

Influence of the overseas on-the-job training program in the student's employability

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ABSTRACT

The study investigated the influence of the overseas on-the-job training (OJT) program in the employability of the students of three undergraduate degrees, namely Bachelor of Science in Agriculture (BSA), Bachelor of Animal Science (BAS) and Bachelor of Science in Agribusiness Management (BSAM) in an agricultural state college. A validated instrument was used to survey a sample of 47 trainees. Findings of the study demonstrated a significant positive correlation between the impacts of the overseas OJT and the measured employability skill set. Personal qualities, work attitude and habits, work performance, and professional skills are all construed to be effectively improved by the trainees' involvement and admission to the overseas OJT program. The perceived effectiveness in the employability skill is also evidenced in the high employment rate of the graduates and the high percentage of them being employed in the field connected to their degrees. The study also strengthened the findings from other internship reports that both soft skills and hard/technical skills are valued greatly when it comes to securing employment. The present study is the first local documentation of the insights of the trainees who participated in the Agrostudies which consolidated their learned skills and raised their concerns on the implementation of the said training program. From here, it is recommended that further studies are to be conducted to validate the present findings and an in-depth review of the underlying issues of the trainees should be addressed to ensure the success and continuity of the program.

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1. INTRODUCTION

On-the-job training (OJT) also known as internship is one of the mechanisms of higher education institutions (HEIs) in developing the needed competencies of students in preparation for employment. The OJT provides an environment for the student to apply their learned concepts and skills in actual work settings and translate the training into a gainful working experience [1]. Numerous opportunities for competency enhancement can come from OJT while trainees can contribute to the goals of the host establishment. Efficiency, morale and professionalism become high in individuals who engage in a good OJT program [2].

Though considered a critical component of higher education, there is no standard definition for OJT or internship. Training is largely defined including OJT as any learning activity which is directed toward the acquisition of specific knowledge and skills for an occupation or a task [3]. Internship, on the other hand,

is generally defined as “a short-term practical work experience in which students receive training in a specific field of interest” [4]. In the Philippines, most colleges and universities integrate OJT in their academic curricula with certain units that must be completed by the students before they can graduate. While there exist extensive researches on the advantages and positive outcomes of internships and on-the-job to the students and organizations, there is, however, relatively little empirical study that aims to identify factors of OJT effectiveness [5] specifically in agricultural programs. Similarly, to the knowledge of the researchers, there have not been local studies about the perceived impacts of OJT among student interns in many baccalaureate programs in the country.

The Bulacan Agricultural State College (BASC) has an OJT program for Bachelor of Science in Agriculture (BSA), Bachelor of Animal Science (BAS), and Bachelor of Science in Agribusiness Management (BSAM) in which students are given the opportunity to have their training in Israel since 2009. This is part of the Commission on Higher Education (CHED) Student Internship Abroad Program (SIAP) by virtue of Commission on Higher Education Memorandum Order (CMO) no. 23 series of 2009 in partnership with Agrostudies, an international training center that offers agricultural training in Israel to developing countries through the Israeli Ministry of Agriculture and Ministry of Foreign Affairs. Under this program, qualified interns are taken to Israel for approximately one year and undergo research-based training while receiving free lodging with a monthly allowance and a free laptop. Despite the COVID-19 pandemic, through CHEDSIAP, BASC was able to send BSA and BSAM interns to Israel, continuously providing the opportunity to gain hands-on experience in their accredited host training establishment (HTE).

As an agricultural country, this has been helpful to the country since agriculture remains the second biggest industry in the country [6] sharing 23% of the total employment [7]. With student internships done overseas, graduates are more likely to learn advanced knowledge and skills and change their behavior in their discipline because they are exposed to activities and trainings that differ from what they used to. It is imperative for HEIs to constantly revisit their OJT programs and evaluate the perceptions of students regarding the implementation of the OJT and their internship performance to ensure internship goals are met. Also, the constant evaluation enriches the course offerings of the HEIs to adapt to the needs of the labor market, reassure mutually supportive industry-academe global linkage, fortify career guidance, and lastly, imbibe professionalism among on-the-job trainees. It is on the mentioned premises that this study was pursued with the general purpose of assessing the impact and effectiveness of the OJT program for BSA and BSAM students from 2009-2019, specifically on the employment status and perceived impact and effectiveness. Further, the correlation between the perceived impacts and effectiveness, and the present employment status of the graduates was demonstrated to suggest patterns on career performance, issues, plans and other employment-based data.

2. METHOD

2.1. Research design

This research utilized a mixed-method design. The qualitative part of the study included the semi-structured interview among graduates and their present employers regarding their feedback on the overseas OJT program and its relevance on their current employment. A researcher-made questionnaire reviewed by the BASC Research Office was used for the survey. Respondents were the BSA, BAS, and BSAM graduates who conducted their OJT in Israel from 2009-2019. For the sake of consistency and uniformity in the discussion, they were referred to as student trainees in the report. Population sampling was conducted to select the number of respondents. The survey was carried out online (via Google Form) and sent through email and social media accounts, phone interviews and actual interviews with the IATF protocol being followed. Descriptive statistics used for descriptive study were measures of frequency and distribution, central tendency (means) and measures of variability (standard error mean and standard deviation), as well as inferential statistics including non-parametric tests.

2.2. Conceptual framework

The present proposal utilized the two-directional correlational block framework. This framework entails the correlation or association between the variables in the study but not its cause-effect relationship. As seen in Figure 1, the first block consisted of the respondents for the survey who are the BSA, BAS, and BSAM who were part of the CHED SIAP from 2009-2019. They were surveyed and interviewed to obtain and consolidate their perceptions on the impact of the OJT program and its perceived effectiveness in four key areas as shown in the second block. These perceptions were then correlated and assessed for its relevance to the present employment status of the respondents which was presented in the third block. Lastly, the feedback from the employers of the respondents was also gathered to support the findings of the study.

