The Bachelor of Industrial Technology Major in Architectural Drafting Technology Program Tracer Study

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Abstract The study aimed to trace the employment profile of the graduates of the Bachelor of Science in Industrial Technology (BSIT), Two-Year Technical Course and Bachelor of Industrial Technology (BIT) major in Architectural Drafting Technology (ADT) programs from 2008-2014 of one of the universities in Western Visayas, Philippines. A descriptive survey method was applied using a modified survey questionnaire to determine the participants' demographic profile, employment characteristics, and relatedness of the academic program as well as their retrospective evaluation. Snowball sampling identified 100 participants for the survey. Results showed that their educational experience is very relevant in their current workplace, especially their acquired skills in ADT. Furthermore, the study revealed that the majority of the participants were proud and satisfied graduates. They agreed that skills in knowledge and technical aspects were utilized to a great extent while the program contents are highly adequate. Hiring competent faculty member, updating physical facilities, instructional materials, and revising the curriculum may provide better service and produce more skilled technologists.

Keywords: architectural drafting technology, industrial technology, technology program, tracer study

Introduction

"The function of education is to teach one to think intensively and to think critically. Intelligence plus *character* – that is the goal of true *education*."

Martin Luther King Jr.

The advent of technology in the recent year has brought changes in the lives of everyone. In particular, the educational system needs to cope with the latest technology hardware and software necessary for the delivery of instruction. In so doing, the academe must accept these changes to become globally compatible with the expectations of the global market as well as to produce quality graduates that are competent in knowledge, skills, and attitude for life-long learning.

In 2014, the Commission on Higher Education (CHED) mandated all State Universities and Colleges (SUCs) to use Outcome-Based Education (OBE) emphasizing delivering and assessing learning through a student-centered process (CHED Handbook, 2014). The handbook stressed on what is essential for all the learners to acquire the learning domains to achieve a desired level of competencies; incorporating disciplined-based learning areas with the OBE context of the vision, mission, goals, and objectives (VMGO). A significant paradigm shift was highlighted on OBE especially in the areas of VMGO by determining the standard criteria for success indicators. With this paradigm shift, the academic sector, especially the (SUCs) is in the process of revising their curricular structure to meet the demands of the curriculum and the need of the industry.

In OBE, the faculty act as a facilitator of learning who allows the students to play their parts in class activities through

discussions reflected in analytical and critical thinking coming from their experiences. Because of this shift, there is a need to observe and measure the progress of the three domains. On the part of the University, careful planning is a must to attain the intended learning outcomes that begin with designing the curriculum, to achieve correct alignment of course outcomes.

True to this approach, expected graduates of an OBE program are those who can work efficiently and effectively in their respective workplaces after graduation, equipped with the necessary competencies related to their jobs. The program outcomes are to determine the congruence of its competencies to the workplace that impact the society (CHED Handbook on Typology, 2012). Along with this, the ASEAN Quality Reference Framework (2015) calls for all educational institution to support the quality framework for lifelong learning through quality qualifications systems.

The ADT program used OBE since 2014, to ensure that the knowledge and skills provided to the students meet the demands of the industry. Over a decade, the University is one of the top feeders of drafters/CAD operators in the country because of the advent of digital and modern drawing tools used on house planning. OBE challenged the ADT program to become substantially optimistic in attaining its objectives and being responsive in quality assurance shifting from competency-based to outcome-based education, aligned the academic services based on the framework of OBE to tailor fit the industry's needs.

Why Tracer Study?

In order to become a leading science and technology University in Southeast Asia by 2030, the "University is committed to provide quality and relevant advanced education, higher technological, professional instruction and training in arts, sciences, education, architecture,

engineering, agriculture, forestry, and other fields of study, thereby producing locally oriented, globally competitive and eco-friendly human resources." So, the best tool to achieve the vision and mission of the University is to trace the whereabouts of the products (students) after graduation. According to Child Labor Impact Assessment Toolkit Tracer Study Manual International Programme on the Elimination of Child Labor (IPEC) (2011), the ultimate objective of a tracer study is similar to that of other impact assessments to systematically analyze the lasting or significant changes that seek to influence decision-making or policy formulation through the provision of empirically-driven feedback.

