

Quality Improvement Needs for Vocational High School Teachers in Indonesia

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Abstract. Vocational high school quality is determined by the workability of its graduates, the partnerships with business and industry, as well as the professionalism of its teachers. The purpose of this study is to identify the needs of quality improvement of vocational high school teachers in accordance with the Teachers' Disposition Index focusing on student-centered dimension, professionalism, and curriculum-centered dimension. The study employed a questionnaire survey as the methodology, and the sample of the population was randomly selected 300 teachers in Indonesia. The findings showed that teachers need to improve their quality in the aspect of student-centered dimensions, including effective instructional strategies, responsibility, learning environment, and collaboration with others. While, professionalism and curriculum-centered dimension, including teacher's knowledge and positive attitude, facilitation of learning, communication skill, and implementation of the curriculum and learning programs. Based on the results, our expectation is that vocational high school teachers should improve teaching quality by developing student-centered learning environment and teachers' professionalism to make students learn more optimally.

Keywords: Quality improvement, Teacher's Disposition, Vocational teacher, Vocational High School

INTRODUCTION

Vocational High Schools prepare graduates with work abilities through industry-academy cooperation (Slamet, 2013; Rose, 2008) and teachers' professionalism. The Law of Republic of Indonesia No. 14/2005 on Teachers and Lecturers stated that Teachers are professional educators with the primary task of educating, teaching, guiding, directing, training, assessing, and evaluating students (Ministry of Education and Culture, 2005). Teacher quality is critical factor in school success (AITSL, 2011; Akareem & Hossain, 2016; Obidike, 2016; Taylor, 2017).

The job of Vocational High School is to instruct and train students in a particular field, and to ensure graduates with high competitiveness (Slamet, 2013). One of the determining factors is teachers' capabilities or teachers' qualities (Faulkner & Latham, 2016; Lupascu, Pânisoară, & Pânisoară, 2014; Zuber & Altrichter, 2018).

The need of quality improvement of teachers can be identified from teachers' learning, teaching practice, and students' learning (Kang, Cha, & Ha, 2013). National Education Standards of Indonesia mentions that one of the indicators of accreditation is the teachers' standard (Minister of Education, 2010). Al-Dajeh (2012) explained that the national professional teacher standards are related to academic and special pedagogical knowledge, instructional planning and implementation, and assessment of students learning and instruction (Cedefop, 2011). The Teachers' Disposition Index (TDI) measures teacher dispositions from a student-centered dimension, professionalism, and curriculum-centered teacher (Schulte, Edick, Edwards, & Mackiel, 2006).

Vocational high school teachers in East Java, Indonesia had grown their competence through education and training programs as well as non-educational and training programs (BPSPDM & PMP, 2011). In addition, the government has been conducting programs and providing professional training and education to improve teachers' quality since 2007 (Ministry of Education and Culture, 2010). Unfortunately, the result showed that only few certified teachers in Vocational High School continued their professional development (Sujianto, Mukhadis, & Isnandar, 2012). Based on this gap of needs,

this study aimed to identify the needs of quality improvement for Vocational High School teachers in East Java, Indonesia.

LITERATURE REVIEW

Vocational High School in Indonesia

Vocational High School, in Act of National Education System No. 20 article 15, is defined as secondary education for preparing students for particular work (Indonesia Government, 2003). The vocational high school in East Java has followed the guidelines of the National Education System, which is to provide practical skills and vocational training to students. It consisted of eight subject areas of expertise, namely technology and engineering, information and communication technology, health, arts, crafts and tourism, agribusiness and agro-industries, business, and management (Ministry of Education and Culture, 2010). As a part of national education system, it aims at helping student develop skills and knowledge and prepare them for future employability (Malik, 2018; Rustiadi, 2015; Serdyukov, 2017).

The Needs of Quality Improvement of Teachers

Student-Centered Dimension

Student-centered dimension is defined as an approach of the interaction between students and teachers to create learning experiences appropriate of the real world, focusing on the students' responsibilities, activeness, interest, and needs of students (Çubukçu, 2012; Gibbs, 1992; Thornburg, 1995). This student-centered teaching method was focused on the needs of the students, rather than teachers (Janor, Rahim, Rahman, Auzairy, Hashim, & Yusof, 2013).

