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Design of Student's Character Assessment Instruments in Industrial Work Culture at Aceh Vocational

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Abstract. *The character of industrial work culture is universal, so it can be adopted to be applied to vocational education institutions as a basic thing so that later when students enter industry they will find several similar characters that students must already have. This study aims to realize a development design (blueprint) in instrument development. This investigation aims to produce an instrument that can be used to develop and measure the industrial work culture character of vocational students, especially those in Aceh. So far, the development of industrial work culture character has been mandated to be implemented by the Indonesian government. The theoretical basis of this study is the theory of Kartwohl and Bloom (1956). The affective domain is a domain related to attitudes, values, feelings, emotions and stages of acceptance or rejection of an object in teaching and learning activities. Affective assessments need to be carried out in the same way as cognitive assessments, so students must have character competencies that can be measured like cognitive competencies. The affective domain is divided into five categories, namely: receiving or attending, responding, valuing, managing, characterization. The affective domain requires measurement tools like the cognitive domain, so that students' affective competence is also better developed. Character is an affective domain, the design of the industrial work culture character instrument in carrying out this study was limited to five characters, namely: discipline, hard work, honesty, responsibility and entrepreneurship.*

Keywords: *character, character instrument, the affective domain*

1. Introduction

Vocational High School (SMK) as a vocational education institution according to the explanation of the National Education System Law (UU Sisdiknas) No. 20 of 2003 Case 15, is secondary education that provides students specifically to work in certain areas of expertise. Vocational education aims to improve students' intelligence, knowledge, personality, noble character and skills to live independently and participate in further education in accordance with their vocational program, preparing students specially to work in certain fields. Currently, the relevance of vocational education to the business and industrial world in Indonesia is still low. There are still many vocational education graduates who do not work or do not work in their field, this gap is felt by the industrial world as service users.

Furthermore, in the decision memorandum it is explained that Vocational school heads, teachers, technicians, administrative staff need to strengthen non-technical competencies (soft skills) and technical skills (hard skills) of students in accordance with the needs of the world of work, as well as develop character in accordance with the values of Pancasila. Vocational education is secondary education that prepares students primarily to work in certain fields. formal educational institutions that prepare graduates

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to work with knowledge, skills and work attitudes in certain fields that suit the needs of the business world and the industrial world, (Decree of the Minister of Education, Culture, Research and Technology of the Republic of Indonesia number 2021).

In accordance with the understanding above, it can be concluded that vocational education is formal education to provide knowledge and competence in preparing students to work in their field of expertise. The reality in the field is that vocational school graduate students have the highest unemployment rate, based on data from the Central Statistics Agency (BPS), which has issued a report regarding the number of unemployed people in Indonesia so that in February 2022 it will reach 8.40 million people. This number decreased by 350,000 compared to February 2021. Based on percentages, the Open Unemployment Rate (TPT) in February 2022 was 5.83 percent, a decrease of 0.43 percentage points compared to February 2021 at 6.26 percent. This figure has increased compared to February 2020, exactly a month before the World Health Organization (WHO) declared cases of transmission of the Covid-19 virus a global pandemic. It is known that the TPT level in that year was 4.99 percent (BPS, 2022).

The future direction of vocational school development in Indonesia is based on the principle of strengthening vocational schools, according to Presidential Directive no. 9 of 2016 concerning Vocational Revitalization in the Context of Improving the Quality and Human Resources of Indonesia. The revitalization of education in vocational schools is a description of the vision (ideal conditions) regarding the process of providing education in vocational schools, which must be used as a reference for all parties and the direction of vocational school development in the future, 2016).

The revitalization of Vocational Schools, which began in 2016 through Presidential Directive Number 9 of 2016 concerning Vocational Revitalization in the Context of Improving the Quality and Competitiveness of Indonesian Human Resources, is an initial step that is considered important for resolving the quality problem of Vocational Schools. graduates who are labeled as less able to compete with other upper secondary education graduates. This is contrary to the initial expectations for the formation of vocational schools where graduates were expected to be superior compared to other secondary education graduates (Indriani, 2020).

