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Transferable skills in Technical and Vocational Education and Training (TVET) in Indonesia

Abstract

Transferable skills are an essential part of the desirable outcomes of vocational education and have therefore become the focus of the Indonesian vocational education system. The concept is expressed through different terms, such as life skill education, but is still poorly developed in Indonesia. The available educational regulations provide neither a clear definition nor specific instructional guidelines, which would enable educators to translate the concept into practice. In fact, different approaches have been taken to integrating the transferable skills concept into vocational education in Indonesia, such as structuring and restructuring of several competencies within the frequently-reformed vocational curriculum. However, there is still a lack of a clear definition that would guide policy formulation and ultimately implementation, which is due to the absence of scholarly discourse and theories on transferable skills. There is no scientific research community working on defining transferable skills. Instead educational policy makers rely heavily on international consultants who often lack necessary understanding of the country context. To improve this situation, human resources capable of developing the education system need to be fostered in Indonesia.

1 Background: TVET in Indonesia

The Indonesian technical and vocational education and training (TVET) system is divided into two largely separate parts, e.g. (1) vocational education which is part of the national education system (Sistem Pendidikan Nasional), and (2) vocational training being part of the national training system for work (Sistem Latihan Kerja Nasional – Sislatkernas).

1.1 Vocational education

Vocational education is provided at the upper secondary level in vocational schools (Sekolah Menengah Kejuruan – SMK –vocational middle schools). The vocational track of higher education is called professional education and is part of the higher education system (Sistem Pendidi-kan Tinggi) provided in higher education institutions such as polytechnics (Politeknik), tertiary-level high schools (Sekolah Tinggi) and even at universities in diploma study programs. Graduates can earn diploma I, II, III and IV (the figures denote the length of study in years).

- Diploma I can currently be earned in extended vocational programs in certain vocational schools, so-called SMK Plus.
- Diploma I and II can be earned in community colleges which are currently being developed.
- Diploma III and IV can be earned in polytechnics, vocational high schools, academies and in universities. Diploma IV is considered as equivalent to an academic bachelor degree (Sarjana 1 or S1).

All these vocational education programs are governed by the National Law on Education (UU 20/2003) and are under the supervision of the National Ministry of Education and Culture (Kementerian Pendidikan dan Kebudayaan – Kemdikbud) which until 2011 was called the Ministry of Education (Kementerian Pendidikan Nasional - DIKNAS).

The National Education Standards Agency (Badan Standar Nasional Pendidikan – BSNP) is an independent, professional institution whose mission is to develop, monitor and evaluate the implementation of national education standards. It is supported by and works in coordination with the Kemdikbud and the Ministry of Religious Affairs, which supervises faith-based education institutions, as well as agencies dealing with education at provincial and municipal levels¹. BSNP develops national education standards and curriculum guidelines which are enacted through regulations of Kemdikbud, while the regional and local education administrations are responsible for their implementation.

Accreditation and quality control is provided by the national accreditation agencies for secondary schools (Badan Akreditasi Nasional Sekolah / Madrasah – BAN-SM) and for higher education (Badan Akreditasi Nasional Pendidikan Tinggi – BAN-PT) which are formally independent institutions but in fact heavily influenced by Kemdikbud due to criteria defined in regulations on education standards.

All education programs up to upper secondary level conclude with a national level examination (Ujian Nasional) run by the Education Assessment Center (Pusat Penilaian Pendidikan) which operates under the Kemdikbud.

With regard to regulations, vocational education, be it schooling or teacher education, is always handled in the framework of upper secondary education. Until 2013, there were hardly any specific provisions for vocational education or vocational teacher education except the national framework curricula for TVET which are developed by the directorate for the development of vocational schools (Direktorat Pembinaan Sekolah Menengah Kejuruan – Ditpsmk) in Kemdikbud's directorate general of secondary education. Education standards for vocational schools have only been enacted in June 2013 via the ministerial regulation Permendikbud 70/2013. An expert group, which was established by the directorate of teaching staff development within the National Ministry of Education and Culture is working on a concept for the so-called Professio-

¹ See BSNP website: <u>http://bsnp-indonesia.org/id/?page_id=32</u>, (Accessed 29.9.2013)

nal Teacher Education Program (Pendidikan Profesi Guru – PPG) aimed at vocational teachers. PPG is currently being implemented as a second stage of teacher education as a prerequisite for earning a teacher's certificate.

