The SEAMEO VOCTECH Journal, the official journal of SEAMEO VOCTECH Regional Centre for Vocational and Technical Education and Training, is published twice a year in June and December. This is an international journal whereby the editorial board members, reviewers, and authors are from various countries not only from Southeast Asian region but also beyond. The articles published have been selected based on their quality and relevance and have gone through the blind review process by peers.

It is a medium of sharing and disseminating information and experiences in vocational and technical education and training (VTET) to all. We believe that much can be gained when there is a focal point where information is sought and utilised to enhance vocational and technical education and training, particularly in Southeast Asia.

The editorial objectives of the SEAMEO VOCTECH Journal are as follows:
- To provide all readers involved in VTET with current practices, ideas, news and research on major issues in the area.
- To inform readers on major developments in VTET to enable sharing of experiences.

The following areas are covered in the journal:
- Innovations in vocational and technical teaching and curriculum development
- Human resources development in VTET
- Technological advancements and practices in VTET
- Researches in VTET.

Readers and contributors wishing to submit manuscript for publication should refer to the guidelines and details on the inside back cover.

SEAMEO VOCTECH would like to emphasise that all opinions expressed in the published articles are those of the authors of the respective articles and do not necessarily reflect the views of SEAMEO VOCTECH or any member government of the Southeast Asian Ministers of Education Organisation (SEAMEO).
The SEAMEO VOCTECH Journal, on its December 2009 Issue comprises articles that uphold the stipulated objectives of the publication: a) to provide information on topics aligned to vocational and technical education, especially in the Southeast Asian region, etc.; b) to stimulate interest among readers from the VTET systems, enabling them to a further analysis or exploration, and; c) to encourage contributors to share related works or other noteworthy articles of information to the education-research milieu.

In fulfilling the first objective, most of the articles have interestingly focused on various subject matters geared to VTET in Southeast Asia and beyond, and which are currently prevalent. Such are the studies in Malaysia that looked into the possible integration in ICT teaching and learning of the Principles of Accounting subject and another one that explored and described the perceived competencies among technical and engineering teachers. Employability skills development to enhance technical TVE skills of students and education and environmental factors construed as hindrances in developing e-learning were delved into by two studies in Indonesia. Two local researches, or for Brunei Darussalam tackled: a) the use of database management system highlighting the influences of fundamental factors: database training and perceived benefits; b) an investigation why VTE graduates of the construction related programs do not enter the construction industry. Furthermore, one study analysed the application skills standards, testing and certification in our region and finally a Kenyan study compared TVE perceptions of learners based on gender and type of school.

Eventually, noteworthy results of the studies included here will undoubtedly spur enthusiasm or otherwise, from among readers to pursue or quest for related concerns as possible targets of investigations. In future, any studies conducted that may deem relevant and germane to VTE will be welcomed by SEAMEO VOCTECH for best practice-sharing purposes.

The year 2009 brought about many challenges for the Centre, in consistently abiding by the ISO 9001:2008 Standard in the conduct of training programmes and initially implementing the 4th Five-Year Development Plan. Commemorating the platinum anniversary or 20th Year of Service of VOCTECH as a SEAMEO Centre on 28 August 2010 will be an exciting future event. Times ahead will comprise programmes and activities signifying the need for more dynamism and creativity.

Alhamdullilah, the Centre has published this issue and it is but proper to acknowledge the pertinent contributions of the authors about their experiences in the region and beyond, the concerted efforts of the editorial board and the commitment of the staff. The Centre thus reiterates that it is only in earnestly working together as a team can tasks and responsibilities be achieved in excellence; this reality has been proven over time now.

Thank you and wasalam.

“Together We Excel”

AWANG ALIAS BIN HAJI ABU BAKAR
EDITORIAL

In this December 2009 edition, SEAMEO VOCTECH Journal takes on issues around the stakeholders’ perceptions of TVET programmes and initiatives to address skills standards, and the use of ICT in education. From Brunei example, the first article shares the research findings about the reasons why the vocational and technical education (VTE) graduates from the construction related programmes were not entering the construction industry even though the number of job openings became the highest compared to other private sectors.

