

Exploring the Skills Improvement and Job Placement Profile among Graduates of Technology and Livelihood Education: Basis for Skills Development Plan of Future Educators

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Abstract – Job placement profile provides a set of essential data of graduates which is considered part of the educational outcome of degree programs with skills improvement as one of the factors for employment. This study aimed to determine the contribution of Bachelor of Secondary Education major in Technology and Livelihood Education (BSEd-TLE) program in the skills improvement of graduates and test the differences of their responses when they were grouped according to job placement profile. Quantitative-descriptive type of research design was utilized in the study with 184 graduate-respondents. Result showed that male graduates have significantly higher response on the improvement of their communication skill than females. The BSEd-TLE graduates with higher improvement on communication skill are those employed in less than six (6) months. Communication skill together with the IT skill has significantly higher level of response from the graduates regarding the skills improvement compared to the problem-solving skill and research skill. Those working students during college have significantly higher response on skills improvement in terms of problem-solving and research skills. However, those employed graduates with less than Php 10,000 as monthly salary and the previous job is not relevant to teacher education are those with higher response on the contribution of the program to the improvement of their IT skill. Employed BSEd-TLE graduates have significantly higher level of improvement on research skill compared to those unemployed. The findings of the study served as a basis for a development plan based on the 21st Century skills for future educators.

Keywords – communication skill, information technology, problem-solving, research skill, employment status

INTRODUCTION

Higher education institutions produced graduates who will serve as part of the workforce, future professionals and leader that contribute to the economic growth and development of the country. However, these graduates face some challenges on how they could apply the skills they learned from the classroom in the real-world scenario [1]-[4]. They have acquired appropriate knowledge without the actual experience on how to bring theories into practice [5]. Employability skill is part of soft skills that is also considered important foundation of learning to prepare the students with the abilities necessary to be possessed in the work environment like academic institutions in the case of teacher education. It is considered significant skill required upon graduation besides technical knowledge in an attempt to compete for

employment and sustain job at the industrial global market [6]- [14].

The 21st Century Skills related to problem solving, communication, information technology and research are considered significant component of managing responsibilities inside and outside the classroom setting and leading an organization towards the achievement of schools' vision and mission [15]-[19]. Developing the problem-solving skills of the learners stimulates their sensibility or responsiveness to the needs of the community, society and country that makes them aware of the social and political issues. The problem-solving skill will now lead them in developing the research skill where they can find possible or alternative solutions with an aide of various emerging technologies and ways to offer livelihood education programs for the vulnerable communities. At the same time, effective

communication skill [20] will bring them to certain level of maturity and responsibility to confidently disseminate information to the public. Thus, this study is anchored in experiential learning theory which is defined as a process of knowledge creation with experience transformation, and the result of experience understanding and transformation is knowledge. In its turn, experience understanding is information reception, and experience transformation is information and following action interpreting [21]. Students' experience is significant in learning appropriate skills.

The process of developing the skills of the teacher education students especially those enrolled in Technology and Livelihood Education (TLE) program has been an important element of the curriculum in equipping them with the right knowledge and attitude towards performing their duties and obligation in delivering notable accomplishments. Aquino et al. [22] emphasized that higher education institutions experience pressure to enhance their curricula and improve the quality of instruction as they are entrusted with the responsibility of turning in graduates with employable skills and good attitudes.

The former baccalaureate degree in Secondary Education major in TLE (BSEd-TLE) is now a Bachelor in Technology and Livelihood Education (BTLEd) program which aims to equip the learners with adequate and relevant competencies in the area of TLE, particularly for the TLE exploratory courses from Grades 4-8 based on the Philippine TVET Trainers Qualification Framework [23]. The BTLEd graduates are intended to become classroom teachers, TVET Trainers and Assessors, school leaders or managers and education program specialist. They might also become community builders who provide services to uplift the lives of the underprivileged people and sector of the society through providing livelihood programs. They could also be able to identify and solve problems through conducting relevant research for sustainable development of education and communicating or disseminating the findings of the study in various conferences with an aide of different online platforms and emerging technologies. These are some of the possible employment opportunities for the students enrolled in the program that they can explore upon graduation.

Furthermore, the employment status of the graduates is also considered an important success parameter for higher education institutions. Determining the relevance of present employment to

teacher education and assessing how the institution helped them developed certain skills that contribute to their job placement are the main focus of this present study. It is the major responsibility of the HEIs to measure the capabilities of their graduates to be part of both private and public elementary, secondary or tertiary schools in the Philippines and even abroad. Looking into consideration the possibility of participating in life-long learning activities could be an advantage for the graduates to advance in their professional career [24]–[27]. In addition, the professional profile of the teacher education graduates served as important part of the major variable in the study to determine the specific category from their profile with significant difference from the identified skills.

