

Development of a Batak Character-Based Of Industrial Work Practices Management Model in Vocational High School Sidikalang

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Abstract: *This research was aimed at: (1) finding the model development of a Batak Character- based of industrial work Practices management in Vocational High School Sidikalang, (2) revealing Batak character-based of industrial work practices performance outputs, (3) finding out the responses of industrial and school's management of a Batak Character- based of industrial work Practices (4) identifying industrial work practices based on Batak character effective to develop student's characters.*

This R&D and experimental research was done and conducted at three vocational schools, namely private vocational high school Arina Sidikalang as the first place trial, tourism private vocational high school Prima Sidikalang as the second place trial, and state vocational high school 1 Sidikalang as the third for place trial. Those three schools are in Dairi Regency, North Sumatra Province, Indonesia. Three groups of 125 students as subject with purposive sampling techniques about 35 students for fist limited trial, 40 students on the second trial, and 50 students on the third trial. Data were collected by inventory questionnaire, in depth interviews, and documentation. Hypothesis testing was conducted by t-test with SPSS assisted computer program.

The result showed that (1) model development of a Batak Character- based of industrial work Practices management is fit to improve performance outputs in the implementation Vocational High School Industrial Work Practices, (2) outputs of model development of a Batak Character- based of industrial work Practices management are religious, discipline, cooperation, hardworking, responsibility, honest and polite higher significantly than conventional (3) Responses of organizers of Industrial Work Practices program and corporate management officer are positive in the development of student's character. (4) By t-test result, model development of a Batak Character- based of industrial work Practices management has a high level of significance and is able to effectively develop the students' character to be better and development of industrial work practices based on Batak character model can be developed as an alternative to the implementation of industrial work practices program at vocational hihg school.

Keywords - *Development, Industrial Work Practices, Batak Character*

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I. Introduction

Industrial Work Practice which is known in Indonesia language as Prakerin (Praktek Kerja Indsutri) is an educational program formed from the pattern of Dual System Education (DSE) or in indonesia language well known as Pendidikan Sistim Ganda (PSG) which is done in two places, namely in school and in business/industry. [1] Both schools and industry provide education and work experience to students as measured in the form of an assessment of the practices undertaken. Prakerin aims to produce a professional workforce, increase the linkage and integration between educational institutions with industry, and provide recognition of work experience as an educational process. Directorate of Vocational Secondary Education or SMK mentioned that obstacles perceived by schools, are: (1) geographic diversity, (2) diversity of readiness and progress of Vocational Secondary Education, (3) diversity of Vocational Secondary Education programs that have not been balanced with the surrounding industry diversity, (4) weakness of soft skill possessed by students. While the obstacles are felt by the industry, among others: (1) not yet possessed strong job structure and expertise, especially in small and medium industries, (2) there is no cost allocation plan for education development, (3) not yet have perception about profit of the Prakerin (4) lack of awareness about the effectiveness, efficiency, and quality improvement in Prakerin implementation, and (5) there is no guarantee that after Prakerin' implementation all students will have hard skills, especially soft skills.[1]

The quality development of Prakerin program must be done by the management of vocational education so that the quality of the graduates is in line with the demands of the job market. The challenges of work world

and work competence are getting higher along with technological advances and workplace dynamics demands vocational education institutions can anticipate and deal with the changes that occur by utilizing various capabilities that exist. The Prakerin model development process involves management, professional (headmaster, teacher) and all school communities including stakeholders can generate new ideas in the provision of vocational education.

