



## Soft Skills Analysis of Educational Student in Vocational Study Program of Mechanical Engineering Ivet University

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### Abstract

Soft skills are very needed for every educator. Soft skills encourage the technical skill in self or even institutional development. This research was aimed to analyze 11 kinds of soft skills that is important for prospective educators to have. This research was done in form of descriptive analysis by using quantitative approach. The sample of this research was the students of IVET University as prospective educators for Vocational School in Technological Engineering field. The number of the sample was 80 students. The result showed that almost all respondents have good soft skills; the score was 6859 by 9600 total score. It's same with 71,4%. The highest score was reached from indicator of enthusiasm at work, that was 86,4%. The lowest score was got by the capability of prospective educators from indicator of creative and innovative thinking, that was 51,9%. Based on this research, educational method or training in increasing the students' soft skills for prospective educators have to be done, especially in indicator of critical, creative, and innovative thinking.

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## INTRODUCTION

Educator is a profession that is aimed to develop human resources. A good educator is who has certain skills to support the profession. Those skills are divided into two aspects; hard skills and soft skills. *Sapate and Bawge* (2017:12) explained that hard skills and soft skills are very needed for developing human resources. But soft skills have important role for someone to increase the professionalism at work or even the career path in every field. Unfortunately, based on data from Harvard School of Business said that 90% hard skills are given in school and only 10% soft skills are given. In fact, soft skills have bigger role in working field, about 85% (Nurudin, 2015). That problem is also occurred on teacher training education program, especially vocational teacher program. The study of soft skills is very rarely done in academic sphere. The position of soft skills is only as an additional aspect. Whereas, good soft skills are needed to increase career and professionalism as educator.

Good soft skills are very useful for prospective educators as supporting facilities for increasing the career on working field. The ability cannot be reached instantly or by short trainings, but it can be reached by habitual actions that can be a character. The soft skills will be rapidly developed if it is support by good environment. It is because the soft skills are life skills. *Elfindri* (2010:67) said that soft skills are life skills for self, group, and also our relationship with God. Positive soft skills will get someone to have good relation in society. The communication skill, emotional skill, language skill, group skill, has moral and ethics, good manners and spiritual skill.

Based on *Sudana, et al* (2015: 19), there some aspects of soft skills that's needed for prospective educator, they are: (1) self discipline; (2) responsibility; (3) enthusiasm at work; (4) problem solving ability; (5) collaboration; (6) communication skill; (7) personality; (8) social attitude; (9) critical thinking; (10) creative and innovative thinking; (11) belief; (12) self motivation. *Rokhimawan* (2012:53) stated that

the benefit that can be got by educator who has good soft skills are: (1) having good capability in doing interpersonal relationship; (2) taking right decision; (3) communicate effectively; (4) being a prestigious teacher; (5) getting a good impression in developing professionalism; (6) giving a good example for students; (7) being succeed. If educator can have such good soft skills, the career will increase significantly.

Vocational Education of Mechanical Engineering of IVET University is one example of program in educational university. This study program is due to vocational field. One of the aims of the PVTM study program of IVET University is to create a vocational educator of mechanical engineering. As an educator in vocational field, the soft skills are very needed to help developing hard skill that is remain. Beside to improve hard skills or technical skill in mechanical field, good soft skill also will help educators to be exemplary and inspiring teacher for students in the future.

Analysis of soft skills for prospective educators is needed for analyzing kinds of soft skills that should be increased and to strengthen the skills. The result of this analysis is used to determine the next step to create graduate who has ideal soft skills of prospective educator. Effectively, the analysis of ability is done for student early in beginning semester. Because if something negative is found on students, the policy makers of the university can take an action to solve.

The analysis of soft skills research is really needed to measure the prospective educators on beginning semester; about first to fourth semester. The reason is to reveal the fact about soft skills remains. The deficiencies and excesses will be discovered by the analysis. Result of the research also can be use to determine the solution on problem occurred, as an input for prospective educators on increasing soft skill and input for the policy makers to do the action of amelioration if needed.