The findings of the study will provide skills development plan for the BTLEd students on how they can be equipped and prepared for future employment with the necessary skills to identify and solve problems, conduct research, communicate reliable information and apply appropriate technologies in delivering quality and excellence in the field of education.

OBJECTIVES OF THE STUDY

This study aimed to determine the contribution of the program in the improvement of skills of the students in terms of problem-solving, research, communication and information technology and test the differences of responses when the graduates of Technology and Livelihood Education were grouped according to profile in terms of sex, year of graduation, employment status, length of job search, relevance of present employment to teacher education sector, graduates who are enrolled for further study, graduates who were working students during college, monthly salary, promotion, relevance of previous job to teacher education, previous and present job placement, and type of organization; to propose a skills development plan.

MATERIALS AND METHODS

Research Design

Quantitative Descriptive type of research design was utilized in the study as the result was used to describe certain phenomena regarding the job placement profile of the graduates and how the degree program helped them in improving specific skills necessary for employment.

Instrument

The survey instrument used for the study was adapted from ideas and concepts of employability studies of Chavez et al. [7], Dotong et al. [8], Ismail & Mohammed [9] and Laguador and Dotong [10] with a Cronbach’s alpha value of 0.876 which signifies that the instrument has a good internal consistency.

Respondents

The respondents of the study are the graduates of Bachelor of Technology and Livelihood Education from 2017 to 2019 which composed of 49 Males and 135 females. There are 36 out of 44 or 81.8% graduates from 2017 served as respondents, while 38 out of 41 or 92.7 percent from 2018 and 110 out of 113 or 97.3 percent from 2019 with the total respondents of 184 out of 198 or 92.9 percent.

Data Gathering Procedure and Ethical Consideration

The official list of graduates from 2017-2019 was taken from the Dean’s Office of the College of Education. Graduate-respondents were given online link to answer the questionnaire and also through their email addresses. The respondents were informed regarding the purpose of the study and only those graduates who are willing to participate in the study answered the questionnaire. Ethical considerations had been observed throughout the data gathering. Names of the graduates were already deleted during the process of data analysis to ensure the anonymity of their responses.

Data Analysis

Descriptive statistics was used in the processing of data. The frequency count, percentage, weighted mean and standard deviation are used in the analysis of contribution of the program to skills improvement of the graduates while independent sample t-test for variables with two (2) categories and analysis of variance for variables with three (3) or more categories

in testing the differences. The given scale was used to interpret the result of the data gathered: 1.00-1.49: Very Low; 1.50-2.49: Low; 2.50-3.49: High; 3.50-4.00: Very High.

RESULTS AND DISCUSSION

Table 1 presents the contribution of the Program to Skills Development of Graduates. Result showed that 63.0 percent of the graduates strongly believed that the program had greatly helped them to improve their communication skill while 32.1 percent of the graduates have high level of agreement with 4.3 percent and 0.5 percent of the respondents have low level and very low level, respectively. Agustina and Setiawan [28] emphasized that oral communication skill is essential for thinking and learning. By getting the knowledge of it, students would be able to express information, opinions, understand concepts, and would be able to discuss experience and expertise.

Further, the program has contributed very high to the development of IT skill of the 58.2 percent of the graduates followed by the 37.0 percent with high level and 3.8 percent and 1.1 percent with low and very low levels, respectively. Students were trained to use various educational media and technology in the teaching and learning process to ensure the quality of the delivery of instruction. Icard [29] note that some teachers find teaching environment challenging, hard, and not the easiest experience for them to be a successful teacher. However, some have excelled using better practices of implementing current educational technology [30], and creating learning experiences to a maximal high.

Likewise, result also showed that 46.7 percent of them strongly believed that the program helped them to improve their problem-solving skill followed by the 42.9 percent of the graduates have high level of agreement with 9.8 percent and 0.5 percent of the respondents have low level and very low level, respectively.

Table 1. Contribution of the Program to Skills Improvement of Graduates

| The program helps the students improved their... | Very Low | | Low | | High | | Very High | |
|--|----------|-----|-----|-----|------|------|-----------|------|
| | F | % | F | % | f | % | f | % |
| 1. problem-solving skill | 1 | 0.5 | 18 | 9.8 | 79 | 42.9 | 86 | 46.7 |
| 2. research skill | 6 | 3.3 | 16 | 8.7 | 90 | 48.9 | 72 | 39.1 |
| 3. communication skill | 1 | 0.5 | 8 | 4.3 | 59 | 32.1 | 116 | 63.0 |
| 4. IT skill | 2 | 1.1 | 7 | 3.8 | 68 | 37.0 | 107 | 58.2 |
| Mean | | 1.3 | | 6.5 | | 40.2 | | 52.0 |

On the other hand, 39.1 percent of the graduates believe that the program has contributed very high to the improvement of their research skill while 48.9 percent of them answered with high level. There is 8.7 percent of the graduates with low level of agreement and 3.3 percent of them with very low level. Students were also prepared to become problem solvers by being sensitive to the needs of the academic community through conducting research projects and offering alternative solutions to the given problems being experienced by the students and teachers.

