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Academic and Practical Performance of Grade 11 Learners in Bread and Pastry Production Under the Technical-Vocational-Livelihood Track: Basis for Instructional and Resource Enhancement

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Abstract

This study developed a journal-style analysis of the academic and practical performance of Grade 11 learners enrolled in Bread and Pastry Production under the Technical-Vocational-Livelihood track at Urdaneta City National High School, Pangasinan, Philippines. Using a descriptive-evaluative design, the study drew on performance records and survey responses from 50 learners and 3 teacher-respondents. Descriptive statistics showed that learners achieved strong written performance (M = 87.40) and higher practical performance (M = 90.10), suggesting that hands-on instruction effectively supports competency development. Learner-related factors were generally favorable (AWM = 4.18), with interest in learning Bread and Pastry receiving the highest rating (M = 4.52). Teacher- and school-related factors were rated very positively (AWM = 4.35), particularly the teacher's demonstration of proper baking techniques (M = 4.50). However, learners also reported persistent constraints, particularly inadequate tools (M = 4.20), short laboratory time (M = 4.12), and ingredient shortages (M = 4.08). The findings indicate that learner motivation, teacher guidance, and supportive facilities shape performance, while resource and scheduling limitations constrain skill mastery. The study concludes that Bread and Pastry instruction is functioning well pedagogically but requires stronger laboratory resourcing, protected practice time, and assessment-aligned support systems to sustain competency-based outcomes and improve industry readiness.

Keywords: *bread and pastry production, technical-vocational education, practical performance, learner motivation, senior high school*

Introduction

Technical and vocational education and training remain central to employability, skills formation, and school-to-work transition. Evidence from low- and middle-income settings shows that vocational preparation can improve labor-market participation, while systematic reviews in TVET emphasize that assessment must capture both knowledge and demonstrable performance if programs are to reflect authentic occupational standards (Chakravarty et al., 2019; Yusop et al., 2022).

Recent literature also shows that work-based and practice-oriented learning environments influence motivation, self-regulated learning, self-efficacy, and employability-related outcomes. Vocational students perform more effectively when they receive opportunities for authentic practice, social support, and structured feedback, although the effects of work-based versus school-based learning may differ by track and implementation conditions (Hong et al., 2021; Pylväs et al., 2022; Suyitno et al., 2025; Tobback et al., 2025).

Within TVET classrooms, teacher competence in assessment for learning and continuous professional development is especially consequential because vocational performance depends on guided demonstration, formative feedback, and well-aligned practical assessment. Reviews of vocational

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teacher learning likewise show that changes in teaching practice are among the most important outcomes of professional learning in VET settings (Sandal, 2023; Zhou et al., 2022).

In Bread and Pastry Production specifically, prior Philippine studies suggest that acquired skills are significantly associated with core competencies, while learners frequently encounter barriers related to time, resources, and class conditions (Rodil & Briones, 2022; Celestino, 2024). Against this backdrop, the present study examined the academic and practical performance of Grade 11 learners in Bread and Pastry Production, the learner- and school-related conditions associated with that performance, and the challenges that may inform targeted school-level intervention.

Methodology

The study employed a descriptive-evaluative research design. Based on the uploaded manuscript, the respondents consisted of 50 Grade 11 learners enrolled in Bread and Pastry Production and 3 Senior High School Bread and Pastry teachers in School Year 2025–2026. Data were drawn from performance records and a researcher-made questionnaire covering four domains: academic and practical performance, learner-related factors, teacher- and school-related factors, and challenges encountered in the course. The source manuscript indicates that means, frequencies, percentages, and average weighted means were used to summarize the data.

This design is appropriate for a school-based TVET performance study because it permits a focused description of competency-related outcomes and learning conditions without overstating causal claims. It also aligns with the current policy emphasis on strengthened SHS implementation, competency-based delivery, formative and summative monitoring, laboratory standards, and the expansion of work immersion in technical pathways.

