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Assessment of NDMU BS Computer Science Student Trainee Performance During On-the-Job Training Using Performance Appraisal Reports (2023–2025)

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ABSTRACT

This study assessed the performance of Bachelor of Science in Computer Science (BSCS) student trainees from Notre Dame of Marbel University (NDMU) during On-the-Job Training (OJT) across three summer terms (2023–2025) using a multidimensional performance appraisal instrument completed by host supervisors. A descriptive quantitative design was employed with 30 BS Computer Science trainees from NDMU (Summer 2023: n=5; Summer 2024: n=16; Summer 2025: n=9) deployed to nine host organizations in South Cotabato and surrounding regions. The performance appraisal instrument comprised three parts: Part I assessed Personal Skills and Attitude across four dimensions (Work Habits, Work Skills, Social Skills, General Attitude) using a 5-point scale; Part II evaluated Internship Job Performance across six dimensions using categorical ratings (Not Satisfactory, Satisfactory, Very Satisfactory); and Part III measured alignment with three Program Educational Objectives (PEOs) using a 5-point scale. Data were analyzed using descriptive statistics (means, standard deviations, frequencies, percentages). Part I yielded an overall mean of 4.69 (SD=0.53), with General Attitude highest (M=4.83) and Work Skills lowest (M=4.57). In Part II, Teamwork Skills received the highest Very Satisfactory rate (96.7%) while Job Specific Skills received the lowest (66.7%). Part III overall mean was 4.67 (SD=0.47), with PEO3 highest (M=4.77) and PEO2 lowest (M=4.57). A consistent upward performance trend was observed across terms (2023→2024→2025). The NDMU BS Computer Science trainees demonstrated strong overall performance particularly in professional dispositions, teamwork, and continuous learning. Findings support targeted interventions to strengthen technical skill application and ethical competency development.

Keywords: On-the-Job Training, Performance Appraisal, Computer Science Education, Internship Assessment, Program Educational Objectives

INTRODUCTION

On-the-job training (OJT) and internships have become indispensable components of computing education worldwide, serving as the primary bridge between academic learning and professional practice (Haddad-Adaimi et al., 2022). These workplace-based learning experiences enable students to apply theoretical knowledge in authentic industry settings, develop professional competencies, and enhance their employability in an increasingly competitive technology sector. Despite the widespread recognition of OJT's strategic importance, a significant gap persists in the systematic evaluation of internship outcomes, particularly in developing-country contexts where institutional capacity and industry-academe coordination face substantial constraints (Haddad-Adaimi et al., 2022).

In the Philippines, OJT is mandated for most higher education programs, including BS Computer Science, as a mechanism to ensure graduates possess not only technical proficiency but also the professional dispositions required by industry employers. However, empirical studies have documented recurring operational challenges, such as misalignment between assigned tasks and course learning outcomes, insufficient supervision, inadequate placement duration, variable orientation practices, and inconsistent assessment procedures (Dawaton, 2021;

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

Hebron, 2020). These challenges underscore the urgent need for robust, standardized performance appraisal systems that can reliably measure trainee competencies and inform curricular improvements.

Performance appraisal reports completed by host supervisors constitute the primary assessment artifact in most internship programs. Oladimeji (2024) demonstrated that employer evaluations correlate significantly with overall trainee performance in Computer Science SIWES programs, validating that structured supervisor ratings serve as reliable indicators of competency development. However, Haddad-Adaimi et al. (2022) found a worldwide lack of systematic models for internship evaluation, with most institutions relying on ad hoc forms subject to rater bias and inconsistent rubrics. Contemporary frameworks advocate for multidimensional assessment combining quantitative ratings, categorical performance judgments, and program objective alignment (Gollapalli et al., 2023; Tinoco-Giraldo et al., 2021)

Notre Dame of Marbel University (NDMU), located in Koronadal City, South Cotabato, operates a BS Computer Science program that requires students to complete 200 hours of On-the-Job Training (OJT) during the summer term before their final year. The NDMU BSCS program aims to produce graduates who can establish themselves as practicing computer science professionals, apply ethical and professional responsibilities, and advance professionally through continuous learning—objectives formalized as three Program Educational Objectives (PEOs) aligned with international computing curricula standards (ACM Computing Curricula Task Force, 2013). To assess trainee performance and evaluate the extent to which OJT experiences support these PEOs, NDMU employs a multidimensional performance appraisal instrument completed by host organization supervisors at the conclusion of each trainee's placement.