Table 2 presents the differences on the contribution of the degree program to the skills development of graduates. Result showed that the communication skill ($M=3.37$, $SD=.60$) together with the IT skill ($M=3.52$, $SD=.62$) has significantly higher level of improvement ($f=9.836$, $p=.0001$) based on the contribution of the program compared to the problem-solving skill ($M=3.37$, $SD=.68$) and research skill ($M=3.24$, $SD=.74$) with significantly lower level of contribution. The institution provides different student activities that enhanced the communication and information technology skills of the students. The student development programs stimulate the creative and innovative ideas of students to prepare them in more challenging tasks outside the walls of their classrooms and portals of the academic institution. Communication skills of teachers really encourage practitioners to be imaginative in using their skills according to Salmon and Young [31]. Constant practice and application of this communication is always necessary to develop more advanced level of conveying

messages through written or verbal interactions [32]-[34]. Students develop their skills through the application of their knowledge and skill during internship [35]-[37] or practice teaching for teacher education students.

Table 3 presents the tests of differences on the contribution of the program to the skills development of graduates which is considered useful in their job placement when grouped according to sex. Significant difference exists on the communication skill ($t=2.040$, $p=.044$) of the graduates. Result showed that male ($M=3.71$, $SD=.50$) the graduates have significantly higher level of response on the contribution of the degree program to the improvement of their communication skill compared to females ($M=3.53$, $SD=.63$). Meanwhile, no significant difference exists between males and females on the contribution of the program to the improvement of problem-solving skill ($t=.004$, $p=.997$), research skill ($t=-.894$, $p=.373$), and IT skill ($t=.121$, $p=.904$). Even the result of composite mean scores has no significant difference ($t=.241$, $p=.81$) which signifies that the program has high level of contribution to the improvement of their skills across both sexes in general. Males have noted significantly higher response which the program contributed to the improvement of their communication skills than females.

The level of communication skills among females is significantly higher than males according to studies [38], [39]. But the present study measured the level of improvement obtained by the students from the program.

Table 2. Differences on the Contribution of the Program to Skills Development of Graduates

| The program helps the students improved their... | Mean | SD | VI | Rank | f-value | p-value |
|--|------|-----|-----------|------|---------|---------|
| 1. problem-solving skills | 3.37 | .68 | High | 3 | 9.836 | .00001 |
| 2. research skills | 3.24 | .74 | High | 4 | | |
| 3. communication skills | 3.58 | .60 | Very High | 1 | | |
| 4. IT skills | 3.52 | .62 | Very High | 2 | | |
| Composite Mean | 3.43 | .53 | High | | | |

*Significant at $p<.05$ (two-tailed)

Table 3. Differences on the Contribution of the Program to Skills Development of Graduates which considered Useful in Job Placement when grouped According to Sex

| Skills The program helps the students improved their... | Male | | Female | | t | df | p-value |
|--|------|------|--------|------|--------|---------|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.37 | 0.70 | 3.37 | 0.67 | .004 | 182 | .997 |
| 2. research skill | 3.16 | 0.85 | 3.27 | 0.70 | -.894 | 182 | .373 |
| 3. communication skill | 3.71 | 0.50 | 3.53 | 0.63 | 2.040* | 105.122 | .044 |
| 4. IT skill | 3.53 | 0.68 | 3.52 | 0.61 | .121 | 182 | .904 |
| Composite Mean | 3.44 | 0.53 | 3.42 | 0.53 | .241 | 182 | .810 |

*Significant at $p<.05$ (two-tailed)

Table 4. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Year of Graduation

| The program helps the students improved their... | 2017 | | 2018 | | 2019 | | f-value | df | p-value |
|--|------|------|------|------|------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.42 | 0.73 | 3.39 | 0.64 | 3.34 | 0.68 | .204 | 183 | .816 |
| 2. research skill | 3.36 | 0.76 | 3.34 | 0.71 | 3.18 | 0.74 | 1.273 | 183 | .282 |
| 3. communication skill | 3.67 | 0.63 | 3.61 | 0.55 | 3.54 | 0.61 | .609 | 183 | .545 |
| 4. IT skill | 3.47 | 0.77 | 3.50 | 0.65 | 3.54 | 0.57 | .206 | 183 | .814 |
| Composite Mean | 3.48 | 0.56 | 3.46 | 0.54 | 3.40 | 0.52 | | | |

*Significant at $p < .05$ (two-tailed)