## METHOD

This research is conducted using descriptive analysis by quantitative approach, in which it will reveal the ability of soft skills that is owned by prospective educators of IVET University on Study Program of Technical Engineering with 80 students as the sample without measure the influence from factors or binding variables (Sugiyono 2015:14). The students as sample are the students on first until fourth semester. In gathering data, the writer uses questioners from respondent and analyzes them using descriptive quantification technique.

The following are steps on this research: (1) conducting the questioners based on criteria of soft skill that is needed by prospective educator; (2) validation of questioners from soft skills expert; (3) determining respondent, is that prospective educators on vocational field; (4) spread the questioners to the respondents for filling; (5) collecting the data result; (6) data analyzing; (7) summarizing the result of research; (8) concluding the result of research; (9) giving advise to strengthen the soft skills of prospective educator.

The conducting of questioner is based on 12 aspects of soft skills that is very needed for prospective educators. The aspects are shortened by 11 criteria by combining aspect of conviction and self motivation. Both aspects are combined as they have attachment; self motivation will appear by having strong conviction. That 11 aspects are consist of: (1) self discipline; (2) responsibility; (3) enthusiasm at work; (4) problem solving ability; (5) collaboration; (6) communication skill; (7) personality; (8) social attitude; (9) critical thinking; (10) creative and innovative thinking; (11) belief and self motivation. From those criteria, 30 questions appear to use for analyzing soft skill ability that is owned by the prospective educators.

**RESULT AND DISCUSSION**

The result of research on self discipline criteria shows that almost all student have good soft skill; 74,5% for score. It is taken based on the students who always hold their commitment they make. Only few students that like to break

their commitment. So as some students that declare about breaking rules, more than 80% students state that they are obedient in the rules. However, the students also say that one of factors influence the discipline is indolent. Some students say that the indolent is one of aspect which make self discipline is low. The aspect is very harmful. The students state if they become an educator or teacher, one important thing to be exemplary is self discipline. The self discipline is should be strengthened, because it is a difficult thing that is done without self mastery. Lewis (2005) also elaborates that self discipline is self mastery, self restraint, self reliability, and self independence. Self discipline is very hard to do without powerful willingness and habituation. Self discipline is one of soft skill capital that's always used in the work. It is also important for educator because an educator will become role model for the students.

**Table 1.** Analysis results of self discipline indicator

Ind.	Total Score	Max Score	%	Criteria
Self Discipline	1192	1600	74.5	Good

**Table 2.** Analysis results of indicator of responsibility

Ind.	Total Score	Max Score	%	Criteria
Responsibility	738	960	76.9	Good

Responsibility is one of important thing that should be owned by educator. Sukiman, et al (2016) stated that characteristics of responsibility are doing duties and obligations earnestly, and ready to get the consequence. The result shows that students have responsibility with criteria 76,9%. Based on analysis result, the students think that responsibility is very important to be owned by every people and has main priority. University students as prospective teacher think that responsibility is an absolute thing owned to support educational career. They state that responsibilities have to pressure to students. They also say that responsibility will help the prospective educator to take the right decision on teaching. The analysis result also

shows that responsibility will become basic power on keeping a sense of belonging in work environment, so that the sense will form sensitivity to do responsibility in the work. The attitude will be one important thing to create right policies based on the work need.

**Table 3.** Analysis results of indicator of enthusiasm at work

Ind.	Total Score	Max Score	%	Criteria
Enthusiasm at Work	553	640	86.4	Very Good

Enthusiasm at work is one of criteria that get highest score from this soft skill analysis to prospective educators; it is 86,4%. It can be proven by the result of survey that shows if students have had willingness to be an educator or teacher. Most of the student state that their desirability has grown on their mind. It becomes their motivation to have an enthusiasm at work as educator. Only few prospective educators think that the problem is low salary. It shows that in fact they have a high enthusiasm at work. It makes the score in this criteria is the highest. As mentioned by Mamun (2012), soft skills are special skill which can increase enthusiasm to work and increasing career. This skill can help the students to develop their work and will make they have self independence to work at work environment that has good orientation of performance.

