

“SMART HOSPITALITY EXPRESS” – WORK INTEGRATED LEARNING & PROJECT BASED LEARNING ON WHEELS

WONG, K. W. DENNIS

Hospitality Discipline, Vocational Training Council, Hong Kong, China

denniskw@vtc.edu.hk

This paper presents an innovative mobile learning platform developed by the Hospitality Discipline of the Vocational Training Council (VTC), Hong Kong that combines Work-Integrated Learning (WIL) and Project-Based Learning (PBL) for students of the Higher Diploma in Sports Studies with Smart Technology. The Smart Hospitality Express (SHE) Project transforms a mini-truck into a mobile technology laboratory, creating unprecedented opportunities for hands-on vocational training while promoting health and wellness across Hong Kong. Through its first three academic years (2021/22-2023/24), SHE has engaged over 9,000 participants across 90+ schools, demonstrating the effectiveness of this novel approach to vocational education. The paper examines the pedagogical framework, implementation strategies, learning outcomes, and community impact of this initiative, while exploring its potential for replication in other vocational disciplines.

Keywords: *mobile learning, work-integrated learning, project-based learning, vocational education, smart sports technology*

Introduction

The integration of smart technology into sports studies presents unique opportunities for enhancing vocational education. Traditional methods often lack the dynamic, real-world application necessary to fully prepare students for careers in this evolving field. Recognizing this, the Hospitality Discipline at VTC developed the “Smart Hospitality Express (SHE)” Project, offering a mobile learning platform that brings education directly to communities, fostering both student development and public health engagement. SHE allowed the students to outreach to different schools, sports associations, and community centers to actively engage stakeholders in the sports, health and education sectors while students are conducting Work-Integrated Learning (WIL) and Project-Based Learning (PBL) by organizing smart health and sports day and workshops. The SHE Project also aligns with the Smart City Blueprint 2.0 (Hong Kong SAR Government, 2020),

which emphasizes innovation in education and community services. In addition to enhancing students’ learning, the SHE serves to increase community engagement and promotes health and fitness awareness, similar goal as stipulated in the Global Action Plan on Physical Activity (WHO, 2022).

Conceptual Framework for Pedagogical Innovation

SHE integrates three key educational paradigms:

1. Mobile Learning: Bringing education directly to communities (Billett, 2014)
2. Work-Integrated Learning (WIL): Following Billett’s (2014) structured WIL model, where students develop professional competencies through real-world tasks
3. Project-Based Learning (PBL): Student-driven problem-solving (Kolmos, 2017)

SHE (Figure 1) represents an innovative approach to vocational education by creating a mobile classroom for sports and related programmes. This innovative platform enables students to engage with diverse populations including school children, elderly community members, and elite athletes through comprehensive data collection and analysis activities. The WIL and PBL approaches enable students to achieve intended learning outcomes in a structured way.

Figure 1: Smart Hospitality Express



SHE is a health and fitness classroom on wheels, serving as a mobile classroom in smart sports, e-health, and fitness assessment. It promotes smart sports data analytics and aligns with VTC's strategic "Digital Future"

initiative, facilitating multi-disciplinary and innovative project collaborations. Equipped with health and sports equipment, SHE functions as a mobile smart sports coach and supports various planned purposes.

The primary objectives of SHE include:

1. Providing students with hands-on experience in smart sports technology applications
2. Collecting and analyzing health data from diverse demographic groups
3. Revitalizing sports participation through data-driven exercise and diet recommendations
4. Training students in emerging professional roles, such as:
 - Sports assessors
 - Sports data architects
 - Techno fitness coaches
 - Sports administrators
 - Smart living planners

SHE Project Implementation

Prior to operation, the SHE was required to obtain Special Purpose Vehicle License from Transport Department before completing exterior design and painting and installation of portable and fixed digital fitness equipment.

