

## **BENCHMARKING OF VALUES, SKILLS AND KNOWLEDGE (VSK) IN TOP 20 UNIVERSITIES AGAINST THE GENERATED VSK FROM MALAYSIAN BASED TEACHING AND LEARNING GUIDING PRINCIPLES**

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### **Abstract**

This paper provides a review on the attributes expected of a quality teacher in the training of the top 20 universities in the world particularly in teaching and learning. The attributes, namely: values, skills and knowledge (V, S, K) were benchmarked against the VSK generated from provisional Malaysian-Based Teaching and Learning Guiding Principles (MBTLGP) developed by Universiti Pendidikan Sultan Idris (UPSI), Malaysia. The findings indicated that there are commonalities and differences of V, S, K by both MBTLGP and the top 20 universities in preparing a quality teacher in their teacher education programmes. The MBTLGP does cover all the V, S, K indicated in the synthesised VSK of the top 20 universities.

**Keywords**      *benchmarking, values, skills, knowledge, framework.*

### **Abstrak**

Kertas ini melaporkan ulasan tentang atribut guru berkualiti dalam latihan di 20 universiti terkemuka di dunia terutamanya dalam bidang pengajaran dan pembelajaran. Atribut seperti nilai, kemahiran dan pengetahuan (VSK) telah ditanda aras dengan VSK yang telah diperolehi daripada *Malaysian-Based Teaching and Learning Guiding Principles* (MBTLGP) yang telah dibangunkan oleh Universiti Pendidikan Sultan Idris, Malaysia. Dapatan menunjukkan bahawa terdapat beberapa persamaan dan perbezaan dalam VSK daripada kedua-dua MBTLGP dan 20 universiti terkemuka di dunia untuk menyediakan guru yang berkualiti dalam latihan perguruan. MBTLGP yang dibangunkan di UPSI mempunyai semua VSK yang telah dianalisis daripada 20 universiti yang telah dipilih.

**Kata kunci**      *benchmarking, nilai, kemahiran, pengetahuan, framework.*

## INTRODUCTION

The focus on developing quality teachers has received increased attention in education (Barber & Mourshed, 2009; LePage, 2005; Hattie, 2004). There is a need to draw up descriptions of core attributes to provide student teachers new to the field, and those responsible for training them, with clear goals and understanding of the role of a teacher (Chong & Cheah, 2009). The core attributes that underpin teacher training will serve to equip student teachers with values, skills and knowledge (V, S, K) so that they can function effectively in their teaching profession (Thorpe, 2002). Teacher educators need to know the attributes to produce quality teachers for the future (Lanier & Little, 1986). Universiti Pendidikan Sultan Idris (UPSI), Malaysia and Teacher Education Institution (IPG), Malaysia under the Niche Research Grant Scheme (NRGS) are reviewed the existing teacher education programmes giving adequate attention, emphasis and focus on the aspects of curriculum, teaching and learning, assessment, leadership and clinical experience in the teacher education programmes. This is to enhance and where necessary, to transform the teacher education model so that it will be able to produce teachers for the 21st century and beyond. The two institutions are now at the phase of establishing a framework for teaching and learning to ensure that appropriate and effective pedagogies are used in the curriculum, with the objective of equipping teachers with the instructional strategies needed for effective classroom instruction. The review of existing teacher education programme was the initial phase of the 5 years research to develop a teacher education model for Malaysia. The benchmarking process significantly important to answer the following attributes research questions:

*“How does the generated profile of values, skills, and knowledge of student teachers compare to the profile of students teachers of selected renowned teacher education institutions?”*

This phase involves benchmarking the profile of values, skills and knowledge that form the foundation for constructing the teaching and learning framework to develop quality teachers for the future. The teaching and learning framework is developed in collaboration and consultation with four other projects under the overarching programme: curriculum, assessment, teacher leadership and clinical induction or school experience. Therefore, this paper provides a report of the review on the attributes required to prepare quality teachers from the top universities in the world. The attributes namely values, skills and knowledge are deduced from prospectuses or other documents related to the teacher education programmes from websites of top universities. The findings of the review are then compared to the Provisional Malaysian-Based T&L Guiding Principles (MBTLGP) developed by UPSI and IPG to identify the commonalities and differences. The comparison is very significant in order to improve the provisional MBTLGP published.