The second article examines learners’ perceptions of Technical and Vocational Education (TVE) and determines any differences on the basis of gender and type of school, among other factors based on a case study in Kenya. The study found that students showed some interest in TVE, but in general the students still perceived TVE has a low status, has weak link with industry, and has limited scope and coverage of programmes. The study showed a significant relationship between the problems faced in the process of teaching TVE and the learners’ perception of the subjects.

The third article addresses specific issue in the curriculum contents and learning processes, specifically on the employability skills. By examining the perceptions of principals, teachers and curriculum developers in six cities in Indonesia the study revealed that the employability skills consisting of academic, personal management and teamwork skills have been incorporated into the teaching and learning of technical and vocational education context with different levels of implementation.

The fourth article examines teacher perception of their competencies, importance, and educational needs in information and communication technology (ICT) in Malaysia. The findings show that computer operating skills were considered sufficient and required the least training. On the other hand, media communication and telecommunication were perceived as the two top areas that teachers require training. The educational needs increased when the ICT skills were more complicated.

The fifth article was based on the study focusing on the use of database management systems (DBMS). The study examines the perceived benefits of database training and the use of DBMS.

The sixth article illustrates initiatives to enhance TVET programmes by addressing the issue of skills standards. Particularly, it explores current practices of skills standards, assessment, and certification based on the case studies in Southeast
Asian countries. The paper discusses various actors who developed the standards and the contents covered in them. The paper also describes the actors who assessed and how the assessment was conducted.

The seventh article documents the efforts made by the Ministry of Education, Malaysia (MoE) in preparing teachers for integrating ICT in teaching a Principles of Accounting subject operationalised through the ASSETBase simulation courseware. The researchers also developed a conceptual model for ICT-based accounting education at the school level, which have been and will be used continuously for intervention programmes.

The last paper evaluates the implementation of E-learning in Indonesia by looking at what factors hinder the implementation of E-learning in Indonesia and what factors should be considered in E-learning development, such as resources, education, and environment. Empirical and literature studies showed that educational and environmental factors represent the main hindrance in developing e-learning in Indonesia.

Through rich information and wide scopes covered in this edition, we believe that the readers can find useful lessons learned in improving our TVET policy and practices. Enjoy reading them!

Editor
<table>
<thead>
<tr>
<th>Authors/Co-Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chin Wei Keh</td>
<td>Employers’ Perspectives on the Construction Related Programmes Offered by the Vocational and Technical Education in Brunei Darussalam</td>
<td>1</td>
</tr>
<tr>
<td>John Simiyu</td>
<td>Learners’ Perceptions of Technical and Vocational Education in Kenya: A Case Study of Nakuru District, Rift Valley Province</td>
<td>13</td>
</tr>
<tr>
<td>Hendarman</td>
<td>Perceptions of Principals, Teachers and Curriculum Developers towards Employability Skills Development in Technical and Vocational School: A Case Study of Indonesia</td>
<td>25</td>
</tr>
<tr>
<td>Muhammad Sukri Saud, Sarimah Ismail &amp; Nor Fadila Mohd Amin</td>
<td>Information and Communication Technology Competencies Perceived By Technical and Engineering Education Teachers</td>
<td>34</td>
</tr>
<tr>
<td>Mohd Noah A. Rahman, Awang Yussof Awg Mohamad, Afzaal H. Seyal, &amp; Irwan M. Mashud</td>
<td>The Significance of Database Training and Perceived Benefits on the Use of Database Management Systems</td>
<td>42</td>
</tr>
<tr>
<td>Paryono</td>
<td>Application of Skills Standards, Testing and Certification in SEAMEO Member Countries</td>
<td>54</td>
</tr>
<tr>
<td>Rashidah Hassan &amp; Arfah Salleh</td>
<td>Issues and Challenges in Preparing Teachers for ICT Integration in Classroom Teaching and Learning: The Case of Principles of Accounting Sijil Pelajaran Malaysia (SPM)</td>
<td>69</td>
</tr>
<tr>
<td>Priyanto</td>
<td>Redesigning E-Learning Development in Indonesia</td>
<td>85</td>
</tr>
</tbody>
</table>
EMPLOYERS’ PERSPECTIVES ON THE CONSTRUCTION RELATED PROGRAMS OFFERED BY THE VOCATIONAL AND TECHNICAL EDUCATION IN BRUNEI DARUSSALAM