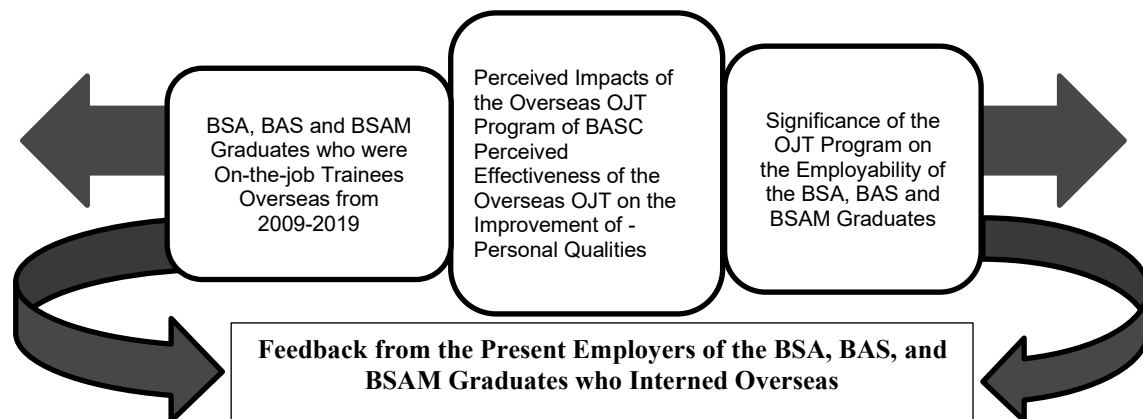


Figure 1. The two-directional correlation block framework of the study

2.3. Instrument reliability

The items in the researcher-made survey instrument were subjected to reliability analysis via Cronbach's alpha. All items obtained excellent reliability level which resulted in the retainment of all the questionnaire items. Reliability level range and interpretation adapted was: Cronbach's alpha coefficient is more than 0.90=excellent; 0.80-0.90=good; 0.70-0.79=acceptable; 0.60-0.69=questionable; 0.50-0.59=poor; less than 0.59=unacceptable. Table 1 presented the reliability scores of the different parts of the instrument used.

Table 1. Measurement of reliability of the survey instrument

| Questionnaire category | No. of items | Cronbach's alpha coefficient | Reliability level |
|---|--------------|------------------------------|-------------------|
| OJT impact determinants | 8 | 0.917 | Excellent |
| Effectiveness in personal quality/traits improvement | 8 | 0.922 | Excellent |
| Effectiveness in work attitude and habits improvement | 8 | 0.913 | Excellent |
| Effectiveness in work performance development | 8 | 0.959 | Excellent |
| Effectiveness in professional skills development | 8 | 0.956 | Excellent |

2.4. Sources and materials

The equipment, supplies, and materials to be used in the study were laptop computers, smartphones, printer, copier machine, bond papers, printer ink, copier toner, pens and folders.

2.5. Sampling procedure

Simple random sampling was used as the sampling technique. The sample size was calculated using the formula for correlation sample size of Hulley *et al.* [8]. A total of 47 on-the-job trainees overseas enrolled in BSA, BAS and BSAM programs from 2009-2019 were randomly selected as respondents of the study. The formula used was:

$$N = [(Z\alpha + Z\beta)/C]^2 + 3$$

Where, N=total sample size; Z_{α} =the standard normal deviate for $\alpha=1.9600$; Z_{β} =the standard normal deviate for $\beta=0.8416$; $C=0.50*\ln[(1+r/1-r)]=0.50*\ln[(1+0.40)/1-0.40]=0.4236$; r=expected correlation coefficient (set as 0.40).

The computed N was: $N=[(1.9600+0.8416)/0.4236]^2+3=43.7422+3=47$. For clarity in the report, the terms trainees, student trainees, graduates and respondents meant the same as these all refer to the graduates of BSA, BAS, and BSAM who went overseas (Israel or the United States of America) to have their OJT.

2.6. Statistical analysis

Collected data were analyzed using Mann-Whitney U Test for the differences between the gained skills of BSA/BAS and BSAM groups. Spearman's Rho was used to measure the correlation or association between the variables used. Data are presented in means \pm standard error of the mean (SEM). All data were run on Shapiro-Wilk test for normality and Levene's test for homogeneity. SPSS 26.0 (SPSS, Inc., Chicago, IL, USA) was used to process all the gathered data.

3. RESULTS AND DISCUSSION

3.1. OJT experience of the trainees

As seen in Table 2, majority of the student trainees were exposed to farm-based training which included practical application of agricultural production in greenhouses, poultry/livestock farms, fruit orchards, rice production and even farm logistics (N=42, 89.36%). Only 4 student trainees (8.51%) handled both farm and office-based work, while only 1 responded that the training given was mostly clerical work along with laboratory work, report management and customer service. For the graduating class where the student trainees belonged, most of them were part of batch 2018-2019 (N=20, 42.55%), followed by batch 2017-2017 (N=10, 21.28%). Five respondents came from batch 2017-2018, while four were from batch 2014-2015, three from batch 2012-2013, two from batch 2009-2010 and 2013-2014, and lastly, there was one respondent from 2015-2016. The duration of the OJT was usually one year, which was observed among 41 trainees (87.23%). In the meantime, five respondents had their training for 6-10 months and finally, there was one respondent who stated that her training duration was less than 6 months.