In developing a Prakerin model in a school it is necessary to consider the local cultural factors in which the school is located. Prakerin is part of the educational process. Education is practically inseparable from cultural values. In preserving and preserving local culture, the process of transferring it more effectively is through education. For example in Sidikalang distric, having a majority population of Batak tribes, then in the development of an educational program needs to consider the cultural values of Batak itself to improve educational programs through local cultural approach. Cultural value in question is the value of the dominant character of a culture. Prakerin is a program that must be implemented every student of SMK. Prakerin implementation is still conventional by focusing on program objectives to develop student hard skills but to ignore soft skills. This gap causes students to be rich in skills but poor attitude and morals because of the planting of the value of the characters is igonered. If this is allowed, then it is feared that students will lose their identity and affect their quality. According to requirement analysis through observation and spreading of questionnaire conducted on some students who have implemented Prakerin before, got result that student shows aspect of knowledge is higher than attitude. Characters excavated are religious, disciplined, cooperative, hard work, responsible, honest, and polite. This requires a solution. The solution is a Character-Based of Industrial Work Practices (Prakerin) model to improve attitudes with the expectation that the skill or knowledge aspect is proportional to the attitude aspect.

Kosim Muhammad cited from The Ministry of Indonesian National Education Regulation assesses the urgency of planting character values to students in the context of the totality of psychological and socio-cultural processes grouped in: spiritual and emotional development, intellectual development, exercise and kinesthetic (physical and kinesthetic development), and taste and affection and creativity (affective and creativity development) [2]. Azzets supported the statemen, where with the cultivation of the character value to the child, the knowledge, feel and action aspect or hard skill and soft skill will run in balance because without all three education, character will not be effective. [3] Furthermore, the [2] author write through the National Curriculum Center of 2010 set 18 reference value of character that comes from religion, five principle or Pancasila, and culture are: Religious, Honest, Tolerance, Discipline, Hard work, Creative, Independent, Democratic, Want to Know, Spirit of Nationality, Love the country, Appreciate Achievement, Friendship/Communicative, Peace, Reading Fond, Care for the Environment, Social Care, and Responsibility.

In the Complete Dictionary of Indonesian Language, character is defined as the psychological traits, character, morals or manners that distinguish someone from others. The [3] author was clearly implied that the character will enable the individual to achieve sustainable growth, because the character provides consistency, integrity, and energy. Azzet noted that the people who have a strong character, will have the momentum to achieve goals. And O'Corner said that character education is a broad term that is used to describe the general curriculum and organizational features of schools that promote the development of fundamental values in children at school.[4] The Directorate of Vocational Secondary Education mention that character-based of Industrial Work Practices treatment in Vocational High School is a learning that leads to the strengthening and development of a child's behavior as a whole based on a certain value referred to by the vision of the school mission. And from the [1] author definition implies:

- a. Character-Based of Industrial Work Practices (Prakerin) model is an integrated education with learning that occurs in all subjects including at the time of implementing the Industrial Work Practice.
- b. Character-Based of Industrial Work Practices (Prakerin) model is directed at developing a child's behavior as a whole. Assuming the child is a human organism that has the potential to be strengthened and developed.
- c. Strengthening and developing behaviors in character education is based on the value that school refers to by taking into account the existing cultural elements.

Character cultivation to students involves not only students but also mentors, principals, and employees in the business / industrial world and parents. It is important that the student find examples and environments that are conducive to the good character being built in his personality. The true character of the Bataknese must be maintained and developed within the Batak generation through education. Education can not separated practically with cultural values. Geerts in Basyari noted that in keeping and preserving the local culture, the process of transferring it will be more effectively through education.[5]

Pasaribu in his book "Indigenous and Batak Cultural' War" wrote down the values of Batak tribe characters that have been attached to each Batak person are: religious, disciplined, hard work, help each other, responsible, honest, friendly, and polite. [6] The reason for choosing the value of Batak culture character in the implementation of Prakerin in SMK in Sidikalang because Sidikalang district is the area which its population is

92% are Bataknese which is cited from Central Bureau of Statistics of Dairi Regency, 2017. The seven characters become a tool to transfer the value of cultural character through the implementation of Prakerin.

