

Alignment of the Curriculum to the Development of the Industrial World (Revitalization Program of Vocational High Schools in Indonesia)

Abstract

The revitalization program of Vocational High Schools (SMK) in Indonesia is supported by the Presidential Decree in 2017. There are six main elements that have been done by selected SMKs which refer to SMK revitalization guidance in 2017. One of the elements is the alignment of curriculum. Curriculum alignment is an activity in units of time implemented by schools and industry to align the contents of the curriculum so that the graduates can see the needs of the workforce in the industry. By this alignment, the graduates are expected to have certain skills in accordance with the industry requirements and gain expertise certificate from industry accordingly. The survey was conducted in 125 vocational high schools spread out in various regions of Indonesia. The revitalization program was carried out for 4 areas of expertise or skill field: agriculture, maritime, tourism, and creative industries. The questionnaire used 2 main variables namely managing and preparing of curriculum alignment in VHS (Vocational High Schools) with 5 questionnaire items and the VHSs implementation in case of the curriculum alignment with 4 questionnaire items. The survey used 0-4 Likert scale ranging from "No activities implementation" until "Activity has been implemented". In general, the results show that most of SMKs in the curriculum alignment management variable is in "Activity is still in implementation" or "on-going" state. The case is similar for the curriculum alignment implementation variable yet few schools employ the curriculum differently with SMK curriculum guidance.

Keywords: *Curriculum Alignment, Industrial World, Revitalization, Vocational High School*

1 Introduction

The process of establishing competencies in SMK is focused on 21st century learning skill by developing learning process that emphasizes higher order thinking skills (HOTS) and the application of literacy capability development especially digital literacy and the reinforcement of character education. This process requires the fulfilment and equity of SMK facilities, productive teachers, education personnel, school management, and industry cooperation relationships as important components to be straightened out. The report of Case Study on "National Policies Linking TVET with Economic Expansion: Lessons from Singapore" (Seng 2012) found that a key challenge today is remaining true to its mission in staying focused on vocational and technical skills. The real tests of success are the

employability of the graduates, career development, upgrading in the educational system, public acceptance and image (Seng 2012).

The major change being undertaken by Indonesia in relation to vocational education in secondary schools is the implementation of the President Instruction No.9/2016 on the revitalization of Vocational High Schools in order to Improve the Quality and competitiveness of Human Resources (Seta 2016). There are six focus revitalizations which one of them is the alignment and development of curriculum. The structure of the secondary education curriculum is comprised of compulsory subject groups and selected subject groups. The course covers 9 subjects with a 24-hour/week study load. The contents of the curriculum consist of core competence, basic competence, and compulsory subjects. The study load is 48 hours lessons/week. The curriculum SMK should refer to the Decree of the Director General of Primary and Secondary Education Number. 330/D. D5/KEP/KR/2017 on Core Competencies and Basic Competencies of National Subjects (A), Regional Content (B), Skill Field (C1), Skill Program (C2), and Skill Competency (C3), 06 July 2017. There are 9 skills field but in this program of revitalisation until 2019 only focus in four skills field; (1). Skill Field of Agribusiness and Agrotechnology with 6 Skill Programs and 20 Skill Sub Programs/Skill Competency (2). Skill Field of Maritime with 4 Skill Programs and 8 Skill Sub Programs/Skill Competency (3). Skill Field of Tourism with 4 Skill Programs and 8 Skill Sub Programs/Skill Competency (4). Skill Field of Art and Creative Industry with 8 Skill Programs and 12 Skill Sub Programs/Skill Competency.