Schomburg and Ulrich (2011) discussed that tracer study enables the institution of higher education to get information on the result of the investigation that may be useful for the revision of the program to improve the course offering. This idea was also supported by the study of Nivera, Toledo, Sualibio, Boral, and Asuncion (2015) as they stressed that result of the tracer study of the program would be the basis to review and evaluate program content. Badiru and Wahome (2016) also confirmed that results from the tracer study pointed out what particular area of the program needs to improve. Flotcher (2010), Herrmann, Dilger, and Junghanns (2010) and Dillman (2008), argued that every tracer study is unique and has ubiquitous and rigorous methodologies. He also emphasized that the educational institution is the greatest beneficiary of the result of the tracer study utilizing the feedback from the responses of the graduates addressing the felt weaknesses in study programs and services.

ADT on Outcome-Based Education

In the CHED Handbook on Typology (2014), OBE highlighted the attributes of the graduates that can demonstrate the love of God and nation combining expertise leadership in their field of specialization. It also points out the ability to

communicate effectively and think critically and creatively working in the expected industry harmoniously in a multi-disciplinary and multi-cultural environment that engaged in lifelong learning by keeping abreast with the latest developments in the society (WVCST BOT Res. 12/21/2007-84/ACCO Resolution No. 18D-2014).

As an area of specialization, the College of Industrial Technology (CIT), Almanac (2014) states that the graduates are expected to work as draftsmen, or CAD operators working manually or digitally on house plans in a construction industry whether private or public. This new technology gave the University the edge from other SUC's in the Region and became the feeder of CAD operators locally and internationally. If graduates are not working in the expected industry, they can put up their own business using their skills learned in the ADT that will cater the needs of the community where they are living like t-shirt printing, tarpaulin layout and sign painting, stage and float decorations, visual arts, and other artworks. For more than a century of existence, the University is known for its excellence in science and technology and production of quality graduates, specifically its CIT offering in ADT.

Legal Bases for the Revision of the ADT Program

To make all the programs responsive to the latest developments of the society, the University called for a system-wide curriculum revision that aims to create an OBE course syllabi. This positive move supports the call of CHED and to support the K-12 program of the Department of Education. During the said review, all of the faculty members across the system were oriented and taught on how to develop the course syllabus using the OBE approach. The revision of the curriculum should be geared towards one standard policy to ensure the application of uniform process and procedures that guarantee relevance, excellence, and cost-effective higher education program specifically in the ADT. The Curriculum Manual (2017) of the University used

several legal bases to ensure the legitimacy of the program. First, is the ASEAN Integration Report (2015) that aims to develop human resources through closer cooperation in the education and life-long learning, and in science and technology for the empowerment of the peoples of the ASEAN and the strengthening of the collaboration among ASEAN Community. Second, is the Republic Act 7222 otherwise known as the "High Education Act of 1994" (Republic Act, 1994).

Accordingly, CHED shall set a minimum standard for programs and institutions of higher learning (section 8d). Third, is the Executive Order No. 83, s. 2012, which is the "Institutionalization of the Philippine Qualification Framework (PQF)," that mandated to adopt national standards and levels for outcomes of education. SUC's must develop and maintain pathways and equivalencies as access to qualifications. Help the student to move easily and readily between the different education and training sectors and between these sectors and the labor market. The PQF directs alignment of national and international qualifications to support global mobility of workers equally recognized and valued with the other countries. Fourth, is the CHED Memorandum Order No. 46, (2012), entitled "Policy-Standard to Enhance Quality Assurance (QA) in Philippines Higher Education through an Out-comes-Based and Typological-Based QA" that discusses the role of the state in providing quality education to its citizens and the last is the Resolution No. WVCST BOT 05/16/2008 known as One System One Standard (OSOS), which shall serve as the uniform basis for all streaming of curricula offerings both in the main and external campuses.

In the attempt to discuss the reasons for the existing scenario on how to match the needs of the industry with the practices in the academe through OBE and determine the eventual career pathways of its graduates and whether the program impacted the world of work, this study was conceptualized to provide an empirical basis.

Figure 1 shows the framework of the study. It depicts the variety of experiences the students get to prepare them to become competent and self-reliant draftsmen in the labor industry. If the University delivered the right competencies and skills needed in the workplace; the students may be able to secure jobs that require skills congruent to the competencies and skills acquired in during their stay in the undergraduate program.

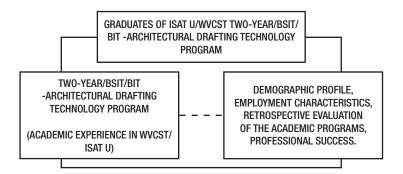


Figure 1. The framework of the study

The information and feedback taken from this tracer study may provide the intrinsic and extrinsic result and benefits which may be useful and timely, especially in the labor market. The output of the study includes the established demographic profile of the graduates, the employment characteristics, and the retrospective assessment of the Architectural Drafting Technology (ADT) program. The obtained information is vital for academic deliberation and immediate actions for the improvement of the program.

