ACADEMIC PERFORMANCE AND PERCEIVED EMPLOYABILITY SKILLS OF INDUSTRIAL EDUCATION GRADUATES UNDER NEW CURRICULUM

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Abstract - *This study identified the relationship between the academic performance and the perceived employability skills of the first batch of Bachelor of Science in Industrial Education graduates of Nueva Ecija University of Science and Technology San Isidro Campus under the K to 12 Curriculum, during the 2nd semester of A.Y. 2022-2023. The profile of the BSIE graduates in terms of their academic performance in Teaching Internship and Course Audit were identified. The respondents' perceived employability skills in terms of their communication skills, critical thinking skills, collaboration skills, technological skills, and teaching skills were also identified. The results of the study revealed that of all the given employability skills, there is a significant relationship between the Critical Thinking Skills of the student-respondents and their academic performance in Teaching Internship and Course Audit.*

***Key Words*: academic performance, course audit, employability skills, critical thinking skills, teaching internship**

INTRODUCTION

People often consider grades first when defining academic performance. In fact, when people hear the term "academic performance" they often think of a person's general weighted average or GWA (Williams, 2018 [1]). This concept has been a thing for so many years and has been manifesting across all levels of education since most schools, colleges and universities rank students by their GWA, awarding special designations such as valedictorian and salutatorian for those who graduate first and second in their class. Moreover, when hiring recent graduates, employers and organizations start by looking at grades. To them, grades carry more weight in some industries, especially technical professions such as law, medicine and finance. While this may be true, grades do not always reflect a person's knowledge or intelligence. Some students do not perform well in a classroom setting but are very intelligent and earn high marks on IQ tests, standardized testing or college entrance exams. In tertiary education, success is not purely about intelligence; some students demonstrate their competence by serving as student body president or holding officer positions in student groups. Or, they might regularly organize student events such as

fundraisers, sport festivals and dances. Some of the brightest students do not earn commendable grades but are extremely well-rounded, succeeding at everything from music to athletics. This is because they have mastered a diverse set of skills, illustrate intelligence, curiosity and persistence, qualities attractive to universities and employers. Universities and employers look favourably on consistent leadership activities, feeling these students will bring that same drive to their classrooms or offices. Meanwhile, other industries place less importance on grades, particularly creative professions such as writing or art and occupations such as sales where people skills are more crucial than technical knowledge. In other words, the definition of academic performance extends to achievement outside the classroom (Bond, 2019 [2]).

The College of Education of NEUST San Isidro Campus has produced a new batch of Bachelor of Science in Industrial Education graduates, during the Academic Year 2022-2023. This new batch of graduates has transitioned from Grade 10, finishing the prescribed Grades 11 and 12 of Senior High School Program before entering tertiary education level. Thus, having geared their basic education from the newly-implemented K to 12 curriculum, compared to the traditional curriculum, graduates of Grades 11 and 12 are expected to have built their knowledge and skills in different subject areas, including courses that make them employable as they finish high school, more so, when they finished their tertiary education. The trainings these graduates have undergone including their Teaching Internship and Pre-board Examination Review Sessions conducted in school, are the critical tools needed as they venture into the real-life classroom setting. In addition, their employability skills including communication skills, critical thinking skills, collaboration skills, technological skills, and teaching skills are assumed to have levelled up after the years of rigorous studying and training.

It is in this context that this study was carried out. Its goal was to identify the relationship between the academic performance in terms of final grades in Teaching Internship and Course Audit, and the perceived employability skills including

communication skills, critical thinking skills, collaboration skills, technological skills, and teaching skills of this new batch of BSIE graduates under the K to 12 curriculum, of the College of Education of NEUST San Isidro Campus, during the school year 2022-2023.