The implementation of revitalization of SMK is not an easy task since the number of SMK continues to grow as increasing number of the productive age in Indonesia. In 2015/2016 the population of public and private vocational high schools reaches 13,131 schools with a total of 4.4 million students (SED-TVET 2016). The implementation of the Presidential Instruction involves 10 ministries and 2 institutions which are the Institution of Profession Certification and the Local Government in 37 provinces in Indonesia. The Ministry of Industry targets that by 2019, 1,775 SMKs will be fostered and cooperated with industrial companies to produce certified graduates of 845 thousand people. In addition, the Ministry of Industry has conducted a curriculum alignment on SMK with industry for 34 skill programs related to the industry by incorporating the competence of the required skills of the industry into the existing subjects in SMK along with the preparation of modules for additional learning materials (Kementerian Perindustrian Republik Indonesia 2017).

The Minister of Labor assesses the curriculum in vocational high schools (SMK) needs to be adjusted with the industry, so that graduates can be absorbed more in the world of work. Industry involvement in the SMK curriculum alignment process will bring the supply of available manpower to the demand of the industry so that it can push the unemployment rate from 6.13 percent to about 5.3 percent (Antara 2017). Meanwhile, the Coordinating Ministry for Human Development and Culture (Kemenko PMK) seeks to improve the quality and competitiveness of Indonesian human resources by encouraging the vocational education improvement. One of the activities to improve vocational education is through the improvement and alignment of the vocational curriculum. The curriculum alignment should

be tailored to the needs of the industry and ensure the relevance of the graduate's results to the needs of the industry itself. (Winarto 2017). Based on the reality and the various initial programs that have been implemented in order to revitalize SMK and to know the extent to which the specific conditions on the alignment of curriculum vocational curriculum with the industry, the study focuses on 2 questions:

1. How is the management and preparation of curriculum alignment in SMK?
2. What has been done by SMK in curriculum alignment?

2 Strategy and Curriculum Distinction Method

Curriculum alignment is a curriculum development activity that allow more decentralisation system since the role of the school must be actively closer to the learning situation and other academic activities with the needs and situations in the world of work, while a centralization rules or regulations still applied. The aspect of decentralization refers to school-based decision-making which explains the role of schools in the international and school-based curriculum development areas that focus on national conditions (Brady 1990). Through decentralization approach, SMK must make its own decisions according to the needs of the workforce in the provinces or districts in the school area while simultaneously anticipating the globalization of labour. For that activity, SMK requires a model of assistance with other institutions either by universities or institutions of related industries. Partnership with industry is very important for VHS to develop curriculum. Establish a comprehensive industry cluster-based partnership is the way to prepare PPP (Public Private Partnership). The industry cluster-based partnership is then involved in the curriculum alignment with cluster-related programs of study (Mordica & Nicholson-Tosh 2013). SMK curriculum alignment is an important part of the revitalization program of SMK that can bring the graduate of Vocational Education matching the needs of the world of work.

The implementation of SMK revitalization is coordinated by the Directorate of Vocational High School Supervision (DitPSMK) under the Ministry of Education and Culture. DitPSMK determines that 125 SMK/VHS (Vocational High School) are eligible as the benchmark of 13,131 VHS. Furthermore, the Revitalization Team at DitPSMK determines the number of lecturers from 10 counselling universities. Each counsellor will periodically supervise the school and be responsible for assisting all revitalization activities at school including curriculum alignment programs. The development of curriculum that is aligned with the needs of the world of work requires a relationship or cooperation with the industry in the field of manufacturing and services in a reciprocal basis. The form of partnership of educational institutions with industrial and service institutions is one of the activities in the RPJMN 2015 – 2019 (National Medium Term Development Plan) which emphasizes that the curriculum of education and vocational training should be in accordance with "economic" activities at both the district and provincial levels (Kementerian Perencanaan Pembangunan Nasional Republik Indonesia 2014). Finch & Crunkilton (1999, 67) argue that for the decision-making process in planning the development of vocational curriculum requires stages and data information from

several inter-related indicators. The indicators that will underlie the decisions of the curriculum development step must be met through data collection in the field.

