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TVET@Asia Issue 24: Vocational Didactics I: Construction Technology, Wood Technology and Color Technology and Interior Design

The initial and further education and training of TVET teachers and instructors includes vocational didactics, which focuses on specific occupations or occupational groups. Vocational didactics embraces the specifics of work tasks and work processes and their transformation into efficient vocational learning processes. The Hangzhou Declaration of the UNESCO-UNEVOC (2005) recommends a sectoral structure and the introduction of occupational field-specific vocational didactics. The vocational learning processes relate to all three learning fields of TVET, i.e., the vocational school, the practical vocational training center, and the company workplace. In principle, the focus is not only on imparting occupation-related knowledge but also on analyzing typical occupational work processes and tasks. The construction sector is crucial given the United Nations' sustainability agenda and climate change. A large proportion of global CO₂ emissions that are responsible for climate change are generated during the production and operation of buildings. The dual transition of digitalization and greening can significantly improve this sector by reducing CO₂ emissions. Technical innovations are being developed and integrated into the labor market. On the one hand, vocational didactics integrates these developments into the professionalization of TVET in terms of personnel and, on the other hand, supports the transfer of innovations through initial and continuous TVET offers.

This issue of TVET@Asia includes innovative approaches to vocational didactics in construction technology, wood technology, color technology, and interior design.

One significant contribution to this discourse comes from TAWANDA CHINENGUNDU (University of Pretoria), who conducts an in-depth analysis of the **South African Construction and Technology Curriculum and Assessment Policy Statement**. This study assesses how well the curriculum's vocational didactics components align with industry expectations, ultimately evaluating their effectiveness in preparing students for employment within the construction sector. Through a thorough document analysis that includes curriculum policy statements, relevant educational frameworks, and industrial standards, the findings reveal that while the curriculum is well structured with a logical progression from simple to complex subject matter—covering essential areas such as materials, equipment, safety protocols, and sustainable practices—it notably lacks practical training opportunities. The study emphasizes that enhancing practical components within the curriculum is crucial for better equipping students to face real-world challenges. Furthermore, it highlights the limited content on digital tools necessary for modern construction technologies. As a result, it

recommends the continuous review and enhancement of curricula to ensure alignment with evolving industry needs.

In another compelling study conducted by JERALD HONDONGA (Tshwane University of Technology, South Africa), ABIA MUTUMBWA (Zimbabwe Open University, Zimbabwe), MABLE KELEBOGILE KGOSI (Tshwane University of Technology, South Africa), the focus shifts to **Zimbabwean** educators' experiences in delivering construction technology subjects at school level. The paper explores various vocational didactic methods teachers employ to facilitate learners' smooth transition into the labor market or into further training after graduation. By systematically reviewing curriculum documents spanning decades—from post-independence policies until today—the study identifies two distinct phases in vocational didactics, which initially emphasized craft skills acquisition post-independence but later pivoted towards inclusive vocational skills development aimed at addressing socio-economic challenges after 1990. Findings suggest that while early approaches nurtured positive attitudes toward manual work through skill development for production lines, contemporary strategies have shifted towards equipping students with higher-level technical skills suited for self-employment opportunities. The paper argues for continued evolution in vocational didactics tailored to meet sustainable skill set requirements necessary for green jobs—a critical aspect as industries increasingly seek environmentally responsible practices.

Lastly, an insightful exploration into community-based development (CBD) is presented by LAILA HANIFAH, ERNA KRISNANTO, AGARA GAPUTRA (Universitas Pendidikan Indonesia) through their examination of **Indonesia's** Bantuan Stimulan Perumahan Swadaya (BSPS) program aimed at improving housing quality among low-income communities using ferrocement technology solutions. This research underscores how active community engagement plays a pivotal role in empowering individuals through practical learning processes facilitated via localized programs tailored directly towards their specific needs—demonstrating not only potential benefits associated with enhanced living conditions but also fostering essential skill sets required for independently applying innovative building techniques like ferrocement layering amongst local populations.

The effectiveness of management within TVET colleges is critically examined by MOKABA MOKGATLE (University of South Africa), MPHONG DICHABA (Department of ABET and Youth Development, University of South Africa), Matome Malale (Department of ABET and Youth Development, University of South Africa) through a study investigating how Post-School Education and Training (PSET) policy impacts institutional performance in Gauteng province, **South Africa**. Despite existing policies intended to enhance throughput rates among TVET colleges—aligning with national goals outlined in frameworks such as the National Development Plan 2030—the research reveals persistent low completion rates, raising questions about managerial success within these institutions. This investigation uncovers significant gaps related to guideline formulation by governing bodies like DHET (Department of Higher Education and Training) by employing qualitative methodologies that capture the principals' perspectives on factors influencing management efficacy. The absence of clearly defined determinants for management success poses considerable challenges; thus,

this paper advocates for developing comprehensive improvement models based on respondents' insights while recommending avenues for future research to address these systemic issues.

Another innovative approach emerges from SAMAILA HAMZA, JAMILU MUSTAPHA CHEDI, and HARUNA ANGULU (Abubakar Tafawa Balewa University Bauchi), who investigate how integrating green process skills into **Nigeria's** construction technology sector can foster economic growth and development while promoting sustainability initiatives. Utilizing an exploratory mixed-methods framework combining qualitative interviews with stakeholders across technical colleges and quantitative analyses via structural equation modeling techniques allows researchers to derive critical insights and validate a comprehensive model explicitly designed around green process competencies essential within today's construction landscape. Key areas identified include information-sharing strategies alongside coordination skills necessary among various actors involved, from educators imparting knowledge through curricula adjustments aligned with emerging technologies to actual practitioners implementing these principles onsite effectively during project execution phases.

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