

Success Factors of Technology Graduates in Selected State Universities and Colleges of the Philippines: Basis for Program Enhancement

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A B S T R A C T

The study is divided into two components, namely; the beekeeping status and contribution. This study aimed to determine the success factors of technology program graduates in selected State Universities and Colleges (SUCs) of the Philippines. The independent variables are respondents' demographics, accreditation status of the technology programs, the morale of respondent, and the practices in the curricular, teaching-learning and assessment, facilities and learning resources, student affairs services, and the organization and management aspects of the technology program while the dependent variables are the graduation rate, graduates' employment rate, employment status, length of time in acquiring the first job, and monthly income/salary. Findings revealed that the longer the length of service of the faculty, the higher is the graduation rate of the SUCs; State Universities and Colleges with more female faculty generated more graduates than those with more male faculty; the more the SUCs implement the practices in the organization and management of the technology programs, the better the employment rate and higher employment status of their graduates; and State Universities and Colleges with faculty having a shorter length of service generated more graduates with higher employment status and less waiting time before acquiring the first job. In addition, the respondents' sex and length of service predict the graduation rate while the length of service predicts the graduation status and the length of time of the graduates in acquiring the first job. Moreover, the organization and management significantly predict the employment rate and employment status of graduates.

1. INTRODUCTION

1.1. Research Background

One of the primary mandates of higher education institutions (HEIs) is to provide students with knowledge, skills, and experiences that will contribute to their overall success and career after graduation. As Ref. [1] and Ref. [2] said, the concept of success has a universal appeal and motivation for attainment and is conceptualized as a result of work-related achievements throughout one's professional experience. Indicators of career success are categorized as objective and subjective indicators [2,3]. Previous studies revealed that there was no particular measure of career success but the inevitable presence of difficult-to-quantify elements in a measure should not be used as an excuse to ignore those elements [4,5]. Objective career success indicators comprise of hierarchical rank, a number of promotion, job changes, and salary, awards and recognition, status, power, impact, and influence while subjective indicators include

promotability, employability, perceived career opportunities, job, and career satisfaction and promotion [2].

Furthermore, the educational inputs and processes like the faculty and staff demographic profile and morale, and the practices along the curricular aspect, teaching-learning and assessment, facilities and learning resources, student affairs services, and organization and management were also studied to see how these variables affect the success factors of technology graduates.

The study will help to determine the success factors of technology graduates in selected SUCs of the Philippines and use the results of the study as a basis for the enhancement of the different technology programs in order to become more responsive to the needs of the students the labor market and other stakeholders.

1.2. Literature Review

Generally as observed, the learning experiences gained from school have something to do more or less with the students' success in their career, and job. Student post-graduation success is tied with their educational experiences and the learning

environment Learning experience refers to any interaction, course, program, or other experience in which learning takes place, whether it occurs in traditional academic settings (schools, classrooms) or nontraditional settings (outside-of-school locations, workplace environments). Whereas, learning environment denotes the diverse physical settings, cultures, and traditions and context in which students learn as well as the ways in which teachers may organize an educational setting to facilitate learning [6]. Also, empirical data showed that practices along with the components of educational programs related to the curriculum, instruction, supervision, assessment, and administration impact student outcomes and success, hence, the efficient administration of educational activities is desired. In addition, educational infrastructure such as buildings, classrooms, laboratories, and equipment are crucial elements of the learning environment in universities. There is strong evidence that high-quality infrastructure facilitates better learning, improves student outcomes, and increase graduation rates, among other benefits [7].

Quality of education is more often than not measured in terms of the quality of graduates. This challenge is not new to all schools and has been a matter of long quest by the higher education institutions (HEIs). One perceived factor of quality is the question of what the graduates had become after graduation and the ratio of graduates to the total enrolment. These concerns are never perfected by the HEI's brought about by the many factors that interplay during the students' school days. The State Universities and Colleges (SUCs) in the Philippines have their share in this realization. To constantly determine the quality of graduates of SUCs prompted the conduct of this study with specifics on the success factors of Technology Program Graduates in selected SUC's. Several graduates tracer studies (GTS) had been periodically conducted in SUCs to ascertain the students' success post-graduation. Studies have shown that GTS measures the graduates' extent of professional/career success caused by education and the quality of the graduates' university education as well as an educational success [8].

Furthermore, graduate surveys can provide valuable statistics for evaluating the results of the education and training and serve as the basis for future planning activities and curriculum review and re-engineering of the subject content or program enhancement to meet the global demands [9,10]. The factors considered are graduation rate, employment rate, employment status, length of time in acquiring the first job, and monthly income. The implications of the statistical data derived from the indicators will be used as a basis for a future revision of curriculum as cited by Pontillas [10], a crucial step to program enhancement.