Statement of the Problem

This study aimed to identify the relationship between the academic performance and the perceived employability skills of the new batch of BSIE graduates under the K to 12 curriculum, during the 2nd semester of A.Y. 2022-2023. Specifically, it sought to answer the following questions:

1. Describe the respondents' academic performance in terms of:
   a. Final Grade in Teaching Internship; and
   b. Final Grade in Course Audit.

2. Identify the respondents' perceived employability skills in terms of:
   a. Communication skills;
   b. Critical Thinking Skills;
   c. Collaboration Skills;
   d. Technological Skills; and
   e. Teaching Skills.

3. Identify the relationship between the respondents' academic performance and their perceived employability skills.

MATERIALS AND METHODS

Research Design

This research utilized the descriptive-correlation design to identify the relationship between the academic performance in terms of final grades in teaching internship and course audit and the perceived employability skills including communication skills, critical thinking skills, collaboration skills, technological skills, and teaching skills of the new batch of BSIE graduates under K to 12 Curriculum.

Respondents of the Study

The respondents of the study were the 32 Bachelor of Science in Industrial Education graduates of the College of Education of Nueva Ecija University of Science and Technology, San Isidro Campus, during the 2nd semester of A.Y. 2022-2023. They were asked about their academic performance in their previous semester in terms of their final grades in Teaching Internship and Course Audit. Moreover, they were asked to assess themselves regarding their perceived employability skills.

Instrumentation

The researchers used a two-part questionnaire in gathering data. The first part deals with identifying the academic performance of the graduates through their final grades in Teaching Internship and Course Audit. In order to interpret the final grades of the respondents in both subjects, the researchers made use of the scale as follows: (1) 1.00; (2) 1.25; (3) 1.50; and (4) 1.75, verbally interpreted as 1.00 Excellent; 1.25 Very Satisfactory; 1.50 Satisfactory; and 1.75 Good. The second part dealt with graduates' self-assessment on the level of their employability skills which made use of the scale (5) Always; (4) Often; (3) Sometimes; (2) Rarely; and (1) Never, verbally interpreted as 4.20-5.00: Always (A); 3.4-4.19: Often (O); 2.60-3.39: Sometimes (S); 1.8-2.59: Rarely (R); 1.00-1.79: Never (N)

Procedures

In order to gather data and information needed for the study, the researchers read previous studies, journals, and online sources until they located a standardized questionnaire in gathering the profile of the respondents in terms of their academic performance and their perceived employability skills. They gathered literature and studies pertinent to the study in order to find different parameters to be tested and to support the findings of the study after the data-gathering phase.

Statistical Treatment

The gathered data from the questionnaire were tallied, tabulated, and interpreted using the following statistical tools. Frequency count was used to analyze and interpret the academic performance of the respondents while weighted mean was used to describe their perceived employability skills. To determine the relationship between the academic performance of the respondents and their perceived employability skills, Pearson R correlation was used.
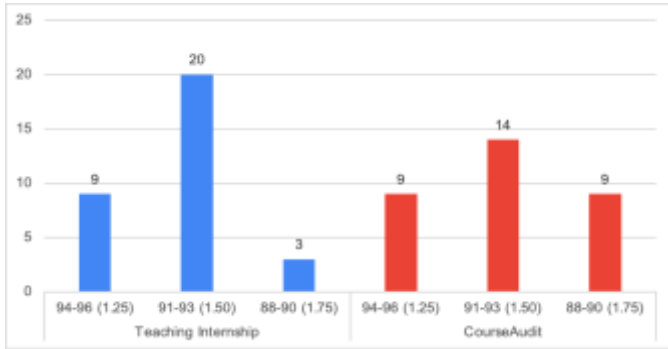
RESULTS

This section presents the analysis and interpretation of the data gathered from the respondents of the study.

1. Profile of the Respondents

Figure 1 presents the academic performance of the respondents in terms of their final grades in Teaching Internship and Course Audit.

Figure 1. Academic Performance of the Respondents

Legend: 1 (97-100) Excellent; 1.25 (94-96) Very Satisfactory; 1.50 (91-93) Satisfactory; 1.75 (88-90) Good

2. Respondents' Perceived Employability Skills

Table 1 presents the data regarding the respondents' perceived communications skills.