The appraisal instrument used in this study operationalizes this multidimensional approach through three parts. Part I assesses Personal Skills and Attitude—encompassing Work Habits, Work Skills, Social Skills, and General Attitude—as foundational professional dispositions identified as critical by employers across computing fields (Barr et al., 2024; Celestial-Valderama, 2023). Part II evaluates Internship Job Performance across six dimensions (Overall Job Performance, Job Specific Skills, Problem Solving Skills, Interpersonal Skills, Leadership Skills, and Teamwork Skills) using categorical ratings that reflect holistic supervisor judgment of competency demonstration in authentic workplace tasks. Part III measures the trainee's alignment with the three Program Educational Objectives (PEOs) of the BSCS program, providing a direct mechanism for validating that OJT experiences contribute to program-level outcomes required for accreditation.

Despite the widespread implementation of OJT in Philippine higher education, few studies have conducted systematic, multi-cohort assessments of CS trainee performance using validated instruments that simultaneously capture personal competencies, job performance, and PEO alignment. This study addresses this gap by analyzing performance appraisal data from 30 BSCS trainees across three consecutive terms (Summer 2023, 2024, 2025) to describe performance patterns, identify strengths and development areas, and track trends over time.

Objectives of the Study

This study aimed to assess the performance of BS Computer Science student trainees of Notre Dame of Marbel University during their On-the-Job Training using performance appraisal reports from 2023 to 2025.

Specifically, this study seek to:

1. Determine the level of trainee performance in terms of Personal Skills and Attitude and Program Educational Objectives using mean and standard deviation per item, subdimension, and cohort;
2. Describe the level of internship job performance based on the distribution of ratings categorized as Very Satisfactory (VS), Satisfactory (S), and Not Satisfactory (NS) using frequency counts and percentages;
3. Compare trainee performance across cohorts (2023–2025) by examining term-level mean scores for Personal Skills and Attitude and Program Educational Objectives, and term-level rating distributions for Internship Job Performance;
4. Identify the highest and lowest performing competency areas based on computed mean scores and rating distributions; and

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

5. Determine performance trends across the three-year period to assess improvements in student preparation and OJT program implementation.

Scope and Limitations

This study focuses on 30 BSCS trainees from NDMU who completed their OJT during Summer 2023 to Summer 2025. All trainees were deployed to host organizations in South Cotabato and surrounding regions for a minimum of 200 hours. Performance data were collected using the NDMU Computer Studies Department performance appraisal instrument completed by host supervisors at the conclusion of each placement.

This study is limited to the quantitative analysis of student trainee performance based on the available performance appraisal reports. Although supervisor comments were included in the dataset, they were not subjected to systematic analysis due to several constraints. Specifically, the number of comments was limited, and many entries were found to be repetitive, as supervisors appeared to use similar or identical remarks across multiple trainees. Additionally, the comments lacked sufficient personalization, making them less reliable for in-depth qualitative interpretation. As a result, the study focuses primarily on the quantitative measures of performance, such as mean scores, standard deviations, and rating distributions, which provide more consistent and objective bases for analysis. Future studies may consider collecting more detailed and individualized qualitative feedback to enable a more comprehensive evaluation of trainee performance.

METHOD

Research Design

This study employed a descriptive quantitative research design to systematically describe and analyze the performance of BSCS student trainees during OJT using structured performance appraisal data. Descriptive research is appropriate when the objective is to characterize the existing state of a phenomenon without manipulation of variables (Tinoco-Giraldo et al., 2021). The design enabled computation of descriptive statistics (means, standard deviations, frequencies, and percentages) across all appraisal dimensions and cohorts.

Participants

The study involved 30 BS Computer Science student trainees who completed OJT across three consecutive summer terms:

- Summer 2023: n=5 trainees
- Summer 2024: n=16 trainees
- Summer 2025: n=9 trainees

All trainees were enrolled in the BS Computer Science program of Notre Dame of Marbel University. Participation was inclusive of all trainees who completed OJT during the study period and whose performance appraisal forms were fully accomplished by host supervisors.