## LITERATURE REVIEW

### Definition of Values, Skills, Knowledge

#### 1. Values

Defining ‘Values’ is itself a matter for discussion and debate. It is defined as the principles of standards of behaviour, one’s judgement of what is important in life (Oxford Dictionary, 2014). Halstead & Taylor, (2000) defined values in a broader spectrum; ‘the principles and fundamental convictions, which act as general guides to behaviour, the standards by which particular actions are judged as good or desirable’. The ‘standards behaviour that can be judged’ need to be imparted in teacher education because values should be a high agenda to those who concerned on teacher education (Fraser & Saunders, 2000). Tirri (2010) informed that values are professional ethics and relationship identifies caring and respect, professionalism and commitment, and cooperation. Thus the word ‘values’ in teacher education still need a further investigation on the needs as well as its spectrum so it will be clearer. Tirri, (2010) suggested that values needed to be imparted to a student teacher are: belief that all pupils can learn, the need to reflect on one’s practice, cultivating a spirit of innovation and enterprise, commitment to the teaching profession, the need to work with parents, appreciating individual differences, upgrading one’s knowledge and skills continuously and valuing service to others and the community.

#### 2. Skills

To facilitate student learning and classroom management, Irvine, (1997) referred “skills” in the educational context as an achievements and/or behaviours to be acquired through practice or training. Grossman, (1990) refers skill as a “set of procedures” (p. 37) that teachers need to apply to provide varied pedagogical experience. Teachers need coping and adaptability skills such as time management, goal setting, planning and setting priorities for the well-functioning of the classroom to facilitate different kinds of learning (Darling-Hammond & Bransford, 2005). Darling-Hammond and Bransford, (2005) recommended that student teachers should have skills such as: delivering effective lessons, motivating students, facilitating thinking, managing classroom discipline, assessing pupils’ learning, ability to work with parents and other stakeholders, applying theories to improve teaching, articulating beliefs about teaching and learning, ability to manage work and time.

#### 3. Knowledge

Knowledge is defined as the (technical) knowledge and skill required to do something (Oxford Dictionary, 2014). Teachers need a knowledge base of standards, theories and ideals to inform their teaching practice. Darling-Hammond & Baratz-Snowden (2005) emphasise that “teachers must know the subject they teach and understand how to organize curriculum in light of both students’ needs and the schools’ learning objective.” (p. 14). They conceptualized the knowledge base of teachers around a framework, highlighting three interconnected areas between teachers, learners and content: 1) knowledge of learners and their development in social contexts, 2) knowledge of subject matter and curriculum goals, and 3) knowledge of teaching.

Quality teachers should have a high degree of knowledge, especially in subjects or fields that they teach (Borhan & Ismail, 2011). They must have knowledge of various teaching strategies and how to use related technologies to teach. In addition, Borhan and Ismail, (2011) opined that teachers need to adapt lessons according to pupils' needs; guide pupils in all kinds of project work and develop assessment tools to implement assessment effectively.

### **Values, Skills and Knowledge**

Teachers play a major role in knowledge, skills and experiences construction. They must continually engage in a critical examination of their beliefs and values about teaching to form visions about what are possible and desirable conceptions of teaching (Feiman-Nemser, 2001). It can be suggested that three attributes of V, S, K must be integrated into teacher education programmes so that they form the attributes and the soul of quality teachers. In the context of teacher education, the V, S, K in the definition is translated as an attributes needed to ensure that teacher educators know where to navigate their student teacher. Integration of the three attributes is seen to be a baseline in order for them to plan or to develop their training framework or model in their institutions.