Table 5. Differences on the Contribution of the Program to Skills Development of Graduates which considered Useful in Job Placement when grouped According to Employment Status

| The program helps the students improved their... | Unemployed (n=58) | | Employed (n=130) | | f-value | Df | p-value |
|--|-------------------|------|------------------|------|---------|--------|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.31 | 0.63 | 3.39 | 0.70 | -.766 | 182 | .445 |
| 2. research skill | 3.10 | 0.77 | 3.31 | 0.72 | -1.755 | 182 | .081 |
| 3. communication skill | 3.52 | 0.60 | 3.61 | 0.60 | -.951 | 182 | .343 |
| 4. IT skill | 3.47 | 0.60 | 3.55 | 0.64 | -.836 | 115.91 | .405 |
| Composite Mean | 3.35 | 0.52 | 3.46 | 0.53 | -1.382 | 111.09 | .170 |

*Significant at $p < .05$ (two-tailed); **Significant

This signifies that the institution provides communication skills enhancement to male teacher education students that's what they really need to prepare in becoming great teachers in the future.

Table 4 presents the test of differences on the contribution of the program to the skills improvement of graduates which are considered useful in the job placement when grouped according to year of graduation. Result showed that no significant difference exists across batches of graduates on the contribution of the program on the improvement of problem-solving skill ($f=.204$, $p=.816$), research skill ($f=1.273$, $p=.282$), communication skill ($f=.609$, $p=.545$), and IT skill ($f=.206$, $p=.814$). This signifies that the three (3) batches of the graduates have experienced diverse level of skills improvement from the institution. The result showed that the different batches of graduates have diverse responses on how they were exposed to different school activities that enhanced their problem-solving skill, research skill, communication and IT skills. Across different programs, year levels and batch of graduates should be consistent in providing curricular activities that support and complement the implementation of the curriculum. Muema et al. [40] noted that these student activities are very essential part of college life to prepare learners to be holistic. Different batches signify their responses of having high to very high level of skills improvement from the program.

Table 5 presents the test of differences on the contribution of the program to the skills improvement of graduates which are considered useful in the job placement when grouped according to employment

status. Result showed that no significant difference exists at alpha value of 0.05 between employed and unemployed graduates on the contribution of the program on the improvement of problem-solving skill ($f=-.766$, $p=.445$), communication skill ($f=-.951$, $p=.343$), and IT skill ($f=-.836$, $p=.405$). This signifies that both groups of the graduates between employed and unemployed have experienced diverse level of skills improvement from the institution. Though improvement on research skill of employed graduates ($M=3.31$, $SD=.72$) obtained a little higher difference compared to unemployed ($M=3.10$, $SD=.77$) but the variance can be considered statistically different ($f=1.755$, $p=.081$) using alpha value of 0.10. Cotronei-Baird [41] emphasized that the employability skills development is a significant graduate learning outcome and attributes of most contemporary university degrees. The higher education institutions have a critical role of academic in teaching and assessing the curriculum.

Table 6 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in the job placement of graduates when grouped according to length of job search. Result showed that those graduates with less than 6 months ($M=3.68$, $SD=.53$) of job search believed to have a significantly higher level of improvement on communication skills ($t=2.692$, $p=.041$) compared to those graduates who were employed after a year ($M=3.49$, $SD=.61$) and after 2 years ($M=3.31$, $SD=.95$). Meanwhile, improvements of the problem-solving ($f=.078$, $p=.925$), research skills ($f=.828$, $p=.439$) and IT skill ($f=.336$, $p=.715$) obtained no significant difference on the responses among the graduates.

Table 6. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Length of Job Search

| | <6 months | | after 1 Year | | after 2 years | | f-value | df | p-value |
|----------------------------------|-----------|------|--------------|------|---------------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | Mean | SD | | | |
| 1. problem-solving skills | 3.34 | 0.71 | 3.29 | 0.69 | 3.31 | 0.85 | .078 | 146 | .925 |
| 2. research skills | 3.20 | 0.75 | 3.22 | 0.72 | 2.92 | 1.04 | .828 | 146 | .439 |
| 3. communication skills | 3.68 | 0.53 | 3.49 | 0.61 | 3.31 | 0.95 | 2.692* | 146 | .041 |
| 4. information technology skills | 3.54 | 0.61 | 3.45 | 0.65 | 3.54 | 0.88 | .336 | 146 | .715 |
| Composite Mean | 3.44 | 0.51 | 3.36 | 0.54 | 3.27 | 0.75 | .723 | 146 | .522 |

*Significant at $p < .05$ (two-tailed)