Table 2. OJT profile of the trainees from 2009-2019

| Overseas OJT details | Frequency | Distribution (%) |
|--|-----------|------------------|
| Type OJT activities | | |
| Farm-based (greenhouse, poultry/livestock, fruit orchard, rice field operations, and logistics) | 42 | 89.36 |
| Both farm and office-based work | 4 | 8.51 |
| Office-based (clerical work, laboratory work, data/report management, entrepreneurial/sales, and customer service) | 1 | 2.13 |
| Batch | | |
| 2018-2019 | 20 | 42.55 |
| 2017-2018 | 5 | 10.64 |
| 2016-2017 | 10 | 21.28 |
| 2015-2016 | 1 | 2.13 |
| 2014-2015 | 4 | 8.51 |
| 2013-2014 | 2 | 4.26 |
| 2012-2013 | 3 | 6.38 |
| 2011-2012 | 0 | 0.00 |
| 2010-2011 | 0 | 0.00 |
| 2009-2010 | 2 | 4.26 |
| Duration of OJT | | |
| 1 year | 41 | 87.23 |
| 6-10 months | 5 | 10.64 |
| Less than 6 months | 1 | 2.13 |

While Agrostudies Agricultural Apprenticeship has been in operation since 2005 [9], BASC officially began sending student trainees to Israel in 2009. Since then, the internship in Israel has become an annual event that attracts many student trainees thereby increasing the number of trainees being sent off every year. The student trainees were interned in carefully selected agricultural farms for their learning by doing experience. The training program's goal is to provide multiple opportunities for experiential learning in advanced agricultural methods which include instruction from technical experts and their assigned mentors, and theoretical studies with practical agricultural internships [9].

As stated by Nooghabi [10], experiential learning or learning by doing is a main element of agricultural education. Students enrolled in agriculture programs must be fully trained to recognize farm problems and to solve problems with logical approach. To achieve this, there is a need to unravel the existing challenges and differences between theoretical and practical contents of agriculture programs such as issues in farm input access, proper and contemporary technologies and production techniques, learning environment for students, well-trained instructors, facilities and technical knowledge, and nature of practicum among others [11]–[14]. Referring to the perceived impact of agricultural OJT of the BASC graduates in Israel as “impactful”, the apprenticeship had anecdotally left a big influence among them and contributed greatly to the employability of the graduates. Conversely, this did not imply the overall competence of the program as there are still numerous aspects to be considered in assessing the total effectiveness of the internship program. Kingery [14] in his study involving international agricultural education courses, proposed that experiential learning must integrate different educational and learning theories, and youth development theories, implemented by the college system and its partner agencies.

3.2. Employment profile

Most of the student trainees under overseas internship were able to be hired in their first job in less than a year (N=13, 27.66%), as shown in Table 3. This was followed by those hired within a month and between 4-6 months (N=12, 25.53%). It was also important to note that 48.94% (23) of these graduates (as of

this report) were employed in companies related to agriculture and 14.89% (7) have been managing their own enterprises for the last 7 years. On the other hand, 11 (23.40%) of the surveyed graduates were recently unemployed due to the job retrenchment in the country brought about by the COVID-19 pandemic. On a side note, the employment rate of the graduates is considerably high. This high employment rate of BSA, BAS, and BSAM graduates paralleled the rate in the Philippines, as the Philippine Statistics Authority (PSA) reported an increase in the national employment rate in agriculture from 22.2% in 2019 to 24.8% in 2020, with 9.75 individuals employed in agriculture in 2020 [15].

With regard to employment period, 7 of the 47 respondents have been employed for only a year since they recently transferred to other companies, while nine respondents are currently in the second year of their jobs. Seven graduates have been in their present company for almost 5 years, and another seven graduates have been running their own business for 7 years or more. As for their employment type at present and last employment before unemployment, 21 are already regular/permanent in their companies, 15 are in temporary status, 10 are under contractual status, and 1 is project-based.

Table 3. Employment profile of the surveyed graduate trainees from 2009-2019

| Employment details of the OJT (graduates) | | Frequency | Distribution (%) |
|--|--|-----------|------------------|
| Time taken to get the first job (after graduation) | After graduation (within a month) | 12 | 25.53 |
| | 2-3 months | 10 | 21.28 |
| | 4-6 months | 12 | 25.53 |
| | More than 7 months (less than a year) | 13 | 27.66 |
| Nature of employment | Self-employed/manages own business | 7 | 14.89 |
| | Employed in an agency/company/field related to my course | 23 | 48.94 |
| | Underemployed, present career not related to my course | 6 | 12.77 |
| | Unemployed | 11 | 23.40 |
| Length of service in present employment | Less than 1 year | 7 | 14.89 |
| | 1-2 years | 9 | 19.15 |
| | 2-3 years | 5 | 10.64 |
| | 3-4 years | 1 | 2.13 |
| | 4-5 years | 7 | 14.89 |
| | Not applicable (unemployed) | 11 | 23.40 |
| Nature of employment (present and last work before unemployment) | Self-employed business 1-7 years | 7 | 14.89 |
| | Regular/permanent | 21 | 44.68 |
| | Temporary | 15 | 31.91 |
| | Contractual | 10 | 21.28 |
| Type of industry (present and last work before unemployment) | Project-based | 1 | 2.13 |
| | Natural resources and environment industry | 1 | 2.13 |
| | Manufacturing industry | 5 | 10.64 |
| | Agricultural industry (public/private) | 25 | 53.19 |
| | Insurance | 1 | 2.13 |
| | Business process outsourcing (e. g. Call center companies) | 1 | 2.13 |
| | Education/academe | 1 | 2.13 |
| | Finance/management | 2 | 4.26 |
| | Wholesale and retail industry (e. g. SM Dept. store) | 3 | 6.38 |
| | Non-government organization (NGO)/humanitarian institution | 2 | 4.26 |
| | Government services | 1 | 2.13 |
| | Construction | 2 | 4.26 |
| | Food and beverage industry | 3 | 6.38 |
| Salary | More than 60,000 | 4 | 8.51 |
| | 50,000-60,000 | 1 | 2.13 |
| | 40,000-50,000 | 1 | 2.13 |
| | 30,000-40,000 | 1 | 2.13 |
| | 20,000-30,000 | 9 | 19.15 |
| | 10,000-20,000 | 19 | 40.43 |
| | Below 10,000 | 12 | 25.53 |
| Promotion | Once | 16 | 34.04 |
| | Twice | 3 | 6.38 |
| | Thrice | 0 | 0 |
| | Not yet | 21 | 44.68 |
| Career plans in the next 5 years | Not applicable (self-employed) | 7 | 14.89 |
| | Promotion in current work | 4 | 8.51 |
| | Go abroad and work there | 24 | 51.06 |
| | Manage own business | 16 | 34.04 |
| | Transfer to another job within the country | 2 | 4.26 |
| | Pursue further studies (i.e., Masters, PhD) | 1 | 2.13 |