Setting and Host Organizations

The 30 trainees were deployed to nine (9) host organizations spanning government agencies, private IT firms, and academic units in South Cotabato and Region XII:

Organization	Type	Summer Term
InfoActiv IT & Engineering Solution	Private IT Firm	2023
NDMU – MIS	Academic/University IT	2023
DICT South Cotabato	Government IT Agency	2024
Provincial Government of South Cotabato	Local Government	2024, 2025
Eulap Software Solutions	Private IT Firm	2024

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

Lead Solutions Inc.	Private IT Firm	2024
CrimShield Inc.	Private IT Firm	2024
DEPDev Regional Office XII	Government Agency	2025
Philippine Coconut Authority Region 12	Government Agency	2025

Instrument

The performance appraisal instrument is a structured supervisor evaluation form comprising three parts:

Part I — Personal Skills and Attitude

This section assesses trainee performance across four dimensions using a 5-point Likert scale (29 items, 5-point scale: 1=Poor, 2=Fair, 3=Satisfactory, 4=Good, 5=Excellent):

- Work Habits (5 items): Punctuality, attendance, self-discipline, ability to work independently, commitment to tasks
- Work Skills (9 items): Technical understanding, application of academic knowledge, effective use of tools/technologies, quality and accuracy of outputs, timeliness, resourcefulness, attention to detail, initiative in learning
- Social Skills (6 items): Clear communication, active listening, teamwork, respect and courtesy, positive response to feedback, professionalism
- General Attitude (9 items): Honesty and integrity, confidentiality, adherence to safety policies, responsibility and accountability, professional appearance and conduct

Part II — Internship Job Performance

This section evaluates overall internship performance across six dimensions using a categorical rating scale (6 dimensions, categorical: NS=Not Satisfactory, S=Satisfactory, VS=Very Satisfactory):

- Overall Job Performance
- Job Specific Skills
- Problem Solving Skills
- Interpersonal Skills
- Leadership Skills
- Teamwork Skills

Part III — Program Educational Objectives

This section assesses the trainee's potential to achieve the three Program Educational Objectives of the NDMU BSCS program within five years after graduation, using a 5-point Likert scale (5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree) (3 items, 5-point scale):

- PEO1: Establish themselves as practicing computer science professionals in identifying and solving significant complex real-world problems in various industries by applying sound principles of the theoretical foundations and mathematical bases of computer science and communicate these solutions professionally.
- PEO2: Apply ethical, social, and professional responsibilities, and remain informed and involved as full participants in the CS profession and our society.
- PEO3: Advance professionally through organized training or self-learning to new technologies, tools, and methodologies to remain at the leading edge of computer science developments and practice in the profession and in the academic field.

The appraisal instrument was developed by the NDMU Computer Studies Department in consultation with industry partners and aligned with CHED requirements for OJT assessment. The instrument's structure aligns

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

with competency frameworks advocated by Bowers et al. (2023), who recommend mapping assessed activities to industry skill standards across technical, professional, and dispositional domains. The three PEOs assessed in Part III are the official program educational objectives of the NDMU BSCS program, approved by the university and aligned with ACM/IEEE computing curricula guidelines (ACM Computing Curricula Task Force, 2013). While formal psychometric validation (e.g., reliability analysis, factor analysis) was not conducted as part of this study, the instrument has been used consistently across multiple cohorts and is accepted by host organizations as a reasonable measure of trainee performance.

Data Collection

Performance appraisal forms were completed by designated host supervisors at the end of each OJT placement period following direct observation of trainee performance throughout the deployment. Forms were centrally collected and managed by the OJT coordinator.

Data Analysis

Data were analyzed using descriptive statistics:

- Part I and Part III: Mean (M) and standard deviation (SD) computed per item, per subdimension, and per cohort
- Part II: Frequency counts and percentages for VS, S, and NS ratings per dimension and per cohort
- Cross-cohort comparison: Term-level means for Parts I and III; term-level VS/S/NS distributions for Part II

RESULTS AND DISCUSSIONS

Part I — Personal Skills and Attitude

Table 1 Work Habits (n=30)

Indicator	M	SD	2023	2024	2025
Reports on time	4.60	0.86	4.20	4.50	5.00
Reports regularly	4.50	0.78	4.20	4.44	4.78
Performs tasks without much supervision	4.63	0.56	4.00	4.75	4.78
Practices self-discipline in his/her work	4.73	0.45	4.80	4.69	4.78
Demonstrates dedication and commitment	4.67	0.48	4.20	4.62	5.00
Section Mean	**4.63**	**0.62**	**4.28**	**4.60**	**4.87**

Table 1 presents the Work Habits ratings. The section mean of 4.63 (SD=0.62) reflects consistently strong professional discipline across all cohorts. *Practices self-discipline* (M=4.73) and *Demonstrates dedication and commitment* (M=4.67) were the highest-rated indicators, while *Reports regularly* (M=4.50) was the lowest. A clear upward trend is observed across cohorts: 2023 (M=4.28) → 2024 (M=4.60) → 2025 (M=4.87), with the 2025 cohort achieving perfect scores on *Reports on time* and *Demonstrates dedication and commitment* (both M=5.00).