Table 7. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Relevance of Present Employment to Teacher Education

| | Not Relevant (n=64) | | Relevant (n=55) | | f-value | Df | p-value |
|---------------------------|---------------------|------|-----------------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skills | 3.36 | 0.70 | 3.42 | 0.74 | -.446 | 117 | .656 |
| 2. research skills | 3.22 | 0.74 | 3.38 | 0.71 | -1.219 | 117 | .225 |
| 3. communication skills | 3.58 | 0.59 | 3.62 | 0.65 | -.353 | 117 | .725 |
| 4. IT skills | 3.50 | 0.64 | 3.60 | 0.63 | -.856 | 117 | .394 |
| Composite Mean | 3.41 | 0.52 | 3.50 | 0.55 | -.927 | 117 | .356 |

*Significant at $p < .05$ (two-tailed)

When it comes to length of job search, those graduates with higher response on communication skills are those with less number of months on searching for jobs. This signifies that communication skill really matters to the job placement of the graduates [42] most especially during interviews where they can express more of their ideas and share some of their learning experiences as student and member of various organizations in college.

Table 7 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in their job placement when grouped according to relevance of present employment to Teacher Education. No significant difference exists on the skills improvement of the graduates in terms of problem-solving skill ($f = -.446$, $p = .656$), research skill ($f = -1.219$, $p = .225$), communication skill ($f = -.353$, $p = .725$) and IT skill ($f = -.856$, $p = .394$). However, it can be seen from the result that the research skill obtained the highest f-value and lowest probability value compared to other three (3)

skills. Although, the result has no significant difference between the two groups, the research skill can still be considered an important factor that can possibly influence for the graduates to have a more relevant job placement to teacher education. The institution provides better learning experiences to students when they propose and conduct food product development [43] as application of their technical knowledge from the program. Research is an essential component on developing the employability skills [44],[45] to prepare them for higher level of responsibility in any organization.

Table 8 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in their job placement when grouped according to sector. No significant difference exists on the skills improvement of the graduates in terms of problem-solving skill ($f = .133$, $p = .940$), research skill ($f = .447$, $p = .720$), communication skill ($f = .088$, $p = .967$) and IT skill ($f = .728$, $p = .537$).

Table 8. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Sector

| | Government | | | | | | | | f-value | df | p-value |
|--------------------------|------------|------|-----------|------|----------|------|--------|------|---------|-----|---------|
| | Services | | Education | | Business | | Others | | | | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.38 | 0.77 | 3.41 | 0.73 | 3.30 | 0.47 | 3.42 | 0.84 | .133 | 118 | .940 |
| 2. research skill | 3.25 | 0.90 | 3.38 | 0.70 | 3.20 | 0.62 | 3.21 | 0.71 | .447 | 118 | .720 |
| 3. communication skill | 3.54 | 0.66 | 3.61 | 0.65 | 3.60 | 0.60 | 3.63 | 0.50 | .088 | 118 | .967 |
| 4. IT skill | 3.38 | 0.71 | 3.59 | 0.63 | 3.60 | 0.60 | 3.58 | 0.61 | .728 | 118 | .537 |
| Composite Mean | 3.39 | 0.63 | 3.50 | 0.54 | 3.43 | 0.40 | 3.46 | 0.51 | .511 | 118 | .694 |

*Significant at $p < .05$ (two-tailed)

It can be observed from the result that those graduates who belong to Education sector ($M=3.50$, $SD=.54$) have little higher response in the overall composite mean to those employed in government services ($M=3.39$, $SD=.63$) and business sector ($M=3.43$, $SD=.40$). Though the difference is not considered significant, but it can still be noted the contribution of these skills as important component for the graduates to be employed in the education sector. Teacher education graduates are distributed in different types of sectors in private and public agencies. They are not only working as teachers but also part of business industry and government services because some of them are not yet licensed teachers. They are still waiting for the next schedule of national licensure examination for teachers. These cited skills are also important in various industries most especially the communication and IT skills which according to Ariyawansa and Perera [46] are considered among the highly concerned factors of the employers.

Table 9 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in their job placement when grouped according to graduates who are enrolled for further study. No significant difference exists on the skills improvement of the graduates when grouped according to further study in terms of problem-solving skill ($f=-.552$, $p=.582$), research skill ($f=-.115$, $p=.909$),

communication skill ($f=-1.484$, $p=.139$) and IT skill ($f=-.633$, $p=.527$). It can be noted from the result that those graduates who are enrolled for further study ($M=3.69$, $SD=.55$) have little higher response on communication skill compared to those who are not enrolled ($M=3.54$, $SD=.62$). Though the difference is not statistically significant with the highest computed f-value and lowest p-value compared to other three (3) skills, it can still be considered an important component for the graduates to achieve higher goals if they are well equipped with proper communication skill. Some graduates are already pursuing further studies while waiting for the national board examination because they believe on the essence of having Master's degree is an advantage for teachers to be considered to higher position and ranks in the government or private organizations. Korkonosenko [47] noted the importance of master's degree as a pass to the professional pedagogical future. But most of the graduates are not yet enrolled due to some financial constraints and family obligations that hinder them to take that opportunity.