Most of the student trainees (53.19%) are employed in both public agencies and private companies that are agriculture-centered. This was followed by 10.64% who are in the manufacturing industry and 6.38% in food and beverage industry as well as wholesale and retail (6.38%). As the surveyed graduates believed that their overseas internship helped them enhance technical and practical skills in agriculture, the industry of their present employment is a clear demonstration that it had helped them land jobs related to their degrees.

3.3. Skills acquired from overseas internship

OJT is a requirement in many baccalaureate programs in the country. It is a form of experiential learning in which the interns undergo supervised practical training to apply classroom learning to and witness the meaning of the theories and principles in their chosen programs. Respondents in this study normally trained overseas for 10 to 12 months and were deployed in various farms, assisted in different farm labor and management, and sometimes clerical-related activities. Through this set of training activities, the student interns were able to improve their skills that are significant to their employment.

The respondents of the study from the different programs were asked to rate the different skills they acquired during their training from 1 to 7 with 1 denoting least learned and 7 most learned, as seen in Table 4. It was observed that only the communication skills significantly differed between BSA/BAS and BSAM student trainees. The BSAM student trainees believed that they have gained significantly higher communication skills (Mdn=7) than BSA/BAS student trainees (Mdn=6), $U=180$, $p=0.036$. In the other six learned skills, no statistical significance was found between the BSA/BAS and BSAM student trainees. This finding suggests that the perceptions of the student trainees in the included programs were statistically comparable for human-relation skills, technical skills, management and leadership, research ability, critical thinking and information and technology skills. Collectively, these sets of skills are better known as employability skills which may make an individual attractive to prospective employers [16]. In particular, the significant results for communication skills in BSAM student trainees is a direct implication that this skill is essential for those graduates of the business fields. Communication skill is a soft skill that cannot be enhanced in a short period. It consists of several aspects such as listening, speaking, writing, observing as well as negotiation skills which a person must learn and invest time in a great deal. Several reports have resembled findings that business management-related fields regarded communication skills as important skills in job success [17]–[19].

Table 4. Differences in the skills learned from the overseas OJT of the BASC trainees in BSA/BAS and BSAM program

| Skills acquired from overseas OJT | Degree/program N=47 | Mean±SEM | Mean rank | Median | U test | P value (p<0.05) |
|--------------------------------------|---------------------|-----------|-----------|--------|--------|------------------|
| Communication skills | BSA/BAS (N=26) | 5.65±0.23 | 20.44 | 6 | 180.50 | 0.036 |
| | BSAM (N=21) | 6.19±0.31 | 28.40 | 7 | | |
| Human relation skills | BSA/BAS | 6.04±0.17 | 21.75 | 6 | 214.50 | 0.179 |
| | BSAM | 6.24±0.28 | 26.79 | 7 | | |
| Technical skills (related to degree) | BSA/BAS | 5.96±0.18 | 21.85 | 7 | 217.00 | 0.202 |
| | BSAM | 6.10±0.32 | 26.67 | 7 | | |
| Management and leadership skills | BSA/BAS | 6.23±0.19 | 22.96 | 6 | 246.00 | 0.522 |
| | BSAM | 6.19±0.30 | 25.29 | 7 | | |
| Research skills | BSA/BAS | 5.50±0.20 | 20.96 | 5.5 | 194.00 | 0.079 |
| | BSAM | 5.95±0.33 | 27.76 | 7 | | |
| Critical thinking skills | BSA/BAS | 5.81±0.18 | 21.00 | 6 | 195.00 | 0.079 |
| | BSAM | 6.10±0.32 | 27.71 | 7 | | |
| Information and technology skills | BSA/BAS | 5.73±0.25 | 21.92 | 6 | 219.00 | 0.224 |
| | BSAM | 6.05±0.30 | 26.57 | 7 | | |

The human-relation skills, which is an umbrella term for a multitude of soft skills is described as a desire to understand others which includes but is not limited to their needs and weaknesses and their talents and abilities. In a workplace setting and organizations, human relations also embroil an understanding of how people work together in groups to attain and satisfy both the needs and goals of the individual and the group [20]. Human relations emphasize effective interpersonal skills in decision-making, management, problem-solving and conflict resolution, self-understanding and teamwork [21]. It is believed to be very vital in business management programs, however, surprisingly in the present study, it statistically had the same perceived importance and the same level of learning for both BSAM and BSA/BAS student trainees. The similar perceptions of the two groups of student trainees in human-relations abilities may have been explained by the modern-day skills' shift in the agriculture sector from being technical-based to a more flexible discipline, as information technology, entrepreneurship, and management are proposed [22] to be integrated in agriculture for more contemporary approach and to better serve changing labor demands.

