CFA on Social Skill Instrument Development in KKN-PPM

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Abstract. Tri Dharma Perguruan Tinggi was an important component that needs to be implemented in a balanced and integrated way to create qualified graduates. The presence of KKN-PPM program in universities became one of the ways to increase students' competence through community service activities. This research aims to develop the social skills instruments in the implementation of KKN-PPM for students of Sultan Ageng Tirtayasa University. The sample in this research was 200 students of Sultan Ageng Tirtayasa University who follow the KKN-PPM program. They were selected by using simple random sampling method. The research data were analyzed using factor analysis CFA (Confirmatory Factor Analysis) with Lisrel 8.80. The products can be used to provide information to lecturers in order to prepare and improve the students' competence in the implementation of KKN-PPM program especially in social skill.

Keywords: social skill, KKN-PPM program, CFA, development.

INTRODUCTION

Tri Dharma Perguruan Tinggi is an important component in higher education which includes teaching, research, and community service. The three aspects of the Tri Dharma Perguruan Tinggi are carried out with balanced, harmonious and integrated proportions in the hope that the university graduates can be knowledgeable human beings, sufficient in their respective fields, able to conduct research, and willing to devote themselves for the benefit mankind in general and Indonesian society in particular in the future.

One form of community service that must be followed by students on the level of Strata 1 (S1) is a Kuliah Kerja Nyata (KKN). On the basis of maintaining the image and quality of KKN activities, it is appropriate that KKN activity is more contextual by changing the development paradigm into empowerment paradigm, Kuliah Kerja Nyata into Kuliah Kerja Nyata-Pembelajaran Pemberdayaan Masyarakat (KKN-PPM) Perguruan Tinggi (PT) throughout Indonesia is very important to be done.

Basically KKN-PPM activity is a social interaction activity involving various parties. In KKN-PPM activities, we will encounter various forms of social interaction, which can be broadly classified into three patterns or forms of social interaction, namely: (1) the interaction between individuals; (2) the interaction between persons and groups, and vice versa; and (3) the interaction between groups (Gunawan, 2010).

Many factors that cause the implementation of KKN-PPM to be ineffective, one of them is related to the ability of students (KKN-PPM participants) in communicating and communicating between KKN-PPM participants and with the local community, more precisely is the ability of students in interacting with others, one's ability to interact with others is called social skills. It was described by Sail & Alavi (2010) that career advancement among employees is determined more by the acquisition of social skills and social values rather than by technical skills alone. It means that social skill can effect the students performance on KKN-PPM.

Social skills are specific behaviors that are raised in certain situations in order to be able to perform and achieve relationships or interactions with others effectively so as to be socially competent and acceptable individuals in the community. Slomowski and Dann (1996) defined social skill as process which help person to understand and predict behaviour of others. This cause to control his behaviour and set his social interactions according to environmental conditions to communicate effectively with others.

The level of a person's ability in social skills directly relates to his social growth and is demonstrated in his socially acceptable behaviour (McClelland, Morrison, 2003). The concept of social skills has been variously defined by the
psychologists. Schneider et. al. in Alavi, Savoji & Amin (2013) defined social skills as an instrument for connecting a person to the environment.

According to the result of previous research, social skill can had effect on communication skill. Individual communication skills develop related to communication experiences of family members, relatives and friends. But, orphan children have no certain and stable behavioural patterns with others because they are kept in institutes and they did not experience any family relationship. They face with more communication problems because of weaknesses in social skills. Relationship disability leads to communication failure and they cannot meet their individual demands and wishes. Relationship failure reduces individual self-esteem (Babakhani, 2011). Social skills within a person can be seen through peer relationships, self-management, academic ability, compliance, and assertive behavior (Hertenjung, Partini & Prastiti, 2008; Thompson, 1996; Cartledge & Milburn, 1995; Matson, 2009).

Improving social skills are rather important for personal and professional developments of the people since improving these skills help people to become better relationship builders (Gokel & Dagli, 2017). Social skills can be conceptualised as a specific class of behaviours that an individual exhibits in order to successfully complete a social task (Gresham, 2016). Individuals who possess superior social skills will engage in higher levels of eye contact under circumstances where eye contact is appropriate. Level of social skill was operationalized as reported level of immediate past dating experience. It was assumed that students with more experience would have had greater opportunity to develop skills (Cherulnik, et. al., 1978).

Implied in Deil-Amen (2006) idea is that social skills (and social values) can and should be taught to low income students to remove whatever barriers they may have to climb up the career ladder. In fact social skills and social values or the human and social competence are integral partners of technical knowledge and skills to ensure good job performance in organizations.

Because of the social skill is one of the most important in the KKN-PPM activities, the university had to know the social skill of the students. The problem is the instrument of social skill was not developed yet. So, the main purpose of this study was to develop the social skill instrument on KKN-PPM.