Results

The learners demonstrated strong performance in both written and practical components of Bread and Pastry Production. The mean written or academic score was 87.40, while the mean practical or hands-on score was 90.10. The higher practical mean suggests that learners were able to translate conceptual knowledge into task performance, particularly in skill-based activities where observation, repetition, and demonstration are integral to mastery.

Learner-related factors were generally positive, with an average weighted mean of 4.18. Among the indicators, interest in learning Bread and Pastry received the highest mean (4.52), followed by confidence in performing practical baking tasks (4.34). Regular lesson review (4.10), help-seeking when concepts were unclear (4.18), and basic prior knowledge of baking (3.76) were also rated favorably. These results suggest that motivational and self-regulatory dispositions were present among the respondents.

Teacher- and school-related factors also received strong ratings, with an average weighted mean of 4.35. The highest-rated item was teacher demonstration of proper baking techniques (4.50), followed by clear lesson explanation (4.46), teacher guidance and feedback during baking activities (4.38), provision of a safe and conducive laboratory (4.28), and adequacy of baking tools and equipment (4.12). Overall, these data indicate that instructional support was perceived positively, although material adequacy was rated lower than the pedagogical indicators.

Despite these strengths, the learners reported notable challenges. The most prominent constraints were lack of sufficient baking tools in the laboratory (4.20), limited laboratory time for practice (4.12), and intermittent unavailability of ingredients (4.08). Learners also reported difficulty balancing written and hands-on requirements (3.94) and fear of making mistakes during baking tasks (3.76). The average weighted mean of 4.02 indicates that such constraints were meaningfully present in the learning environment.

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Discussion

The stronger practical performance relative to written performance is consistent with the nature of Bread and Pastry Production as a competency-based specialization in which procedural knowledge is developed through repeated performance, demonstration, and authentic task engagement. Research in TVET assessment has emphasized that performance evidence, rather than written recall alone, is central to judging vocational competence, and bread-and-pastry-specific Philippine research has similarly linked acquired skills with competency outcomes (Yusop et al., 2022; Yusop et al., 2023; Rodil & Briones, 2022).

The favorable learner-factor profile suggests that interest, confidence, and study behaviors form a supportive motivational base for learning. This pattern aligns with studies showing that academic self-efficacy, self-regulated learning, and vocational identity support engagement in both school and workplace settings. In the present study, interest and confidence emerged as salient internal assets, which may partly explain why learners performed especially well in practical tasks.

The strong ratings for teacher demonstration, explanation, and feedback also reinforce the view that instructional mediation remains crucial in TVET. Vocational learning is not only about exposure to tools and recipes; it also depends on how teachers model procedures, structure practice, and translate industry expectations into assessable classroom tasks. Prior studies on vocational teachers' professional learning and assessment for learning underscore the importance of such teacher moves in improving student performance.

At the same time, the study reveals a familiar implementation gap: positive pedagogy is operating within material and scheduling constraints. The reported shortages in tools, ingredients, and practice time mirror other bread-and-pastry studies in the Philippines, where insufficient resources and large classes dilute individualized guidance and weaken sustained practice. This is especially important because TESDA's training standards explicitly define tools, equipment, facilities, and competency-based assessment expectations, while DepEd's strengthened SHS pilot recommends smaller laboratory/workshop class sizes for hands-on subjects.

These results therefore suggest a nuanced conclusion. The program appears instructionally effective, but its long-term quality depends on whether the school can match strong teaching with adequate material conditions. Without sufficient laboratory resources and protected practice time, competency development may plateau, even when learner motivation and teacher commitment remain high.

Conclusions

Grade 11 learners in Bread and Pastry Production demonstrated strong written and practical performance, with practical performance exceeding academic performance. Learner interest and confidence, together with teacher guidance and positive school support, contributed to these outcomes. However, insufficient tools, inconsistent ingredient availability, and limited laboratory time remain important barriers to the development of full competency. The study therefore concludes that Bread and Pastry Production in this setting is pedagogically promising but operationally constrained, and that sustainable improvement requires instructional enhancement to be paired with stronger laboratory resourcing and time allocation.