Both technical skills and management and leadership skills acquired by the student trainees from their OJT were also of the same statistical significance across all programs (BSA/BAS and BSAM). Technical skills are those related to the actual work that the company does [23]. Management and leadership skills on the other hand could be summarized as the ability to guide, organize and motivate toward the group's goals and transform ideas into realizations. From the study of Chung [23], technical skills also known as hard skills are less favored in business management while in agricultural production-centered courses, technical skills are more prioritized. These findings differed from the exploratory factor analysis conducted in a private university in Bangladesh in which technical skills and leadership and management skills were not significantly associated with overall employability [24].

OJT programs or internships are considered capacity enhancement programs that are supervised by someone with authority, who administers the performance of a group of trainees, to assist the junior or new practitioner in improving expertise to meet the targets and objectives of the company [25], [26]. The non-significant results of technical, management, and leadership skills merely depicted that the OJT program in the current study provided equal activities or tasks associated with the enhanced learning in technical and management and leadership skills. In the previous study of Alera *et al.* [27], wherein agriculture graduates were asked to describe what part of the training programs in the curriculum needed improvement to cater their career needs, several of the graduates mentioned the inclusion of leadership and management trainings including financial management so that graduates can strategically plan their tasks, work under pressure, think critically, and manage finances efficiently. Other agriculture graduates also mentioned that the OJT period should have increased hours of training so that more tasks and trainings will be given to them to increase their technical knowledge. While these statements from students are subjective perceptions and not an objective assessment, more objective measurements could be undertaken to better establish the learned employability skills of students in reference to their OJTs. On the other hand, feedback from students should not also be taken lightly as they were the individuals who experienced the actual trainings over a prescribed period.

Research and critical thinking skills go hand-in-hand in many job settings. Employers require research skills to develop new products and services for the market. It is also needed in the improvement of existing technologies and generation of new concepts and ideas to contribute to the gaps in many fields, and overall lead to a more convenient and more productive lifestyle. Research skills can be elaborated as the ability to provide in-depth information, comprehensive analysis and appropriate recommendations and logical answers on a given topic, issue or concern after the thorough evaluation of data collected. It greatly involved the formulation of the problem statement, referring to good sources for framework and logical design of methodology, observations, data collection, and delivery of findings in the form of written or oral reports [28]. All the processes in the acquisition of aptitude in research are attributed to critical thinking skills, which include analyzing arguments, making inferences, judging or evaluating, and solving problems [29].

The perceived level of learning of the student trainees in terms of research skills and critical thinking were the same, which infers that these employability skills were gained adequately in their OJT program. As evidenced by the type of work settings in the overseas OJT of the student trainees, a high percentage of them were deployed both in animal and crop production via shifting schedules. At times, the trainees were given paperwork such as writing reports and short narratives. They were also taught to operate various farm machineries and equipment as well as operation of systematized farming technology controlled by computers. These activities were believed by the student trainees to improve practical skills, critical thinking, and research ability. In connection to these, information technology skills commonly referred to as digital skills are also necessary skills in securing a job in agriculture and other industries. From the findings of the present report, the acquired digital skills of the BSA/BAS group and BSAM group were the same which indicated that both groups received similar capacity improvement activities for them to be equipped with sufficient digital skills i.e., computer computer-operated irrigation systems in greenhouses in the vegetable production farms, modern fertilizer application technique and farm waste treatment.

University and college programs assimilated by OJT programs were found to have positive impacts on salaries [30] and depending on the type of training, whether general or company-specific it may also surge opportunities for finding new and better jobs with other firms. This was demonstrated in the high percentage of the employed graduates (85.11%) against the unemployed (14.89%). Likewise, the number of graduates who are currently working in the fields and industries related to their course was also a promising indication that OJT contributed to the employment security of the student trainees of BSA/BAS and BSAM.

3.4. Impacts of the overseas OJT program through perception measurement

A total 5 out of the 8 impact determinants scored between 4.38-4.40 which was interpreted as "impactful". These determinants centered on the awareness of the latest innovations in the field of expertise, scope in choosing a career, extent to which OJT changes work attitude and habits, expansion of linkages and degree of relevance to present employment, as in Table 5. On the other hand, three indicators obtained

a “very impactful” description with mean scores 4.51-4.57. The statement, “extent to which the OJT brought efficiency to technical skills and knowledge learned” gathered the highest mean (4.57) followed by “understanding of career-related barriers and problems” scoring 4.53 and “exposure to actual occupation settings and application of learned skills” with 4.51 mean. This result paralleled the findings of Shoulders *et al.* [31], that graduates of agricultural programs in a university who were able to take part in an internship program demonstrated good effects on the technical skills of the graduates. Feedback from the interviewed student trainees further supported this as they expressed greater career and employment focus on the specializations, technical skills acquired during trainings, and fields of their internship.

In a relatively similar setting [32], the most important skills that agriculture students in different universities in Egypt considered important but found they did not have sufficient training and were “ill-prepared for” were considered also as “skills gap” and these were: the ability to gain information in specialized areas, to speak effectively, and to think creatively, as well as to apply problem-solving and time management skills. Employers preferred graduates who possessed technical (hard) skills specific to employers as those with technical qualifications do not require extensive training in the real job arena. As Robinson-Pant [33] pointed out, technical skills are more prioritized in agricultural courses centered on production. Predominantly, internships completed in a given period had direct positive impacts on the careers of the trainees [25]. The ratings in the present study showing the strong favorable impacts of overseas OJT on the graduates’ perception is another clear evidence of the affirmative implications of internship as students prepare for a significant shift from academia to employment.