To ensure teacher quality is at par with the international level as aspired in the Malaysia Education Blueprint 2013-2025, student teachers need to have the integration of the attributes namely values, skills and knowledge (V, S, K) to meet the demands of teaching and learning. According to Darling-Hammond, Wise, and Klein (1995), effective teacher education requires teachers to integrate multiple kinds of knowledge and skills as they are used in practice to forge connections between theory and practice. The V,S,K framework not only constructs the parameters of teachers' working knowledge and skills, it also outlines the challenge of developing a set of values in the student teachers in acquiring their proficiency and competence in teaching.

## **METHODOLOGY**

### **Selection of the Top 20 Universities**

For the purpose of this review, the 20 top universities in the world were selected. The selection of the universities were based solely on the ranking made by QS Intelligence Unit for the year 2014 for Education. The QS Intelligence Unit uses the pre-existing methodology and new cooperation between THE and Thomson Reuters to release the Times Higher Education World University Rankings (wikipedia). Three components; academic reputation, employer reputation, citation per paper are combined to produce the results of the QS World University Rankings by Subject. (<http://www.topuniversities.com/university-rankings-articles/university-subject-rankings/qs-world-university-rankings-subject-2014-methodology>).

### **Top 20 QS World University Rankings 2013/14 (Education Institutions).**

1. Institute of Education, University of London  
(<http://www.ioe.ac.uk/study/26.html>)
2. The University of Melbourne  
(<http://coursesearch.unimelb.edu.au/>)
3. Harvard University  
(<http://www.gse.harvard.edu/ppe/program/institute-educational-management-iem>)
4. University of Cambridge  
(<http://www.study.cam.ac.uk/undergraduate/?ucam-ref=global-header>)
5. Stanford University  
(<http://ed.stanford.edu/academics>)
6. Monash University  
(<http://www.monash.edu/education>)
7. University of Oxford  
(<http://www.ox.ac.uk/admissions/undergraduate/colleges>)
8. The University of Sydney  
([http://sydney.edu.au/education\\_social\\_work/about/index.shtml](http://sydney.edu.au/education_social_work/about/index.shtml))
9. University of Toronto  
([http://www.oise.utoronto.ca/guestid/oise/Prospective\\_Students/index.html](http://www.oise.utoronto.ca/guestid/oise/Prospective_Students/index.html))
10. The University of Queensland  
(<http://www.uq.edu.au/education/school>)
11. Columbia University  
([http://www.columbia.edu/home/academic\\_programs/](http://www.columbia.edu/home/academic_programs/))
12. University of California, Berkeley (UCB)  
(<http://www.universityofcalifornia.edu/>)
13. University of California, Los Angeles (UCLA)  
(<http://www.universityofcalifornia.edu/>)
14. Nanyang Technological University (NTU)  
([http://www3.ntu.edu.sg/oad2/NTU\\_UG\\_Localprospectus/index.html](http://www3.ntu.edu.sg/oad2/NTU_UG_Localprospectus/index.html))
15. University of Wisconsin-Madison  
(<http://www.wisc.edu/academics/www.als.hku.hk/admission/>)
16. University of Hong Kong  
(<http://web.edu.hku.hk/>)
17. University of Illinois at Urbana-Champaign  
(<http://www.grad.illinois.edu/professional-development>)
18. University of Edinburgh  
(<http://www.ed.ac.uk/schools-departments/education>)
19. King's College London (KCL)  
(<http://www.kcl.ac.uk/index.aspx>)
20. University of Michigan  
([http://www.soe.umich.edu/academics/teacher\\_certification\\_options/](http://www.soe.umich.edu/academics/teacher_certification_options/))

## **Content Analysis**

Content analysis is a method in the social sciences for studying the content of those types of empirical documentation which can be briefly referred to - with Hodder (2000) - as mute evidence, "that is written texts and artefacts". In this study, the official websites of 20 top teacher education universities were gleaned. Several steps are taken such as collecting, reading, reviewing, and interpreting from prospectuses, course outlines and details on their teacher training or teacher education programmes offered. In relation to the VSK, the specific and emphasized VSK extracted from prospective varied from 20 top education universities. The VSK generated from MBTLGP using keywords-in-contex method, Leech& Onwuegbuzie (2007) qualitative analysis tools: method of constant comparison, keywords-in-context, word count, classical content analysis, domain analysis, taxonomic analysis, and componential analysis.