1.2 Vocational training

Vocational training is governed by the Labor Law (UU 13/2003) and the government regulation on the national training for work system (PP 31/2006), and is managed by the National Ministry of Manpower and Transmigration (Kementerian Tenaga Kerja dan Transmigrasi – Kemenakertrans). It finances and supervises via the regional manpower administrations training centers (Balai Latihan Kerja – BLK), which offer short term vocational training, partly as development measures for the unemployed, partly as targeted training measures according to industry demands.

The national training for work system (Sistem Latihan Kerja Nasional – Sislatkernas) also provides apprenticeship programs as stipulated by a related ministerial regulation (Permennakertrans Per.21/Men/X/2005). Apprenticeship programs are based on trilateral agreements between a company, Kemenakertrans, and the apprentice. The company must be registered with the regional manpower administration and is obliged to provide some training to the apprentice which can be outsourced to an accredited training institution. According to the regulation, the standard duration of an apprenticeship program is 6 months, but under certain conditions can last up to a maximum of 12 months. Despite the existing regulation, apprenticeships are not widely available.

Upon successful completion of any training program, the trainee must have the opportunity to have his acquired competencies certified against the National Work Competence Standards (Standar Kompetensi Kerja Nasional Indonesia – SKKNI), national standards of a professional organization, or international standards. Currently SKKNI are available for more than a hundred occupations, albeit with diverse quality. The certification system which is governed by the National Agency for Professional Certification (Badan Nasional Sertikasi Profesi – BNSP) is not yet fully operational in all provinces and for all occupational areas. Therefore, and presumably because of relatively high costs, certification against SKKNI has not yet gained full momentum.

Certification against SKKNI in addition aimed at strengthening the link between vocational education and the world of work. Through SKKNI, vocational middle school (SMK) graduates were expected to have their competencies certified. When SKKNI were introduced, there was hope that SMK curricula would adopt the content of SKKNI and thus become more work-oriented. This, however, apparently did not happen.

2 Concepts of transferable skills in national TVET and vocational teacher education (VTE) policies in Indonesia

Education in Indonesia, including vocational education, is governed largely by laws, regulations and standards established by the Ministry of Education and Culture (Kementerian Pendidikan dan Kebudayaan – Kemdikbud). At the same time, scholarly debate in sciences, including education sciences, is not very well developed, and controversial scholarly discussions about education concepts and approaches and their representation in laws and regulations are limited. Since the whole education system in Indonesia is meant to be competency-based, one would expect to find a clear concept which classifies competencies into certain types, which defines ways and means to acquire these different types of competencies, and which allows the identifycation of a subset of competencies or a theory which relates to the concept of transferable skills. As a result of missing scholarly debate, such a concept still waits for it being developed. Instead, there were a number of concepts named in laws and regulations over time. Their presentation in the following might appear somehow blurry at points due to missing conceptional and analytical scientific work on the subject.

In mid-2013, education philosophy and school curricula (again) underwent a substantial reform. There seems to be a pattern that whenever a new minister of education takes office, a new curriculum is being issued for secondary schools, which in contrast to higher education institutions do not have the authority to develop their own curricula. The most recent curriculum is called Kurikulum 2013 and its related regulations were issued in June 2013. Only by the end of 2012 first informational activities, like concept presentations, seminars and conferences of the new curriculum, were implemented by the ministry of education and culture. At the time when the curriculum-related regulations were issued, the general public, as well as schools, teachers, and teacher education institutions had little understanding about the changes the latest curriculum reform would entail, despite the conducted informational activities. Especially parents voiced their concerns about the limited preparation time schools and teachers had been given. Regardless of these concerns, Kurikulum 2013 was implemented starting from the new school year (from second half of August 2013).

2.1 Transferable skills in TVET

Kurikulum 2013 and its related regulations on education standards contain new definitions of competencies (when compared with the 2005 and 2006 definitions). The following sub-sections will try to demonstrate the differences between the old and new definitions.