Based on the reference and real conditions in the field, 2 main variables and several sub indicators are determined. The first variable is the managing and preparing of curriculum alignment in VHS which has five sub indicators, (1). Curriculum Review: A review of the current curriculum, (2). Private Companion: Determination of industry to be involved in alignment, (3). Workshop/FGD: Conducting workshop/FGD with industry, (4). Finalization: Finalization of curriculum with industry manufacture and services as a result of workshop/FGD, (5). Curriculum alignment: Document of curriculum aligned. The second variable is The VHSs implementation in case of the curriculum alignment which has four sub indicators, (1). Public Private Partnership (PPP): School (VHS) cooperates with industry in accordance with the areas of expertise, (2). Relevance of Curriculum: School (VHS) development programs and curriculum relevance with industry as the realization of link and match program, (3). Curriculum and Certification: School (VHS) prepares the direction of curriculum development to meet student learning experiences including the attaining certification of expertise and producing products capability as per standard, (4). Curriculum Synchronization: School (VHS) synchronizes the curriculum with relevant industry for certification of expertise.

The method used was a survey with the number of 125 school samples. The number of VHS school samples were adjusted to focus on the skill field of revitalization: 32 VHS in Skill Field of Agribusiness and Agrotechnology (Agriculture), 24 VHS in Skill Field of Maritime, 45 VHS in Skill Field of Tourism, and 24 VHS in Skill Field of Art and Creative Industry (Creative Industry).

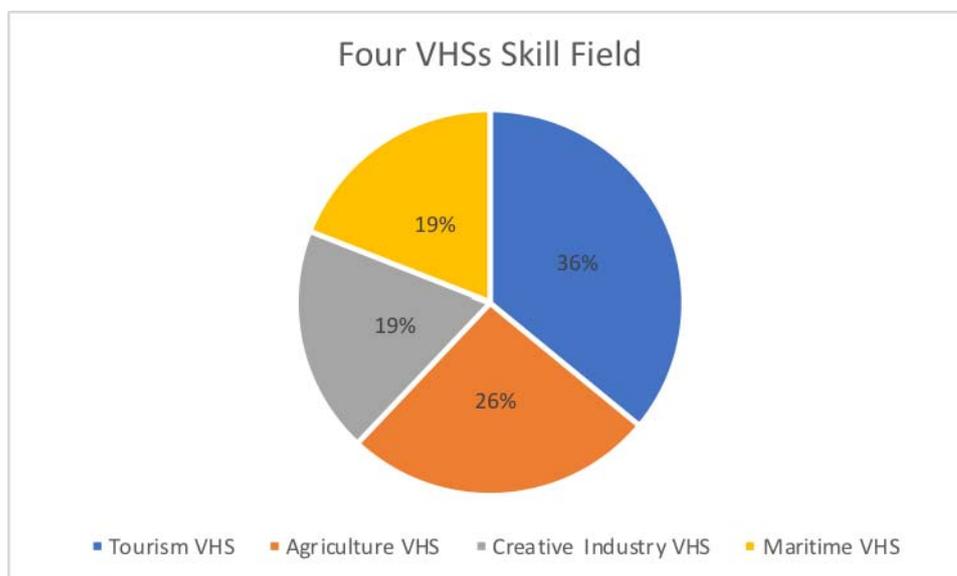


Figure 1: The Percentage of Four VHSs Skill Field

The determination of the number of VHS involvement considers the number and status of schools as the referral schools of the four focuses of the revitalization program (Figure 1).

When considering Indonesia's geographical conditions, the number of VHS in the fields of Maritime and Agriculture should be the highest. However, in fact, the two fields are only slightly less than the amount of VHS in skill fields of technology, tourism and trade.

Principals and Counsellors at each school are the main respondents. They filled out a closed questionnaire with a Likert scale of 0-4, with a description of the scale 0 = No activities implementation, 1 = There is initiation of activities implementation, 2 = There is a planning of implementation activities, 3 = Activity is still on-going, 4 = Activity has been implemented. Especially for the variable of VHSs implementation in case of the curriculum alignment, a description of the reasons related to the selected scale are required to gain more detail findings. Two respondents (Principal and Counsellor) in each school is the effort to crosscheck real conditions in the field.

