

Innovative Model (Crown-Cone-Star) for Empowerment of Workforce

Dr (Mrs) M.C.W Somaratne

Senior Lecturer Gr I

Division of Polymer and Chemical Engineering Technology

Institute of Technology University of Moratuwa

chandanis@itum.mrt.ac.lk

0714433632



Abstract

Education in Sri Lanka faces persistent challenges of student attrition across multiple stages, from primary school to university entry. Approximately 11% of students drop out before the GCE Ordinary Level (O/L) examination, and nearly 87% discontinue formal education at different stages, resulting in an average of over 300,000 school leavers annually. These figures highlight the urgent need to recognize and strengthen alternative education pathways. While higher education (HE) emphasizes the cognitive domain of knowledge and intellectual skills, vocational education and training (VET) develops psychomotor competencies essential for the world of work. This paper introduces the Crown–Cone–Star Model as a conceptual framework to illustrate how merging outcomes from HE and VET can produce empowered individuals and resilient workforces. The model positions the Sri Lanka Qualifications Framework (SLQF) as a “crown” of academic achievement and the National Vocational Qualifications (NVQ) framework as a “cone” that individuals can continuously fill with skills and experience. When integrated effectively, these complementary systems generate a “star,” symbolizing innovation, adaptability, and productivity in the workplace. The study concludes that valuing HE and VET equally, and creating stronger pathways between them, is not only essential for reducing dropout rates but also for fostering holistic human capital development in Sri Lanka.

Keywords: Higher Education, Vocational Education, NVQ, SLQF, Workforce Development, Dropout Rates, Crown–Cone–Star Model

Introduction

Education is a key driver of national development, but it must be understood in all its forms. While higher education provides theoretical knowledge and fosters innovation, vocational education equips individuals

with hands-on skills that are essential for economic and industrial functions. Both paths are valuable and necessary. A country’s strength lies not only in its graduates and researchers, but also in its skilled personnel and technicians. Building a balanced and resilient workforce requires recognition that vocational training is just as vital as academic achievement.

In Sri Lanka, although primary education is compulsory, a significant proportion of students discontinue their studies before completing key national examinations. Recent reports indicate that approximately 11% of students drop out before sitting for the GCE Ordinary Level (O/L) examination (Athukorala, 2024). Furthermore, dropout rates remain high at the GCE O/L, GCE Advanced Level (A/L), and university entry stages, as shown in Figure 01.

On average, around 87% of students who take the GCE O/L examination leave formal education at different stages, resulting in an estimated annual dropout rate of 268,642 from 2017 to 2022. When those who exit before the O/L stage are included, this total rises to approximately 314,642. This situation underscores a major national issue and highlights the need to actively engage these individuals in vocational and skills-based training programs to secure their career development and contribution to the economy.

Developing all three learning domains—cognitive, affective, and psychomotor—is crucial for holistic education programs. The cognitive domain focuses on thinking skills, the psychomotor domain emphasizes hands-on and practical abilities, and the affective domain involves communication, teamwork, and values (Noor et al., 2020). Noor and colleagues found that students often perform better in the psychomotor and affective domains than in the cognitive domain, largely due to difficulties in understanding concepts and methods required to answer exam questions, which primarily assess cognitive skills.

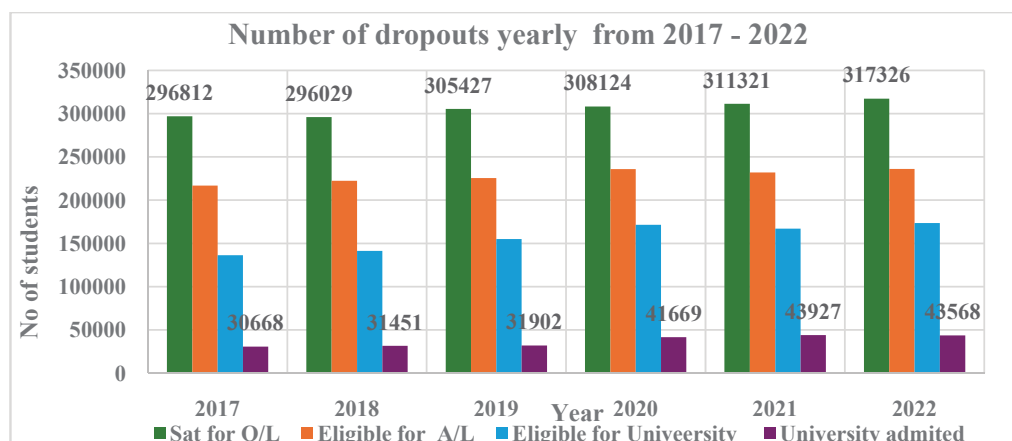


Figure 01: Number of dropouts yearly from 2017 - 2022

Source: Labor Market Information Bulletin, volume 2/19 & volume 2/23, (Tertiary & Vocational Education Commission, 2024))

In the current education system, students with diverse strengths are often assessed through the same examination papers, regardless of their abilities. This mismatch contributes to persistently high exam failure rates. Limited resources in higher education institutions also restrict access and exacerbate dropout rates at the university level.