Purpose of the Research

This study sought to review and evaluate the Two-Year/BSIT/BIT Architectural Drafting Technology program at the University through a tracer study of its graduates from 2008-2014.

The study was designed to determine:

- 1. the employment characteristics in terms of (a) employment status, (b) employer, (c) tenure, (d) job position, (e) waiting time, (f) nature of work, (g) reasons for being hired, (h) present salary, (i) satisfaction of the salary, (j) job searching, (k) job location; (l) the current status in terms of (m) enrolled in upgrading course, (n) course enrolled, and (o) plan to pursue studies at the University;
- 2. the extent to which skills learned in school are used in the current job as a whole; and
- 3. the adequacy and applicability of the program as a whole.

Methodology

Research Design

This study used a descriptive survey method which aimed to describe the characteristics of a population or phenomenon as it exists at the time of the study. It is in part, a curriculum product evaluation that documents curriculum effectiveness, relevance, and adequacy by determining how well the products (the graduates) have achieved the goals of their program (Nivera, Toledo, Sualibio, Boral, & Asuncion, 2015).

Participants of the Study

The researchers utilized a systematic random sampling. However, the procedure did not work because of issues related to time and logistics. So the researchers opted to use snowball sampling to come up with 100 participants. It is a sampling technique where a participant of the study leads the researchers to other possible participants until a desired or adequate number of participants are reached (Crossman, 2018). Majority of the participants are graduates of the BIT program from academic years 2011 to 2014 who responded through email and hard

copies. On the other hand, old students from BSIT and Two-Year Technical curriculum responded less maybe because they were busy in their jobs. It clearly shows that the convenient way to trace the graduates of the program is through the internet.

Table 1 presents the demographic data of the participants, where the majority of them were male, single, less than 30 years old, who belonged to the BIT program and had no awards. The majority of whom did not take the examination; nevertheless, many of them took a TESDA national competency examination and Licensure for Examination for Teachers (LET) and were able to pass even though the program is a none-board.

Table 1. Demographic data of the participants

Personal Information	Total (N=100)	%
Sex		
Male	62	62
Female	38	38
Civil Status		
Single	89	89
Married	11	11
Age		
Not more than 30 years old	44	44
More than 30 years old	56	56
Curriculum		
2-Year	2	2
BSIT	31	31
BIT	67	67
Honors Received		
Summa Cum Laude	0	0
Magna Cum Laude	1	1
Cum Laude	3	3
Other Awards	26	26
No Award	70	70
Examination Passed		
LET	4	4
CSE	10	10
TESDA	31	31
No Exam Taken	55	55

Table 1 further shows that 70% of the participants have no awards, yet 30% were awardees, and 45% passed either the LET, Civil Service Examination (CSE), or Technical Education and Skills Development Authority (TESDA) trade tests.

The Instrument and Data Gathering Procedure

To obtain quantitative and qualitative feedback from graduates about their undergraduate competencies learned during their stay in the program, as well as employment characteristics, and retrospective evaluation of the program this study utilized a modified version of the instrument developed by Nivera, Toledo, Sualibio, Boral, and Asuncion (2015) and CHED format tracer study instrument. It only included relevant items in the present study using a hard copy and online versions of the questionnaire. The numbers of items/questions of each component of the questionnaire are as follows: personal information, 10; employment status, 4; current status, 4; other concerns and suggestions, 2; retrospective evaluation of the program, 12.

The researchers secured permission from the offices of the employees and owners of the industry. The researchers personally distributed and administered the survey to the identified participants. In some cases, personnel from the workplace of the respondents were requested to facilitate the distribution and administration of the questionnaires. Some of the participants were interviewed through phone calls after seeking their consent. Graduate students who visited the campus during that time were also used as a participant while others accomplished the instrument posted on messenger and email. Despite problems in time and logistics, the researchers gathered 100 participants.

Data Analysis

The gathered data were encoded, summarized, tabulated, processed, analyzed, interpreted and were

computer-processed using Statistical Package for Social Science (SPSS) Version 22. The researchers adopted a tally scheme for every item for statistical processes. In analyzing the results, the researcher used the frequency count and percentage, mean, and standard deviation for descriptive analysis; the inferential analysis uses both t-test and Oneway ANOVA. The frequency count and percentage were used to establish the demographic and employment profile of the participants. It was coded and clustered in thematic approach and presented in tables and figures.