**Table 4.** Analysis results of indicator of problem solving ability

Ind.	Total Score	Max Score	%	Criteria
Problem Solving Ability	267	320	83.4	Very Good

This analysis is identified very good in result. Score in this indicator is 276 from total score 320. The percentage of the result is 83,4. It is based on students that can face the problem with their self confidence. Beside that, they also believe that think simply and always focus on working are the solution to solve the problems. One of the problems that may come to the students in work world is career transition. The

problem can be difficult to solve if the student can't think practice. McCale (2008) stated that advantages of soft skill for students is not only on theory applying to practice activity, but also can give a chance to develop skill that is needed on their career transition. By thinking practically, they will do their transition easily.

**Table 5.** Analysis results of indicator of collaboration

Ind	Total Score	Max Score	%	Criteria
Collaboration	517	960	53.9	Average

Collaboration is one of obstacle for the students on PVTM Study Program IVET University in developing soft skills. It is proven by only few of them that ever joined an organization. Whereas the good experience in organization helps the prospective educator to make collaboration, in which it is very needed for prospective educator in facing real work on teaching or educating. When they joining an organization, most of them only became a member, not have important role. From 80 respondents, only 13 students have ever become a leader on organization. In organization that they have ever joined, about 26 students said that they never do collaboration with other people in different race, ethnic, and religion. 43 students said seldom, 8 students were sometimes joined, and 13 students said often. From the data, can be stated that some students are good enough with the score is 517 from 960 in maximum score, with criteria is average. Special treatment is needed for students to be usual on joining an organization, not only in university, bur also in society. Literature study that was conducted by Radtke (2019:8) supports the importance of collaboration. The result shows that many positive advantages can be got when teachers from many different background do a collaboration or cooperation.

**Table 6.** Analysis results of indicator of communication

Ind.	Total Score	Max Score	%	Criteria
Communication	642	960	66.9	Good

The analysis shows that on communication criteria, prospective educator in IVET University is good. Total score gained is 642 from 960 maximum score; it is 66,9%. Based on result of survey, most of students said that they often communicate with some new people. It means that they are brave to do self actualization. Most of them also ever did a presentation or discussion in the classroom. They said that they are confident on it. It means that they have sufficient capital in communicating with others to prepare themselves to be a good educator. Good communication can help them to boost up their career in their workplace. Rani (2010:1) stated that soft skill can give powerful practice orientation to students and help them to set their skills up and increase their communication skill, the using an effective English, business correspondence, presentation, team building, leadership, time management, group discussion, interview and interpersonal skills. The skills can play the important role in self building for all students for rising their career.

**Table 7.** Analysis results of indicator of personality

Ind.	Total Score	Max Score	%	Criteria
Personality	882	1280	68.9	Good

The analysis shows that the students have good criteria. Total score reached is 882 from 1280 total score, or 68,9%. It is showed by 50 students that seldom come late in an event, 27 students said that they never come late, 3 students often come late on some occasions, and no one that always come late. Beside that, they also stated that they have a good perseverance. Most of them stated that they want to do their duty even though it is very difficult to do. A high willingness to study is also showed by the students. The analyzing result showed that they want to learn something new to support their career development. It means that they have a good personality to become a good example for their students in the future. A problem that occurs in this indicator is about their honesty. Based on survey, about 49% students are

identified dishonest, and 46% have a good honesty. This result is almost the same. This problem is should be solved as the honesty is one of the most important thing for someone in forming their character. A good character is a basic soft skill that is very needed in every working world. Sudjimat (2010) stated that soft skills, which cover basic skill, self skill, and social skill are the most important thing in practical activities, especially related to K3.

**Table 8.** Analysis results of social attitude indicator

Ind.	Total Score	Max Score	%	Criteria
Social Attitude	1274	1600	79.6	Good

The analysis shows that the students get good for criteria, with total score 1274 from 1600 total, or about 79,6%. This result is based on students' statement about closeness to neighbors, colleagues, or schoolmates. And the result is: about 45% students have very good relationship with their neighbors, 35% is good, and the rest is just good enough. The analysis result is also showed that students are known by their schoolmates; 40% is very good, 41% is good, and the rest is good enough. The familiarity of students in learning environment and society showed that they have a very good personality with about 28%, 43% is in good personality, and 30% is good enough or average. It can be concluded that the students have a good social attitude. The attitude will be always remained with them as prospective educator to serve and help the society at their neighborhood or school. The attitude also will help them in adapting at all living environment, so that they can reach good career. It is supported by Majid, et al (2012) with their research towards 188 students of business management at some universities in Singapore. The result shows most of respondents feel that soft skills are very useful to run the social interaction and career.