2.1.1 Transferable skills in TVET policies up to 2013

The main legal documents referring to what could be termed transferable skills in TVET are the following:

- UU 20/2003. Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional (Law 20/2003 on the National Education System)
- *PP 19/2005. Peraturan Pemerintah Republik Indonesia Nomor 19 Tahun 2005 tentang Standar Nasional Pendidikan* (Government Regulation 19/2005 on the National Education Standard).
- Permendiknas 22/2006. Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 22 Tahun 2006 tentang Standar Isi untuk Satuan Pendidikan Dasar dan Menengah (Ministerial regulation on the content of elementary and secondary education)
- Permendiknas 23/2006. Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 23 Tahun 2006 tentang Standar Kompetensi Lulusan untuk Satuan Pendidikan Dasardan Menengah (Ministerial regulation on the competency outcome in elementary and secondary education)

These legal documents all refer, implicitly or explicitly, to life skill education which can be compared with the concept of transferable skills. The Education Act UU 20/2003, which can be considered an umbrella for all education regulations, lists some normative values which are to be included in the school curriculum in article 36. The government regulation on education standards (PP 19/2005) states in article 13 that life skills education (Pendidikan Kecakapan Hidup) shall take place in lower and upper secondary education, including vocational education. According to the regulation, life skills education includes personal, social, academic, and vocational competences and can be integrated in either or each of the 5 learning content groups, namely a) religion and morality, b) citizenship and personality, c) science and technology, d) esthetics, and e) body, sports, and health. The term 'life skills' seems to have a similar meaning as the term 'transferable skills' coined in the EFA Global Monitoring Report 2012.

Vocational education in Indonesia aims not only at preparing youth for gainful employment but also for further education, and focuses on creating 'good' citizens. Therefore, the curricula consist of so-called 'normative', 'adaptive' and 'productive' subjects (mata kuliah normatif, adaptif, dan produktif) (Permendiknas 22/2006). Normative subjects - which include religious education, citizenship education, Indonesian language, physical education, health education, as well as arts and culture - focus on educating 'good' citizens. Adaptive subjects – which include English language, natural sciences, social sciences, information management and computer skills, as well as entrepreneurship education - are considered to provide the necessary basic knowledge and skills for higher education, and the productive subjects. The productive subjects consist of subjects on basic vocational competencies as well as on vocational competencies, both of which are occupation-specific.

The term 'life skills', however, can neither be found in the ministerial regulation on the content of elementary and secondary education (Permendiknas 22/2006), nor in the one on competency standards for graduates of primary and secondary education, including vocational education (Permendiknas 23/2006). Instead the second regulation defines a list of 23 competences to be acquired by vocational students (see Table 1).

Table 1: Competency standards for graduates of vocational schools

- 1. Behave in accordance with the religious teachings relevant to the development of adolescents;
- 2. develop to the highest degree possible using own potential, and reduce personal shortcomings;
- 3. show a self-confident attitude and assume responsibility for your behavior, actions and work;
- 4. participate in the enforcement of social rules;
- 5. appreciate religious diversity, nation, tribe, race, and socio-economic groups at the global level;
- 6. build and apply information and knowledge logically, and in a creative and innovative way;
- 7. demonstrate logical, critical, creative and innovative thinking in decision-making;
- 8. demonstrate the ability to develop a culture of learning for self-empowerment;
- 9. demonstrate sportsmanship and a competitive attitude to achieving best results;
- 10. demonstrate the ability to analyze and solve complex problems;
- 11. demonstrate the ability to analyze natural and social phenomena;
- 12. use environmental resources productively and responsibly;
- 13. participate democratically in the life of the society, nation and state in the framework of the State of the Republic of Indonesia;
- 14. express yourself through arts and cultural activities;
- 15. appreciate works of art and culture;
- 16. produce creative work, both as an individual and in a group;
- 17. maintain personal health and safety, physical fitness, as well as a clean a environment;
- 18. communicate verbally and in writing in an effective and polite manner;
- 19. understand own and others' rights and obligations in the community;
- 20. accept differences and be empathic towards others;
- 21. show the ability to read and write a text systematically and aesthetically;
- 22. demonstrate the ability to listen, read, write and speak in Indonesian and English languages;
- 23. master professional and entrepreneurial competencies to meet labour market demands, as well as to be able to continue with higher education according to the respective vocation.