Table 2 Work Skills (n=30)

Indicator	M	SD	2023	2024	2025
Knows his/her work well	4.40	0.67	4.00	4.31	4.78
Completes assignments on time	4.53	0.68	4.00	4.44	5.00
Works with speed and accuracy	4.50	0.73	3.80	4.50	4.89
Ensures quality of work	4.40	0.72	3.80	4.38	4.78

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

Produces much output with less time	4.57	0.68	4.20	4.50	4.89
Displays resourcefulness	4.70	0.47	4.20	4.75	4.89
Requires less supervision	4.67	0.48	4.20	4.69	4.89
Manifests thoroughness and attention to detail	4.60	0.50	4.40	4.50	4.89
Has initiative	4.80	0.41	4.80	4.69	5.00
Section Mean	**4.57**	**0.61**	**4.16**	**4.53**	**4.89**

Work Skills (M=4.57, SD=0.61) is the lowest-rated subdimension in Part I. *Has initiative* (M=4.80) and *Displays resourcefulness* (M=4.70) were the highest-rated items, while *Knows his/her work well* (M=4.40) and *Ensures quality of work* (M=4.40) were the lowest. The 2023 cohort showed the weakest performance in *Works with speed and accuracy* (M=3.80) and *Ensures quality of work* (M=3.80), with marked improvement in subsequent cohorts. The 2025 cohort achieved near-perfect scores across all Work Skills items.

Table 3 Social Skills (n=30)

Indicator	M	SD	2023	2024	2025
Shows tact in dealing with people	4.67	0.48	4.20	4.69	4.89
Shows respect and courtesy	4.73	0.45	4.20	4.75	5.00
Capable of learning from and listening to co-workers	4.83	0.38	4.80	4.75	5.00
Shows appreciation and gratitude	4.73	0.45	4.40	4.75	4.89
Shows poise, self-confidence, and is well-groomed	4.63	0.49	4.20	4.69	4.78
Shows emotional maturity	4.70	0.47	4.20	4.75	4.89
Section Mean	**4.72**	**0.45**	**4.33**	**4.73**	**4.91**

Social Skills (M=4.72, SD=0.45) ranked second among Part I subdimensions. *Capable of learning from and listening to co-workers* was the single highest-rated item across all of Part I (M=4.83, SD=0.38), achieving perfect scores in the 2025 cohort. *Shows poise, self-confidence, and is well-groomed* (M=4.63) was the lowest-rated Social Skills indicator. The subdimension showed consistent improvement across cohorts: 2023 (M=4.33) → 2024 (M=4.73) → 2025 (M=4.91).

Table 4 General Attitude (n=30)

Indicator	M	SD	2023	2024	2025
Shows interest in work	4.80	0.41	4.20	4.88	5.00
Accepts suggestions	4.80	0.41	4.40	4.81	5.00
Cooperates well with everybody	4.87	0.35	4.60	4.94	4.89
Exhibits honesty and dependability	4.83	0.38	4.20	4.94	5.00
Follows instruction	4.80	0.41	4.40	4.88	4.89
Observes safety rules and regulations	4.80	0.41	4.20	4.94	4.89
Accepts responsibility	4.83	0.38	4.20	5.00	4.89
Respects superiors	4.87	0.35	4.40	4.94	5.00
Shows friendliness and pleasant attitude	4.87	0.35	4.40	5.00	4.89
Section Mean	**4.83**	**0.38**	**4.33**	**4.92**	**4.94**

General Attitude (M=4.83, SD=0.38) is the highest-rated subdimension in Part I. Three indicators—*Cooperates well with everybody, Respects superiors, and Shows friendliness and pleasant attitude*—achieved the highest item means (M=4.87 each). The 2024 cohort achieved perfect scores in *Accepts responsibility* (M=5.00) and *Shows friendliness and pleasant attitude* (M=5.00), while the 2025 cohort achieved M=5.00 in *Shows interest in work, Accepts suggestions, Exhibits honesty and dependability,* and *Respects superiors*.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