Table 5. Perceived level of impact or influence acquired from the OJT program

| Impact determinants | Mean±SEM (N=47) | Verbal interpretation |
|---|--------------------|-----------------------|
| 1. Awareness of the latest trends and innovation in the field of specialization | 4.47±0.09 | Impactful |
| 2. Exposure to actual occupation settings and application of learned skills | 4.51±0.09 | Very impactful |
| 3. Extent to which the OJT helped in choosing a career | 4.40±0.12 | Impactful |
| 4. Extent to which the OJT brought efficiency to technical skills and knowledge learned | 4.57±0.08 | Very impactful |
| 5. Extent to which the OJT brought change to work attitude and work habits | 4.49±0.09 | Impactful |
| 6. Expansion of local and international linkages (people, institution, companies) | 4.40±0.09 | Impactful |
| 7. Understanding of career-related barriers and problems | 4.53±0.09 | Very impactful |
| 8. Relevance of the training to the currently pursued job and career plans | 4.38±0.11 | Impactful |
| Composite mean | 4.47±0.02 | Impactful |

Note: 1-1.50=very unimpactful; 1.51-2.50=unimpactful; 2.51-3.50=slightly impactful; 3.51-4.50=impactful; 4.51-5.00=very impactful

3.5. Effectiveness of the overseas OJT in the graduates’ personal qualities development

The trainees assessed the development of their personal qualities upon experiential learning from their internship abroad. It included eight statement determinants under eight categories (hygiene/grooming, self-composure, workplace well-being preservation, communication skills, compassion for learning, self-confidence, commitment, and adaptability). The eight determinants obtained a mean score ranging from 4.51-4.68 with a composite mean of 4.62 described as “very effective”, as in Table 6. The “very effective” rating of the trainees in the personal qualities development inferred a satisfactory impact of the OJT program overseas on refining the trainees’ traits. Several studies [34]–[37] stated that unemployment of fresh graduates can be addressed by graduates lacking communication skills, self-esteem, commitment and eagerness to learn, and ability to give sound judgment. Most of the personal qualities an individual may possess are soft skills. Employers across industries, in general, hired inexperienced graduates based on their skills, knowledge, and attitudes, from which they factor in internships as a major contributor to the preparation and development of the graduates in their efficiency in the workplace.

The study’s results entail the perceived effectiveness of the OJT program from which the student trainees valued their experiences highly during internships as it helped them improve their personal traits. It is during internships that graduates learn the needed employability skills under supervising authorities [38]. From there, experiences gained by students in these OJTs aid them in making better cognizant decisions about their career choice and route. Furthermore, the “very effective” score of the personal qualities determinants suggest the importance of improving employability skills during an internship since these skill sets are desired by many employers. These include professionalism, enthusiasm, commitment, reliability, initiative, and self-confidence, among others. The most important skills learned in OJT in Israel, for the respondents were self-confidence, self-reliance, time management, adaptability, compassion, and analytical thinking. Many of them believe their experiences reinforced their personal values and recoured their weaknesses. As Anjum [39] explained, internship could impact personal and professional development since practical experience serves as a learning curve for trainees on personal and professional aspects.

Table 6. Perceived OJT effectiveness in terms of personal qualities/traits development

| Personal qualities determinants | Mean±SEM (N=47) | Verbal interpretation |
|--|-----------------|-----------------------|
| 1. Dresses neatly and appropriately for work | 4.51±0.10 | Very effective |
| 2. Maintains pleasing personality, self-composure and work ethics to colleagues, supervisors and clients/customers | 4.61±0.08 | Very effective |
| 3. Keeps workplace safe and clean | 4.68±0.09 | Very effective |
| 4. Possesses above average oral and written communication skills | 4.53±0.10 | Very effective |
| 5. Shows willingness to learn more and grow continuously/ update current knowledge and skills | 4.62±0.09 | Very effective |
| 6. Projects self-confidence and enthusiasm at work | 4.64±0.09 | Very effective |
| 7. Show commitment, honest, and integrity at work | 4.68±0.08 | Very effective |
| 8. Demonstrate adaptability to different job scenarios | 4.66±0.08 | Very effective |
| Composite mean | 4.62±0.02 | Very effective |

Note: 1-1.50=very ineffective; 1.51-2.50=ineffective; 2.51-3.50=slightly ineffective; 3.51-4.50=effective; 4.51-5.00=very effective

3.6. Effectiveness of the overseas OJT in the graduates' work attitude and habits development

Similarly, all the determinants for work attitude and habits development attained a “very effective” description with mean values from 4.66-4.79. As shown in Table 7, the trainees rated “displays great interest and sense of duty in assigned tasks/responsibilities” and “accepts mistakes and shortcomings and has willingness to embrace change” 4.66 the lowest among the determinants while the “motivates himself/herself to overcome difficult and unfamiliar tasks and errands at work” had the highest mean at 4.79. This was followed by a 4.70 mean from the statement, “recognizes the authority and tasks of his/her superiors and provide them the necessary support services and assistance required and needed”. As investigated by Anjum [39], among business students, good work habits and ethics were developed upon deployment in an internship program.

Another study by Schulze-Ehlers [40] matched the elucidation of the present study as employability is determined indirectly by personal structural characteristics of the graduates with practical experience exhibited as its key feature. Students who gained internships have higher chances of acquiring extrinsic success (viz., promotion, starting salary) and improvement in attitude toward work such as job acquisition skills, interpersonal skills, and communications skills. Corresponding outcomes on hospitality graduates were found to highlight the importance of work attitude and personal competency development in internship programs because these can play a major role in the realization of the graduates' career potential [41].