So, Batak Character-Based of Industrial Work Practices model is a process of giving guidance to students to be a whole person whose character-based Batak culture in the dimensions of heart, thought, body and taste and intention obtained through Prakerin activities. Character education in Prakerin can be interpreted with value education, character education, moral education, which aims to give good decisions, maintain goodness, and realize that goodness in everyday life with a vengeance. [6] The purpose of this research is to develop model of Prakerin implementation based on Batak character in SMK Sidikalang sub district arounds.

II. Method

This type of research is Research and Development (R and D). This study has a definition as a process or steps to develop a new product or refine an existing product. [7] The subjects of this study are students who have implemented Prakerin, along with supervising teachers from 3 schools, namely: SMK Swasta Arina Sidikalang, SMK Pariwisata Prima Sidikalang, and SMK Negeri 1 Sidikalang, Dairi Regency, North Sumatra Province, Indonesia. The object of research is the development Character-Based of Industrial Work Practices in SMK Sidikalang district arounds. The research location is in Sidikalang District, Dairi Regency, and North Sumatera Province.

Borg and Gall said that research and development is a process used to develop and validate educational products. [7] Research design using oriented attitude and result design consists of 10 steps. Each step is very clear intent and purpose so for the beginner designer is very suitable as a basis for studying the model other designs. Three steps on the Borg and Gall model show a very clear, uninterrupted connection between one step and another. In other words, the system contained in Borg and Gall is very concise, yet the content is solid and clear from one Sequence to the next sequence. The steps of implementation design are as follows:

- a. Data collection
Data collection through Focus Group Discussion (FGD) is an internal factor analysis; Strengths and weaknesses, external factors; Opportunities, and threats that schools have in the implementation of Prakerin in the previous school year.
- b. Research Planning
Analyzing these factors for research and model development. Prepared research planning, research methodology, data analysis technique plan, and road-map research to be developed into a research product.
- c. Development Model
Define the model. Once the data has been collected and needs analysis has been done through FGD and the existing theory, then a suitable model is established to overcome the existing weaknesses and threats. The model chosen is the Prakerin Management Model Based on Batak Character. The selected characters are: religious, disciplined, hard work, helpful, responsible, honest, friendly, and polite
- d. Phase Trial I and Model Revision
The first limited model test at a school in Sidikalang sub-district. Data collection of test results I for revised model.
- e. Phase Trial II and Model Revision
The testing of the model is limited to II at another similar school in Sidikalang sub-district. Data and results are collected to revise the model.
- f. Stabilization Model and Improvement Model
Collection of limited I and II test results for reanalysis and model stabilization and model refinement, user manual and assessment format.
- g. Phase Trial III and Model Revision
Testing model III in a similar school at a wider level. As a benchmark selected rayon schools.
- h. Stabilization Model and Improvement Model
Development and assessment instruments of character development of Prakerin participants. Data were collected for analysis and compared with phase I and II trials.
- i. Dissimilation
Solving existing problems by involving various experts in the field of Prakerin to be asked for input and validation of Prakerin model developed.
- j. Implementation
Disseminate information / socialization to all SMK in Sidikalang Sub-district by focus group discussion (FGD) at Private Vocational High School Arina Sidikalang.

This research and development is a mixed type research between qualitative and quantitative research methods. Qualitative research methods are in the early stages of development of the survey and initial data collection of a condition to be targeted. While the quantitative research is in charge of testing the validity of the

product and product reliability. To collect survey data, information about Prakerin's objectives, Prakerin process, characteristics of students and their environment, specific objectives are required. Information about Prakerin's goals is obtained from document analysis, i.e. internal and external factor analysis. The analysis used is SWOT analysis (Strength, Weakness, Opportunity, Treats). To obtain data about the effectiveness of Prakerin based Batak character management used observation techniques, interviews and questionnaires. Instruments are developed by researchers in the form of questions.