**Table 9.** Analysis results of Indicator of critical thinking

Ind.	Total Score	Max Score	%	Criteria
Critical Thinking	383	640	59.8	Average

The analysis shows if in critical thinking indicator, the students have average. From 640 in maximum score, they get 383 or about 59%. That is based on students' satisfaction of decision or regulation at society. The data shows that they have less of initiatives to develop something remain. They only follow and don't have initiative to modify or even develop everything discovered. If this situation cannot be repaired, so the possibility to be the leader or pioneer at the future will be impossible. Students should have dissatisfaction toward something remain, so that they will create a better change in the future. This skill can be created by learning method that develop the critical thinking. Because of that, the soft skill will significant increase in this indicator. Sunarto (2015) on his study also support this statement. Based on his research, every student will show many kinds of soft skill they have. Soft skill can be increased by using learning models which prioritize the cognitive process based on clarification type and personality, so that it can create critical thinking.

**Table 10.** Analysis Results of Indicator of creative and innovative thinking

Ind.	Total Poin	Max Score	%	Criteria
Creative and Innovative Thinkin;	166	320	51.9	Average

The result of this research states that the students get total score 166 from 320 in maximum score. The percentage is about 51,9% with criteria of average. It is based on evaluation from the students itself about their attitude as a follower. Or in the other word, they always do their duty as they get based on instruction or based minimum standard. They don't want to make innovation or improvement. Beside that, they usually wait to get work without having initiation to ask first. It is needed an special training to improve the skill in this indicator. It's because to be a good leader, someone should have a creative and innovative thinking to create a new invention or to solve problem using certain ways. Tarus, et al (2017) stated that a manager is a main innovator and hiring staffs

that have enthusiasm at work, so that it can create a greater creativity.

**Table 11.** Analysis Results of Indicator of belief and self motivation

Ind.	Total Score	Max Score	%	Criteria
Belief and Self Motivation	245	320	76.6	Good

In belief and self motivation, the students believe that being a teacher will bring them toward success in the future. It's showed by good percentage, that is 76,6% students stated that being a teacher will bring them to the success. This indicator has linked with indicator before which stated that they are very motivated to be an educator. By seeing high belief and motivation, the students are believed to be prospective educator who able to bring success for them and their students in the future. It is supported by study from Woo (2013:291), the result or research showed that motivation and cognitive load have canonical correlation which significant with their performance. So if someone have motivation and good cognitive load, a good performance also will be reached easily.

**Table 12.** Criteria of total indicator

Ind.	Total Score	Max Score	%	Criteria
Total	6859	9600	71,4	Good

Based on the total number of all indicators given in this research, the PVTM students of IVET University as prospective educators have good soft skills, with the total score 6859 from maximum score 9600 or 71,4%. This data showed that the students have had good capital soft skills to be educator in vocational school. Despite of some indicators that should be increased, that is on collaborations, critical thinking, and creative and innovative thinking.

**CONCLUSION**

Soft skills of prospective educator students in PVTM IVET University showed the good

result. The soft skills are analyzed based on 11 indicators. Getting the result of analysis 86,4%, showed that the students have great enthusiasm at work and have ability on solving problem by percentage 83,4%. Analysis result on indicator of self discipline, responsibility, communication, personality, social attitude, belief and self motivation of the students showed good criteria by percentage 73,9%. And criteria of good enough 55,2% is gained for indicator of collaboration, critical thinking, creative and innovative thinking. It means that the students have fulfilled soft skills which are needed for prospective educator by giving reinforcement on skills of collaboration, critical thinking, creative and innovative thinking.

## SUGGESTIONS

It is needed the way to defend indicator with very good criteria, those are indicator enthusiasm at work and self confident in solving every problem. Indicator that has good criteria should be increased by giving reinforcement of soft skills on learning models or trainings. Every agency have to think the right way to increase students' skill on indicator of collaborations, critical thinking, creative and innovative thinking by many models of education or soft skills training about the case.

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