Source: Permendiknas 23/2006, own, non-official translation

The list of competencies for vocational school graduates (see Table 1) is identical to the list of competencies for upper secondary school graduates, except for item 23. The regulation in addition includes a large number of partly subject-specific competencies for every study subject within the normative and adaptive subjects. Based on the list of competencies in Table 1, an

Indonesian definition of transferable skills for the time span from 2006 to 2013 could be derived. However, the somehow disorganized list and a lack of academic discourse on transferable skills in Indonesia makes it difficult to identify a concise, underlying model of these skills.

When looking at Table 1, the reader might get the impression that the development of a selfsustained, self-confident and critical personality is not the most important goal of vocational education. The ability to shape the world of work or the society, which for example is an important goal of German vocational education, is not mentioned at all. Instead, integration in the value system and into society appears more important. This focus might stem from the cultures which can be found on Java Island, the core island of Indonesia². These traditional cultures are very community-oriented and at the same time hierarchical, and require the individual to integrate into society instead of trying to change it.

2.1.2 Transferable skills in TVET policies from 2013

A number of new regulations have been introduced which define the core properties of the new curriculum 2013. These are:

- PP 32/2013. Peraturan Pemerintah Republik Indonesia Nomor 32 Tahun 2013 tentang Perubahan atas Peraturan Pemerintah Nomor 19 Tahun 2005 tentang Standar Nasional Pendidikan (Government regulation on the amendment of regulation 19/2005 focusing on national education standards)
- Permendikbud 54/2013. Peraturan Menteri Pendidikandan Kebudayaan Republik Indonesia Nomor 54 Tahun 2013 tentang Standar Kompetensi Lulusan Pendidikan Dasar dan Menengah (Ministerial regulation on competence standards for graduates of elementary and secondary education)
- Peraturan Menteri Pendidikandan Kebudayaan Republik Indonesia Nomor 64 Tahun 2013 tentang Standar Isi Pendidikan Dasardan Menengah (Ministerial regulation on the teaching content for elementary and secondary schools)
- Peraturan Menteri Pendidikandan Kebudayaan Republik Indonesia Nomor 70 Tahun 2013 tentang Kerangka Dasar dan Struktur Kurikulum Sekolah Menengah Kejuruan / Madrasah Aliyah Kejuruan (Ministerial regulation on the basic framework of the secondary vocational school curriculum)

The new Kurikulum 2013 seems to abandon the categorization into normative, adaptive and productive subject. Instead, subjects in vocational education have been divided into specific groups A, B, and C (Permendikbud 70/2013).

² More than 50% of the Indonesian population live on Java Island, the capital Jakarta is located here, and the state government is dominated by persons with a Java Island cultural background.

Group A:

- 1. Religion and 'good manners' education (Pendidikan Agama dan Budi Pekerti),
- 2. State philosophy³ and citizenship education (Pendidikan Pancasila dan Kewarganegaraan),
- 3. Indonesian language (Bahasa Indonesia),
- 4. Mathematics (Matematika),
- 5. Indonesian history (Sejarah Indonesia), and
- 6. English language (Bahasa Inggris).

Group B:

- 1. Art and culture (Seni Budaya),
- 2. Physical and health education (Pendidikan Jasmani, Olah Raga, dan Kesehatan), and
- 3. Crafts and entrepreneurship education (Prakarya dan Kewirausahaan).

Combined, subjects in group A and B make up 50% of the new Kurikulum 2013. The subjects in group A are prescribed at national level, while the subjects in group B are subject to provincial and/or regional regulations. Group C, which makes up the other half of the curriculum, contains vocational subjects. For some of the vocational fields, certain subjects are prescribed, such as physics, chemistry and technical drawing for technology and engineering.

In addition, the ministerial regulation on competency standards for graduates of primary and secondary education (Permendikbud 54/2013) groups competencies under three headings: (1) attitude, (2) knowledge, and (3) skills and defines them for upper secondary education, including vocational education (see Table 2).

Dimension	Abilities
Attitudes	Behave in faithful, noble, confident, responsible and educated manner in
	social and natural environments. Behave as a respected national in a
	globalised world.
Knowledge	Have factual, conceptual, procedural and meta-cognitive knowledge in
	science, technology, art and culture. Show insights into humanity, the nation,
	the state and civilisation and with respect to causes and impact of different
	phenomena.
Skills	Have the ability to think and act effectively and show creativity in abstract
	and concrete ways.