1.3. Research Objective

The study was primarily conducted to determine the success factors of technology program graduates in selected SUCs of the Philippines that will serve as the basis for program enhancement. More specifically, the study aimed to determine if the respondents' profile, morale, the accreditation status of the curricular program, and the practices in the curricular aspects, teaching-learning and assessment, facilities and learning resources, student affairs services, organization and management of the technology program significantly predict the career success factors of graduates in terms of graduation rate, employment rate,

employment status, length of time in acquiring the first job, and monthly income/salary.

2. MATERIALS AND METHODS

2.1. Preparation of Respondent

The descriptive research design was used in the study in order to establish a description of the respondents' profile and morale in the workplace, the accreditation status of the technology programs, and the program practices of the respondent universities. The same type of design was used to collect information on the graduation rate, employment rate, employment status, length of time in acquiring the first job, and monthly income of the alumni of participating universities. The respondents of the study were the staff and faculty members of the College of Industrial Technology or the Industrial Technology Department of the participating universities identified using the simple random sampling technique with the assistance of the concerned department heads. A validated questionnaire checklist was used as a data-gathering tool. Two hundred sixty-five were distributed to the participating SUCs but only one hundred fifty-five (155) or 58% of the faculty and staff responded to the survey. The SUC that participated in the survey were Batangas State University Alangilan Campus (25), Cavite State University Imus Campus (24), and Rosario Campus (20), Isabela State University San Mateo Campus (15), Nueva Vizcaya State University Bambang Campus (9), Sorsogon State College (22), Southern Luzon State University Lucban Campus (20), and Technological University of the Philippines Cavite Campus (20).

2.2. Statistical Analysis

The statistical tools utilized in the study are frequency, percentage, mean, and overall mean, standard deviation, and multiple regression analysis. To allow the application of multiple regression analysis, the institutional variable data was distributed to the number of respondents from each SUC. A Likert scale was used to assess the degree of agreement (DA) on the sub-indicators of morale and the practices in the curricular, teaching-learning and assessment, facilities and learning resources, student affairs services, and the organization and management aspects of the technology program: 1.00-1.50, Strongly Disagree; 1.51-2.50, Disagree; 2.51-3.50, Slightly Agree; 3.51-4.50, Agree; 4.51-5.00, Strongly Agree. The ratings were verbally interpreted (VI) accordingly as 1.00-1.50, Very Low Morale/Poor; 1.51-2.50, Low Morale/Fair; 2.51-3.50, Slightly High Morale/Satisfactory; 3.51-4.50, High Morale/Very Satisfactory; 4.51-5.00, Very High Morale/Outstanding.

3. RESULT AND DISCUSSION

The modal of the faculty and staff of selected the SUCs as respondents of the study is at the earlier middle age (21-35 years old), female (54%), a master's degree holder (46%), and from the academic affairs department (92%) with a salary equivalent to grade 12 and at least 5-year experience with the current employer. The job and work environment morale of faculty and staff as respondents is high with a mean rating of \bar{x} = 3.837 (SD = 0.557) and \bar{x} = 4.020 (SD=0.534) respectively.

3.1. Practices in Selected SUCs in term of the Curricular Aspect

As presented in Table 1, the faculty and staff of respondent universities believe that their institution has stated goals and objectives that are communicated systematically to all the constituencies with a mean value of 4.336 (SD = 0.573) described as “very satisfactory”; the programs of the institutions are consistent with their goals and objectives with a mean value of 4.252 (SD = 0.679) described as “very satisfactory”; the curricular program offerings are consistent with the needs of the labor market or industries with a mean value of 4.103 (SD = 0.685) described as “very satisfactory”; the institutions have a wide range of program offerings that provide academic flexibility with a mean value of 4.097 (SD = 0.737) described as “very satisfactory”; that the feedbacks from academic peers and employers are used in the initiation, review, and redesign of programs with a mean value of 3.890 (SD = 0.778) described as “satisfactory.” The overall mean of 4.136 (SD = 0.560) on the best practices of SUCs as regards the curricular aspects of the SUCs is described as “very satisfactory.” This can be attributed to the fact that all the technology programs of the selected SUCs of the Philippines have undergone rigid accreditation by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP) and it is perceived that such exercise has strengthened these programs. Likewise, the high rating given by the respondents is an indication that the technology programs being offered in their respective institutions were carefully designed with the end-goal of producing quality graduates consistent with the needs of the industries.