3 Research Findings

Managing and preparing an overall curriculum alignment of 125 VHS are collaborative work of academic communities in schools with revitalization teams from universities and informants from the industry. Selected schools are schools that satisfy minimum required conditions compared to thousands of vocational schools in Indonesia. The survey results on the management and preparation of curriculum alignment work are shown in Figure 2.

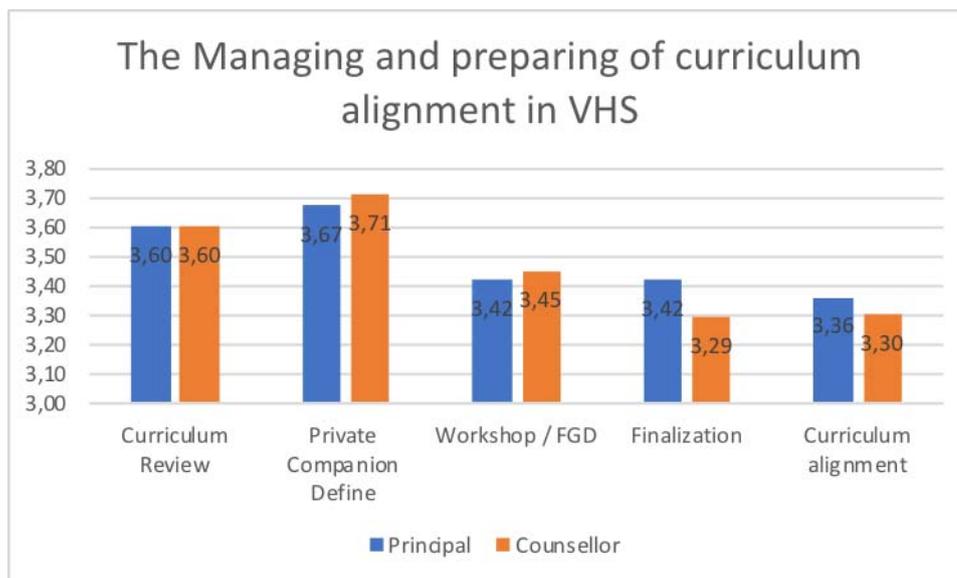


Figure 2: Managing and Preparing of Curriculum Alignment in VHS

Overall, the score of the principal and counsellor is almost the same. However, in the Finalization sub-indicator gain counsellor lower score compared to principal's. This implies that there are many schools do not immediately complete the document of aligning the curriculum with the industry after completing the workshop/FGD. Private Companion Define sub-indicator achieve relatively high score which implies that almost all vocational schools already have cooperation with industry in accordance with the field of competence.

Figure 3 shows the results of scores for school conditions implementing curriculum alignment through direct review of counsellors at their respective accompanied SMK.