Table 10 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in their job placement when grouped according to graduates who were working students during college.

Table 9. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Graduates who are Pursuing Further Study

| | No (n=137) | | Yes (n=51) | | t-value | Df | p-value |
|---------------------------|------------|------|------------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skills | 3.35 | 0.67 | 3.41 | 0.70 | -.552 | 182 | .582 |
| 2. research skills | 3.24 | 0.70 | 3.25 | 0.84 | -.115 | 182 | .909 |
| 3. communication skills | 3.54 | 0.62 | 3.69 | 0.55 | -1.484 | 182 | .139 |
| 4. IT skills | 3.50 | 0.61 | 3.57 | 0.67 | -.633 | 182 | .527 |
| Composite Mean | 3.41 | 0.52 | 3.48 | 0.56 | -.826 | 182 | .410 |

*Significant at $p<.05$ (two-tailed)

Table 10. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Graduates who were working students during college

| | No (n=156) | | Yes (n=32) | | t-value | Df | p-value |
|--------------------------|------------|------|------------|------|---------|--------|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.32 | 0.70 | 3.59 | 0.50 | -2.614* | 59.162 | .011 |
| 2. research skill | 3.19 | 0.76 | 3.53 | 0.57 | -2.432* | 182 | .016 |
| 3. communication skill | 3.56 | 0.61 | 3.69 | 0.54 | -1.112 | 182 | .268 |
| 4. IT skill | 3.51 | 0.65 | 3.59 | 0.50 | -.720 | 182 | .473 |
| Composite Mean | 3.39 | 0.54 | 3.60 | 0.41 | -2.056* | 182 | .041 |

*Significant at $p<.05$ (two-tailed)

Significant difference exists on problem-solving skill ($t=-2.614, p=.011$) and research skill ($t=-2.432, p=.016$) where those working students ($M=3.59, SD=.50$) have significantly higher response compared to those who are not working students ($M=3.32, p=.70$) during college. The composite mean score also showed significant difference ($t=-2.056, p=.041$) between working students ($M=3.60, SD=0.41$) and full-time students ($M=3.39, SD=.54$). Being a working student in college contributed to the advancement of their skills related to employment because they can obtain different learning experiences that cannot be offered within the classroom setting. They have already the application of their knowledge, skills and values while learning other educational theories that can be applied during practice teaching. The experience of being a working-students has a great advantage against those full-time students when it comes to responsibility [48], maturity and how they view the world of work as early as college. It gives them another opportunity to realize the importance of money and education.

Table 11 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in their job placement when grouped according to monthly salary. Significant difference exists on IT skills ($f=2.692, p=.042$) where those graduates who are receiving less than Php 10,000 as monthly salary have significantly

higher response on IT skills compared to those graduates with salary range from 10,001 to 20,000. But the composite mean score of those graduates with more than Php 20,000.00 monthly salary have higher response on the contribution of the program to their skills improvement. This signifies that having higher response or observation on how they improved their skills have somewhat contribution to earn higher salary most especially in IT skill.

Table 12 presents the differences on the contribution of the program to the skills improvement of graduates which are considered useful in their job placement when grouped according to promotion. Responses on the contribution of the program to the improvement of skills among the graduates who were already once promoted do not differ significantly in terms of problem solving ($t=-.801, p=.425$), research skill ($t=-.056, p=.955$), communication skill ($t=.331, p=.741$) and IT skill ($t=-.449, p=.654$). This signifies that the contribution of the program to skills improvement is not a factor that describes the promotion of graduates at work. These students can be promoted no matter how the program contributed to the skills of the graduates. This is a good indication that the training and preparation of the students are designed across all types of learners for the formation of competences and demonstration of good behavior and strategies [49].

Table 11. Differences on the Contribution of the Program to Skills Development of Graduates which considered Useful in Job Placement when grouped According to Monthly Salary

| | <10k | | 10,001-20K | | 20,001-40k | | f-value | df | p-value |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|------------|-------------|
| | Mean | SD | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.35 | 0.69 | 3.38 | 0.75 | 3.50 | 0.71 | .298 | 119 | .743 |
| 2. research skill | 3.32 | 0.69 | 3.16 | 0.80 | 3.56 | 0.62 | 2.044 | 119 | .134 |
| 3. communication skill | 3.53 | 0.66 | 3.62 | 0.61 | 3.72 | 0.46 | .780 | 119 | .461 |
| 4. IT skill | 3.67 | 0.48 | 3.38 | 0.78 | 3.56 | 0.62 | 2.692* | 119 | .042 |
| Composite Mean | 3.46 | 0.50 | 3.38 | 0.59 | 3.58 | 0.45 | 1.364 | 119 | .074 |

*Significant at $p<.05$ (two-tailed)