Observations were made to find out firsthand what was happening in the field when students practiced in industry, how did students perform activities while working and fill in existing leisure time. Then the interview was conducted to gather information about what is needed from the school's supervising teacher and also the industry's tutor. Interviews were also conducted to school management (Headmaster, Vice Headmaster, and Chairman of Industrial Work Practices). Meanwhile, the questionnaires were conducted to find out the students' responses to the Prakerin process. For this purpose, data were collected from students using the old Prakerin management model with students using Prakerin Character-Based of Industrial Work Practices (Prakerin) management to find out whether there were significant differences in the use of both models. The items in this questionnaire include the effectiveness of the Prakerin model, starting from the briefing stage, implementation, development, and evaluation. The whole stage aims to determine whether the Character-Based of Industrial Work Practices (Prakerin) model has advantages compared with the old Prakerin model. Characters excavated are; Religious, disciplined, hard work, cooperation, responsibility, honest, and polite. Students targeted in this questionnaire are students who are sitting in class XI from various departments.

III. Results And Discussion

The results of the study include the results of document analysis and literature, interviews, observation results, and questionnaire results. The results of document analysis and literature are as follows. The purpose of Prakerin implementation is 2 (two) that is general and special. Common goals are:

- a. Competence Fulfillment according to curriculum demands.
- b. Implementation of Competence into the world of work.
- c. The growth of work ethic / Work experience.
- d. Strengthening link and match relationships between SMK and Industry.
- e. Improve the efficiency of professional quality education and training process.

While the specific purpose are:

- a. Produce SMK graduates with knowledge, skills and character; Religious, Discipline, Cooperation, Hard Work, Responsible, Honest, and Polite through Character-Based of Industrial Work Practices (Prakerin) model.
- b. Maintaining the Character Development of students to better on the character of Religious, Discipline, Cooperation, Hard Work, Responsible, Honest, and Polite.
- c. Evaluating the character development of students; Religious, Discipline, Cooperation, Hard Work, Responsible, Honest, and Polite through Character-Based of Industrial Work Practices (Prakerin) model.
- d. To get Prakerin report Based -Character into be feed-back material in determining policy and decision making
- e. Establishing a harmonious relationship between school and other related institutions.

The first interview was conducted on the headmaster, Drs. Asi Sitanggang. The result of interviews obtained was that the implementation of Prakerin prevailing in the previous period at SMK Swasta Arina Sidikalang was still conventional. Both students and teachers considered Prakerin a program that was the requirement to finish studying only. Interview results shown that the character of students after implementing Prakerin tendt to be bad. Students show a lazy attitude of learning. Many students were returned by insutry place to the school on the ground of breaking the rules made by insutry. In addition, insusrtly was also not involved in the determination of Prakerin's implementation policy.

The result of the second interview with Vice of Headmaster was that between school and insutry were not fully linked and matched. School did not have a letter of agreement or Memory of Understanding (MoU) with industry. In search of the place Prakerin became the student's responsibility. The next interview was conducted to the head of Prakerin's work program. The result of the interview shown that schools had difficulty in synchronizing the implementation schedule of Prakerin with industry requirement. Limited places forced the school to accept the conditions of students carrying Prakerin overlap. Besides, the schools also still had to compete with other similar schools in Prakerin student placement due to the limited number of industry with the same Prakerin schedule. This condition became very difficult.

The last interview result was with one of Prakerin's tutors. From the interviews obtained information that the implementation of Prakerin in SMK Swasta Arina Sidikalang in the previous period did not hold debriefing of Prakerin with a programmed method. The debriefing was done in just one day. And in the implementation of

Prakerin guidance schedule, supervising teachers only monitored student attendance at premises only. In addition there were students who were forced to return by industry to the school because the student broke the rules in industry.

After the Character-Based of Industrial Work Practices (Prakerin) model was implemented at SMK Swasta Arina Sidikalang, from a number of questions raised in the questionnaire to the principal, vice principal of the curriculum, chairperson of Prakerin Group, school counselor teacher, the result of the answer to the question indicates Prakerin's management is better. Industry is involved in the joint policy determination on Prakerin implementation. Students show better characters.