Table 2:Competency groups in the 2013 competency standards

Source: Permendikbud 54/2013, own, non-official translation

³ Pancasila, the 5 principles, is the Indonesian state philosophy, set in the preamble of the Indonesian constitution.

The ministerial regulation on the basic framework of the curriculum for primary and secondary education (Permendikbud 70/2013) splits the 'attitudes' into spiritual and social competencies, leaving the other 2 dimensions unchanged but naming all of them 'core competencies' (kompetensi inti). The descriptions of these core competencies are slightly more elaborate than those in Table 2 but are quite similar in nature. In addition, the regulation lists, for each subject and for each grade from 10 to 12, a number of 'basic competencies' (kompetensi dasar) resulting in a long list of basic competencies, most of which would qualify as transferable skills.

From these definitions it is even harder to deduct a concise definition of a concept of transferable skills than from the competence listing for the years 2006 to 2013. In addition, the distinction between competences of general school and vocational school graduates is even less pronounced.

2.1.3 Summary of transferable skills in TVET policies

The 'old' concept of transferable skills in Indonesia was largely based on an unstructured form of 'life skills', which are comparable with 'transferable skills' as defined by the EFA Global Monitoring Report 2012. The new curriculum, Kurikulum 2013, classifies skills in a traditional manner into spiritual and social competences, knowledge and skills. Somehow this looks like a step back on the path to an internationally-recognized concept for competency-based education. International comparability is further hampered by the use of the terms 'core competencies' (kompetensi inti) and 'basic competencies' (kompetensi dasar). In addition, neither the old nor the new concept of competencies has been discussed intensively in academic circles in view of the international discussions on 'transferrable skills' or preceding concepts dealing with these skills. A concept of 'transferable skills' for vocational education which are required for work-related cross-border mobility can hardly be identified in both the old and new curriculums.

It should be noted that in the past 5 years, there have been discussions on the so-called 'character education' as a response to a perceived decay of moral values and appropriate youth behavior. These discussions, however, concern the whole education system and are not focused on vocational education.

2.2 Transferable skills in Vocational Teacher Education policies

For teachers and lecturers, including those for TVET, the following regulations are relevant:

- *UU 14/2005. Undang-Undang Republik Indonesia Nomor 14 Tahun 2005 tentang Guru dan Dosen* (Law on teachers and (university) lecturers)
- Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 16 Tahun 2007 tentang Standar Kualifikasi Akademik dan Kompetensi Guru (Ministerial regulation on the standard of academic qualifications and competencies of teachers)

Both documents apply to all teachers and university lecturers for all types of educational institutions, including those of vocational education. Law *UU 14/2005* stipulates in article 9 that teachers must be qualified for their profession. Article 10 of the same act further defines this qualification as the acquisition of pedagogical, personal, social and professional competencies.

The teacher standards (Permendiknas 16/2007), among other things, define the core competencies of normative and adaptive subject (social and natural sciences) teachers in vocational schools together with those for teachers in general upper secondary schools. Core competency standards for teachers of vocational subjects are not defined. These competencies are divided into four areas: (1) pedagogic, (2) personal, (3) social and (4) professional competencies (see table 3).

Table 3:	Teachers'	core	competences
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Pedagogic competencies 1. Be able to deal with learners' physical, moral, spiritual, social, cultural, emotional, and intellectual characteristics 2. Master learning theories and principles of teaching and learning 3. Develop curricula for her/his teaching subject 4. Organize learning that educates 5. Use information technology and communication for the benefit of learners 6. Facilitate the development of learners' potentials 7. Communicate with learners in an effective, empathic and polite manner 8. Conduct assessment and evaluation of learning processes and results 9. Utilize assessment and evaluation results for learning 10. Take reflective action for improving the quality of learning 11. Act according to religious, legal, social norms and the Indonesian national culture 12. Present her/himself as a honest person with noble character, and set an example for the students and the community 13. Present her/himself as a person who is stable, mature, wise and authoritative 14. Demonstrate work ethics, high responsibility, pride in being a teacher, and self-confidence 15. Uphold the code of ethics of the teaching profession Social competencies 16. Be inclusive and act objectively without discriminating on the basis of gender, religion, race, physical condition, family background, or socio-economic status 17. Communicate effectively, empathetically and politely with fellow educators,			
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18. Be able to adapt to diverse socio-cultural contexts in the workplace in different parts of Republic of Indonesia	17. Communicate effectively, empathetically and politely with fellow educators, other		
Republic of Indonesia	school staff, parents and others in society		
1	18. Be able to adapt to diverse socio-cultural contexts in the workplace in different parts of		
19. Communicate with her/his own or other professional communities orally, in writing or	Republic of Indonesia		
by other means	by other means		