Table 1. On Communication Skills

INDICATORS	WM	VI
1. I use diagrams and charts to help express my ideas.	3.53	O
2. Before I communicate, I think about what students need to know, and how best to convey it.	4.56	A
3. I think about what I'm going to say next to make sure I get my point across correctly.	4.38	A
4. Before I send a message, I think about the best way to communicate it (in person, over the phone, in a newsletter, via memo, and so on).	4.59	A
5. I try to help my students understand the underlying concepts behind the point I am discussing.	4.69	A
6. I consider cultural barriers when planning my communications.	4.09	O
Grand Mean	**4.31**	**A**

Legend: 4.20-5.00: Always (A); 3.4-4.19: Often (O); 2.60-3.39: Sometimes (S); 1.8-2.59: Rarely (R);1.00-1.79: Never (N)

Table 2 presents the data regarding the respondents' perceived critical thinking skills.

Table 2. On Critical Thinking Skills

INDICATORS	WM	VI
1. After reading, I check important information even if it seems to be true.	4.38	A
2. After reading, I am able to repeat important threads from the text.	4.28	A
3. I form my impression on the basis of various information that I gather.	4.06	O
4. When I read the text, I am researching for a relationship between the information it contains and other texts that I have read.	3.78	O
5. When I am interested in some information, I try to check if it is true.	4.56	A
6. When discussing, I try to use practical examples to justify my stance on the matter	4.22	A
Grand Mean	**4.21**	**A**

Legend: 4.20-5.00: Always (A); 3.4-4.19: Often (O); 2.60-3.39: Sometimes (S); 1.8-2.59: Rarely (R);1.00-1.79: Never (N)

Table 3 presents the data regarding the respondents' perceived collaboration skills.

Table 3. On Collaboration Skills

INDICATORS	WM	VI
1. I take part in deciding how work should be allocated.	4.06	O
2. I acknowledge good contributions from my colleagues.	4.38	A
3. I handle disagreements and conflicts constructively in the workplace.	4.06	O
4. I am good at making sure that everyone knows what's going on.	4.22	A
5. When someone is under pressure, I offer to help him or her.	4.41	A
6. I am able to give constructive criticism to others and to accept it myself.	4.19	O
Grand Mean	**4.22**	**A**

Legend: 4.20-5.00: Always (A); 3.4-4.19: Often (O); 2.60-3.39: Sometimes (S); 1.8-2.59: Rarely (R);1.00-1.79: Never (N)

Table 4 presents the data regarding the respondents' perceived technological skills.

Table 4. On Technological Skills

INDICATORS	WM	VI
1. I plan lessons involving digital technology in the classroom.	4.41	A
2. I use the internet to research information.	4.50	A
3. I use technology or the Internet for self-instruction.	4.31	A
4. I use technology to share information (e.g., multi-media presentations using sound or video, presentation software, blogs, podcasts)	4.47	A
5. I use technology to support team work or collaboration (email)	4.06	O
6. I use technology to interact directly with experts or members of local and global communities.	4.06	O

Grand Mean		**4.30**	**A**

Legend: 4.20-5.00: Always (A); 3.4-4.19: Often (O); 2.60-3.39: Sometimes (S); 1.8-2.59: Rarely (R);1.00-1.79: Never (N)

Table 5 presents the data regarding the respondents' perceived teaching skills.