## **Comparative Analysis**

The item-by-item comparison of two or more comparable alternatives, processes, products, qualifications, sets of data, systems, or the like. In benchmarking, the values, skills and knowledge (V,S,K) were synthesised from the top 20 universities as ranked by the QS Intelligence Unit for the year 2014 for Education that offer teacher education programme. In Benchmarking, we attempted to be "better than the best".

## **Limitation of the benchmarking**

The universities' prospectuses, course outlines and details on their teacher training or teacher education programmes offered were reviewed and analysed to gather information on the V,S,K attributes in their programmes. This is the limitation of this benchmarking. It was not written explicitly in any of the prospectus reviewed about the three attributes in their training outline, prospectus and programme details on each of the university's website. It is learned that each of the university or institution infused and emphasised few attributes that can be interpreted as a value, skills and knowledge in their training or teacher education programme. Although the university websites did not have any of the three V,S,K written explicitly in their training outline, prospectuses or programmes, each university or institution had emphasis or infusion of attributes that could be interpreted as value, skills and knowledge.

## **FINDINGS**

In benchmarking, the values, skills and knowledge (VSK) were synthesised from the top 20 universities as ranked by the QS Intelligence Unit for the year 2014 for Education that offer teacher education programme. These syntesised VSK were summarised in Table 1.

Table 1 *A Syntesised VSK from the Top 20 universities*

Values	Skills	Knowledge
Student teacher relationship	Seeks to advance knowledge in their respective fields	To master content knowledge
Improve the well-being of children and youth within and beyond school.	Think critically, creatively with strong reasoning skills.	Master the knowledge of skills and values.
Recognise diverse population, multiculturalism and differences.	Apply knowledge, information and research skills to complex problems in a range of contexts and produce effective oral and written communicators.	
Develop appreciation of the region, ethics, human rights and environment	To provide leadership for educational development worldwide.	

### The VSK Generated from the MBTLGP

A teacher’s attributes in terms of values, skills, and knowledge were generated from MBTLGP. Two experts validated the conceptualised attributes with a percentage inter-rater agreement yielded at 83.3% [Kappa value = .75,  $p = .007 < .05$ ]. The feedback/comment as to the alignment of values and skills with the knowledge in the 6th Guiding Principle was taken into consideration in further refinement. The refined attributes for each of the corresponding Guiding Principles are indicated in Table 2.

Table 2 *VSK generated from MBTLGP*

Guiding Principles	Values	Skills	Knowledge
1. Teaching and learning that nurture good values, attitudes and behaviours	The teacher cherishes positive values, attitudes and behaviours.	1. The teacher is able to nurture good values, attitudes and behaviours.  2. The teacher demonstrates good values, attitudes and behaviours.	The teacher is knowledgeable about positive values, attitudes and behaviours aspired by the country.

<b>Guiding Principles</b>	<b>Values</b>	<b>Skills</b>	<b>Knowledge</b>
2. Teaching and learning should foster an atmosphere of intellectual excitement (IE) in students.	<p>1. The teacher believes that intellectual excitement is an important goal in teaching and learning.</p> <p>2. The teacher realizes that intellectual excitement is an important element to intrinsically motivate students to be lifelong learners.</p> <p>3. The teacher genuinely shows enthusiasm for the content and the teaching of the content.</p>	<p>1. The teacher is able to use methods, strategies and techniques that promote IE effectively.</p> <p>2. The teacher is able to identify learners' need socially and psychologically.</p>	<p>1. The teacher has knowledge of a variety of methods, strategies and techniques that promote IE.</p> <p>2. The teacher understands learners' need socially and psychologically.</p>
3. Teaching and learning that nurture a climate of inquiry and critical reflection	The teacher highly values the importance of inquiry and critical reflection for intellectual and personal development.	The teacher is able to create opportunities for inquiry and critical reflection to take place.	The teacher is knowledgeable about the process of inquiry as well as critical reflection.