Professional competencies

- 20. Master the concepts, structure and material, and possess an analytical mind set in her/his teaching subject
- 21. Master the basic competencies and subject-specific competencies of her/his teaching subject
- 22. Develop teaching material for his/her teaching subject in a creative manner
- 23. Develop her/his professionalism continuously through reflection
- 24. Use information and communication technology for self-development

Source: Permendiknas 16/2007, own, non-official translation

The competencies listed in Table 3 are the 'teachers' core competencies' (kompetensi inti guru). Each core competency has its corresponding 'teaching subject competencies' (kompetensi guru mata pelajaran) which amounts to a total of 70 'teaching subject competencies (note: there are no 'teaching subject competencies' for core competency no. 20). All core competencies listed in Table 3, except no. 20 and 21, could be considered as 'transferable skills', at least in the teaching profession. Some of these competencies could also be applicable for other professions. However, discussions on transferable skills for TVET teachers are taking place even less often among teacher educators than those on transferable skills in TVET.

3 Level of implementation of transferable skills

Given the relatively poor state of education research in Indonesia, only some general remarks can be made with respect to the implementation of the competence-based approach, and more specifically the transferable skills approach. The following analysis, except when explicitly indicated, does not apply to the new Kurrikulum 2013 since it is not yet implemented (even the finalised curricula are not yet available).

Schools in theory are required to prepare detailed curricula and syllabi for each subject. These planning documents should define the competencies to be imparted in each lesson, and teachers are required to adhere to these documents. However, the extent to which these requirements are met is unclear. What is clear is that most vocational schools have such planning documents since they are required for program and school accreditation. Even if teachers want to follow these documents, it is unclear whether they have the necessary means, such as abilities, understanding and resources, to effectively support learners in acquiring the defined competences. Generally, it seems more unlikely than likely but will naturally differ from one institution to another. Among the approximately 10.000 vocational schools in Indonesia, there are a small number of high quality institutions which apply up-to-date learning concepts and which produce graduates who are highly-valued by the companies. The large majority of vocational schools, however, tend to be of poor or even very poor quality when compared to TVET institutions in more developed countries.

This is due, among others, to the fact that teacher-centered teaching approaches still prevail, even though student-centered learning approaches have been promoted in recent years. Education planners seem aware of this reality and have therefore introduced measures to improve teachers' competencies in implementing student-centered learning approaches. Two of these measures include the introduction of a formal qualifications scale for teachers and a scheme for teacher certification stipulated by the Law on Teachers and Lecturers (UU 14/2005). In 2007, teachers started to be certified through portfolios which, however, did not significantly improve teacher quality. Thereafter, short-term in-service training or professional teacher education and training (Pendidikan dan Latihan Profesi Guru- PLPG), which included competency-based assessment, was introduced. Currently, this approach is being reformed to a one-year teacher education program for university graduates called professional teacher education (Pendidikan Profesi Guru – PPG), which likewise includes competency-based assessment. The incentive for teachers to participate in PLPG and/or PPG is a two-fold salary increase. While the short-term in-service courses have shown some, albeit limited, impact, PPG is expected to show greater effects. The reason for this assumption is that PPG includes, besides theoretical courses in pedagogy and subject-specific didactics a three-month guided and supervised practical training in vocational schools and a three-month guided and supervised practical training in a companies (six months in total). One concern is the fact that teacher education institutions (mostly universities) which run the academic study programs for teachers are also commissioned with PPG which implies that PPG could be of similar quality as university study programs⁴.