Table 5. On Teaching Skills

INDICATORS	WM	VI
1. I employ effective motivation in class activities.	4.44	A
2. I use methods and techniques appropriate for the lesson.	4.53	A
3. I provide varied teaching-learning activities.	4.38	A
4. I exhibit skills in the use of teaching aids and devices.	4.25	A
5. I encourage pupils' interaction and participation.	4.66	A
6. I demonstrate skills in asking thought-provoking questions.	4.19	O
Grand Mean	**4.41**	**A**

Legend: 4.20-5.00: Always (A); 3.4-4.19: Often (O); 2.60-3.39: Sometimes (S); 1.8-2.59: Rarely ®;1.00-1.79: Never (N)

3. Relationship between the Respondents' Academic Performance and their perceived Employability Skills

Table 6. Correlation of the Academic Performance and Perceived Employability Skills of the Respondents

Perceived Employability Skills		Teaching Internship	Course Audit
	N	32	32
Communication Skills	Pearson Correlation	-.154	-.300
	Sig. (2-tailed)	.401	.095
	N	32	32
Critical Thinking Skills	Pearson Correlation	-.379*	-.373*
	Sig. (2-tailed)	.033	.035
	N	32	32
Collaboration Skills	Pearson Correlation	-.162	-.100
	Sig. (2-tailed)	.375	.588
	N	32	32

Technological Skills	Pearson Correlation	.065	-.014
	Sig. (2-tailed)	.723	.939
	N	32	32
Teaching Skills	Pearson Correlation	-.250	-.203
	Sig. (2-tailed)	.168	.265
	N	32	32

*Correlation is significant at the 0.01 level (2-tailed).
**Correlation is significant at the 0.05 level (2-tailed).

DISCUSSION

This study involved 32 Bachelor of Science in Industrial Education graduates from the College of Education of Nueva Ecija University of Science and Technology, San Isidro Campus, during the 2nd semester of A.Y. 2022-2023. On the academic performance of this new batch of BSIE graduates in terms of their final grades in Teaching Internship, the results showed that majority or 20 out of 32 of them got a grade of 1.50 with a remark of "satisfactory" while only 9 out of the remaining graduates got a final grade of 1.25 with a remark of "very satisfactory". Meanwhile, only 3 out of the total number of BSIE graduates got a grade of 1.75 with a remark of "good" while none of the graduates got a flat 1.00 grade. On the other hand, the academic performance of the BSIE graduates in terms of their final grades in Course Audit were as follows: 14 out of 32 graduates got a grade of 1.50 with a remark of "satisfactory"; 9 graduates got a grade of 1.25 with a remark of "very satisfactory" and another 9 graduates got a grade of 1.75 with a remark of "good". No graduates got a flat 1 grade in Course Audit. Conversely, these figures showed an average academic performance of this new batch of BSIE graduates and this average performance may be due to several factors. In fact, according

to Brew 2021, academic performance is affected by many factors including parents' education levels and income, teachers' knowledge of the subject, textbooks availability and accessibility, libraries, practical laboratory, meals provision and many others. While this may be true, Williams, 2018 stated that students who earned average grades display a pattern of achievement by consistently learning new skills. In other words, when these graduates with average academic performance reflected on their grades seek for employment, employers will see it as a selling point, thinking these applicants are eager to learn and will be easy to train.

One of the most important skills of a good teacher is good communication skills. In this study, the perceived employability skills of the respondents in terms of their communication skills obtained a grand mean of 4.31, verbally interpreted as "Always". This means that most of the indicators listed as regards proper communication skills were evident among these BSIE graduates. Communications skills like trying to help their students understand the underlying concepts behind the point they were discussing (WM = 4.69), thinking about the best way to communicate (WM = 4.59), thinking about what students need to know, and how best to convey it (WM = 4.56), and thinking about what they would say next to make sure that they send messages correctly (WM = 4.38) were among the indicators identified by the respondents as skills they would "always" do. Actual classroom teachers use these abilities intuitively in daily life, but how well they have developed these skills can affect their ability to communicate effectively, efficiently, and respectfully. According to Berry 2021,[3] good communication can establish a trend of respect, good behavior, and good performance in the classroom. Aspiring teachers can do these by first having a systematic plan with clear goals, objectives, and expectations for each class period and having enough engagement with students by involving them in academic activities and experiences outside the classroom. Meanwhile, this study showed that majority of these respondents scored high in the given indicators. Consequently, there is a reason to believe that the years of training and exposure given to these graduates have helped them developed and prepared themselves for future employment and that their employability skills in terms of communication have already been established.