The factors affecting the implementation of Student-Centered Learning (SCL) included different environments, psychosocial dimension, time, teaching methods, learning activities development, evaluation tools, equipment, and place dimensions (Çubukçu, 2012; Janor et. al., 2013). The SCL program consists of three main stages (1) To make students more active in acquiring knowledge and skills by appropriate training exercises, computer assisted learning or field work; (2) To make students more aware of their work and motivation; (3) To focus on interaction, tutorials and group discussion; and (4) To focus on transferable skills that can be applied in different situations (O'Neill & McMahon, 2005).

The research of SCL showed that students become more interested in learning and enhancing their knowledge and skills instead of using Traditional teacher-centered pedagogy. Besides, students focus more on individual learning and depend on the choices of teachers' learning strategies (Lea, D. Stephenson, & J. Troy, 2003). As an alternative to externally directed instruction, SCL was rooted in the constructivist conception that knowledge was constructed by students, and the teacher is the facilitator of learning rather than the presenter of information (Kember & Gow, 1994). Lea et al. described that the propositions for SCL included: (1) reliance on active rather than passive learning, (2) emphasis on deep learning and understanding, (3) increased responsibility and accountability on the part of the student, (4) increased sense of autonomy in the learner, (5) interdependence and mutual respect between teacher and learner, and (6) reflective approach to the teaching and learning process (Lea, et al., 2003).

Professionalism, Curriculum-Centered Dimension

Teacher professionalism is associated with a strong technical culture, service ethic, professional commitment, and professional autonomy. As a professional, teacher also plans by receiving feedback from others and altering her/his behavior appropriately in the future (Young, 2004). Teachers are expected to demonstrate a commitment to excellence in practical teaching, regard for the highest standard of ethical behavior in their relationships with students, empathy and respect for others,

collaboration with colleagues to benefit students, and responsibility and dedication to all their undertakings (Agezo & Christian, 2000).

Furlong addresses teacher professionalism in three dimensions, namely: (1) professional knowledge that teachers need to consider in their teaching and learning process; (2) teacher's teaching improvement needed for student learning and teacher's authority; and (3) autonomy that refers to the authority and freedom of teachers in the planning and implementing instructional activities and in the decisions making during the instructional process (Furlong, 2001). Evans L. (2011) also conceptually analyzed the dimension of teacher professionalism including (1) Behavioral dimension is related to teachers' competency and their effort to improve students' learning; (2) Attitudinal dimension is related the beliefs and attitudes of teachers concerning their profession; and (3) Intellectual dimension is related to teachers' knowledge accumulation, their skill to make questioning sequential, and their quality analysis.

METHODS

This study was designed to identify teachers' attitudes toward their needs of improving teaching qualities employing questionnaire survey methodology. The target population was teachers in vocational high schools located in East Java towns, Indonesia, who have the expertise in the fields of machining techniques. For the research controllability and cost, this study randomly selected 300 teachers as the sample for data collection. Furthermore, the project used Teachers' Disposition Index (TDI) to measure a student-centered dimension (25 items), professionalism and curriculum-centered dimension (20 items). Schulte et al explained that the reliability estimate for the items of student-centered dimension was 0.98 and the mean of the corrected item-total correlations were 0.63. The reliability estimate for the items of professionalism, curriculum-centered dimension was 0.97 and the mean of the corrected item-total correlations were 0.72. The data provide evidence that the TDI was reliable and valid to measure teacher dispositions or attitude (Schulte, 2006). The data were collected through survey questionnaires for vocational high schools' teachers in East Java, Indonesia.

After all questionnaires were received, the data were tabulated and statistically analyzed for every question proposed for this study using frequency distributions with the IBM Statistical Package for the Social Sciences (SPSS) 21. The teachers' attitude scale was grouped as low-intermediate-high (<2 = low level, 2-4 = intermediate level, and >4 = high level).

RESULTS AND DISCUSSIONS

The levels of the teachers' attitudes on vocational high school are determined as 5-level Likert style illustrated in Table 1. This indicated that all the teachers' attitude scores are at a high level. Accordingly, while the mean score obtained by the teachers' attitude was calculated of 4.22, the student-centered dimension was determined of 4.50, and 4.23 for the professional and curriculum centered dimension. The scores of skewness and kurtosis showed that data distribution is normal.