Table 1. Mean Distribution of the Practices in Selected SUCs in terms of the Curricular Aspect

Practices	Mean	SD	DA	VI
1. The institution has stated goals and objectives that are communicated systematically to all its constituencies	4.336	.573	A	VS
2. The programs of the institution are consistent with its goals and objectives	4.252	.679	A	VS
3. The institution has a wide range of program offerings that provide academic flexibility.	4.097	.737	A	VS
4. Feedback from academic peers and employers is used in the initiation, review, and redesign of programs.	3.890	.778	A	VS
5. The curricular program offerings are consistent with the needs of the labor market or industries.	4.103	.685	A	VS
Overall Mean	4.136		A	VS

3.2. Practices in Selected SUCs in Terms of Teaching-Learning and Assessment

As presented in Table 2, the faculty and staff of the respondent institutions believe that their institutions facilitate the effective running of the teaching-learning programs with a mean value of 4.155 (SD = 0.615) described as “very satisfactory”; the institutions have a well-conceived plan for monitoring student progress continuously with a mean rating of 4.058 (SD = .677) described as “very satisfactory”; the student assessment procedures and systems are reliable and valid with a mean rating

of 4.129 (SD = .652) described as “very satisfactory”; the institutions have an effective mechanism to recruit qualified and adequate faculty and staff with a mean rating of 4.148 (SD = .662) described as “very satisfactory”; the institutions have an open and participative mechanism for evaluation of teaching, research and work satisfaction of the faculty with a mean rating of 4.142 (SD = .688) described as “very satisfactory”; and the teachers and staff had the opportunities for continued academic progress and professional development with a mean rating of 4.152 (SD = .529) described as “very satisfactory.” The overall mean 4.152 and SD = 0.529 signifies closeness of responses by the respondents, and that the selected SUCs of the Philippines have a well-established system for teaching-learning and evaluation and is interpreted as “very satisfactory”. The results can be attributed to the continuous quality assurance initiatives, the impact of the program accreditation, and the dynamic and sustainable professional development of the faculty and staff of the institutions, among other factors.

Table 2. Mean Distribution of the Practices in Selected SUCs in Terms of Teaching-Learning and Assessment

Practices	Mean	SD	DA	VI
1. The institution facilitates the effective running of the teaching-learning programs.	4.155	.615	A	VS
2. The institution has a well-conceived plan for monitoring student progress continuously	4.058	.677	A	VS
3. The student assessment procedures and systems are reliable and valid	4.129	.652	A	VS
4. The institution has an effective mechanism to recruit qualified and adequate faculty and staff	4.148	.662	A	VS
5. The institution has an open and participative mechanism for evaluation of teaching, research and work satisfaction of the faculty	4.142	.688	A	VS
6. The teachers and staff have opportunities for continued academic progress and professional development.	4.277	.707	A	VS
Overall Mean	4.152		A	VS

3.3. Practices of Selected SUCs in Facilities and Learning Resources

As shown in Table 3, the respondents agreed that the growth of the infrastructure in the selected SUCs of Luzon, Philippines keeps pace with the academic growth of the institution with a mean rating of 4.019 (SD = 0.751) described as “very satisfactory”; the institutions have a library and computer facilities and other learning resources with easy access by all its constituencies with a mean rating of 4.013 (SD = 0.702) described as “very satisfactory”; the institutions have the needed physical facilities to run the educational programs efficiently with a mean rating of 4.000 (SD = 0.655) described as “very satisfactory”; the institutions have mechanisms for maintenance and optimal use of the infrastructure with a mean rating of 3.871 (SD = 0.770) described as “very satisfactory.” The overall mean of 3.976 and SD = 0.584 denotes that the institutions assessed have very satisfactory and well-maintained physical facilities, infrastructures, and learning resources that keep pace with the growing number of students. It can be noted there is close similarities to the perception of the respondents as indicated by the small value of SD. The satisfactory mean rating by the respondents can be attributed to the efforts of the management of the institutions for continuously upgrading their facilities and

learning resources to keep pace with the current technologies. This effort is also aligned with the requirements of the program accreditation that each institution is encouraged to undergo with the aim of improving the quality of education.

Table 3. Mean Distribution of the Practices of Selected SUCs in Facilities and Learning Resources

Indicators	Mean	SD	DA	VI
1. The institution has the needed physical facilities to run the educational programs efficiently	4.000	.655	A	VS
2. The growth of the infrastructure keeps pace with the academic growth of the institution.	4.019	.751	A	VS
3. The institution has mechanisms for maintenance and optimal use of infrastructure	3.871	.770	A	VS
4. The institution has library and computer facilities and other learning resources with easy access for all its constituencies	4.013	.702	A	VS
Overall Mean	3.976		A	VS

3.4. Practices of Selected SUCs on Student Affairs Services

As presented in Table 4, the respondents agreed that their respective institution provides clear information to students about admission and completion requirements for all program, the fee structure and refund policies, financial aid, and scholarship programs with a mean rating of 4.219 (SD = 0.677) described as “very satisfactory; the institution has provisions for food and health services with a mean rating of 4.123 (SD = 0.696) described as “very satisfactory; the institution has safe and secure environment with a mean rating of 4.007 (SD = 0.752) described as “very satisfactory; the institution has active sports and cultural programs with a mean rating of 3.926 (SD = 0.689) described as “very satisfactory; the institution provides consultation and guidance services to its students with a mean rating of 3.872 (SD = 0.691) described as “very satisfactory; the institution has provisions for students with special needs and PWD’s with a mean rating of 3.560 (SD = 0.620) described as “very satisfactory.” The overall mean rating of 4.134 (SD = 0.603) signifies that the students in the selected SUCs of Luzon are being provided with very satisfactory student-related services. A successful student affairs program is a manifestation that the institutions are providing a holistic approach to the academic development of the students. The responses are somewhat homogeneous as indicated by the small SD value.