Chin Wei Keh
Universiti Brunei Darussalam

Abstract
Currently the construction industry is the largest employer of the private sector in Brunei employing about 37,000 workers and among them about 87% are foreigners. With the high dependence on foreign workers within the industry, this study is done to investigate why the vocational and technical education (VTE) graduates from the construction related programmes are not entering the construction industry. Semi-structured interviews were conducted on the top class representatives of the construction industry in the hope of extracting insight into the problems from the industry leaders. The result shows a complex picture and the study was able to identify different factors involved. The researcher however stressed the importance of classifying these factors as there is no one solution to the issue. From the educational point of view, it is essential to improve the understanding between industries, VTE colleges and its students and to make up for the pitfall in the programmes as pointed out by the employers to ensure that the programmes are “well accepted by the industry.”

Keywords: construction industry, construction related programmes, vocational and technical education of Brunei
LEARNERS’ PERCEPTIONS OF TECHNICAL AND VOCATIONAL EDUCATION IN KENYA: A CASE STUDY OF NAKURU DISTRICT, RIFT VALLEY PROVINCE

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Abstract
The main purpose of the study was to examine the Kenyan secondary school learners’ perceptions of Technical and Vocational Education (TVE) and determine any differences on the basis of gender and type of school, among other factors. Cluster probability sampling technique was employed to select participating schools. The participants were randomly selected from each of the schools. Data were collected through questionnaires and interviews and analysis was done both quantitatively and qualitatively. The results of the study revealed that although learners in secondary schools show some interest in TVE it requires re-evaluation by the government to make it more gender balanced, practically oriented and according to the current trends in technological changes that link it to the world of work. The study recommends that TVE should be structured to impart employable skills and attitudes in the learners. Teachers and parents should provide students with generic career development competencies in making informed choices within TVE. The results of the study provide insights on how to generate policies and guidelines for educational and vocational guidance that should allow TVE to be considered as a first choice for secondary school students.

Keywords: learners’ perceptions, technical and vocational education, socio-economic background, type of school
PERCEPTIONS OF PRINCIPALS, TEACHERS AND CURRICULUM DEVELOPERS TOWARDS EMPLOYABILITY SKILLS DEVELOPMENT IN TECHNICAL AND VOCATIONAL SCHOOLS: A CASE STUDY OF INDONESIA

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Abstract
High-performance workplace requires a behaviour and orientation towards work that go beyond step-by-step task performance. Job-specific technical skills in a given field are no longer sufficient as employers scramble to fill an increasing number of interdependent jobs and continuously develop skills beyond those required for specific job, the so-called “employability skills”. Therefore, these skills must be incorporated into the curriculum of technical and vocational education. The study, based on the perceptions of principals, teachers and curriculum developers in 6 cities in Indonesia, revealed that the employability skills consisting of academic skills, personal management skills and teamwork skills tend to have been incorporated into the teaching and learning of technical and vocational education context. The prevalence of those employability skills among students appeared to be varied ranging from average to closely high. The teaching and learning through groups of subjects and through curricular and extra-curricular activities were agreed to be the appropriate methods to teach the employability skills.

Keywords: employability skills, vocational and technical education, stakeholders’ perception
THE SIGNIFICANCE OF DATABASE TRAINING AND PERCEIVED BENEFITS ON THE USE OF DATABASE MANAGEMENT SYSTEMS

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Abstract

The technology acceptance model (TAM) has been widely used in information systems research. This study focuses on the use of database management systems (DBMS) as the central theme of a generic theoretical framework. Experiences of DBMS uses among organisations dominated the IS literature. A one stage normative model was developed to test two factors: database training and perceived benefits, on the use of DBMS. Statistical analysis reveals both latent variables remain to be fundamental determinants on the use of DBMS. The implications of these findings are discussed.