On the other hand, only communication skills like considering cultural barriers when planning communications (WM = 4.09) and using diagrams and charts to help students express ideas (WM = 3.53) were marked done "often" by the self-assessment of these graduates. Nonetheless, one can still infer that these graduates have already mastered an effective and efficient communications skills and thus, majority of them were employable.

When it comes to the respondents' critical thinking skills, their self-assessment had a grand mean of 4.21, verbally interpreted as "Always". As defined by Coursera 2021,[4] critical thinking is the ability to interpret, evaluate, and analyze facts and information that are available, to form a judgment or decide if something is right or wrong. BSIE graduates may have used these abilities over their years in college when they were tasked to deliver a topic presentation, create a term or reflection paper, and conduct research projects, individually or as a group. These abilities were evident among these graduates since based on the results indicated in Table 2, majority of them would "always" check something if it interests them (WM = 4.56); they would "always" check important information even if it seems to be true mostly after reading (WM = 4.38); and when discussing a particular lesson, they would "always" try to use practical examples to justify their stance on the matter (WM = 4.22). These results showed the respondents' abilities to verify newly-acquired information and to simplify the task at hand, which, according to Hassan, Madhum 2007,[5] are desirable competencies which employers expect from their prospective employees. On the other hand, critical thinking skills like forming their impression on the basis of various information that they gather and reading the text they were researching for a relationship got a weighted mean of 4.06 and below, verbally interpreted as "Often". Conversely, when someone is a critical thinker, he or she is able to raise valid, critical questions leading towards right and better solutions, and is able to reflect on his or her own and other people's activities as well as making respective adjustments, understanding the importance of their personal contribution to the development of the organization and society in general (Penskaukine, 2020). [6]

Another employability skill assessed among these new graduates of BSIE program was their collaboration skills. Cambridge dictionary defines collaboration as the activity of working together to create or achieve the same thing, or a product of this. Collaboration skills, on the other hand, are what enable people to work well with one another. These skills include understanding a variety of perspectives, managing priorities from everyone in the group, and meeting expectations as a reliable member of a team (Doyle, 2022). [7] Moreover, according to Piniuta 2019, [8] collaborative skills are necessary to solve complex and interdisciplinary problems. Based on the self-assessment of the respondents as regards their collaboration skills, they would "always" offer help when someone is under pressure (WM = 4.41). Their self-assessment also revealed that they would "always" acknowledge good contributions from their colleagues (WM = 4.38) and that making sure that everyone knows what is going on is a practice they would "always" do. Generally, a grand mean of 4.22 indicated that these BSIE graduates would "always" observe collaboration among their future colleagues, which is critically necessary for their future employment. Doyle 2022, [9] stated that employers typically seek employees that function effectively as part of a team and are willing to balance personal achievement with group goals. In doing so, employees help an organization progress. Meanwhile, half of the skills needed for a good collaboration would be "oftentimes" done by these graduates including the ability to give constructive criticism to others (WM = 4.19), handle disagreements and conflicts constructively in the workplace (WM = 4.06), and take part in deciding how work should be allocated (WM = 4.06). These results showed a slight difference on how these graduates assessed their collaboration skills. Nonetheless, the grand mean obtained from this particular employability skills was 4.22, verbally interpreted as "Always" since majority of the collaboration skill indicators were evident among the respondents.