METHOD

This study was a developmental research model with Confirmatory Factor Analysis (CFA) technique. The variables involved in this study is social skills. So the result of this research is a standard instrument of social skill measurement in the implementation of KKN-PPM. The data used in this study is primary data in the form of response given to the items on the instrument of social skill by 350 students involved in KKN-PPM program. All of the respondents were selected by using simple random sampling method.

Before used in field test, the social skill instrument was validated by 20 raters whose expert on measurement. The raters studied about the conceptual definition, operational definition, dimensions, indicators, dan the items. Then, it was validated to measure the empirical validity by using 150 respondents whose involved in KKN-PPM. On the field test, the social skill instrument was tested to 200 students who oinvolved in KKN-PPM.

The research data processing that has been collected from the raters was analyzed by using Aiken’s V. The data which has been collected from the empirical test was analyzed by using Product Moment Cosrelation to find out the item validity and Alpha Cronbach’s reliability to find out the instrument reliability. While the data which has been collected from the field test was analyzed in two stages: (1) First Order Confirmatory Factor Analysis and (2) Second Order Confirmatory Factor Analysis.

RESULT AND DISCUSSION

Based on the theories, the social skill consist of five dimensions and each dimensions consist of indicators. The dimensions and the indicators of it can be explained in table below.

| No | Dimensions       | Indicators                                      |
|----|------------------|------------------------------------------------|
| 1  | Peer Relationship| Have participation to get along                 |
|    |                  | Become a favorite individual                    |
|    |                  | Empathy and sympathy for peers                  |
| 2  | Self Management  | Emotional controlling                           |
|    |                  | Receive criticism from others                   |
|    |                  | Cooperating with others                         |
| 3  | Academic Success | Able to learn independently                     |
|    |                  | Activeness                                      |
| 4  | Compliance       | Compliance follows existing regulations         |
|    |                  | Confidence                                      |
| 5  | Assertive        | Responsibility                                  |
|    |                  | Express displeasure                             |
The draft of social skill instrument was developed consist of 69 items. Based on the raters found that 69 items were valid (Aiken’s V > 0.200). While based on the empirical test by using Product Moment Correlation, found that there were 9 invalid items such as item number 31, 33, 34, 41, 46, 50, 54, 66, and 68. It means that for the field tests, the social skill instrument consisted of 60 valid items with Alpha Cronbach’s reliability was 0.938. It means that the social skill instrument were reliable with 60 valid items.

The standardization of social skill instrument was carried out using Confirmatory Factor Analysis (CFA). To find out the good points, namely by looking at the loading factor found in the path coefficient of the structural model and measurement model. The standardization of the instrument was done so that the items in the instrument of social skill were feasible to be used as a measure of data collection in research. Factor analysis in this study used Confirmatory Factor Analysis (CFA) with Lisrel 8.80 full version. The measurement model was based on the Goodness of Fit criteria, which is to test the compatibility of theoretical models with empirical data.

Based on the entire series of trials and revisions twice, the standard instruments were obtained to measure the social skills of the students in the implementation of KKN-PPM. The result of the social skills instrument parameter measurement at the First Order Confirmatory Factor Analysis stage using maximum probability likelihood is obtained as follows: In peer relationship dimension, parameter value \( \hat{\lambda} \) is 0.967 which means if \( \xi_{15} \) increases 1, then \( X_{15} \) is expected to increase by 0.967 With an error value of 0.065. Conversely the lowest parameter \( \hat{\lambda} \) value is 0.639 which means if \( \xi_{10} \) increases 1, then \( X_{10} \) is expected to increase by 0.639 with an error value of 0.709. In self management dimension, parameter value \( \hat{\lambda} \) highest is 0.955 meaning if \( \xi_{30} \) increase 1, hence expected \( X_{30} \) increase equal to 0.955 with error value equal to 0.088. Conversely the lowest parameter \( \hat{\lambda} \) value is 0.826 which means if \( \xi_{23} \) increased 1, then expected \( X_{23} \) increased by 0.826 with an error value of 0.318.

In the academic success dimension, the highest parameter \( \hat{\lambda} \) value is 0.951 which means if \( \xi_{40} \) increases 1, then \( X_{40} \) is expected to increase by 0.951 with an error value of 0.095. Conversely the lowest parameter \( \hat{\lambda} \) value is 0.739 which means if \( \xi_{38} \) increases 1, then \( X_{38} \) is expected to increase by 0.739 with an error value of 0.459. In the Compliance dimension, the highest parameter value \( \hat{\lambda} \) is 0.966 which means if \( \xi_{46} \) increases 1, then \( X_{46} \) is expected to increase by 0.966 with an error value of 0.061. Conversely the lowest parameter \( \hat{\lambda} \) value is 0.909 which means if \( \xi_{47} \) increased 1, then expected \( X_{47} \) increased by 0.909 with error value of 0.174.

In asertive dimension, parameter value \( \hat{\lambda} \) highest is 0.979 which means if increase 1, then expected \( X_{31} \) increase equal to 0.979 with error value equal to 0.150. Conversely the lowest parameter \( \hat{\lambda} \) value is 0.799 which means if it increases 1, then \( X_{39} \) is expected to increase by 0.799 with an error value of 0.361. The results of the measurement model analysis show that all items of statement have value t-value > 1.96 at level 0.05 which states that the items are valid and feasible to be used with construct reliability value equal to 0.996.