Meanwhile, the results of the questionnaire analysis are divided into 2 parts: respondents of the old model and the respondents of the new model Prakerin implementers. For respondents the old model of Prakerin contains questions to acquire students' behavior in religious character, discipline, hard work, cooperation, responsibility, honesty, and courtesy. While for respondents Prakerin new model namely Character-Based of Industrial Work Practices (Prakerin) model divided into 3 types of questionnaires; Questionnaires for the phases of preparation, stages of coaching, and final evaluation stage.

The results of questionnaires on the old user Prakerin user respondents were as follows on Figure 1, and based on the Figure 1, data obtained from 35 respondents who had implemented Prakerin, the character of students of SMK Swasta Arina Sidikalang using the old Prakerin management model, with an average of 73.35% was still far from very good category. This was because Prakerin's implementation process was still conventional, where Prakerin was considered as one of the requirements to complete education in vocational school. Prakerin was not well managed, not implemented based on needs and standards of implementation that should be. Not requiring Prakerin's debriefing, students were allowed to seek a place of practice until their lodging, even the guidance process did not work properly. The main objective of Prakerin's implementation with this model was to prioritize skills by overriding aspects of attitude.

But after the first phase trial, it could be seen the results of test model as shown in the Figure.2. And from the Figure 2, data obtained from 35 respondents who had implemented the Character-Based of Industrial Work Practices (Prakerin) model, the character of students SMK Swasta Arina Sidikalang with the average percentage of 91, 62% was in excellent category.

To find out whether the Character-Based of Industrial Work Practices (Prakerin) model has significant differences with older Prakerin model in improving student character; Religious, disciplined, hard work, cooperation, responsibility, honest, and polite, then both models are tested by first collecting initial data from each sample then found Mean, Standard Deviation, Standard Error, and Standard Difference Mean both samples Then t-tested. And from the test results found to = 7, 32 and degrees of freedom (DF): $(N1 + N2 - 2) = 35 + 35 - 2 = 68$ with t- table as follows:

— At 5% significance level: t-table = 2.00

— At a significance level of 1%; t-table = 2.65

Since the result to = 7.32 is much greater than from t-table, both at the 5% significance level and 1% significance level are: $2.00 < 7.32 > 2.65$. Thus, the null hypothesis is rejected. Means between the Character-Based of Industrial Work Practices (Prakerin) model (new model) with conventional Prakerin model (old model) has significant Mean difference. Furthermore, after experimental model of 3 (three) times at different schools, it can be seen the results of test as in the Fig.3 and Table.1.

From Table.1 and Fig.3 obtained from 125 respondents who have implemented the Character-Based of Industrial Work Practices (Prakerin) model, hence can be drawn conclusion as follows:

- a. The results of the description of the data show that in general the students of the participants the Character-Based of Industrial Work Practices (Prakerin) model has no difficulty in carrying out industrial practice activities. The entire character has increased with different significance. Although the average character of hard work shows lower numbers compare with other characters, but generally have been categorized well.
- b. Output of the Character-Based of Industrial Work Practices (Prakerin) model shows better character improvement. This implies the use of new models in Prakerin management by expanding the number of respondents, superiorly and convincingly can improve the character; Religious, disciplined, hard work, cooperation, responsibility, honesty, and courtesy of students become more positive.
- c. For each trial I test to trial II, from trial II to trial III always shows a significant increase. This means that prior to testing the model in the next stage done improvement and refinement of the model.
- d. The Character-Based of Industrial Work Practices (Prakerin) model has been able to demonstrate its effectiveness and effectiveness as a model of Industrial and Business Practices Management today and in the future.
- e. Response management of managers about the implementation of the Character-Based of Industrial Work Practices (Prakerin) model is also in high category. It shows the level of acceptability of the

model to be held in their school environment. Including their perceptions of the Prakerin manual, Prakerin's goals, and soft skills that can be trained in this model.