Table 1. The Distribution of the Teachers' Attitude of Vocational High School

Dimension	N	M	SD	Skew	Sek
Student-centered	300	4.50	0.84	0.14	-0.89
Professional and curriculum-centered	300	4.23	0.85	0.25	-0.83

Notes: N= Number, M= Mean, SD= Standard Deviation, Skew= Skewness, Sek= Kurtosis

On the other hand, as indicated in Table 2, the teachers' responses are in five options (strongly disagree, disagree, neutral, agree, and strongly agree) with the score 0.52 and 0.74 showed validities, and the score of 0.76 showed reliabilities.

Table 2. Teachers' Answer, Reliabilities, and Validities for Vocational High School Teachers

Dimension	SD	D	N	A	SA	V	R
Student_centered	-	-	-	277 (92.3%)	23 (7.7%)	0.52	0.76
Professional and curriculum-centered	-	-	70 (23.3%)	211 (70.3%)	19 (6.4%)	0.74	0.76

SD = Strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly Agree, V=Validity, R= Reliability

Student-Centered Dimension

Based on Table 2, the study showed various evidences on the needs of quality improvement of vocational high school teachers. 277 (92.3%) and (7.7 %) of teachers were agree and strongly agree to students-centered dimension. This result is relevant to condition that show teacher's attitude was supporting activities of teaching and learning that done by teachers in vocational high school. In addition, teachers generally have several experiences concerning different ways of learning. The teachers have ability to demonstrate qualities of humor, empathy, and warmth. They were better thoughtful and responsive listeners. They are more familiar with their students and colleagues. They hold responsible for themselves and others. It was difficult to collaborate with others if they are only responsible for themselves.

In addition, Vocational High School teachers teach the subject course based on predefined time in school and accordance with applicable curriculum. Some teachers are unsure that students can follow the teacher's lesson. Meanwhile, students are more motivated to study. The learning environment is more comfortable and quieter for students to learn absorbedly. At last, Teachers can manage their students' work more easily and efficiently. Finally, vocational high school teachers expect students will achieve core competency.

Professionalism and Curriculum-Centered Dimension

As seen in Table 2, the findings showed that 211 (70.4%) and 19 (6.3%) agree and strongly agree with the statement, while 70 (23.3%) remain neutral. From the results of this study, it can be concluded that the number of students in class affects their academic performance. One of innovations and creativity was research done by teachers. The purpose of the teachers in making research is merely to meet the requirements needed for promotion. Teachers undertook Ministry of Education projects and implemented research-based instructional practice, which aimed to improve the quality of student learning, establish complete teaching facilities, and create partnership for teaching quality.

Schools collaborate with industries in related fields. This was used to design instructional teaching and learning in vocational high school to give students more experience of competencies needed in the field of work. Eventually, students are satisfied with their skills taught by their teacher in the classroom.

The professionalism of teachers was shown by their attitudes, for example being discipline in time and in doing task, maintaining ethics, being responsible to students in the learning, both in the class and their home, as well as taking feedback from their task. On the other hand, school lack enough equipment, so students cannot learn effectively and achieve less than expected. Teachers, schools, government, and industries work together to solve the shortage of facilities. Teachers had the combination of teaching and relevant industries. Industrial visit is one of teaching methods that provide students with an opportunity to learn about the internal working environment. Furthermore, teachers need to improve their communication skill, both verbal and non-verbal. This is important for teachers in their delivery of pedagogy, classroom management, and interaction with students, students' parents, and colleagues. Good communication created by schools through successful education is a good cooperation done by teachers, students, parents, and the society.

CONCLUSION

The study concluded that the influential factors for the need of quality improvement of vocational high school teachers in East Java were both student-centered dimension and professionalism and curriculum-centered dimension. The indicators of student-centered dimension that affected teacher quality include effective instructional strategies, responsibility, and learning environment and collaborate with others. Moreover, the indicators of professionalism and curriculum-centered dimension include teacher knowledge and positive attitude, facilitation of learning, communication skill, and the implementation of the curriculum and learning programs. Finally, the expectation of this study is used to improve the teacher qualities and to contribute to prevent action toward the problem that may happen in teaching and learning environment.

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