GitHub Feature Use and Programming Skill Development among BSICT Students

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Abstract: *This study examined the relationship between GitHub feature utilization and the development skills of third- and fourth-year Bachelor of Science in Information and Communication Technology (BSICT) students at SNSU. The researchers focused on repository management skills, collaboration features, and version control practices, analyzing their impact on project organization, code management confidence, and collaboration readiness. A descriptive-correlational quantitative design was employed, involving 15 participants (14 males, 1 female) who completed a structured survey using a four-point Likert scale. Data were analyzed with Jamovi, employing descriptive statistics, Pearson correlations, and regression analyses. Results revealed moderate proficiency across all GitHub feature domains, with mean scores of 3.10 for repository management skills, 3.15 for collaboration features, and 3.07 for version control practices (SD range: 0.497–0.555). Participants demonstrated the highest confidence in collaborative tasks, such as coordinating group projects (M = 3.20), but showed lower proficiency in error recovery and task monitoring (M = 2.93–3.00). The study recommended structured GitHub training, hands-on pedagogical approaches, and peer learning networks to address challenges like uneven engagement. This research provided a foundation for optimizing GitHub's educational impact in ICT curricula, aligning with industry demands.*

Keywords: ICT Students, GitHub Utilization, Programming Skills, Quantitative Study