Table 4. Mean Distribution of the Practices of Selected SUCs on Student Affairs Services

Indicators	Mean	SD	DA	VI
1. The institution provides clear information to students about admission and completion requirements for all program, the fee structure and refund policies, financial aid, and scholarship programs	4.219	.677	A	VS
2. The institution provides consultation and guidance services to its students	3.872	.691	A	VS
3. The institution has safe and secure environment	4.007	.752	A	VS
4. The institution has provisions for food and health services	4.123	.696	A	VS
5. The institution has provisions for students with special needs and PWD’s.	3.560	.620	A	VS
6. The institution has active sports and cultural programs	3.926	.689	A	VS
Overall Mean	3.951		A	VS

3.5. Practices of Selected SUCs in Organization and Management

Table 5 presents the mean distribution of the practices of Selected SUCs in organization and management. As presented, the respondents believe that their institution strive to promote value-based education, social responsibilities and good citizenry with a mean rating of 4.136 (SD = 0.645) described as “satisfactory”; the academic and administrative planning in the institution move hand in hand with a mean rating of 4.123 (SD = 0.648) described as “satisfactory”; the institution adopt quality management strategies in all academic and administrative aspects with a mean rating of 4.097 (SD = 0.700) described as “satisfactory”; the budgeting, accounting, and auditing procedures are regular and standardized with a mean rating of 4.071 (SD = 0.685) described as “satisfactory”; the institution displays sensitivity to changing educational, social and market demands with a mean rating of 4.045 (SD = 0.638) described as “satisfactory”; the institution is geared to promote an ambiance of creativity and innovation with a mean rating of 4.045 (SD = 0.668) described as “satisfactory”; the institution practices relevant welfare schemes for all its constituencies with a mean rating of 4.032 (SD = 0.618) described as “satisfactory”; the offices and departments of the institution are governed on the principles of participation and transparency with a mean rating of 3.994 (SD = 0.743) described as “very satisfactory”; the institution is effective in resource mobilization and planning development strategies with a mean rating of 3.995 (SD = 0.714) described as “very satisfactory”; there are fair and expeditious grievance redress mechanisms at all levels of the institution’s functioning with a mean rating of 3.916 (SD = 0.683) described as “very satisfactory”; and the finances of the institution are judiciously allocated and effectively utilized with a mean rating of 3.877 (SD = 0.724).

The overall mean rating of 4.026 (SD = 0.553) suggests that the organizational model and the management of the selected SUCs in the Philippines are very satisfactory. It simply means that the top management and the different divisions such as the academic, administrative, budgeting, accounting, auditing, and other sectors are delivering quality services to the clientele.

Table 5. Mean Distribution of the Practices of Selected SUCs in Organization and Management

Indicators	Mean	SD	DA	VI
1. The offices and departments of the institution are governed on the principles of participation and transparency	3.994	.743	A	VS
2. Academic and administrative planning in the institution move hand in hand	4.123	.648	A	VS
3. The institution practices relevant welfare schemes for all its constituencies	4.032	.618	A	VS
4. There are fair and expeditious grievance redress mechanisms at all levels of the institution's functioning	3.916	.683	A	VS
5. The institution is effective in resource mobilization and planning development strategies	3.955	.714	A	VS
6. The finances of the institution are judiciously allocated and effectively utilized.	3.877	.724	A	VS
7. Budgeting accounting, and auditing procedures are regular and standardized	4.071	.685	A	VS
8. The institution displays sensitivity to changing educational, social and market demands.	4.045	.638	A	VS
9. The institution is geared to promote an ambience of creativity and innovation.	4.045	.668	A	VS
10. The institution adopts quality management strategies in all academic and administrative aspects.	4.097	.700	A	VS
11. The institution strives to promote value-based education, social responsibilities, and good citizenry.	4.136	.645	A	VS
Overall Mean	4.026		A	VS

3.6. Graduation Rate of Technology Programs

The graduation rates differ among the selected SUCs but fall within the range of 65% to 75% (Figure 1) The average graduation rate of 70% is comparable to the overall graduation rates in highly industrialized nations like Japan (72.5%) and Russia (84.9%). Specifically, as shown, CvSU Rosario Campus graduation rate in the BS in Industrial Technology program is 74%; CvSU Imus Campus graduation rate in the BS in Information Technology program is 71%; ISU San Mateo Campus graduation rate in the BS in Information Technology curriculum is 70%; TUP Cavite Campus and BatState-U Alangilan Campus had a graduation rate of 70% in the Bachelor of Technology, and the BS in Industrial Technology programs respectively. Meanwhile, the Sorsogon State University and the SLSU had a graduation rate of 69% in the Bachelor of Technology and BS in Industrial Technology programs respectively. Whereas, NVSU Bambang Campus' BS in Industrial Technology program has a graduation rate of 67%. The average rate of 70% obtained from the selected SUCs of the Philippines is almost the same with the SUCs overall graduation rate from 2010 to 2015 at 71% and higher compared to private HEIs at 65% in the same years according to the Philippines Statistic Authority (PSA).