Keywords: Database, DBMS, Perceived Benefits
APPLICATION OF SKILLS STANDARDS, TESTING AND CERTIFICATION IN SEAMEO MEMBER COUNTRIES

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Abstract
Skills standards have been adopted widely in Southeast Asia with different levels of implementation and arrangements. The national skills standards have been used as a guideline for developing the curriculum or training plan, developing the training materials, and preparing the students or trainees to take the skills assessments or certification. This paper explores current practices based on the case studies in Southeast Asian countries focusing on the three main components of skills standards: the scope and contents of the standards, assessment, and certification. The paper discusses various actors who developed the standards and the contents covered in them. In terms of assessment, the paper describes the actors who assessed and how the assessment is conducted based on the experience in the Southeast Asia. Since SEAMEO VOCTECH is associated with the Ministry of Education, the skills standards are focused more on the formal education and training initiated by the Ministry.

Keywords: Skills standards, testing and certification, vocational and technical education.
ISSUES AND CHALLENGES IN PREPARING TEACHERS FOR ICT INTEGRATION IN CLASSROOM TEACHING AND LEARNING: THE CASE OF PRINCIPLES OF ACCOUNTING SIJIL PELAJARAN MALAYSIA (SPM)

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Abstract
This paper documented the efforts made by the Ministry of Education, Malaysia (MoE) in preparing teachers who taught a Principles of Accounting subject to be ready to integrate ICT, operationalised through the ASSETBase simulation courseware, in their classroom teaching and learning. Pre- and immediate post-training results conducted from August 2005 to October 2006 showed that teachers were ready to embark upon the integration of the courseware into their classroom teaching and learning. Follow-up research in June 2007 indicated that the teachers were equally enthusiastic about integrating ICT into the accounting subject but for various reasons they could not implement the integration as expected. The findings suggest that teachers’ positive attitude towards ICT integration in accounting education is not enough reason to ensure successful implementation. Other measures are needed. In view of such a discovery, several intervention programmes were and would be carried out as further discussed critically in this paper.

Keywords: Teacher preparation, ICT integration, ASSET Base simulation courseware.
REDESIGNING E-LEARNING DEVELOPMENT IN INDONESIA

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Abstract

E-learning is one of many delivery methods in teaching-learning. E-learning can be used as synchronous learning or asynchronous learning. In Indonesia e-learning development has been around for ten years; but there have been no indications of satisfactory results. This is shown from the rank of e-learning readiness of Indonesia that is at the position of being 52nd of 60 countries in 2003 and 60th of 60 countries in 2005. The questions to be raised are: what factors hindered the implementation of e-learning in Indonesia and what factors should be considered in e-learning development? For a reference to this study, the following factors were considered: resources, education, and environment. Resources include technology availability (hardware and software) (technological readiness), teachers and students’ capability (human resources) and funding availability (economic readiness). The educational aspect includes learning content availability (content readiness) and availability of regulation on e-learning and digital pedagogy standardisation (educational readiness). The environment aspect includes recognition and appreciation of superior (leadership readiness) and cultural readiness as represented by the fact that e-learning should be part of everyday working activities and organisation should provide an environment that encourages people to use the technology. Empirical and literature studies show that educational and environmental factors represent the main hindrance in developing e-learning in Indonesia. Therefore, e-learning development in Indonesia should be redesigned, not only by considering resources factors, but also by integrating both factors, educational and environmental, in a convergent way.

Keywords: Delivery methods, synchronous and asynchronous e-learning, education, Indonesia.
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Word Length
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5. Discussion of theory and research should be short, any technical terms used must be explained to enable readers without much familiarity in the topic chosen to comprehend what has been explained.

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