Results and Discussion

The tracer graduates of the Architectural Drafting Technology of the BSIT, Two-Year Course, and BIT programs from 2008 to 2014 yielded 100 participants only due to poor response rate and time constraints, and during the retrieval of the instruments, 1/3 of the participants answered online, while the rest responded using hard copies. Using quantitative treatment of the study 92% of the participants thoroughly answered the items in the questionnaire, and 8% skipped one or more, particularly in the question on employment status, present monthly income and some of the open-ended questions, which sought their recommendations and suggestions for the improvement of the programs.

Figure 2 shows the distribution of the participants, the majority of whom came from the SY 2011 to 2014. The data represents the transition of the curriculum from BSIT to BIT wherein most of the students in the BIT availed the provision of the social media during these years and used it to their advantage and considered as the most number of participants who responded during the conduct of this study.

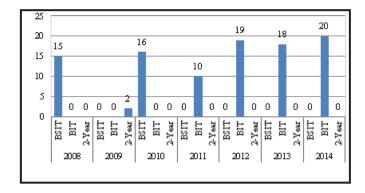


Figure 2. Distribution of Participants in Terms of Year Level.

Employment Characteristics and Current Status of the Participants

Table 2 presents the employment characteristics of the participants in terms of employment status, which includes employment, employer, tenure, job description, waiting time, nature of work, reasons for being hired, the satisfaction of the salary, and job searching and current status of the participants in terms of enrolled in upgrading at the University.

The employment characteristics of the participants show that the majority of whom are permanently employed (75%). Regarding the employer, most of them are working in the private sectors (85%) and (85%) are holding a non-supervisory position. This characteristic is very evident in the ADT program, considering that many of the participants are working in the private firms, after being hired at the commencement of their on-the-job training. However, a majority of them waited for not more than two years to get hired for jobs related to their work. When it comes to salary, a majority of the participants (66%) had a moderate, quite happy (85%) working happily and harmoniously with their co-workers. Moreover, regarding job searching, most of the jobs found were recommended by someone (28%) because of demand of the CAD-related work,

and recommendation is common to the owners and co-worker in the industry. As Badiru and Wahome (2016) pointed out, a meaningful and successful tracer study use accurate data from the employment characteristics, which served as an integral source of information.

Table 2. Employment Characteristics and Current Status of the Participants.

Employment Characteristics	Total (N=100)	%
Employment Status		
Employed	74	74
Not Employed	26	26
Employer		
Government	15	15
Private	85	85
Tenure		
Permanent	52	52
Casual/Contractual/Job Hire	43	43
N/A	5	5
Job Position		
Supervisory	15	15
Non-Supervisory	85	85
Waiting Time		
Not more than one year	38	38
2 years	39	39
3 years	18	18
N/A	5	5
Nature of Work		
Related	69	69
Somewhat Related	38	38
Not Related	3	3
Reasons for Being Hired		
Knowledge and Skills Related to Work Applied For	51	51
Other Personal Skills	18	18
Computer Literate	31	31
Present Salary		
Low	18	18
Moderate	66	66
High	16	16

Satisfaction of the Salary		
Not Happy	3	3
Quite Happy	85	85
Нарру	12	12
Job Searching		
Response to Ads	15	15
Recommended by Someone	28	28
Information from Friends	16	16
Family Business	8	8
Walk-in Applicant	15	15
Arranged by School Job-Placement Officer	18	18
Enrolled in Upgrading Course		
Yes	34	34
No	42	42
No Response	24	24
Course Enrolled		
Diploma in Teaching (DIT)	3	3
Post-Graduate	9	9
Skills Training/Trade	51	51
N/A	37	37
Plan to Pursue Studies at ISAT U		
Yes	66	66
No	10	10
No Answer	24	24

Regarding the current status, the majority of participants have no plans to upgrade their course, but are open for greener pasture to support their needs and of their family. But, if they have enough time and money, they plan to enroll in other fields like Diploma In Teaching (DIT), either in post-graduate studies or in architecture to improve their educational status for future use. Their plans to pursue and shift to another career made the drafting graduates dependable and successful in their chosen industry such as teachers and architects. The ADT program is designed to developed graduates to become draftsmen, CAD operators, and artists. Results revealed that acquired competencies in knowledge, skills, and attitudes were very significant when they wanted to pursue other fields. In

fact, those who took units in DIT claimed that their acquired competencies in the ADT were much utilized in their teaching profession, especially in their major subjects. Moreover, those who shifted to Architecture were thankful that they have the edge over their classmate because of what they had learned from the previous program. Killen (2016) in his study stressed that a program should be flexible for the students to choose to or shift from one course to another as long as they mastered the competencies. Therefore, ADT is a strong foundation when planning to become a teacher or an architect.