Many school leavers transition directly into the workforce, either through vocational training or as entry-level workers. Among these individuals are highly creative and skilled people whose specialized psychomotor abilities frequently remain under-recognized during their school years. The psychomotor domain is especially important in fields such as industrial education, agriculture, home economics, business education, music, art, and physical education. As such, vocational education and training (VET) places strong emphasis on systematically categorizing learning objectives within this domain. Importantly, many technical occupations require not only advanced practical skills but also cognitive understanding and affective competencies (Simpson, 1966).

In Sri Lanka, the National Vocational Qualification (NVQ) Framework, introduced in 2005, provides nationally recognized tertiary-level vocational awards under the Tertiary and Vocational Education Commission (TVEC). In parallel, higher education institutions (HEIs), both public and private, operate under the University Grants Commission (UGC), guided by the Sri Lanka Qualification Framework (SLQF), which was established in 2012. The SLQF sets national standards for post-secondary qualifications and aims to facilitate the recognition of prior learning, thereby improving vertical mobility within the higher education system (SLQF National Committee, 2012 & 2015).

The balance of cognitive and psychomotor outcomes differs between NVQ and SLQF pathways. Higher education graduates primarily develop strong cognitive abilities, while VET graduates emphasize psychomotor competence. By integrating these complementary outcomes, organizations do not simply fill vacancies—they build well-rounded teams capable of combining deep knowledge with practical expertise. In today's rapidly evolving world of work, success depends not on knowledge alone or skills alone, but on the ability to integrate both. The future workforce must therefore consist of thinkers and doers; individuals and teams able to imagine, design, build, and improve.

This paper presents the **Crown–Cone–Star Model** as a framework to illustrate how merging the outcomes of higher education and vocational education strengthens the workforce. The model demonstrates that valuing both education systems equally can reduce school dropouts, motivate learners to develop diverse competencies, and ultimately empower individuals to become multi-skilled contributors to national development.

Method

In Sri Lanka, the higher education qualification framework (SLQF) can be metaphorically represented as a **crown**. This crown illustrates the increasing value and specialization of academic qualifications, which primarily develop the cognitive domain, knowledge, analytical thinking, and intellectual skills. Higher education equips individuals to engage in problem-solving, research, and leadership, and the crown metaphor highlights its role as a visible mark of intellectual achievement.

Conversely, the vocational education and training (VET) framework, represented by the National

Vocational Qualification (NVQ) system, is akin to a **cone**. Individuals, such as school leavers, entry-level workers, and vocational students, hold this cone and progressively fill it with practical knowledge, skills, and work experience, particularly within the psychomotor domain. By starting with foundational or intermediate job roles and continuously developing their competencies, these individuals increase their value in the workforce and contribute directly to industrial and economic functions.

In the workplace, employees often carry **either a crown or a cone**, reflecting their primary area of expertise. Some individuals bring deep theoretical knowledge (crowns), while others contribute hands-on skills and experience (cones). When these individuals collaborate effectively, their combined expertise forms a **star**, symbolizing a workforce that is innovative, adaptable,

and highly productive. This star embodies the integration of cognitive, psychomotor, and affective abilities across teams, demonstrating the value of a balanced and complementary workforce.

A schematic illustration of the SLQF and NVQ frameworks is shown in Figure 02, while the creation of the star through merging crowns and cones is depicted in Figure 03.

Figure 02 shows the SLQF as a **crown**, representing the hierarchical progression and intellectual depth of higher education qualifications. The NVQ framework is shown as a inverted **cone**, symbolizing the accumulation of practical skills, work experience, and vocational competencies. Together, the crown and cone represent the dual pathways of cognitive and psychomotor development that individuals can pursue.