<b>Guiding Principles</b>	<b>Values</b>	<b>Skills</b>	<b>Knowledge</b>
4. Teaching and learning should provide quality learning spaces, resources and technologies	The teacher appreciates the value of learning spaces, resources and technologies contributing to quality instruction without compromising the role of the teacher.	The teacher is able to use learning spaces, resources and technologies effectively.	The teacher knows how to enhance learning through the use of a wide variety of materials as well as human and technological resources.
5. Teaching and learning should ensure a constructive alignment between an evolving knowledge base, student learning outcomes, learning experiences, actual practice, and assessment	The teacher realizes the importance of aligning an evolving knowledge base, student learning outcomes, learning experiences, actual practice, and assessment.	The teacher is able to align constructively an evolving knowledge base, student learning outcomes, learning experiences, actual practice, and assessment.	<p>1. The teacher has knowledge of an evolving knowledge base, student learning outcomes, learning experiences, actual practice, and assessment.</p> <p>2. The teacher has a sound knowledge of aligning an evolving knowledge base, student learning outcomes, learning experiences, actual practice, and assessment.</p>
6. Teaching and learning that offer an international and culturally diverse learning environment	<p>1. The teacher appreciates the need for an international and culturally diverse learning environment.</p> <p>2. The teacher is sensitive to the diverse needs of students from different cultures.</p>	The teacher is able to create an environment where students from different cultures, religions, political ideologies, socio-economic background and gender are able to work together.	<p>1. Teacher has a basic knowledge of the different cultures, religions, socio-economic background and gender of the nation and the world.</p> <p>2. Teacher has a basic understanding of major political ideologies that shapes a society.</p>

The first phase of the (NRGS) project generated the provisional MBTLGP and its corresponding teachers' attributes in terms of values, skills and knowledge (VSK). These MBTLGP and VSK contribute, in part, to the development of Provisional Teacher Education Model (PTEM). It is learned that most of the universities ranked by the QS World University Ranking as well as the MBTLGP have a similarities in preparing a quality teacher. The reviewer interpreted the values, skills and knowledge attributes in the prospectuses based on the definition. Further investigations on what is lacking in both sides can be carried out in the future to improve teacher education in Malaysia. The details on what the top universities offers to their prospective teachers is hoped to inspire any univerisity in Malaysia to prepare a quality teacher and place Malaysian universities at par with the top universities in the world.

The comparison between the conceptualised VSK from MBTLGP and the synthesised VSK from the top 20 QS-ranked universities are given below:

- i. In terms of Values, the MBTLGP does cover all the values indicated in the synthesised VSK except for the student-teacher relationship.
- ii. In terms of Skills, the MBTLGP does cover all the skills indicated in the synthesised VSK except for problem solving skills.
- iii. In terms of Knowledge, the MBTLGP seems to fall short of mastering knowledge "per se". However, the researchers in this project favour the retention of constructive alignment of evolving knowledge base, student learning outcomes, learning experiences, actual practice, and assessment in our quest to produce independent learners.

In Benchmarking, we attempted to be "better than the best". As of now, comparison with the synthesised VSK from the top 20 QS-ranked universities shows that there are certain important missing characteristics which would be integrated in further refinement of MBTLGP. The MBTLGP and the Benchmarked VSK synthesised from this teaching & learning project were consolidated with the other projects (i.e., curriculum, assessment, teacher leadership, and clinical experience & induction) contributed to the development of the Provisional Teacher Education Model (PTEM) as depicted in Figure 1. As indicated in Figure 1, it is graphically shown that the MBTLGP contributed to the core Guiding Principles in the PTEM while the Benchmarked VSK provided the pillars of support to the PTEM.