IV. Figures and Tables

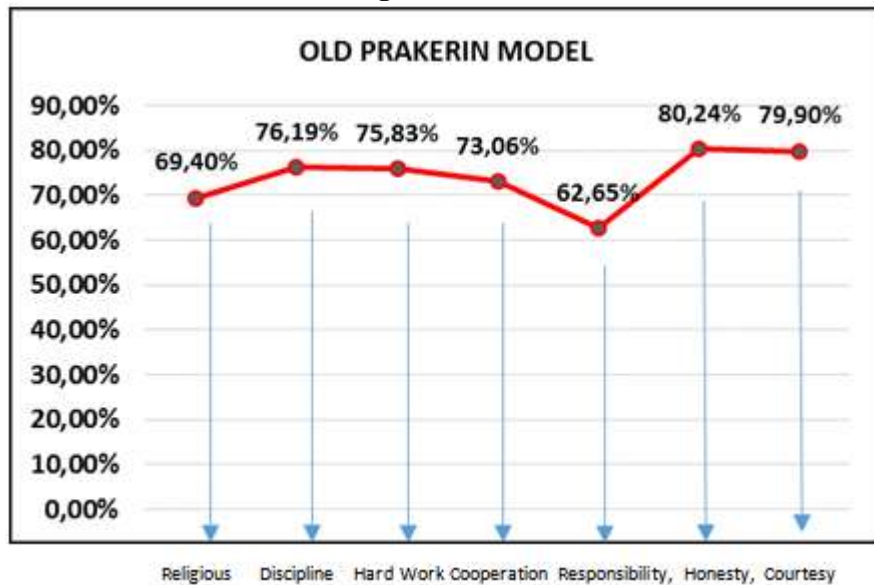


Figure 1. Percentage of student character of the old Prakerin model implementation at SMK Swasta Arina Sidikalang

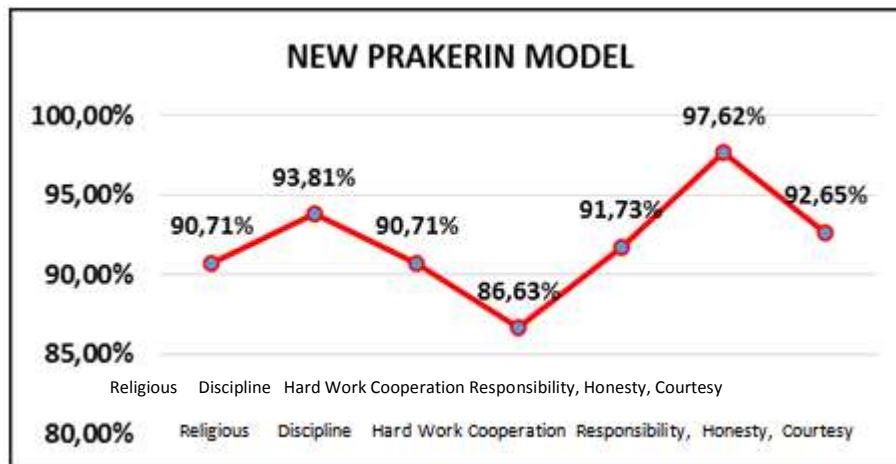


Figure 2. Percentage of student character of new model Prakerin (Batak Character Based) in Private SMK Arina Sidikalang