Table 12. Differences on the Contribution of the Program to Skills Development of Graduates which considered Useful in Job Placement when grouped According to Promotion

| | Not Yet Promoted (n=100) | | Promoted (n=20) | | t-value | Df | p-value |
|---------------------------|-----------------------------|------|--------------------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skills | 3.36 | 0.72 | 3.50 | 0.69 | -.801 | 118 | .425 |
| 2. research skills | 3.29 | 0.74 | 3.30 | 0.66 | -.056 | 118 | .955 |
| 3. communication skills | 3.60 | 0.62 | 3.55 | 0.60 | .331 | 118 | .741 |
| 4. IT skills | 3.53 | 0.64 | 3.60 | 0.60 | -.449 | 118 | .654 |
| Composite Mean | 3.45 | 0.54 | 3.49 | 0.51 | -.326 | 118 | .745 |

*Significant at $p<.05$ (two-tailed)

Table 13. Differences on the Contribution of the Program to Skills Improvement of Graduates which considered Useful in Job Placement when grouped According to Relevance of Previous Job to Teacher Education

| | Not Relevant (n=74) | | Relevant (n=114) | | t-value | df | p-value |
|---------------------------|---------------------|------|------------------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skills | 3.43 | 0.68 | 3.32 | 0.67 | 1.068 | 182 | .287 |
| 2. research skills | 3.27 | 0.76 | 3.23 | 0.73 | .380 | 182 | .704 |
| 3. communication skills | 3.61 | 0.59 | 3.56 | 0.61 | .519 | 182 | .605 |
| 4. IT skills | 3.64 | 0.61 | 3.45 | 0.63 | 2.031* | 182 | .044 |
| Composite Mean | 3.49 | 0.53 | 3.39 | 0.53 | 1.221 | 182 | .224 |

*Significant at $p < .05$ (two-tailed)

Table 13 presents the differences on the contribution of the program to the skills improvement of graduates which are considered useful in their job placement when grouped according to relevance of Previous Job to Teacher Education. Result showed that those graduates with previous job not relevant ($M=3.64$, $SD=.61$) to teacher education have significantly higher response on IT skills ($t=2.031$, $p=.044$). Meanwhile, no significant difference exists on problem solving skill ($t=1.068$, $p=.287$), research skill ($t=.380$, $p=.704$) and communication skill ($t=.519$, $p=.605$). The computed composite mean score of those graduates with previous jobs relevant ($CM=3.39$, $SD=.53$) to teacher education have little lower response compared to those with jobs not relevant ($CM=3.49$, $SD=.53$). Job relevance to completed degree program in college has been a challenging issue among graduates due to their eagerness to have immediate job placement. They tried to accept any type of work assignment even not related to teacher education. But once they have obtained the professional license, they immediately transfer to

public schools.

Table 14 presents the differences on the contribution of the program to the skills improvement of graduates which are considered useful in their job placement when grouped according to previous and present job. Result showed that no significant difference exists on the skills improvement of graduates in terms of problem solving ($f=.577$, $p=.631$), research skill ($f=.831$, $p=.478$), communication skill ($f=.179$, $p=.910$), and IT skill ($f=.596$, $p=.619$). The computed composite mean score of those graduates with no present and previous job ($CM=3.49$, $SD=.57$) have a little higher response compared to those graduates who are still in their current jobs ($CM=3.44$, $p=.51$). Furthermore, those graduates with previous job but no current job ($CM=3.34$, $SD=.50$) have little lower score than those graduates who changed jobs ($CM=3.47$, $SD=.56$). This signifies that the contribution of the program to the skills improvement of the graduates is not a factor that describes the changes on the job placement of the graduates.

Table 14. Differences on the Contribution of the Program to Skills Improvement of Graduates when grouped According to Previous and Present Jobs

| | No Present & Previous Job | | With Previous Job but no Current Job | | Change Job | | Still in the Current Job | | f-value | p-value |
|---------------------------|---------------------------|------|--------------------------------------|------|------------|------|--------------------------|------|---------|---------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | | |
| 1. problem-solving skills | 3.48 | 0.68 | 3.27 | 0.57 | 3.38 | 0.76 | 3.39 | 0.68 | .577 | .631 |
| 2. research skills | 3.24 | 0.83 | 3.14 | 0.74 | 3.36 | 0.73 | 3.21 | 0.73 | .831 | .478 |
| 3. communication skills | 3.62 | 0.59 | 3.53 | 0.58 | 3.61 | 0.64 | 3.59 | 0.60 | .179 | .910 |
| 4. IT skills | 3.62 | 0.59 | 3.43 | 0.61 | 3.54 | 0.62 | 3.55 | 0.66 | .596 | .619 |
| Composite Mean | 3.49 | 0.57 | 3.34 | 0.50 | 3.47 | 0.56 | 3.44 | 0.51 | .422 | .716 |