While the results of second order confirmatory factor analysis of social skill instrument show that the loading factor on the constituent dimension is valid, with the factor loading value > 0.5. The amount of charge factor for the dimension of peer relationship was 0.950; The self-management dimension was 0.999; The dimension of academic success was 0.977; The dimension of compliance was 0.999; and assertive dimension was 0.999 with construct validity value of 0.962.

The goodness of fit model was done to compare the model with the same test with the empirical model. The compatibility model was the contradiction of the intermediate model that is specified by the covariance matrix between items or observed variables. According to Haryono (2012), the use of 4-5 goodness of fit criteria was considered to be sufficient to assess the feasibility of a model, provided that each of the criteria of goodness of fit is absolute fit measurement, incremental fit measures, and parsimonious fit measures. The first criterion of goodness of fit is absolute fit measures which consist of absolute Chi-Square, goodness of fit indices (GFI), root means square of approximation (RMSEA), standardized root mean square residual (SRMR), and expected cross validation index (ECVI). The second criterion of goodness of fit are incremental fit measures, which consist of adjusted goodness of fit (AGFI), normed fit index (NFI), comparative fit index (CFI), incremental fit index (IFI), and relative fit indices (RFI). Then, the third criterion of goodness of fit are parsimonious fit measure, which consist of Aiken’s information criterion (AIC), consistent aikenke information criterion (CAIC), and parsimonious goodness of fit index (PGFI).

Based on the result of the analysis process, can be seen that there are 9 Goodness of Fit (GOF) measures that are met and each of the criteria of Goodness of Fit are absolute fit measurement, incremental fit measures, and parsimonious fit
measures represented, so it can be concluded that the compatibility of the overall model is good.

Caldarella & Merrel (2009) explained that there are five aspects of social skill, including: (1) peer relations, (2) self-management, (3) academic abilities, (4) compliance, and (5) assertion behavior. The whole aspects will be seen in a person and will be reflected in his behavior. Apart from the above aspects, there are also several other aspects. But basically these aspects will be interconnected.

Gresham and Elliot in Caldarella & Merrel (2009) mentioned that several important aspects in social skills, namely peer acceptance or popularity, understand appropriate adjustment behaviors with others, know other people's social behavior to connect consistently with peer acceptance or other people's adjustments significantly. When in the society, the above aspects will be very beneficial in association. These skills will help us in facing the social world.

While Michelson, et. al. (1985) explained that there are three aspects in social skill such as: (1) verbal response is a response that is conveyed individually to others verbally. This response is usually done by talking or talking, (2) non-verbal responses are individual responses that are not given orally. This non-verbal response is in the form of eye movements expressions, limb movements, sound vibrations, and other emotional expressions that appear when individuals communicate; and (3) the cognitive process experienced by individuals usually involves thoughts and ideas about actions or attitudes that concern something. This cognitive process greatly affects the ability of individuals to carry out verbal and non-verbal communication.

Individuals who have social skill will be more effective in interacting with others because he is able to choose and carry out appropriate behavior in accordance with the demands of the environment. The social skills that individuals have in socialization can change according to time, context and culture (Matson, 2009). Individuals who have good social skills are able to choose and carry out appropriate behavior in accordance with the demands of their environment. Meanwhile, Eisler et. al. (1985) argued that the characteristics of social skill are people who dare to speak, give deep consideration, give a faster response, give complete answers, express evidence that can convince others, not give up easily, demand reciprocity, and be more open in expressing himself.

Characteristics of the individuals who have high social skills include understanding and regulating the emotions of themselves and others (emotional control), responding to others and directing social actions (social attitudes), interactions and communicating verbally and non-verbally (communication), responsible for actions (responsibility), and pay attention to other people (caring). It means that the characteristics of social skills include relationships or effective interactions with others because they are able to choose and carry out appropriate behavior in accordance with the demands of the environment.

The social skills in adult societies were accepted by educators (teachers and lecturers) depleting. Feeling empathy and sympathy for others is greatly reduced. This can be seen from a way of communicating that we cannot see from how to talk about how to ask or how to get information that is not good. Social skill as a complex ability to show good behavior that is rated positively or negatively by the environment, and if the behavior is not good it will be punished by the environment. Social skill contain aspects of skills to live and work together; skills to control yourself and others; skills to interact with one another; exchanging thoughts and experiences so as to create a pleasant atmosphere for each member of the group. Social skill contain aspects of skills to live and work together; skills to control yourself and others; skills to interact with each other; exchanging thoughts and experiences so as to create a pleasant atmosphere for each member of the group (Simbolon, 2018).

CONCLUSION

Based on the results of the analysis that has been done then obtained the standards instruments of social skills. The Social skills instrument consist of dimensions of peer relationship, self-management, academic success, compliance, and assertiveness.

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