The overall Part I mean of 4.69 (SD=0.53) reflects strong personal competency development among BSCS trainees, consistent with findings from comparable Philippine OJT studies. Santelices (2024) similarly reported high attitudinal ratings among Computer Engineering interns in the Philippines, suggesting that Filipino computing students generally demonstrate strong professional dispositions during workplace placements. However, the present study's multi-indicator, multi-cohort design provides a more granular and longitudinal perspective than prior single-cohort studies.

he finding that *General Attitude* (M=4.83) was the highest-rated subdimension while *Work Skills* (M=4.57) was the lowest aligns with patterns documented in the international literature. Barr et al. (2024) found that professional dispositions—including cooperation, respect, and reliability—were more consistently demonstrated by computing apprentices than technical task-specific competencies, suggesting that attitudinal development may be more readily observable and less context-dependent than technical skill application. The high General Attitude ratings across all cohorts, particularly for *Cooperates well with everybody* (M=4.87), *Respects superiors* (M=4.87), and *Shows friendliness and pleasant attitude* (M=4.87), suggest that BSCS trainees of NDMU effectively integrate into workplace cultures and demonstrate the organizational citizenship behaviors valued by host supervisors.

The relatively lower Work Skills ratings—particularly for *Knows his/her work well* (M=4.40) and *Ensures quality of work* (M=4.40)—indicate that technical competency application in authentic workplace contexts remains a development area. This finding corroborates Tolentino's (2023) observation that technical skill gaps are more pronounced in entry-level trainees and suggests a need for more rigorous pre-OJT technical preparation. The improvement in Work Skills across cohorts (2023: M=4.16 → 2025: M=4.89) is encouraging and may reflect cumulative curricular improvements or enhanced host organization task design.

Social Skills (M=4.72) demonstrated the highest single-item rating across all of Part I, with *Capable of learning from and listening to co-workers* (M=4.83). This finding underscores the importance of interpersonal learning agility in computing workplaces, where collaborative knowledge transfer is essential for rapid skill development. Nazlıog˘lu et al. (2023) reported that co-op models integrating extended workplace exposure were particularly effective in developing collaborative competencies, suggesting that the OJT placements in this study provided rich environments for social learning.

Part II — Internship Job Performance

Table 5 Internship Job Performance by Cohort (n=30)

Dimension	Overall VS	Overall S	Overall NS	VS%	2023 VS/S/NS	2024 VS/S/NS	2025 VS/S/NS
Overall Job Performance	23	7	0	76.7%	1/4/0	13/3/0	9/0/0
Job Specific Skills	20	10	0	66.7%	1/4/0	10/6/0	9/0/0
Problem Solving Skills	23	7	0	76.7%	1/4/0	13/3/0	9/0/0
Interpersonal Skills	21	9	0	70.0%	2/3/0	13/3/0	6/3/0
Leadership Skills	22	8	0	73.3%	2/3/0	13/3/0	7/2/0
Teamwork Skills	29	1	0	96.7%	4/1/0	16/0/0	9/0/0

Table 5 reveals strong overall job performance with notable variation across dimensions. Across all six dimensions, no trainee received a "Not Satisfactory" rating, indicating that all NDMU trainees met at least satisfactory performance standards. Teamwork Skills achieved the highest Very Satisfactory rate (96.7%), with the 2024 and 2025 cohorts achieving 100% VS and the 2023 cohort reaching 80% VS. Job Specific Skills was the lowest-rated dimension (66.7% VS), driven primarily by the 2023 cohort (20% VS) and the 2024 cohort (62.5% VS); the 2025 cohort achieved 100% VS. A clear progression is observed: the 2023 cohort predominantly received Satisfactory ratings across most dimensions, the 2024 cohort showed marked improvement, and the 2025 cohort achieved 100% VS in Overall Job Performance, Job Specific Skills, Problem Solving Skills, and Teamwork Skills.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

The dominance of Very Satisfactory ratings across Part II dimensions—particularly Teamwork Skills (96.7% VS)—reflects the strong collaborative culture cultivated through OJT placements. The near-universal VS rating for Teamwork Skills (29 of 30 trainees) is consistent with Barr et al.'s (2024) finding that teamwork and communication were the most frequently evidenced competencies in computing workplace assessments. This result also aligns with Gollapalli et al.'s (2023) emphasis on collaborative competency as a key field training outcome, suggesting that the present placements effectively developed this dimension.