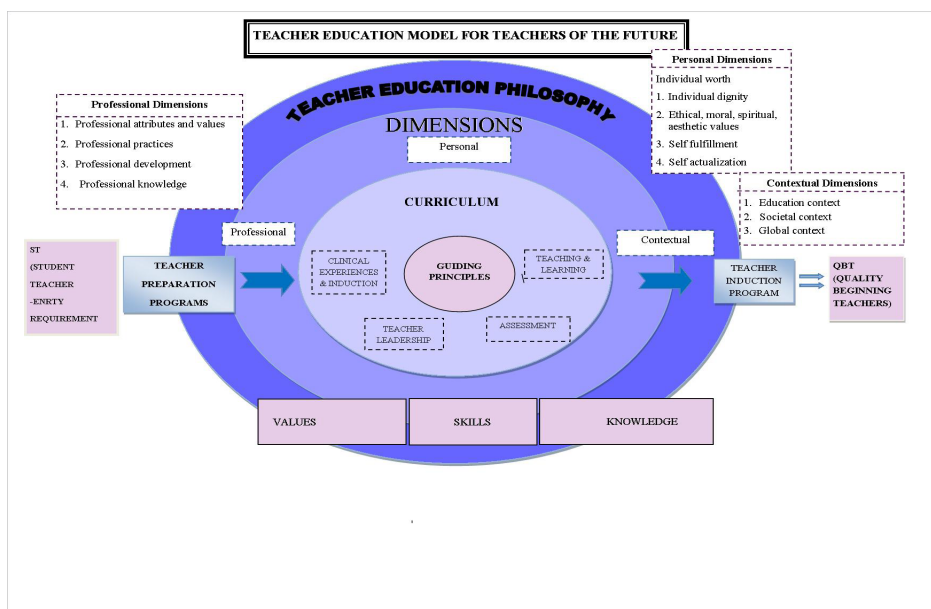


Figure 1 Graphical representation of the development of the Provisional Teacher Education Model (PTEM)

(Source: unpublished Monograph; Development of a Teacher Education Model for preparing Quality Teachers for the Future, Niche Research Grant Scheme, Universiti Pendidikan Sultan Idris, 2014)

## CONCLUSION

Teaching and learning (as one of the elements in PTEM) for preparing quality teachers focuses on providing learning environment that fosters an atmosphere of intellectual excitement where students are actively engaged in the process and content of learning to the point that they are intellectually stimulated and challenged, intrinsically motivated and find learning to be personally meaningful in addition to being international and culturally diverse. In addition, it emphasises the inculcation of good values, the importance of ensuring that all the elements that make up teaching and learning are constructively aligned for optimal achievement of student learning outcomes and the support from technology and resources to facilitate learning. All of these are characteristics of MBTGLP and VSK that contributed to the formation of the PTEM. In order to further refine MBTGLP and its corresponding VSK, the next phase of the research involves process-based validation through classroom observations, interviews, and surveys. Findings on the relevance of MBTGLP will contribute in the development of a teaching and learning framework that will help validate the PTEM on an ongoing basis providing continuous improvement based on empirical evidence grounded in the context of actual practice. This PTEM is hoped can be a guide line for the teacher educators in preparing student teacher to teach. The values, skills and knowledge for the teaching and learning component in the model can stand on its

own to be a guidance for teacher educators to navigate their teaching and learning in preparing student teacher to be a future teacher.

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[http://www.soe.umich.edu/academics/teacher\\_certification\\_options/](http://www.soe.umich.edu/academics/teacher_certification_options/)  
<http://www.study.cam.ac.uk/undergraduate/?ucam-ref=global-header>  
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