*Significant at $p < .05$ (two-tailed)

Table 15. Differences on the Contribution of the Program to Skills Improvement of Graduates when grouped According to Type of Organization

| | Government (n=59) | | Private (n=61) | | t-value | Df | p-value |
|--------------------------|-------------------|------|----------------|------|---------|-----|---------|
| | Mean | SD | Mean | SD | | | |
| 1. problem-solving skill | 3.41 | 0.77 | 3.36 | 0.66 | .353 | 118 | .724 |
| 2. research skill | 3.34 | 0.78 | 3.25 | 0.67 | .700 | 118 | .485 |
| 3. communication skill | 3.59 | 0.65 | 3.59 | 0.59 | .027 | 118 | .978 |
| 4. IT skill | 3.47 | 0.70 | 3.61 | 0.56 | -1.142 | 118 | .256 |
| Composite Mean | 3.45 | 0.60 | 3.45 | 0.46 | .026 | 118 | .979 |

*Significant at $p < .05$ (two-tailed)

Table 15 presents the differences on the contribution of the Program to the skills improvement of graduates which are considered useful in their job placement when grouped according to type of organization. Results showed that no significant difference exists on skills improvement of graduates in terms of problem solving ($t=.353, p=.724$), research skill ($t=.700, p=.485$), communication skill ($t=.027, p=.978$), and IT skill ($f=-1.142, p=.256$). But it can be noted that the

score of those respondents who belong to private organization ($M=3.61, SD=.56$) have little higher response on IT skills as contribution of the program compared those who belong to government ($M=3.47, SD=.70$). Both groups of graduates from private and government have the same computed composite mean score. This signifies that the skills improvement is not a factor that determines the type of organization that the graduates can be affiliated with after graduation.

Table 16. Skills Development Plan for Future Educators

| KRA | Project | Activity | Success Parameters |
|-----------------------|--|--|--|
| IT Skill | Online Teaching Method & Learning Assessment | Redesign the curriculum for synchronous and asynchronous instruction | 75% of online pedagogies and assessments are aligned with flexible learning modality |
| | Education Technology Center | Establish functional Learning Management System | 75% of the students have enhanced their motivation for flexible learning |
| | Digital Learning Experience | Engage students in collaborative activities using interactive technology; Access to Online journals and e-books | 75% of the students have increased satisfaction level with meaningful learning experience |
| Communication Skill | Social Media Communication | Build a community of responsible social media content users and creators | 75% of the students have the ability to create meaningful contents |
| | Creation of Instructional Materials | Learn to communicate the right content of the subject through module writing | 75% of the students have written instructional material for specific content of the module |
| | Research Colloquium | Provide a platform for intellectual discussion of research findings | 75% of the students have experienced research presentation |
| Research Skill | Software Application used for Research | Use of Plagiarism Software, SPSS and Grammarly | 75% of the students have written research article using these software as support for instruction |
| | Research Method | Integrate the use of Content Analysis as research tool in professional courses | 75% of the students have written a research article using content analysis as a method |
| | Research Proposal Writing | Provide training workshop on research writing and publication | 75% of the students have developed the research writing skill through submission of publishable research article |
| Problem Solving Skill | Extension Proposal Writing | Identify specific problems of the local community from needs assessment | 75% of the students have created an extension proposal for the community |
| | Social & Environmental Awareness | Identify challenges of the society and environment from attending seminars & conferences and reading of journal articles | 75% of the students have developed a proposed policy based on identified challenges |
| | Implementation of Community Extension | Implement the extension project through the student recognized organization | 75% of the students have participated in the extension activity |

CONCLUSION AND RECOMMENDATION

The graduates considered the BSEd-TLE program with very high contribution to the improvement of their Communication and IT skills. Moreover, communication skill obtained significantly higher response compared to research skill where graduates obtained significantly lower improvement. Male graduates have significantly higher response on the improvement of their communication skill from the program compared to females. Skills improvement has no significant difference when the graduates are grouped according to year of graduation, employment status, relevance of present employment to Teacher Education, sector, promotion, graduates who are pursuing further study, previous and present jobs, and type of organization. Those graduates with higher skills improvement on communication are also those who landed their first job within six (6) months. Likewise, those graduates with higher problem-solving and research skills are also those working students during college. Furthermore, those graduates with higher IT skill are those graduates with less than Php 10,000.00 monthly salary and those with no relevant jobs to teacher education.

It is recommended to implement the Skills Development Plan for Future Educators in enhancing their employability skills related to information technology, communication, research and problem solving. Higher Education Institutions may also provide educational programs that will cater to the needs of the teacher education students on how to teach lessons that will integrate skills for future jobs and future's thinking to realize the essence of the 21st Century skills.

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