The relatively lower VS rate for Job Specific Skills (66.7%) is the most actionable finding in Part II. This dimension captures domain-specific technical competency application—programming, systems analysis, database management, and other CS-specific tasks—in authentic workplace contexts. The lower rate, particularly in the 2023 (20% VS) and 2024 (62.5% VS) cohorts, suggests that some trainees entered OJT with insufficient technical preparation for the complexity of assigned tasks. This interpretation is supported by (Celestial-Valderama, 2023), who found that host satisfaction with IT interns depended critically on pre-OJT course preparation and the alignment of academic coursework with workplace task requirements. The 2025 cohort's achievement of 100% VS in Job Specific Skills suggests that subsequent curricular improvements or more strategic host organization selection may have addressed this gap.

The cohort-level progression in Part II is particularly noteworthy. The 2023 cohort's predominantly Satisfactory ratings across most dimensions may reflect both limited technical preparation and the characteristics of the two host organizations (InfoActiv IT & Engineering Solution and NDMU-MIS) that year. By contrast, the 2025 cohort achieved 100% VS in four of six dimensions (Overall Job Performance, Job Specific Skills, Problem Solving Skills, and Teamwork Skills), representing a substantial performance improvement. This trajectory is consistent with Oladimeji's (2024) finding that OJT program effectiveness improves when institutions systematically monitor and address performance gaps across cohorts.

Part III — Program Educational Objectives

Table 6 Program Educational Objectives Performance (n=30)

PEO	Description	M	SD	2023	2024	2025
PEO1	Establish themselves as practicing computer science professionals in identifying and solving significant complex real-world problems in various industries by applying sound principles of the theoretical foundations and mathematical bases of computer science and communicate these solutions professionally.	4.67	0.48	4.20	4.62	5.00
PEO2	Apply ethical, social, and professional responsibilities, and remain informed and involved as full participants in the CS profession and our society.	4.57	0.50	4.20	4.62	4.67
PEO3	Advance professionally through organized training or self-learning to new technologies, tools and methodologies to remain at the leading edge of computer science developments and practice in the profession and in the academic field.	4.77	0.43	4.20	4.81	5.00
	Overall	4.67	0.47	4.20	4.69	4.89

Part III results indicate strong PEO alignment across all cohorts. PEO3 (continuous learning) achieved the highest mean (M=4.77, SD=0.43), with the 2025 cohort achieving a perfect score (M=5.00). PEO2 (ethical and professional responsibilities) was the lowest-rated PEO (M=4.57, SD=0.50), though still reflecting strong performance. The 2023 cohort rated all three PEOs equally (M=4.20), while the 2024 and 2025 cohorts showed differentiated and improving performance. The 2025 cohort achieved perfect scores in PEO1 and PEO3.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

The strong PEO alignment (overall M=4.67) validates that OJT experiences contribute meaningfully to program-level learning outcomes, a critical requirement for outcomes-based education and accreditation. The finding that PEO3 (continuous learning and technological advancement, M=4.77) was the highest-rated objective is consistent with the literature on computing education, which consistently emphasizes learning agility as a core graduate attribute in rapidly evolving technological fields (Nazlıog˘lu et al., 2023).

The relatively lower rating for PEO2 (ethical, social, and professional responsibilities, M=4.57) warrants attention. Barr et al. (2024) noted that responsibility and professional commitment were less frequently evidenced by computing apprentices compared to technical and communication skills, suggesting that ethical and professional competencies may require more explicit developmental scaffolding. Tinoco-Giraldo et al. (2021) recommend using defined competency standards and systematic assessment procedures to ensure that ethical competencies are adequately observed and evaluated during internships. The present finding suggests that host supervisors may have less clear criteria for judging ethical and professional responsibilities in entry-level trainees, or that OJT placements provide fewer opportunities for demonstrating these competencies compared to technical and collaborative tasks.

The upward PEO trend across cohorts (2023: M=4.20 → 2024: M=4.69 → 2025: M=4.89) mirrors the Part I trend and suggests that program improvements—whether in curricular preparation, host organization selection, or supervisor orientation—have progressively enhanced trainees' capacity to demonstrate PEO achievement during OJT.