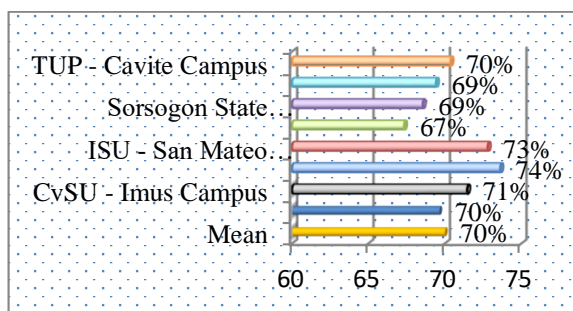


Fig. 1. Graduation Rate of Technology Programs in the Selected SUCs of Luzon, Philippines

3.7. Employment Rate of Technology Graduates

The employment rate shown in Figure 2 reflects two groups, the employed and those unemployed during the time the survey was conducted. As per institution, BatState-U Alangilan Campus and TUP Cavite Campus have similar employment rates at ninety-two percent (92%) employed and eight percent (8%) unemployed; CvSU Rosario Campus and CvSU Imus Campus had eighty-two percent (82%) and eighty-one percent (81%) employed and eighteen percent (18%) and nineteen percent (19%) unemployed respectively; ISU San Mateo Campus had seventy-two (72%) employed and twenty-eight percent (28%) are unemployed; SLSU Lucban had sixty-nine percent (69%) employed and thirty-one percent (31%) unemployed; NVSU Bambang Campus and Sorsogon State College had fifty-five percent (55%) and fifty-two percent (52%) employed and forty-five percent (45%) and forty-eight percent (48%) unemployed respectively. As a whole, the selected SUCs had an average of seventy-three percent (73%) employment rate.

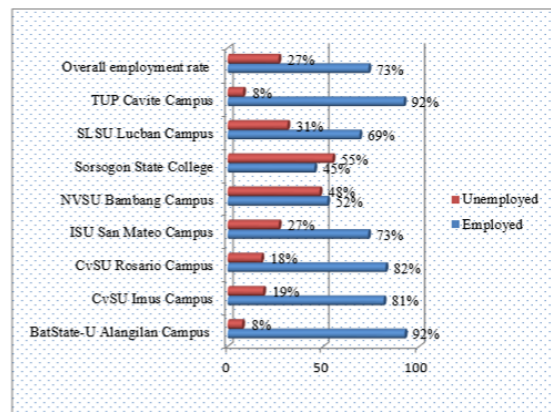


Fig. 2. Employment Rate of Technology Graduates in the Selected SUCs of Luzon, Philippines

3.8. Employment Status of Technology Graduates

It can be seen in Figure 3 that there are three (3) classifications of employment status namely (1) regular/ permanent, (2) temporary/ casual, and (3) part-time/ contractual. As presented, TUP-Cavite Campus had eighty-nine percent (89%) graduates employed with permanent/regular jobs, nine percent (9%) with temporary/casual jobs and two percent (2%) with part-time/contractual jobs; CvSU Rosario Campus had eighty-seven percent (87%) graduates with permanent/regular jobs, three percent (3%) with temporary/casual jobs and ten percent (10%) with part-time/contractual jobs; SLSU Lucban Campus had seventy-eight percent (78%) graduates with permanent/regular jobs, twenty percent (20%) with temporary/casual jobs and two percent (2%) with part-time/contractual jobs; BatState-U Alangilan Campus had seventy-one percent (71%) graduates with permanent/regular jobs, twenty percent (20%) with temporary/casual jobs and nine percent (9%) with part-time/contractual jobs; CvSU Imus Campus had seventy-one percent (65%) graduates with permanent/regular jobs, twelve percent (12%) with temporary/casual jobs and twenty-three percent (23%) with part-time/contractual jobs; ISU San Mateo Campus had sixty-four percent (64%) graduates with permanent/regular jobs, nine percent (9%) with temporary/casual jobs and twenty-seven

percent (27%) with part-time/contractual jobs; Sorsogon State College had fifty-eight percent (58%) graduates with permanent/regular jobs, twenty-six percent (26%) with temporary/casual jobs and sixteen percent (16%) with part-time/contractual jobs; NVSU Bambang Campus had fifty-two percent (52%) graduates with permanent/regular jobs, thirty percent (30%) with temporary/casual jobs and eighteen percent (18%) with part-time/contractual jobs. Overall the graduates in selected SUCs posted seventy-one percent (71%) employed in permanent/regular jobs, sixteen percent (16%), employed in temporary/casual jobs, and thirteen percent (13%) employed in part-time/contractual jobs.