Table 7. Perceived OJT effectiveness in terms of work attitude and habits development

| Work attitude and habits determinants | Mean±SEM (N=47) | Verbal interpretation |
|---|-----------------|-----------------------|
| 1. Displays great interest and sense of duty in assigned tasks/responsibilities | 4.66±0.08 | Very effective |
| 2. Follows work protocol at all times | 4.68±0.11 | Very effective |
| 3. Accepts mistakes and shortcomings and has willingness to embrace change | 4.66±0.09 | Very effective |
| 4. Cooperates willingly and fits easily to the group | 4.70±0.08 | Very effective |
| 5. Takes initiative to update one's technical and/or non-technical knowledge and skills | 4.72±0.07 | Very effective |
| 6. Has independent problem-solving and reasoning capabilities | 4.72±0.08 | Very effective |
| 7. Recognizes the authority and tasks of his/her superiors and provide them the necessary support services and assistance required and needed | 4.74±0.08 | Very effective |
| 8. Motivates himself/herself to overcome difficult and unfamiliar tasks and errands at work | 4.79±0.07 | Very effective |
| Composite mean | 4.71±0.02 | Very effective |

Note: 1-1.50=very ineffective; 1.51-2.50=ineffective; 2.51-3.50=slightly ineffective; 3.51-4.50=effective; 4.51-5.00=very effective

3.7. Effectiveness of the overseas OJT in the graduates' work performance development

Work performance essentially pertains to the accomplishment of tasks and duties assigned to an individual. A quality work encompasses the completion of a given task promptly, along with the execution of a task with minimum supervision, performance in an organized manner and prioritization by imminence. As seen in Table 8, all determinants of work performance development obtained a “very effective” description (4.62-4.72) with a grand mean of 4.67. From the gathered feedback from the trainees, many of them believed that their OJT taught them to work independently and with little supervision from their immediate heads. Some trainees also articulated that their overseas internship required them to complete their tasks on the set deadlines and this led them to work dexterously which further made them to be quick-witted in their present employment. Other anecdotes given first-hand by the trainees revealed that their supervisors expected them to think practically and logically on issues arising on the farms after giving brief overviews and instructions, and many thought these kinds of situations had improved their innovativeness and resourcefulness that they are now applying in their current work.

Organizational skills (determinant 4) were also given emphasis since there were trainees who recalled that their responsibilities in the farm had to deal with managing files, organizing farm inputs and harvests in a certain manner and technique that their farm host had trained them to perform. Organizational skills, along with time management, flexibility and adaptability are some of the most important skills an agriculture graduate should have to ensure their work readiness [42]. Employers in the 21st century look for decision-making, problem-solving and analytical skills, organization and time management, communication and risk-taking skills [43]. Off-campus internships could effectively translate classroom knowledge to be more practical and meaningful, favoring better performance compared to those without internship experience [44].

Table 8. Perceived OJT effectiveness in terms of work performance development

| Work performance development determinants | Mean±SEM (N=47) | Verbal interpretation |
|--|-----------------|-----------------------|
| 1. Completes assigned tasks with minimum supervision | 4.72±0.08 | Very effective |
| 2. Delivers assigned tasks/responsibility promptly or on the deadline | 4.72±0.07 | Very effective |
| 3. Exhibits ability to function well and think logically under pressure | 4.62±0.10 | Very effective |
| 4. Performs assigned tasks in an organized and orderly manner and within acceptable level of quality | 4.64±0.08 | Very effective |
| 5. Accepts work assignments and/or responsibilities willingly | 4.68±0.08 | Very effective |
| 6. Can work as an individual and as a member of a team | 4.70±0.07 | Very effective |
| 7. Translates work ideas into action | 4.62±0.08 | Very effective |
| 8. Develops creative, innovative, or practical solutions on encountered work issue/problem | 4.68±0.08 | Very effective |
| Composite mean | 4.67±.02 | Very effective |

Note: 1-1.50=very ineffective; 1.51-2.50=ineffective; 2.51-3.50=slightly ineffective; 3.51-4.50=effective; 4.51-5.00=very effective

3.8. Effectiveness of the overseas OJT in the graduates' professional skills development

All the eight determinants in the professional skills development in Table 9, were observed to have a "very effective" interpretation with mean scores between 4.68-4.78 and an overall mean of 4.72. In many literatures, professional skills are characterized as one's ability to use knowledge, skills, and experience in certain professional situations [41], [45], [46]. The determinant, "shows ability to perform routine office/farm procedures", which had the highest mean (4.78) expectedly matched the responses of the interviewed trainees. Many of the trainees stated how their performance of rote office/farm duties trained them to be more disciplined and professional with respect to completing their duties on time and practicing ethical standards while on duty. Some of the trainees mentioned taking responsibility and accountability for the farm duties assigned to them and allowing themselves to be flexible and open-minded to changing schedules, decisions and orders from their supervisors became their means of improving their professionalism.

The findings corresponded to Mirakzadeh and Ghiasy [47] who factor analyzed the effective components of agricultural graduates' employment status. As Binder *et al.* [46] put it, internships prepare students from various backgrounds for technical and professional skill development opportunities. While employers' expectations of fresh graduate applicants are wide-ranging and cannot easily be determined because of the numerous factors that affect hiring requirements, professional skills always play a salient role.

Table 9. Perceived OJT effectiveness in terms of professional skills development

| Professional skills determinants | Mean±SEM (N=47) | Verbal interpretation |
|---|-----------------|-----------------------|
| 1. Prioritization of tasks | 4.68±0.08 | Very effective |
| 2. Shows adequate knowledge in performing assigned tasks and work assignment | 4.72±0.08 | Very effective |
| 3. Planning, organization and management capabilities | 4.70±0.07 | Very effective |
| 4. Shows ability to perform routine office/farm procedures | 4.78±0.07 | Very effective |
| 5. Taking responsibility and accountability | 4.72±0.07 | Very effective |
| 6. Flexibility and open-mindedness in execution of tasks and achievement of goals | 4.74±0.07 | Very effective |
| 7. Proficiency in communication in oral, written and digital format | 4.70±0.07 | Very effective |
| 8. Preservation of proper work ethics | 4.72±0.07 | Very effective |
| Composite mean | 4.72±0.02 | Very effective |