Figure 3 presents the employment characteristics of the participants regarding work location.

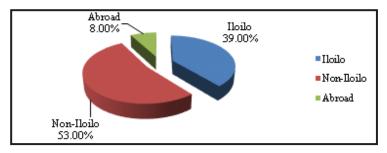


Figure 3. Participants classified according to work location.

The majority were working in the country while others found work abroad. Of those working in the country, the majority of the participants were in the other parts of the country, and the rest were in Iloilo (Iloilo Science and Technology University, 2015). The data showed that most of the participants prefer to work in the country due to the high demand for their course based on the nature of their work which is a CAD operator. In King's (2012) study, people prefer to work in the place where opportunity is within their reach. The graduates tend to work outside the country if the chance is high in that place, but because the demand of work is in the locality, they prefer to work in the country rather than to work abroad.

The Extent which Skill Learned in School used in Current Work as a Whole.

With regards to the extent to which the participants as a whole used the skills they learned from school in their current work, Table 3 shows that the participants use knowledge and technical skills to a great extent while communication skills, human relations skills, and research/problem skills are used to some extent.

Table 3. The extent to which skills learned in school is used in current work as a whole.

Skills	(1) Not at	(2) Very	(3) Limited	(4) To some	(5) To a	Weighted Mean	Interpretation
Skiiis	All	limited extent	extent	extent	great extent		
Knowledge and Technical Skills	0	0	5	35	60	4.55	To a great extent
Communication Skills	0	1	12	48	39	4.25	To some extent
Human Relation Skills	0	1	10	43	46	4.34	To some extent
Research / Problem - solving Skills	0	3	17	47	33	4.10	To some extent
Overall	0	5	44	173	178	4.31	To some extent

The simplest explanation for the lowest ratings obtained by research/ problem-solving skills compared to the other skills is the time allotted in the conduct of the study and the participation of the group member. Drafting students considered research as one of the hardest subjects because it is developmental, lack of research skills and guidance of their research adviser, and decisive participation of the groupmates. Nonetheless, they were able to finish their study before graduation.

The result of this study is in contrast to the result of the study of Gines (2014), where she found that research skills are very adequate. She further stressed that skills in research should be strengthened to complete the research on time with the proper guidance of the researcher adviser. Quality Procedure Manual of the University for Outcome-Based Education (2017) also espoused that varied experiences provided for the students will make them resourceful and self-reliant as stated in the program/degree outcomes of the ADT program.

Adequacy and Applicability of the Program Content as a Whole

Table 4 presents adequacy and applicability of the program content as a whole.

Table 4. Adequacy and applicability of the program content as a whole.

	(1)	(2)	(3)	(4)	(5)	*******	
Content	All limited extent extent gre		To a great extent	Weighted Mean	Interpretation		
Core Courses	0	0	8	51	41	4.33	Moderately Adequate and Applicable
Major Courses	0	0	3	40	57	4.54	Highly Adequate and Applicable
Professional Courses	0	0	9	53	38	4.29	Moderately Adequate and Applicable
General Education Courses	0	0	13	48	39	4.26	Moderately Adequate and Applicable
Overall	0	0	33	192	175	4.36	Moderately Adequate and Applicable

It is noteworthy that the contents of the program were highly adequate and applicable in the drafting courses compared to others because the focus is on the manual and digital making of house plans and similar structures. In fact, the participants of the ADT program claimed that they learned enough in the knowledge and technical skills which apply to their jobs, a sign that their primary course intended to meet

the requirement of their supervisors. This finding justifies the focus of the curriculum on the holistic development of the ADT students as a technologist for the industry. The results of this study conform to that of Nivera, Toledo, Sualibio, Boral, and Asuncion (2015) in their tracer of PNU graduates of Bachelor of Secondary Education major in Mathematics (BSE Math) and Bachelor of Science in Mathematics for Teacher (BSMT) stated that their program content applies to their current work. Millington (2015) also pointed out that graduates of the University of Malawi were satisfied with teaching quality, course content and knowledge gained. It is interesting to note that they saw knowledge of English, communication skills, a sense of responsibility, self-confidence, reliability, problemsolving ability, initiative, and willingness to learn leadership qualities and ability to learn as vital to professional life regardless of the discipline studied. The demand for University to provide competent drafters who can work manually and digitally done house plans to the industry is even higher. In confirmation, the majority of the graduates responded that they were proud and satisfied graduates of the ADT program.