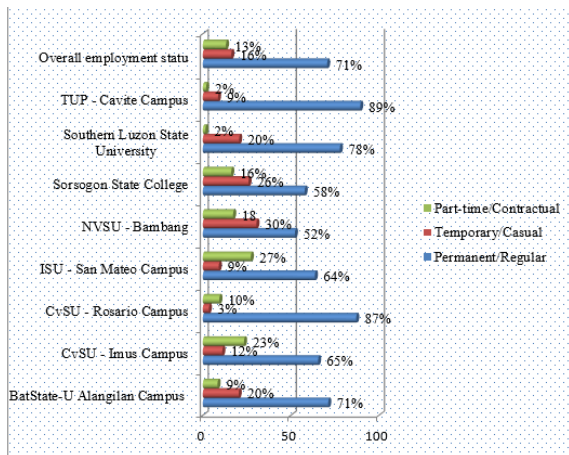


Fig. 3. Employment Status of Technology Graduates in Selected SUCs of Luzon, Philippines

3.9. Length of Time before Acquiring the First Job by Technology Graduates

The data in Table 6 reflect a diverse presentation of the transition from school to work of the graduates in selected SUCs of Luzon during the 2011 to 2016 period. As presented, graduates of TUP Cavite Campus has a mean rating of 1.86 described as the “Waiting time of 3 to 12 months before acquiring the first job”; BatState-U Alangilan Campus, has a mean rating of 1.88 described as the “Waiting time of 3 to 12 months before acquiring the first job”; CvSU – Rosario Campus has a mean rating of 1.96 described as the “Waiting time of 3 to 12 months before acquiring the first job”; CvSU – Imus Campus and Southern Luzon State University have the same mean rating of 2.00 described as the “Waiting time of 3 to 12 months before acquiring the first job”; NVSU Bambang Campus and Sorsogon State College have mean ratings of 2.59 and 2.33 respectively, described as the “Waiting time of 3 to 12 months before acquiring the first job”; and ISU San Mateo Campus has a mean rating of 2.25 described as the “Waiting time of more than a year before acquiring the first job”. The overall mean rating of 2.11 implies that the technology graduates of selected SUCs of the Philippines were able to acquire the first job after waiting for 3 to 12 months.

As presented CvSU Imus Campus graduates have mean rating of 3.189 described as “Earning a monthly salary/income of P15,001 to P20,000; TUP Cavite Campus graduates have mean rating of 3.179 described as “Earning a monthly salary/income of P15,001 to P20,000; BatState-U Alangilan Campus graduates have a mean rating of 3.154 described as “Earning a monthly salary/income of P15,001 to P20,000; CvSU Rosario Campus graduates have a mean monthly salary of 3.088 described as

“Earning a monthly salary/income of P15,001 to P20,000; SLSU graduates have mean rating of 3.019 described as “Earning a monthly salary/income of P15,001 to P20,000”; NVSU Bambang Campus graduates have mean rating of 2.605 described as “Earning a monthly salary/income of P15,001 to P20,000”; and Sorsogon State College graduates have a mean rating of 2.585 described as “Earning a monthly salary/income of P15,001 to P20,000”; and ISU San Mateo Campus graduates have a mean rating of 2.264 described as “Earning a monthly salary/income of P10,001 to P15,000.” The overall mean rating of 2.885 implies that on average, technology graduates in the selected SUCs of the Philippines are earning monthly salary/income of P15,001 to P20,000. With the current salary standards set by the Department of Labor, the salary scale is normal for workers who graduated from 2011-2015 who were surveyed in 2017.

Table 6. Length of Time before Acquiring the First Job by Technology Graduates in Selected SUCs of Luzon, Philippines

SUCs	Mean	Interpretation
BatState-U Alangilan Campus	1.88	Waited 3 to 12 months before acquiring the first job
CvSU Imus Campus	2.00	Waited 3 to 12 months
CvSU Rosario Campus	1.96	Waited 3 to 12 months
ISU San Mateo Campus	2.59	Waited more than a year before acquiring the first job
NVSU Bambang Campus	2.25	Waited 3 to 12 months before acquiring the first job
Sorsogon State College	2.33	Waited 3 to 12 months
SLSU Lucban Campus	2.00	Waited 3 to 12 months
TUP Cavite Campus	1.86	Waited 3 to 12 months
Overall Mean	2.11	Waiting time of 3 to 12 months before acquiring first job

3.10. Monthly Salary of Technology of Graduates

Table 7 displays the monthly Salary of Technology program graduates in the selected SUCs of Luzon.