Unfortunately, the increase in the quantity of vocational schools is not accompanied by an increase in quality. After four years of the recovery program being launched, the roadmap for vocational education has not yet been developed in all regions, the development team for the 2030 vocational school roadmap. Next, the restructuring of education in vocational schools primarily involves a change in philosophy rather than being supply driven to demand driven (Harjono, 2021).

Furthermore, the current problem is that it is still rare to find adequate, valid and reliable character education assessment instruments that can be used by both teachers and students in order to measure the character of industrial work culture accurately. Teachers still have difficulty compiling character education assessment instruments. This is in line with research conducted by Zuliani (2017).

The results of the reviewer's discussions with several interested parties, namely teachers, regional education employees in the field of vocational education, mean that currently there is no instrument to measure the character of industrial culture for use in the context of Vocational High Schools. This study was carried out to develop an instrument to measure the character of industrial culture which will be used to measure the character of discipline, honesty, hard work, responsibility and entrepreneurship. Based on the case above, the reviewer has an interest in carrying out a study by building

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an instrument that will be tested for its validity, reliability and usability so that Aceh vocational school teachers and students can use the instrument as a measuring tool to measure the character of industrial work culture. In this article, only the design is examined. from the instrument.

2. Method

The methodology in this study is to use the Design Research Approach Design Development Research (PRP) or also called Design Development Research (DDR) is a research method to develop and test products that will later be developed in the world of education. There are various types of study models that can be used as a reference in this Research and Development research, here are the various models used in research and development (Amali et al., 2019).

Ridhuan et al. (2021) stated PRP or DDR has four phases namely: 1) requirements analysis phase, 2) design phase, 3) development phase and 4) evaluation phase. However, in some studies on the DDR approach, it has been found that the researchers mostly combine the design and development phases into one phase such as studies conducted by Fariha et al. (2019), Ugur-Erdogmus and Cagiltay (2019), Nurul (2019), Musqisth (2018), Ridhuan (2016). The justification for combining the two phases, namely the design and development phases, is to ensure that a product development process is consistent by using the same group of experts or study participants. This often happens in the process of developing models, modules, guidelines, procedures, frameworks and so on, Ridhuan and Rabihah (2021).

Siraj (2021) The approach in conducting research is dynamic and keeps changing from time to time. Starting with a qualitative and quantitative approach, the research moved to mixed-methods and is now beginning to change to a new approach called Design Development Research (DDR) or in Malay known as the Design and Development Research Approach (PRP). The development of this PRP is in the field of engineering, information and information technology. Then expand to other fields including the field of education. This approach is suitable for use in research that is characterized by the final production of studies such as models, modules, frameworks, taxonomies and other research that will produce something innovative.

Ridhuan (2021) design and development research which is more synonymous with the acronym DDR was founded by Richey and Klien in 2007. The research method in this DDR approach is basically the same as other research approaches. However, Richey and Klien (2007) have made improvements in existing research methods to meet the needs of practitioners, researchers and researchers in conducting impactful studies.

3. Results and Discussions

Results of a survey conducted by the Ministry of Education and Culture's Puspendik on students. Average student behavior scores. The survey was carried out using the Standard Level of Child Development Achievement (STPPA) instrument and a system that can provide an overview of the level of development of children in Indonesia as a whole. Next, the integrity index for SMP/SMPLB and SMA/SMALB/SMK students is measured by the level of honesty in carrying out national exams. for 2017 the student integrity index increased from the previous year. For the SMP/SMPLB level, the target of 72% was successfully realized at 79.69%. Meanwhile, at the SMA/SMALB/SMK level, the target set at 74% was only successfully realized at 73.12% (SMA) and 67.73%. (SMK), (source: LAKIP Kemdikbud 2017).

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Next, it was found that the average attitude value of elementary/middle /high school students realized their achievements had reached the target. The success of this achievement cannot be separated from the activity program carried out by the Ministry of Education and Culture. One of the programs implemented by the Ministry of Education and Culture to improve the attitudes of elementary/middle/high school students is the Strengthening Character Education (PPK) program. In its implementation, the Ministry of Education and Culture also collaborates with ministries, institutions, regional governments and the community to actively implement PPK and an anti-corruption culture. By involving many parties in this program, it is hoped that PPK can become the foundation and main spirit of education and culture (KPKRT, 2022).