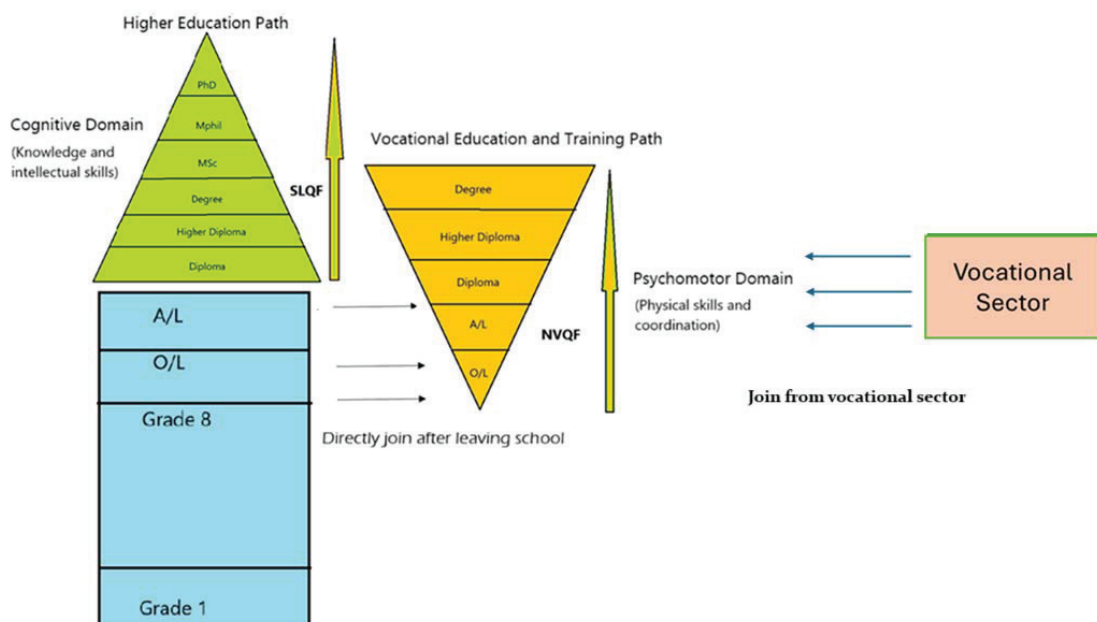


Figure 02: Schematic diagram of qualification frameworks.

Figure 03 demonstrates how individuals holding **crowns** (higher education qualifications) and **cones** (vocational skills) combine in the workplace to form a **star**. The star represents an empowered workforce, integrating theoretical knowledge, practical expertise, and affective skills to achieve innovation, adaptability, and productivity.

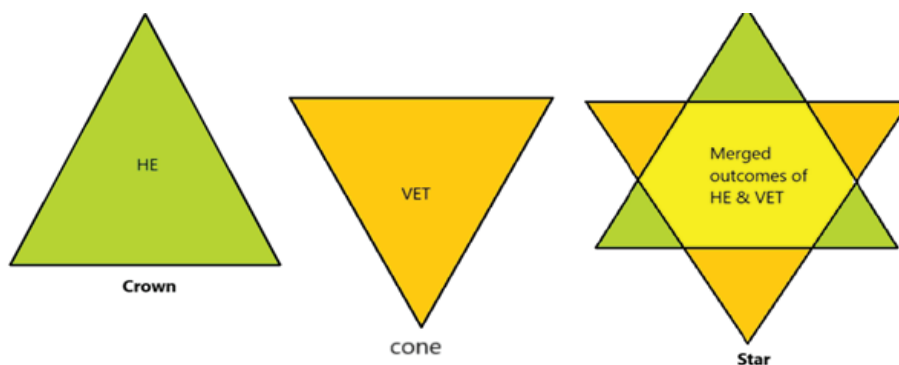


Figure 03: Schematic diagram of crown, cone and star model

Results

Integrating vocational education and training (VET) with higher education (HE) enhances the overall capabilities of both individuals and organizations. When theoretical knowledge from HE (crown) is combined with practical skills from VET (cone), the resulting synergy creates a star in the workplace. This star represents employees and teams who are competent, innovative, and adaptable, capable of addressing complex challenges effectively.

The Crown–Cone–Star Model highlights that workforce effectiveness is maximized when individuals with complementary strengths—thinkers (crowns) and doers (cones)—collaborate. Cognitive skills, such as critical thinking, problem-solving, and analytical reasoning, developed through HE, are reinforced by psychomotor competencies from VET, ensuring practical implementation and high-quality outcomes. This combination produces teams capable of both innovation and sustainable growth.

Discussion/Conclusion

The Crown–Cone–Star Model demonstrates that a robust workforce does not rely on individuals possessing both theoretical and practical skills alone. Instead, it thrives by recognizing and integrating diverse competencies; some employees excel in higher education (crowns), while others bring strong vocational expertise (cones). When these individuals collaborate, they form a star, representing a workforce that is well-rounded, resilient, and highly productive.

Valuing HE and VET equally is crucial for reducing dropout rates and ensuring holistic human capital development. Early recognition of students' strengths in

cognitive, psychomotor, and affective domains, coupled with clear pathways into vocational or higher education, can guide school leavers toward meaningful careers.

By merging knowledge and skills in the workplace, organizations cultivate teams that can innovate, implement, and adapt, rather than merely fill roles. The model emphasizes that strategic workforce development is not about creating individuals with all skills, but about assembling complementary teams where collective expertise produces superior outcomes.

Ultimately, recognizing the equal importance of HE and VET is not just a matter of equity, it is a strategic necessity for building a sustainable, empowered, and future-ready workforce.

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