Table 7 Summary of Performance Across Parts by Cohort

Cohort	n	Part I M (SD)	Part II Dominant Rating	Part III M (SD)
Summer 2023	5	4.27 (0.49)	Satisfactory (majority)	4.20 (0.41)
Summer 2024	16	4.70 (0.57)	Very Satisfactory (majority)	4.69 (0.47)
Summer 2025	9	4.90 (0.29)	Very Satisfactory (all/majority)	4.89 (0.32)
Overall	**30**	**4.69 (0.53)**	**Very Satisfactory (majority)**	**4.67 (0.47)**

Table 7 summarizes the cohort-level performance trajectory. The Summer 2023 cohort showed the lowest performance across all parts, with Part I mean of 4.27 and Part III mean of 4.20, and predominantly Satisfactory ratings in Part II. The Summer 2024 cohort demonstrated substantial improvement, and the Summer 2025 cohort achieved the highest performance levels across all three parts, with the narrowest standard deviations (Part I SD=0.29; Part III SD=0.32), indicating greater performance consistency among trainees.

The findings carry several practical implications. First, the consistently lower ratings in Work Skills and Job Specific Skills across earlier cohorts suggest the need for more rigorous pre-OJT technical preparation, particularly in programming proficiency, systems analysis, and quality assurance practices. Second, the lower PEO2 ratings indicate a need for more explicit integration of ethical and professional responsibility content in the curriculum and clearer rubrics for host supervisors to assess these competencies. Third, the strong performance of the 2025 cohort suggests that recent program adjustments have been effective and should be documented and sustained. Finally, the diversity of host organizations—spanning government agencies, private IT firms, and academic units—provides a rich deployment ecosystem that should be strategically leveraged to expose trainees to varied technical and organizational contexts.

CONCLUSION AND RECOMMENDATIONS

This study presented a comprehensive assessment of BS Computer Science student trainee performance during on-the-job training across three consecutive cohorts (2023–2025) using a multidimensional performance appraisal instrument. The findings reveal strong overall performance, with a consistent upward trend from Summer 2023 (Part I M=4.27) to Summer 2025 (Part I M=4.90), suggesting progressive improvement in OJT program quality and student preparation.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VI, June 2026

Key strengths identified include General Attitude (M=4.83), Social Skills (M=4.72), Teamwork Skills (96.7% VS), and PEO3 alignment (M=4.77), reflecting the trainees' strong professional dispositions, collaborative competencies, and learning agility. Development areas include Work Skills (M=4.57)—particularly technical knowledge application and quality assurance—Job Specific Skills (66.7% VS overall), and PEO2 alignment (M=4.57), which point to opportunities for strengthening pre-OJT technical preparation and ethical competency development.

These findings have direct implications for BSCS program management: curriculum developers should enhance technical skill preparation prior to OJT; OJT coordinators should prioritize host organizations that provide authentic, CS-aligned tasks; and supervisor orientation should include clearer rubrics for assessing ethical and professional competencies. The study also demonstrates the value of systematic, longitudinal performance appraisal data as an evidence base for continuous quality improvement.

Future research should expand the sample size, incorporate qualitative data from trainees and supervisors, and examine the specific programmatic changes that contributed to the observed performance improvements across cohorts. It is recommended that the student trainee performance appraisal form be reviewed and enhanced to improve the quality and depth of data collected. The current appraisal tool may be expanded to include relevant contextual variables, such as the type of host company (e.g., government, private, IT-related, non-IT) and the nature of assigned tasks (e.g., programming, technical support, administrative, multimedia, or data-related tasks). Including these variables will enable future studies to examine how external factors influence trainee performance and better assess the alignment between academic preparation and workplace exposure.

Moreover, the existing open-ended section of the appraisal form may be improved by replacing general comments with more structured guide questions to encourage specific and individualized feedback. Instead of a single “Comments/Suggestions” section, supervisors may be asked to provide responses on the strengths of the trainee, areas for improvement, their recommendation for employment (Yes, No, or Maybe), and additional comments. This enhancement will help minimize repetitive or generic responses and support more meaningful qualitative analysis. With more structured and detailed feedback, future research can conduct in-depth qualitative studies of supervisor evaluations, leading to more comprehensive insights for improving the OJT program.

Ultimately, these improvements will provide a stronger basis for evaluating trainee performance, understanding influencing factors, and further enhancing the effectiveness and industry relevance of the university’s OJT program.

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