With their overflowing feelings about their experience in the University, all of them would recommend it to their friends, colleagues, or relatives to take undergraduate studies in the University. Bearing the title "From a Technical Competence to Technological Excellence" that their alma mater had made them proud in saying that they were the products of the best technical and technological training school in the country.

On the question of how the ADT program can be improved to address the needs of the modern architectural firms, some participants proposed the use of digital technology drafting since the trend in technology is rapidly changing. To wit:

"The trend in the house planning is already digital. The University should provide the drafting students with knowledge and skills in preparing standard working drawings that are accepted globally."

"Revisit the curriculum structure, upgrade facilities of the program and follow the required number of hours based on the requirements of the authorities.

"Support the leadership programs of the drafting students through curricular and non-curricular activities."

"Hire competent faculty in drafting with highly competitive and diverse qualifications."

Finally, the participants were very thankful and honored to have obtained their degree at the University. They believed that the BSIT/BIT/Two-Year program adequately prepared them for their career in industry as technologists.

Conclusion and Implications

The study that sought to review and evaluate the Two-Year/ BSIT/BIT Architectural Drafting Technology program of the University through a tracer study of its graduates from 2008-2014 yielded result that the graduates of the program were accessible using a unique sample provided valuable information related to the quality training offered to them during their stay in the program. The sample consisted of graduates who are relatively young, took and passed the trade test, Civil Service Examination (CSC) and Licensure Examination for Teachers (LET), and residing near the institution. Many of them are presently employed in the private sector, planning to pursue their post education, either supporting their continuing education, and happy workers of their company. These are, therefore, viewed to be characteristics of graduates who are eager to inform their alma mater about their success stories in their respective workplace through a tracer study.

The utilized unique sample of the ADT program provided valuable information, however, may be the most critical information left out there represented by other graduates of the program of different sets of demographic characteristics, so there is also a need to trace other groups of graduates and add to the information initially yielded by the present tracer study.

The developed competencies were very vital and related to the workplace through the major, professional, core, and general education course, as well as skills in communication, human relations, and problem-solving, knowledge/technical, leadership and research, were validated to be useful and applicable to their work which advances the relatedness and relevance of the program. The findings implied that there is a need to enhance further the ADT program to cope with the demand of the design and construction industry by providing additional subjects in 3D rendering, animations, and simulations.

Although physical facilities and equipment were not enough to provide each student to practice activities in CAD, the human resources were found competent and adequate. Thus, the University should improve the physical facilities and equipment to increase the performance of the ADT students in CAD works by allocating a budget for that purpose.

The majority of the participants were satisfied with their salary, happy working with their co-workers, job security and prestige in their current profession. They believed that they are privileged and honored to be graduates of the University. The ADT program succeeded in preparing the graduates adequately for the labor market and instilling in them the love for their profession and their alma mater which means that the University was able to attain its vision, missions, goals, and objectives.

The tracer study yields initial evidence indicating the strengths of the program and may be strengthened further by enhancing it to adapt to the fast-changing world of work, science and technology, by providing, state-of-the-art facilities and equipment, instructional materials, and by hiring highly competitive faculty in ADT with various qualifications.

Recommendations

The researchers proposed the following recommendations based on the findings of the study and conclusions made: First, include the yielded result by the present study to the university-wide tracer study with a different set of demographic characteristics. Second, sustain the high applicability and adequacy of the program contents for the workplace. Third, strengthen the emphasis on communication, human relations, and research/problem-solving skills, which are also used in the workplace to some extent under the ADT program. Fourth, review and improve the ADT program primarily in the research/problem solving by allotting longer contact time to finish their research output on time. Last, improve the physical facilities, equipment, and instructional resources to both the faculty and students.

This study is limited to trace the employment profile of the ADT graduates from 2008-2014 and to determine the extent of the skills learned in the University as well as the adequacy and applicability of the program. The researchers embarked on the expansion of the tracer study to include assessment of the physical facilities and human resource services and add the information to the results yielded by the present tracer. Furthermore, a constant revisit of the curricular offerings to congruently align with the practices of the industry.

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References

- ASEAN Integration Report (2015). Retrieved from http://asean.org/asean-integration-report-2015-4/.
- ASEAN Qualifications Reference Framework (2015).