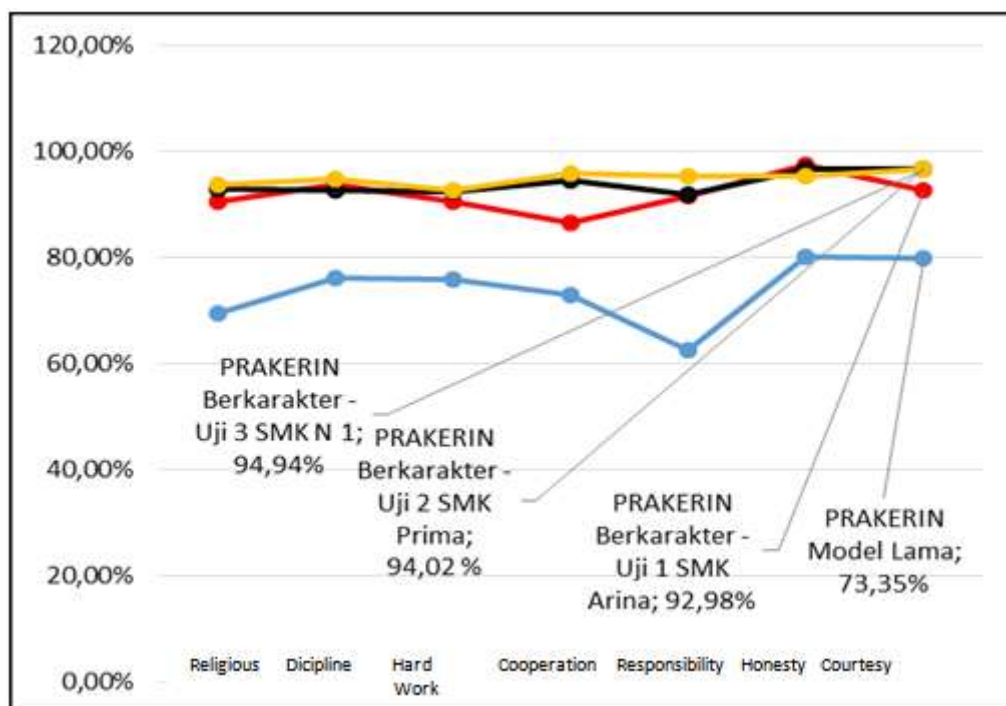


Figure 3. Testing results for 3 times Summary of Trial and Limited Trial I, II, III

Table 1. Summary of t-Test Results of all intergroup variables (significance 0.05)

Activities	N	Average	Deviation Standard	t - count	DF	t- table	Summary
Experiment 1	35	91,62	10,88	7,32	68	2,00	Significant
Control 1	35	73,35	21,17				
Experiment 2	40	94,02	22,44	6,17	73	1,99	Significant
Control 1	35	73,35	21,17				
Experiment 3	50	94,94	11,12	8,64	83	1,99	Significant
Control 1	35	73,35	21,17				

V. Conclusion

From the analysis data and discussion in this study can be drawn the following conclusions:

- a. Based on the experimental and development results, the Character-Based of Industrial Work Practices (Prakerin) model in SMK Sidikalang sub-district proved improving the quality of students' character based on industry experience which includes 7 (seven) characters: religious, discipline, cooperation, hard work, responsibility, honest and courtesy .
- b. Output of the Character-Based of Industrial Work Practices (Prakerin) model: soft skill of students in model class is significantly higher than conventional class. The results of the model test already meet the requirements of research and development that include: accuracy, realistic, and terms of benefits. Experimental data and information are analyzed in accordance with scientific techniques such as instrument validity and reliability, respondent requirements, experiment class classification and control, documentation, and compliance with other provisions or research requirements.

This model proves to be effective for the learning of industry experience subjects with high level of cooperation and commitment by the school and industry. Suggestion of utilization: (a) apply this model widely in big city area (as well as research setting) and other cities with attention to local culture element, student characteristic and school environment, (b) achievement model of the Character-Based of Industrial Work

Practices (Prakerin) model is terminal destination is not a final destination, means that this model still needs other development and testing steps involving training center with broader industry spectrum and more flexible area; (C) the need for similar research on other areas of the Character-Based of Industrial Work Practices (Prakerin) model at Vocational High School.

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