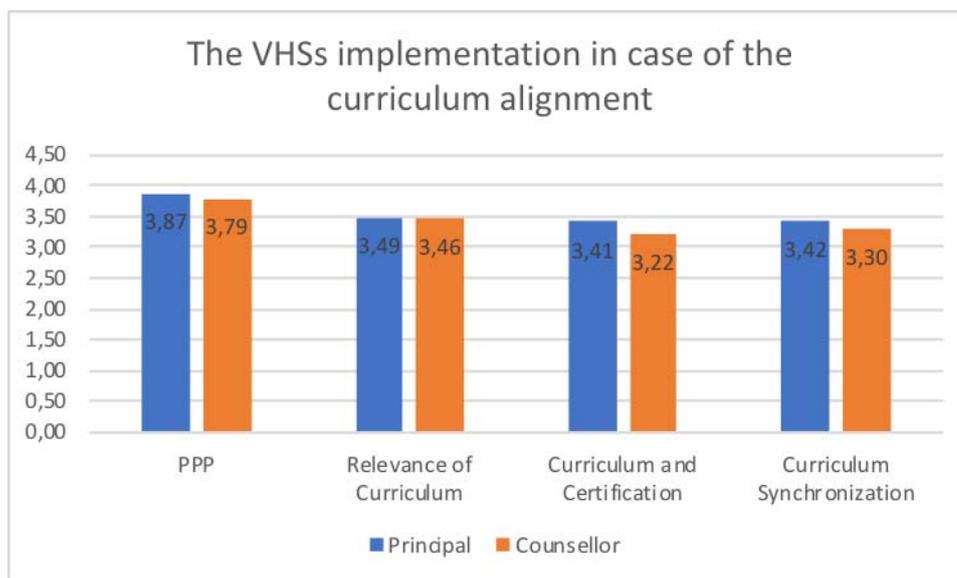


Figure 3: The VHSs implementation in case of the curriculum alignment

There is little difference in the Curriculum and certification indicator, while other indicators scores are quite similar. The alignment of the curriculum with the needs of the industry in which the industry participates in the formulation and drafting activities will result in the application of a curriculum that meets the requirements, so that the learning in vocational education will strive to meet the industry standards. The outcomes of learning of a certain skill can be synchronized with the acquisition of expertise certification. In reality, however, schools still find it difficult to obtain a certificate of expertise despite the curriculum alignment has been implemented. The obstacles of specific skills nomenclature that do not yet exist in the regulation of workforce expertise in Indonesia further complicate the realization of expertise certificates issued by authorized institutions.

Specifically, synchronizing curriculum related to sub-indicator finalization and curriculum alignment in Figure 2 shows that many schools still do not understand how to validate, to revise the workshop/FGD results, and to continue the work of curriculum alignment by completing curriculum derivatives including syllabus, lesson plan, and others (German Federal Ministry for Economic Cooperation and Development (BMZ) 2016). The role of assistant in this case is needed for SMK to get used to accomplish the work holistically rather than just complete activities with no follow up actions.

Further in VHS of Tourism, Agriculture, Creative industry, and Maritime in the context of curriculum alignment, the Figures 4 and 5 show VHS performance in their respective fields.

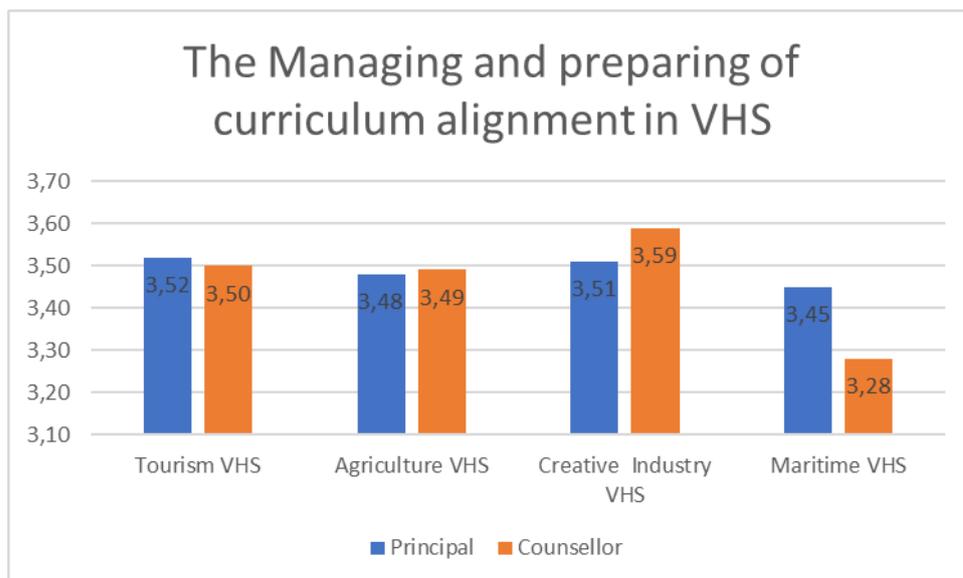


Figure 4: Four skills Field VHSs in Managing and preparing of Curriculum Alignment