 Retrieved from http://asean.org/asean-economiccommunity/sectoral-bodies-under-the-purviewof-aem/services/asean-qualifications-referenceframework/
- Badiru, E. O. & Wahome, M. (2016). Conducting graduate tracer studies for quality assurance in east african universities: A focus on graduate students voices on quality culture. *Journal of Education and Practice*. www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) 7(6).
- CHED Memorandum Order (2012). CHED Memorandum Order No. 46, series of 2012. Policy-Standard to Enhance Quality Assurance (QA) in Philippines Higher Education through an Out-comes-Based and Typological-Based QA. Retrieved from http://ched.gov.ph/cmo-46-s-2012/.
- College of Industrial Technology Almanac (2014). Iloilo Science and Technology University, La Paz, Iloilo City, Philippines.
- CHED Handbook (2014).Commission on Higher Education Handbook on Typology, Outcomes-Based Education, and Institutional Sustainability Assessment. Commission on Higher Education Office of Institutional Quality Assurance and Governance HEDC Building, C.P. Garcia Avenue, U.P. Diliman, Quezon City, 1101 Philippines. Retrieved from www. ched.gov.ph.

- Crossman, A. (2018). What is a snowball sample in Sociology? What It Is and When and How to Use It. Retrieved from https://www.thoughtco.com/snowball-sampling-3026730.
- Dillman, D.A., Smyth, J. D., & Christian, L. M. (2008). Internet, mail and mixed-mode surveys: The tailored design method. New York: Willey.
- Gines, A. C. (2014). Tracer study of PNU graduates. American International Journal of Contemporary Research. (4)3, 95-96.
- Executive Order No. 83 (2012). Institutionalization of the Philippine Qualification Framework. Retrieved from http://www.officialgazette.gov.ph/2012/10/01/executive-order-no-83-s-2012/.
- Flotcher, C. (2010). Address data bank and website for the graduate survey. Kassel: INCHER-Kassel.
- Herrmann D., Dilger, B., & Junghanns, M. (2010). Specialized questionnaires in graduate tracer studies; Demand, development and back channeling results. Koln: University of Cologne.
- Iloilo Science and Technology University (2015). Quality Manual. La Paz, Iloilo City, Philippines.
- Iloilo Science and Technology University (2017). Curriculum Manual.
- IPEC Child Labour Impact Assessment Toolkit: Tracer Study Manual / International Labour Office, International Programme on the Elimination of Child Labour (IPEC) (2011). Geneva: ILO, 2011 3 v. Retrieved from www. ilo.org/ipecinfo/product/download.do?type=document&id=8990

- Killen, R. (2016). Outcomes-based education: Principles and possibilities. Unpublished manuscript, University of Newcastle, Faculty of Education. Retrieved from https://zombiedoc.com/outcomes-based-education-principles.html.
- King, R. (2012). Theories and typologies of migration: An overview and a primer. Willy Brandt Series of Working Papers in International Migration and Ethnic Relations. Malmö Institute for Studies of Migration, Diversity, and Welfare (MIM). Retrieved from https://www.mah.se/upload/Forskningscentrum/MIM/WB/WB%203.12.pdf.
- Millington, C. (2015). The use of tracer studies for enhancing relevance and marketability in online and distance education. Retrieved from http://wikieducator.org/images/e/e1/PID 424 pdf.
- Nivera, G. C., Toledo, Z. M. G. U., Sualibio, M. F. M., Boral, Z. P., & Asuncion, Q. O. (2015). A tracer study of the PNU graduates of the BSMT and BSE math programs from 1985-2010. *Philippine Normal University Journal of Teacher Education*. (2)7, 82-83.
- Quality Procedure Manual of the University for Outcome-Based Education (2017). Iloilo Science and Technology University, La Paz, Iloilo City, Philippines.
- Republic Act 7222 (1994). Retrieved from http://ched.gov. ph/ched/.
- Schomburg, H., & Ulrich, T. (2011). Employability and mobility of bachelor graduates in Europe: Key results of the bologna process. Netherlands: Sense Publishers.
- Stieber, Z. (2015) Martin Luther King Jr. Quotes: 33 Quotes on Education, Courage, Love, Racism, Violence, and Service. Retrieved fromhttps://www.theepochtimes.

- com/martin-luther-king-jr-quotes-33-quotes-on-education-courage-love-racism-violence-and-service 454112.html.
- WVCST BOT Resolution No. 05/16/2008 (2008). One System One Standard (OSOS).
- WVCST BOT Resolution 12/21/2007-84 & ACCO RESOLUTION NO. 18D (2014). Policies and Standards for Bachelor of Science and Industrial Technology program.