Miftah (2020) explained that the Indonesian Government introduced a program called Strengthening Character Education (PPK). PPK is an effort to cultivate character education in schools. The PPK program has been implemented since 2016 at all levels of education in Indonesia. The PPK program aims to encourage quality and moral education that is evenly distributed throughout Indonesia

Somad (2018) wrote that there are five characters out of twenty-one that reflect the character of industrial work culture, and this must be a serious concern for vocational school institutions to cultivate these characters, these characters are: discipline, hard work, honesty, responsibility and Entrepreneurship. Indicators of student competency achievement in these characters can be seen in the Table 1.

Table 1. Indicators of student competency achievement in these characters

No	Character	Description	Indicator
1	Discipline	Actions that demonstrate orderly behavior and compliance with various rules and regulations.	1. Arrive on time to class 2. Obey school rules or shared rules 3. Do or collect assignments according to the specified time 4. Follow the lessons and obey the teacher 5. Don't go in and out or walk around without the teacher's permission while learning is taking place
2	Work hard	Behavior that shows serious effort in overcoming various obstacles to learning and assignments, as well as completing assignments as well as possible.	1. Be active and passionate about learning. 2. Be active in learning, for example asking the teacher about material that is not yet understood. 3. Don't give up easily when doing the assignments given by the teacher. 4. Do not depend on other people to do school assignments. 5. Diligently take part in extracurricular activities to improve your personal achievements.
3	Honest	The behavior carried out in the lessons is an effort to make oneself a person who can always be trusted in words, actions and work.	1. Don't cheat (cheat) in doing your assignments 2. Do not take or copy other people's work without stating the source 3. Admit your mistakes or shortcomings 4. Hand over the items found to those entitled to them 5. Create reports based on existing data or information
4	Responsibility	A person's attitude and behavior to carry out his duties and obligations, which he should do,	1. Make a report on every activity carried out within oral and written form 2. Doing tasks without being asked. 3. Show initiative to solve internal problems

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No	Character	Description	Indicator
		towards himself, society, the environment (nature, state and culture), the country and God Almighty.	closest scope. 4. Avoid internal fraud implementation of tasks 5. Carrying out picket duties regularly. 6. Active participation in activities school.
5	Entrepreneurship	Realizing the abilities and skills he has and mastered, he has an Entrepreneurship program even though he is accepted for work in a promising business world	1. Self-control 2. Try to resolve matters 3. Be self-directed 4. Ensure that matters are resolved 5. Analyze opportunities 6. Personal control 7. problem solver 8. objective thinking

In this study, based on expert opinion, the design of work culture characteristics in industry is a work culture that is productive, disciplined, responsible and honest with the right work attitude to ensure safety and health in the workplace. Vocational education, with its various existing conditions and situations, causes students to be less able to adapt to the workplace because they still do not have the character or culture as stated by the business and industrial world. There is still no harmony, suitability and harmony between the work culture required in the industrial world and the availability of vocational education graduates. These five-character elements form the basis for the design of the instruments being built. The character of industrial work culture can be seen more clearly in the Figure 1.