On the perceived employability skills of the respondents in terms of technological skills, their self-assessment obtained a grand mean of 4.30, verbally interpreted as "Always". Based on the results, these BSIE graduates "always" use the internet to research information (WM = 4.50). They also "always' use technology to share information (WM = 4.47) and "always" plan lessons involving digital technology in the classroom (WM = 4.41). They would also "always" use technology or the Internet for self-instruction (WM = 4.31). Meanwhile, using technology to support team work or collaboration and interact directly with experts or members of local and global communities, both obtained a weighted mean of 4.06, verbally interpreted as "oftentimes" done. These results were apparent with the rise of digital technology especially during the times when Covid-19 pandemic was at its peak. Schools had taught students using different online platforms so the degree of their exposure to these media had helped them become more technology-literate. Coursera 2021, [10] stated that learning technology skills like email, online chat, digital portfolios, electronic databases, and video chat is very important and it has transformed students' everyday lives. Whether someone is a learner, a teacher, improving technology skills can help him or her complete his or her job more efficiently and navigate this digital world effectively (Stebbins, 2021). [11]

Finally, teaching skills as a perceived employability skill, had a grand mean of 4.41, verbally interpreted as "Always", based on the self-assessment made by these BSIE graduates. In fact, 5 out of 6 effective teaching skills scored 4.25 and these were as follows: they "always" encourage pupils' interaction and participation (WM = 4.66), they "always" use methods and techniques appropriate for the lesson (WM = 4.53), they "always" employ effective motivation in class activities (WM = 4.44), they "always" provide varied teaching-learning activities (WM = 4.38), and they would "always" exhibit skills in the use of teaching aids and devices (WM = 4.25). These findings showed that these graduates were able to discern how they can combine multiple teaching methods for their future students to grasp the information better, and they can experiment on what other methods they can use to improve the instructions given to students in the future. According to Stets, Walubengo, and Simwa 2023, [12] one of the most important things a beginning teacher should determine is the teaching approach to apply in class. This is because teacher's teaching skills have a great impact on learners. Demonstrating skills in asking thought-provoking questions got a weighted mean of 4.19, and is going to be "oftentimes" done based on the self-assessment of these BSIE graduates.

These results showed a slight difference on how these graduates assessed their teaching skills. Nonetheless, the grand mean obtained from this particular employability skills was 4.41, verbally interpreted as "Always" since majority of the teaching skill indicators were evident among these BSIE graduates.

On the relationship between the respondents' academic performance and their perceived employability skills, it can be seen that academic performance is measured in terms of final grades in Teaching Internships and Course Audit. At the same time, employability skills are evaluated in terms of Communication, Critical Thinking, Collaboration, Technological, and Teaching Skills. The findings indicate a significant relationship between Critical Thinking Skills and grades in Teaching Internships and Course Audit. The correlation coefficients (r) are -0.379 and -0.373, respectively, and the p-values are 0.33 and 0.35, respectively. The negative correlation coefficients suggest an inverse relationship, implying that higher Critical Thinking Skills are associated with lower grades in both Teaching Internships and Course Audits. However, it's important to note that the p-values are greater than the alpha level 0.05. A p-value less than 0.05 is typically considered statistically significant in statistical hypothesis testing. In this case, the p-values being greater than 0.05 suggests that the observed correlations might have occurred by chance, and it cannot confidently reject the null hypothesis of no correlation. Therefore, while there appears to be a relationship, it may not be statistically significant. The results seem counterintuitive as one might expect higher critical thinking skills to be associated with higher academic performance. In fact, according to Allesio 2019, [13] developing critical thinking abilities is an essential aspect of education that has been the endeavor of many teachers throughout the years, as it is believed that it can lead to higher academic performance. In contrary, Stupnisky, Renaud, Daniels, Haynes, and Perry 2008, [14] stated that research has not yet proven whether critical thinking is a predictor of the adequate performance of students and whether higher levels of the students' critical thinking skills are related to a better performance in certain academic areas.

CONCLUSIONS

In relation to the result of this study, it's possible that those graduates with higher critical thinking skills may be more critical of their work, leading to lower self-assessed grades. Alternatively, the grading criteria in the Teaching Internship and Course Audit might not adequately reward the application of critical thinking skills.

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