The VHS performance of the Managing and preparing variables of the curriculum alignment based on the skill field shows the similarity score from principal point of view. In the other hand, counsellors assess differently especially for VHS in Creative Industry and Maritime. For Creative Industry, it can be concluded that VHS already has the provision of management to become a school of excellence in the field of creativity, but from the academic community the school itself still presents less confident step and develops into superior output schools. While VHS Maritime still lacks of management to prepare the curriculum alignment either assessment from the school or the counsellor. This is possible because the management of VHS Maritime requires various certificates that must be owned by graduates including teachers and management. The task of the counsellor should be able to bring VHS closer to the industry and prepare a strategy to facilitate VHS steps to obtain the various certificates required for the Institute of Maritime Education.

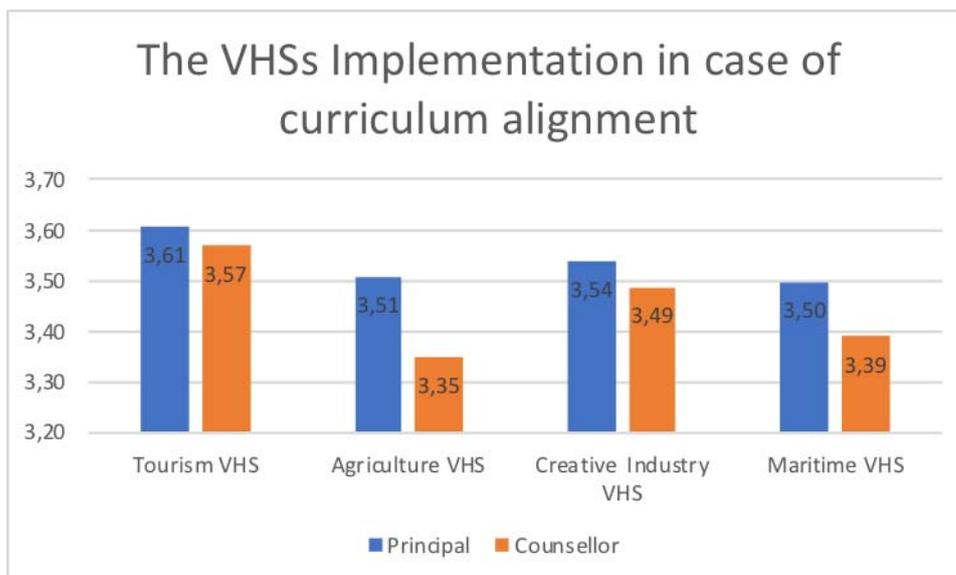


Figure 5: Four skill Field Focus in The VHSs implementation in case of curriculum alignment

Noting Figure 5, the appraisal between principal and counsellor is different across the four VHS. In addition to the questionnaire for this implementation variable, respondents should complete a description of the reasoning of the selected rating scale. This indicates that respondents should go to the field for direct observation to see the implementation of curriculum alignment. Although the overall scaling range is still under "ongoing activity" performance conditions, the trend is still at the "completion stage" of the curriculum alignment, especially for VHS Agriculture and VHS Maritime.

Differences in the assessment also indicate that VHS requires the role of Counsellor to directly supervise and run real activities that involve more of the VHS partner industries in order to implement the curriculum alignment including to run the alignment curriculum in order to stick to the agreed-upon planning with the industry.