Recommendations

First, the school should prioritize the provision and maintenance of baking tools, utensils, and ingredients so that laboratory activities can be conducted without interruption and with greater task repetition.

Second, laboratory schedules should be redesigned to provide longer or more frequent practice sessions, especially for competency areas requiring repeated demonstration and supervised correction.

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Third, teachers should continue using demonstration, guided practice, and formative feedback, but these should be organized more explicitly around TESDA-aligned performance criteria and competency evidence.

Fourth, learner support should include confidence-building measures such as structured peer mentoring, error-tolerant practice sessions, and short remediation activities for students struggling to balance written and practical requirements.

Fifth, future studies should expand to multiple schools and apply inferential techniques to rigorously test the relationship among learner factors, resource conditions, and competency outcomes.

References

Celestino, B. S. (2024). Challenges faced by senior high school students of Bread and Pastry Production: Basis for digital recipe repository. *International Journal of Research and Scientific Innovation, 11*(11), 767–772. https://doi.org/10.51244/IJRSI.2024.11110061

Chakravarty, S., Lundberg, M., Nikolov, P., & Zenker, J. (2019). Vocational training programs and youth labor market outcomes: Evidence from Nepal. *Journal of Development Economics, 136*, 71–110. https://doi.org/10.1016/j.jdeveco.2018.09.002

Hong, J.-C., Zhang, H.-L., Ye, J.-H., & Ye, J.-N. (2021). The effects of academic self-efficacy on vocational students' behavioral engagement at school and at firm internships: A model of engagement-value of achievement motivation. *Education Sciences, 11*(8), Article 387. https://doi.org/10.3390/educsci11080387

Pylväs, L., Nokelainen, P., & Rintala, H. (2022). Vocational students' perceptions of self-regulated learning in work-based VET. *Vocations and Learning, 15*(2), 241–259. https://doi.org/10.1007/s12186-022-09286-8

Rodil, F. M., & Briones, E. O. (2022). Acquired skills and the competencies in Bread and Pastry Production of Grade 11 TVL senior high school students. *IOER International Multidisciplinary Research Journal, 4*(2), 212–222. https://doi.org/10.54476/3403074

Sandal, A. K. (2023). Vocational teachers' professional development in assessment for learning. *Journal of Vocational Education & Training, 75*(4), 654–676. https://doi.org/10.1080/13636820.2021.1934721

Suyitno, S., Nurtanto, M., Jatmoko, D., Widiyono, Y., Purwoko, R. Y., Abdillah, F., Setuju, & Hermawan, Y. (2025). The effect of work-based learning on employability skills: The role of self-efficacy and vocational identity. *European Journal of Educational Research, 14*(1), 309–321. https://doi.org/10.12973/eu-jer.14.1.309

Tobback, I., Verhaest, D., & De Witte, K. (2025). The impact of work-based versus school-based learning on cognitive and non-cognitive outcomes in vocational secondary education. *Economics of Education Review, 107*, Article 102673. https://doi.org/10.1016/j.econedurev.2025.102673

Yusop, S. R. M., Rasul, M. S., Yasin, R. M., Hashim, H. U., & Jalaludin, N. A. (2022). An assessment of approaches and learning outcomes in technical and vocational education: A systematic review using PRISMA. *Sustainability, 14*(9), Article 5225. https://doi.org/10.3390/su14095225

Yusop, S. R. M., Rasul, M. S., Yasin, R. M., & Hashim, H. U. (2023). Identifying and validating vocational skills domains and indicators in classroom assessment practices in TVET. *Sustainability, 15*(6), Article 5195. https://doi.org/10.3390/su15065195

Zhou, N., Tigelaar, D. E. H., & Admiraal, W. (2022). Vocational teachers' professional learning: A systematic literature review of the past decade. *Teaching and Teacher Education, 119*, Article 103856. https://doi.org/10.1016/j.tate.2022.103856