In general, there are two big hurdles for implementing a concept of transferable skills that is relevant to TVET in Indonesia. The first hurdle is the absence of a scientific TVET research community which is the result of a scientific system that does not recognize vocational disciplines⁵ as scientific ones. Therefore, university scholars have trouble developing their academic careers focusing on TVET and related vocational disciplines and getting these activities recognized by the Ministry of Education and Culture, their employer. Instead, they usually earn their merits in related technology and science subjects which prevents them from developing a sound TVET knowledge base and research culture in TVET disciplines and vocational pedagogy. As a result, their knowledge of TVET at international level is limited. This reality is compounded by a language barrier which results from scholars' limited foreign language skills, which limits their use of TVET literature in other languages like German, English, French, Spanish or Chinese.

The second hurdle, which is closely related to the first one, is the fact that the development of the TVET system in Indonesia is largely driven by international donors and frequently-changing international consultants who advocate different TVET philosophies. Australia, the German-speaking countries, the Netherlands, Japan and recently also South Korea exert strong influence on TVET development in the country. However, they take different and partly incompatible approaches. In addition, decision makers in the Ministry of Education and Culture, who often are

⁴ For more details see e.g. Kurnia 2013.

For the concept of vocational disciplines see e.g. Veal, Dittrich, Kämäräinen 2005 and Dittrich 2006.

university graduates with little understanding of TVET, frequently change. As a result of their limited understanding of TVET, decision makers are often dependent on international TVET consultants. In addition, none of the international donors has until now focused on enhancing national academic capacities for TVET system development in Indonesia.

4 Implications for TVET policy and practice

The major hurdle for the development of an adequate concept of transferable skills and its implementation in TVET in Indonesia is the lack of a sound TVET philosophy and TVET research which should form the basis for evidence-based TVET development. This is particularly troubling given the Government's plan to achieve 70% enrolment of upper secondary students in vocational education by 2020 (DIKNAS 2007). According to the arguments presented at the Hangzhou UNESCO International Meeting on Innovation and Excellence in TVET Teacher/ Trainer Education (Veal, Dittrich, & Kämäräinen 2005) and our humble opinion, this short-coming is mainly due to the poor state of the Indonesian scientific research system.

To improve this situation, there is a need for Indonesia to establish a framework for developing a scientific research community in TVET, which would be responsible for TVET teacher education, and which would work in close collaboration with TVET institutions and other TVET stakeholders, such as companies, employer and employee organisations, as well as professional associations.

Steps to be taken in establishing such a framework should include, but are not limited, to:

- Provide support for reforming university faculties dealing with TVET teacher education into teaching and research units. This reform can be achieved by abolishing the strict hiring policy based on the requirement for science-related qualifications and academic merit of university staff, and by encouraging these newly-established units to create departments for vocational pedagogy and TVET system development;
- Develop a culture of academic collaboration in TVET at national level by providing the basis for adequate knowledge exchange and collaboration through national research funding programs;
- Develop academic research quality in TVET (but also in other disciplines) by applying rigid quality control, assessment and (formative) evaluation in national research funding programs;
- Set up a program on basic research in TVET by applying the aforementioned qualitydevelopment measures.
- Develop a culture of knowledge exchange and collaboration at the national level between all TVET stakeholders, such as universities, vocational schools, training centres, labour market actors, all concerned ministries, and the donor and consultancy community.

- Support international knowledge exchange and collaboration in TVET, primarily in the Southeast- and East Asian regions, but also with countries with well-developed TVET systems.
- Set up large-scale pilot programs for TVET development, which would encourage universities, vocational schools and labour market stakeholders to collaborate on improving TVET. Such programs would need independent scientific advice based on formative evaluation schemes and measures to develop a culture of knowledge exchange and collaboration.

5 Key findings

To sum up, there is no clearly articulated concept of transferable skills in TVET in Indonesia. This is due to the fact that a) there is hardly any scholarly discourse on the topic, and b) no pronounced TVET philosophy resulting from government regulations that make only little difference between general and vocational education. In addition, the Indonesian regulatory bodies seem to follow an unclear version of the ideas contained in the Education for All (EFA) framework without adapting it to the TVET context and the world of work.

Before an adequate concept of transferable skills, which could improve the overall quality of TVET, can be developed in Indonesia, the institutional landscape will need to be reformed and research, conceptual and planning capacities, needed for developing an evidence-based TVET system, will need to be strengthened.

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