4 Conclusion

Referring to the description of the five scoring Likert scales, in general, the results show that most of the VHS is in the scale of "Activity is still on-going" or on-going state. Nevertheless, the preparatory performance for this sub variable is still lacking even though the activities is on-going condition must be addressed, especially on sub variable, Workshop/FGD, Finalization, and Curriculum Alignment.

The VHSs implementation in the case of the curriculum alignment is also in "on-going" state, but the overall implementation in the field is still not appropriate since there is still a full VHS implement the existing curriculum or "Curriculum 2013" which does not focus to involve industry in its application. The other hand especially for VHS Agriculture and VHS

Maritime should be fully accompanied in order to achieve its planned performance because the geography of Indonesia is archipelago.

References

- Antara, A. (2017). Menaker sebut kurikulum SMK perlu disesuaikan dengan dunia kerja. Online: <https://news.okezone.com/read/2017/09/08/65/1772255/menaker-sebut-kurikulum-smk-perlu-disesuaikan-dengan-dunia-kerja> (retrieved 06.05.2018).
- Brady, L. (1990). Curriculum development (5th ed.). Sydney: Prentice Hall.
- Finch, C.R & Crunkilton, J.R. (1999). Curriculum Development in Vocational and Technical Education: planning, content, and implementation. Massachusetts: Allyn and Bacon
- German Federal Ministry for Economic Cooperation and Development (BMZ). (2016). Mengembangkan kerja sama yang efektif antara lembaga diklat kejuruan dan industri. Bonn and Eschborn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Online: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwif5tm9gI7cAhXRBIgKHQIrCF4QFggzMAE&url=http%3A%2F%2Fpsmk.kemdikbud.go.id%2Fepub%2Fdownload%2FwwMbJj0J51tzgszLoASGu6GxjJx8DJM6nkDw0EAy.pdf&usg=AOvVaw3E-VnK50K7zfWEDtZdjbwR> (retrieved 20.6.2018).
- Kementerian Perencanaan Pembangunan Nasional Republik Indonesia. (2014). Rencana Pembangunan Jangka Menengah Nasional (RPJMN) 2015-2019. Jakarta: Badan Perencanaan Pembangunan Nasional (BAPPENAS). Online: <https://www.bappenas.go.id/id/data-dan-informasi-utama/dokumen-perencanaan-dan-pelaksanaan/dokumen-rencana-pembangunan-nasional/rpjp-2005-2025/rpjm-2015-2019/> (retrieved 07.07.2018).
- Kementerian Perindustrian Republik Indonesia. (2017). Hingga tahap keempat, 416 perusahaan dan 1.245 SMK terlibat vokasi industri. Online: <http://www.kemenperin.go.id/artikel/18214/Hingga-Tahap-Keempat,-416-Perusahaan-dan-1.245-SMK-Terlibat-Vokasi-Industri> (retrieved 08.07.2018).
- Mordica, J., & Nicholson-Tosh, K. (2013). Curriculum Alignment Module. Illinois: University of Illinois. Online: https://occr.illinois.edu/docs/librariesprovider4/ptr/curriculum-alignment-module.pdf?sfvrsn=30b6bf89_9 (retrieved 06.07.2018).
- SED-TVET. (2016). Building secondary education of Indonesia: a roadmap to 2030. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.
- Seng, L. S. (2012). Case Study on “National Policies Linking TVET with Economic Expansion: Lessons from Singapore”. Bonn: UNESCO, 1-15. Online: <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/gmr2012-ED-EFA-MRT-PI-07.pdf> (retrieved 06.07.2018).
- Seta, A. K. (2016). Revitalisasi pendidikan vokasi. Jakarta: Menteri Pendidikan dan Kebudayaan Bidang Inovasi dan Daya Saing.

Winarto, Y. (2017). Pemerintah matangkan kurikulum pendidikan vokasi. Online: <https://nasional.kontan.co.id/news/pemerintah-matangkan-kurikulum-pendidikan-vokasi> (retrieved 06.07.2018)

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