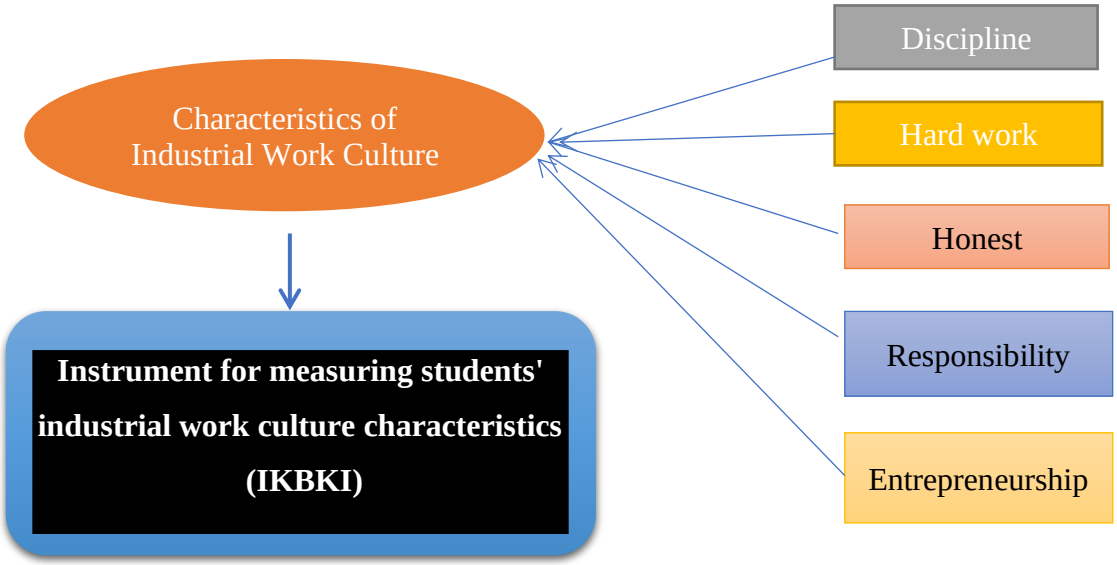

Figure 1. Character diagram of industrial work culture

Identifying the need for the development of an industrial work culture character assessment instrument for Aceh vocational school students (IKBKI). In this phase, vocational school teachers were also selected as interview respondents. The researcher selected five teachers with more than five years of teaching experience, the selection of teacher respondents to obtain data about whether or not IKBKI is built. The teacher's view of the need for the development of IKBKI will strengthen the reason for conducting the study.

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The results of interviews with seven vocational school alumni and three people from the industry mostly stated that the need to develop IKBKI as a tool to build and filter the character of the industrial work culture of vocational school students before continuing to enter the world of industry.

The following section will look at the character of the work culture of Aceh vocational students' industry. The initial plan of IKBKI was distributed to 65 students, this was carried out to ensure and answer the needs for the development of IKBKI. The character of student industrial work culture is assessed using a five-point Likert scale, namely: 1- Never (TP), 2- Once (S), 3- Once in a while (SS), 4- Several times (BRK), 5- Many times (BC). The following will explain the results of a questionnaire given to 65 Aceh vocational students. The results displayed through the following Table 2 are the results of the character of students who are still not as expected in terms of discipline, hard work, honesty, responsibility, and entrepreneurship.

Table 2. Elements and students' character who are still not as expected

No	Elemen	The character of students (Percentage)
1	Discipline	75%
2	Hard worker	80%
3	Honest	83%
4	Responsibilities	95%
5	Entrepreneurship	95%

Through the items from the five elements that were distributed to 65 vocational school students in Aceh, it was found from some of the students' answers that they still chose answers that identified that the character of the student's work culture was still at a poor level. From all of the students' answers, it was found that students still do not have the character of industrial work culture that is as expected. In addition to questions in the form of a likert scale, students were also given a number of questions to ensure the needs of IKBKI were developed, the following questions were shared:

1. The above questions are an overview of the implementation of the character of industrial work culture, according to you should the character of industrial work culture be implemented and used in the school environment?
2. Has there been an assessment of the character of the industrial work culture?
3. Should there be an assessment of the development of the character of the work culture of the Industry?

A total of 65 students which means 100% answer necessary, for question number one, for number two 65 students or 100% of students answer not yet, and for question number three a total of 65 students means 100 students answer necessary. Based on this first phase research, it can be concluded that the IKBKI needs to be developed.

4. Conclusions

The results of initial interviews with several teachers, students, industrial parties and several regional education employees who are supervisors at vocational schools found that it was necessary to develop an IKBKI instrument. It is hoped that the instrument can be used to develop and assess the industrial work culture character of Aceh's vocational students. In fact, the initial design of IKBKI consists of five elements that show the character of industrial work culture, namely: discipline, hard work, honesty, responsibility and entrepreneurship.

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Based on the theory of the importance of an assessment of a process, the reviewer is interested in developing the IKBKI instrument as a measuring tool for developing and measuring the competency of the industrial work culture character of Aceh vocational school students, for which currently the measuring instrument based on the results of observations and interviews is not yet available. In this study, the reviewer carried out an instrument development design using the Design Development Research (DDR) approach.

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