Note: 1-1.50=very ineffective; 1.51-2.50=ineffective; 2.51-3.50=slightly ineffective; 3.51-4.50=effective; 4.51-5.00=very effective

3.9. Correlating perceived effectiveness of the employability determinants with OJT impacts

Awareness of students particularly those who take advantage of OJTs on the skills valued by employers in all industries is essential in securing employment. Equipping one's self with the knowledge of what employment prospects exist in the labor market is a hiring advantage, especially in the age of over-supply or massification which has led to diminished values of many undergraduate degrees [48]. In this report, the internship experiences of the graduates and the impacts of their OJT as they perceived it positively

correlated to the four determinants of its effectiveness. Table 10 presents the significant positive correlation rates of the internship influence and each measured determinant group. First, personal qualities/traits development is positively correlated with the OJT $r(45)=0.736$ $p=0.001$. At the same time, between work habits development and OJT, the correlation is also positive $r(45)=0.759$ $p=0.001$. Similar results were also delivered on work performance development $r(45)=0.762$ $p=0.001$ and professional skills development $r(45)=0.801$ $p=0.001$.

Table 10. Relationship between perceived OJT impacts and effectiveness in employability skills of the trainees

| Determinant | OJT impacts | Perceived effectiveness | | | |
|--|-------------|---------------------------------------|-----------------------------|------------------------------|---------------------------------|
| | | Personal qualities/traits development | Attitude/habits development | Work performance development | Professional skills development |
| OJT impacts | 1.000 | 0.736** | 0.759** | 0.762** | 0.801** |
| Effectiveness on personal qualities/traits dev't | 0.736** | 1.000 | 0.762** | 0.719** | 0.695** |
| Effectiveness on work attitude/habits | 0.759** | 0.762** | 1.000 | 0.766** | 0.796** |
| Effectiveness on work performance development | 0.762** | 0.719** | 0.766** | 1.000 | 0.843** |
| Effectiveness on professional skills development | 0.801** | 0.695** | 0.796** | 0.843** | 1.000 |

** r value is significant at $p < 0.001$; $df=45$

The significant correlations between the impacts of internship as perceived by the BSA/BAS and BSAM graduates and the different determinants showed that trainees benefit from their trainings under Agrostudies about employability skills improvement. This finding is supported by the fact that there is a high employment rate among the graduates who became interns overseas. Likewise, 53.19% of the trainees are at present employed in different sub-sectors of agriculture, an indication that their internship in a specialized field in agriculture may have pushed them to be inclined in a profession where their trainings focused on. This outcome emulated the findings of Ring *et al.* [49], who observed that internship programs are most helpful in shaping interns' career readiness. OJTs also termed internship has been cited in several literature to contribute significantly to the employability of the graduates [38], [44], [50]. The labor market commands the competencies to be developed in universities, therefore, academic programs must be carefully planned and implemented [51].

As students believe that they possess a major edge in the employment world when participating in an internship program, the academia should ensure that the coordination and implementation of OJT programs are properly executed and fairly benefit all involved stakeholders—student trainees, school and industry partners. Meanwhile, it is also worth stating that positive correlations on a significant level were also observed among the four employability determinants. This implied that as one employability determinant measures increased effectiveness, the other employability determinant also increases. Individual qualities or personal competencies tend to improve greatly when a person is exposed to different scenarios that enable them to utilize their learned and innate capabilities. This may lead to personal growth, particularly in challenging situations where an individual is faced to come up with a process of resolving and overcoming the challenge [52]. As personal skills develop, there is a huge possibility that professional skills also ensue [41]. Consistently, an improved work attitude and habits are more likely to result in a commendable work performance due to well-understood, well-enacted work routines and undertakings brought by effectively proven ways and behavior towards a given task.

In this sense, the present findings established the positive impacts of the overseas OJT program in agriculture in developing personal qualities, work attitude and habits, work performance and professional skills of the trainees, consequently preparing them in their transition to employment and capacitating them with employability skills to place them in an advantageous position in the labor market. The findings also concurred with Amoguis *et al.* [53], as the business administration and accountancy graduates, they surveyed found that the OJT program was effective in enhancing their employability skills and increasing their edge in securing jobs.

4. CONCLUSION

The present study supported the perceptions that the overseas OJT program has a positive and progressive influence in the sets of employability skills of the graduates of BSA, BAS, and BSAM. The perceived effectiveness in developing personal qualities, work attitude and habits, work performance and professional skills of the trainees is evidenced in the high employment rate of the graduates and the high percentage of them being employed in the field connected to their degrees. In addition, employability skills

gained by the trainees from the three-degree programs are comparable except for communication skills, from which the BSAM trainees believed that their overseas OJT had improved their communications skills more than the BAS/BSA trainees. This was further sustained by the feedback from employers where employees of BAS and BSA degrees have been thought to lack communication skills. The study also strengthened the findings from other internship reports that both soft skills and hard/technical skills are valued greatly when it comes to securing employment. To the knowledge of the researchers, the present study is the first local documentation of the insights of the trainees who participated in the Agrostudies which consolidated their learned skills and raised their concerns on the implementation of the said training program. From here, it is recommended that further studies are to be conducted to validate the present findings and an in-depth review of the underlying issues of the trainees should be addressed to ensure the success and continuity of the program.

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C : **C**onceptualization

M : **M**ethodology

So : **S**oftware

Va : **V**alidation

Fo : **F**ormal analysis

I : **I**nvestigation

R : **R**esources

D : **D**ata Curation

O : **O**riting - **O**riginal Draft

E : **E**riting - **R**eview & **E**ditting

Vi : **V**isualization

Su : **S**upervision

P : **P**roject administration

Fu : **F**unding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author, [HJN], upon reasonable request.

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