Table 7. Monthly Salary of Technology of Graduates in Selected SUCs of Luzon, Philippines

SUC	Mean	Interpretation
BatState-U Alangilan Campus	3.154	Earning a monthly salary/income of P15,001 to P20,000
CvSU Imus Campus	3.189	Earning a monthly salary/income of ..
CvSU Rosario Campus	3.088	Earning a monthly salary/income of ..
ISU San Mateo Campus	2.264	Earning a monthly salary/income of P10,001 to P15,000
NVSU Bambang Campus	2.605	Earning a monthly salary/income of P15,001 to P20,000
Sorsogon State College	2.585	Earning a monthly salary/income of ..
SLSU Lucban Campus	3.019	Earning a monthly salary/income of ..
TUP Cavite Campus	3.179	Earning a monthly salary/income of ..
Overall Mean	2.885	Earning a monthly salary/income of P15,001 to P20,000

As presented CvSU Imus Campus graduates have mean rating of 3.189 described as “Earning a monthly salary/income of P15,001 to P20,000; TUP Cavite Campus graduates have mean rating of 3.179 described as “Earning a monthly salary/income of P15,001 to P20,000; BatState-U Alangilan Campus graduates have a mean rating of 3.154 described as “Earning a monthly salary/income of P15,001 to P20,000; CvSU Rosario Campus graduates have a mean monthly salary of 3.088 described as “Earning a monthly salary/income of P15,001 to P20,000; SLSU graduates have mean rating of 3.019 described as “Earning a monthly salary/income of P15,001 to P20,000”; NVSU Bambang Campus graduates have mean rating of 2.605 described as “Earning a monthly salary/income of P15,001 to P20,000”; and Sorsogon State College graduates have a mean rating of 2.585 describes as “Earning a monthly salary/income of P15,001 to P20,000”; and ISU San Mateo Campus graduates have a mean rating of 2.264 described as “Earning a monthly salary/income of P10,0001 to P15,000.” The overall mean rating of 2.885 implies that on average, technology graduates in the selected SUCs of the Philippines are earning monthly salary/income of P15,001 to P20,000. With the current salary standards set by the Department of Labor, the salary scale is normal for workers who graduated from 2011-2015 who were surveyed in 2017.

3.11. Regression Analysis

Table 8 shows that the three (3) independent variables predict significantly, singly, or in combination, the graduation rate in selected SUCs of the Philippines. The first variable entered into the equation with a great significant influence on the graduation rate is the accreditation status with a negative beta value of 0.826, and a t-value of -15.963 at the .000 significant levels. The findings suggest that as the accreditation status increases in level, the graduation rate decreases. The negative relationship of accreditation to graduation rate is the effect of SUCs that are moving towards a higher level in accreditation. Institutions vying for higher accreditation levels are implementing stricter policies and processes to improve or sustain the quality of outputs and comply with the accreditation requirements. These institutions are no longer concerned with the quantity but emphasize the quality of outputs in instruction, research, and extension. Whereas, those who do not care much about accreditation are interested in the number of graduates rather than the quality of graduates. This explains why, in this study, institutions with programs that are not accredited or with lower level accreditation have higher a graduation rate than those with higher accreditation levels.

The next variable is the length of service with a beta value of 0.166 and t-value of 3.288 has a strong significant relationship with the graduation rate (p = 0.001). It infers that the length of service of the faculty and staff positively impacts the graduation rate. In other words, the more experienced the faculty and staff of the university, the higher the graduation rate. Teachers with long years of engagement with students develop characteristics related to being compassionate, sensitive to student differences, passion for teaching, and commitment to students’ success. Such teachers’ dispositions are strongly related to student learning and development.

There is also high significance between the graduation rate and the sex of the faculty and staff with a negative beta coefficient

of 0.142 and t-value of -2.790 (p = 0.006). The findings connote that if there are more females than male faculty and staff the higher is the graduation rate in a State Higher Education Institution. This highlights the vital role women are playing in the educational system which is being strengthened by the gender equality programs of each institution. The adjusted R square value indicates that all predictor variables in combination account for 62.2% variations in the graduation rate.

Table 8. Regression of Employment Rate on Independent Variables

Predictors	Beta	t-value	Sig.
1. Accreditation Status	-.826	-15.963	.000
2. Length of Service	.166	3.288	.001
3. Sex	-.142	-2.790	.006

Adjusted R Square = .150
 F = 14.557
 Sig. = .000

Table 9 presents the regression of employment on the organization and management. The table indicates a significant relationship (sig. = 0.22) between the organization and management of the selected SUCs in the Philippines and the employment statistics of graduates with a beta value of 0.175 and t-value of 2.312. The result implies that higher education institutions assessed have a strong organizational structure and competent management who provided efficient and effective leadership which translated to quality graduates employed after graduation. The adjusted R square value indicates that the organization and management as an independent variable accounts for 15% variations in the employment as a dependent variable.

