enterprise and entrepreneurship in the IT sector. *Journal of Small Business and Enterprise Development*, 21(4), 653–667. <https://doi.org/10.1108/JSBED-09-2014-0150>
- [5] Galvan, Jose A., et.al (2014). Assessing the Role of 21st Century Skills on Internship Outcomes in a Steel Multinational Enterprise. Paper ID #10484. American Society for Engineering Education.
- [6] Mason, G. Williams, G. Sue, Crammer. (2006, September). Employability Skills Initiatives in Higher Education: What Effects Do They Have On Graduate

- Labour Market Outcomes? Retrieved from [https://www.researchgate.net/publication/46527326\\_Employability\\_Skills\\_Initiatives\\_in\\_Higher\\_Education\\_What\\_Effects\\_do\\_They\\_Have\\_on\\_Graduate\\_Labour\\_Market\\_Outcomes/link/555c7a8308aec5ac22336a2c/download](https://www.researchgate.net/publication/46527326_Employability_Skills_Initiatives_in_Higher_Education_What_Effects_do_They_Have_on_Graduate_Labour_Market_Outcomes/link/555c7a8308aec5ac22336a2c/download) (29, October 2019)
- [7] Molla, Tony (2019). Don't Overlook Automotive Technology as a High-Tech Career Path. [Web blog post]. Retrieved from <https://www.ase.com/News-Events/Publications/Car-Care-Articles/Don-t-Overlook-Automotive-Technology-as-a-High-Tec.aspx>. (2019, October 28)
- [8] Schnoes AM, Caliendo A, Morand J, Dillinger T, Naffziger-Hirsch M, Moses B, Gibeling JC, Yamamoto KR, Lindstaedt B, McGee R, O'Brien TC. Internship Experiences Contribute to Confident Career Decision Making for Doctoral Students in the Life Sciences. CBE Life Sci Educ. 2018 Spring;17(1):ar16. doi: 10.1187/cbe.17-08-0164. PMID: 29449270; PMCID: PMC6007763.
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