Appendix A

Range	The extent to which skills were used	Adequacy of course content	Applicability of course content
4.50 - 5.00	To a great extent	Highly adequate	Highly applicable
3.50 – 4.49	To some extent	Moderately adequate	Moderately applicable
2.50 - 3.49	To a limited extent	Not quite adequate	Not quite applicable
1.50 - 2.59	To a very limited extent	Slightly adequate	Slightly applicable
1.00 – 1.49	Not at all	Not adequate at all	Not applicable at all

Tracing of Graduates of Architectural Drafting Technology Program College of Industrial Technology

A. Personal Info	rmation		
(Family Name)	(First Name)	(Middle Initial)	(Maiden Name)
Sex: Male	Female		
Date of Birth (DD)/MM/YYYY):/		
	ngle []Married		
Present Address:	Cell No.:		
Tel No.:	Cell No.:	Facebook/Email:	
Year Graduated	et WVCST		
Curriculum: []B	SIT Drafting []BIT Drafti	ing []Two-Yea	r Architectural Drafting
Honors/ Awards	Received during Graduation	1:	
	ia []Magna []Cum Laude		
Examination Pas	sed: []PRC []CSE []TESD	A [] No Exam Taken	
B. Employment			
1. Work	Status []Employed yer []Public	J []Not Employed	[]Self-Employed
2. 2	Status of Employment ()P	ermanent [](Casual/Contractual/Job hire
i	ocation of Work []II	oilo (1Philippin	es []Abroad
•	If employed		
		first job? [] Yes []	
			job?(in years)
		es did you change your	
		Related [] Somewh	at Related [] Not Related
	n for being hired:		_
]Knowledge and skills related	ted to your job applied t	for.
	Other personal qualities		
]Computer literate		
	Present salary f No, why?	Are you happy with you	r present salary?
4. How d	lid you find your job?		
]response to advertisemen	nt []as walk-i	n applicant
]recommended by someor]information from friends		l by school job placement
]family business		ls. Specify)
C. Current Status	•		
Are you	enrolled in upgrading course	e? [] Yes [] No	
ı	f Yes, what course? []D	IT [] Post Gra	duate
		kills Training/Trade Test	
ı	f No, are you planning to pu	ursue studies at WVCST/	ISAT U? []Yes []No
'	f No, why?		
D. Other Concer			
Are there	e some aspects of the BIT Co	urriculum specifically Ar	chitectural Drafting
Technology Prog	ram you wanted to revise/ii ecify	mprove? []Yes	[]No

E. Curriculum Assessment

Please rate the extent to which skills learned in school are used in current job using the following scale:

Range	· Inter	pretat	tion
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4.50 – 5. 00	To a great extent
	To some extent
	To a limited extent
	To a very limited extent
1.00-1.49	Not at all

	5	4	3	2	1
Knowledge/Technical Skills	[]	[]	[]	[]	[]
Communication Skills	[]	[]	[]	[]	[]
Human Relation Skills	[]	[]	[]	[]	[]
Research Skills/Problem-Solving Skills	11	11	[]	11	11

F. Adequacy of program content

Range Interpretation

Highly adequate
Moderately adequate
Not quite adequate
Slightly adequate
Not at all

	5	4	3	2	1
General Courses	[]	[]	[]	[]	[]
Major Courses	[]	[]	[]	[]	[]
Professional Courses	[]	[]	[]	[]	[]
Education Courses	11	11	11	[]	[]

G. Applicability of the Program Content

Range Interpretation

4.50 – 5. 00 Highly applicable					
3.50 - 4.49	Moderately applicable				
2.50 - 3.49	Not quite applicable				
1.50 - 1.59	Slightly applicable				
1.00 -1.49	Not at all				

	5	4	3	2	1
General Courses	[]	[]	[]	[]	[]
Major Courses	[]	[]	[]	[]	[]
Professional Courses	[]	[]	[]	[]	[]
Education Courses	[]	[]	11	11	[]

Thanking you for taking time in filling up this questionnaire.

Appendix B

Table 1. Evaluation Scale for the Experts

Range	Extent to which skills were used	Adequacy of course content	Applicability of course content
4.50 - 5.00	To a great extent	Highly adequate	Highly applicable
3.50 – 4.49	To some extent	Moderately adequate	Moderately Applicable
2.50 – 3.49	To a limited extent	Not quite adequate	Not quite applicable
1.50 – 2.59	To a very limited extent	Slightly adequate	Slightly applicable
1.00 - 1.49	Not at all	Not adequate at all	Not applicable at all