Table 9. Regression of Graduation Rate on the Independent Variables

Predictor	Beta	t-value	Sig.
Organization and Management	.175	2.312	.022

Adjusted R Square = .622
 F= 85.303
 Sig.= .000

Table 10 presents the regression of employment status on the length of service and organization and management. Firstly, the length of service is of great significance on the employment status with a negative beta value of 0.286 and t-value of 4.016 at the 0.000 level. It implies that as the length of service of the faculty and staff gets longer, the employment status of graduates is lower. Inversely, the younger the age of faculty, the higher the employment status of graduates. The negative relationship between the length of service of the faculty and staff and the employment status of graduates may be attributed to the “generation gap” and “digital divide” between the teachers and the students. With the rapid changes in communication techniques, philosophy, pedagogy, and the development of knowledge, it is crucial that educators are familiar with the new educational changes, mainly those connected to technology. However, educators who have been in the profession for a long

time are reluctant to change because they feel they are immigrants in the digital age. They view the digital age as an extension of the industrial world while the younger generations of teachers consider the digital age as a post-industrial era – the information and communication technology (ICT). Since ICT use is a norm in the classroom, the difference in ICT competence between the teacher and the students will negatively affect learning outcomes and the quality of graduates that the technology-driven labor market needs.

Table 10. Regression of Employment Status on Independent Variables

Predictors	Beta	t-value	Sig.
1. Length of Service	-.286	-4.016	.000
2. Organization and Management	.286	3.035	.003

Adjusted R Square = .241
 F = 13.228
 Sig. = .000

Secondly, organization and management is highly significant in the employment status of graduates with a positive beta value of 0.286 and a t-value of 3.035 at the 0.003 level. It suggests that the better the organization and management of a SUC, the better is the employment of its graduates. The institution's success requires thoughtful strategy developed into a plan that is executed effectively. Organizational management is the process of leading an organization and effectively using or controlling its assets and resources. Organizational management goes well beyond the institutional structure; it requires administrators to have methods in place to resolve issues and develop solutions that help the organization achieve its desired goals and vision. In universities, the ultimate goal is to produce quality graduates, relevant research, and extension outputs that have an impact on the end-users. This can only be achieved if the university organization and management have a well-conceived academic and administrative plan anchored to the changing educational, socio-economic and market demands. The adjusted R square value indicates that all the independent variables that entered into the equation account in combination for 24.1% variations in the employment status of graduates.

Table 11. Regression of Length of Time before Acquiring the First Job on Independent Variables

Predictors	Beta	t-value	Sig.
1. Length of Service	-.247	-3.153	.002

Adjusted R Square = .055
 F = 9.942
 Sig. = .002

Table 11 presents the regression of length of time before acquiring the first job and length of service. The length of service plays significantly on the waiting time before acquiring the first job of graduates with a beta value of -0.247 and a t-value of -3.153 at the 0.005 level. It implies that the longer the length of service of the faculty and staff, the employability of graduates is lower. As coded in this study, a higher score is a greater length of time in acquiring the first job. With the negative beta value, graduates under the supervision of older faculty are less

employable as measured by the length of time before acquiring the first job after graduation.

The negative relationship between the length of service and the employability and productivity of graduates in terms of the length of time before acquiring the first job after graduation is a manifestation of how most senior faculty and staff are hardly adapting to the new ways of doing things. With the changing educational landscape brought about new demands in the technology-driven labor market, instructional methods and techniques have to equally cope with these demands. With the technology-driven labor market, students must be taught in a technology-enriched environment. This is one way of bridging the gap between the labor market needs and the skills of graduates. Traditional methods of instruction are time-tested but the infusion of technology in instruction will make the learning experience of technology-savvy millennial students more meaningful. However, older faculty members have a less favorable view and are less skilled compared to the ICT trained and younger members of the faculty which, somehow, brought some disconnection between them and the students. This difference can provide a logical explanation to this statistical finding. The adjusted R square value indicates that the length of service accounts for 5.5 percent variation of the length of time before acquiring the first job.

4. CONCLUSION

Based on the statistical findings of the study, the researcher concluded that the longer the length of service of the faculty, the higher is the graduation rate of the students in SUCs. State Universities and Colleges with more female faculty generated more graduates than those with more male faculty. The more the SUCs implement the practices in the organization and management of the technology programs, the better the employment rate and higher employment status of their graduates. The SUCs having faculty with shorter length of service generated more graduates with higher employment status and less waiting time before acquiring the first job. Moreover, the faculty and staff's sex and length of service are predictors of the graduation rate while the length of service predicts the graduation status and the length of time in acquiring the first job. Meanwhile, the organization and management practice predict significantly the employment rate and employment status of graduates.

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