The equipment features:

- Boditrax body composition analyzer
- NURVV Run smart insoles for gait analysis
- Technogym smart exercise bikes with VR integration
- PostureScan digital mirror
- Myzone heart rate tracking system

SHE mainly operated through outreaching to primary and secondary schools, athlete academies, and sports associations. Students were arranged to conduct smart sports demonstrations and data collection, provide health assessments and improvement recommendations. Through conducting real fitness assessments using professional equipment with diverse client groups (students, athletes, elderly), students were able to develop professional competencies in:

- Sports assessment
- Data analysis
- Client communication
- Training program design

Project-Based Learning Methodology

Students participate in complete project cycles:

1. Needs Assessment: Identifying community health needs
2. Program Design: Creating tailored fitness tests and workshops
3. Implementation: Conducting mobile outreach sessions

4. Evaluation: Analyzing data and providing recommendations

This approach develops critical thinking, problem-solving, and teamwork skills while addressing real community health challenges. Students gain hands-on experience with industry-standard equipment while learning data analytics skills.

Industry Collaborations

The SHE Project has fostered significant industry partnerships:

1. Tanita Health Equipment: Students serve as Sports Assessors for Physical Fitness Assessment Days
2. CUHK & Department of Health: Collaboration on Hong Kong Growth Study (20,000 samples)
3. Elderly Care Programs: Resistance training for sarcopenia prevention (300-450 participants)
4. Hong Kong Korfball Association: Development of digital trainer passports
5. Hong Kong Housing Society: Smart rehabilitation programs for elderly

Funding Support

VTC has provided funding for initial setup of the min-truck, equipment and time-limited operation cost. In addition, the project has demonstrated strong sustainability through external funding such as the SYNC Foundation funding.

Results and Impact

The Table 1 below shows the quantitative outcomes covering the period from AY2021/22 to AY2023/24).

Table 1 Quantitative Outcomes (AY2021/22 – AY2023/24)

Metric	Result
Schools Reached	90+
Participants Engaged	9,000+
Fitness Tests Developed	70+
Student Satisfaction	92%
Community Satisfaction	93%

Discussion

The SHE offered a good opportunity for students to be trained as sports assessors, sports data architects, techno fitness coaches, sports administrators, and smart living planners, at the same time provided a platform for community to enjoy the smart sports and activities and promote healthy lifestyle. During AY2021/22 – AY2023/24, the SHE has outreached to over 90 secondary and primary schools in Hong Kong, with more than 9,000 participants experienced over 70 smart fitness tests designed by the students. The SHE project showcased an innovative and versatile way of vocational and professional education and training that created a

win-win outcome for students and the community. Further exploration is therefore suggested in extending the same WIL and PBL mode for other study areas.

Unlike traditional WIL or PBL models, SHE extends students' learning and practices to a broader and more diverse range of populations. By operating in various community settings. The integration of a mobile platform sets SHE apart by offering students flexibility and interactive learning opportunities. This modern approach keeps students engaged, encourages self-directed learning, and aligns with the digital preferences of today's learners, ultimately boosting motivation and participation.

SHE also enhances its presence within the community by actively engaging in real-world health initiatives. This increased visibility not only strengthens partnerships but also raises awareness about the program's contributions, fostering trust and collaboration with local stakeholders.

Conclusions

The Smart Hospitality Express (SHE) initiative represents a transformative approach to vocational education, combining mobile learning with real-world application to benefit both students and communities. By fostering skills in sports technology and promoting health and wellness, SHE sets a precedent for innovative educational models that can be replicated across various disciplines.

References

- Billett, S. (2014). Integrating learning experiences across tertiary education and practice settings. Springer International Handbooks of Education.
- Kolmos, A. (2017). PBL curriculum strategies. Wiley Handbook of Problem-Based Learning.
- Hong Kong SAR Government. (2020). Smart City Blueprint 2.0.
- VTC. (2021). Digital Future Strategic Initiative Framework.
- World Health Organization. (2022). Global Action Plan on Physical Activity.