



## Needs Assessment Knowledge from Facilitator of Community Empowerment Program in the Digital Era

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### Abstract

Cadres of Kampung KB as facilitators of community empowerment programs are required to have good knowledge in implementing needs assessment with adaptive data management with the industrial era 4.0. The needs assessment technique is not only done manually but can use digital technology to facilitate data collection and data access. However, the use of technology needs to be supported by the facilitator's knowledge of the need's assessment, because it is the basis for understanding the meaning of data tracing. This study uses a quantitative approach, in the form of descriptive statistics, namely interpreting the percentage data from the answers given by the respondents. From the results of the study, it was found that the cadres' needs assessment ability was included in the "Enough" category, while the competence that needed to be improved was knowledge about setting priority needs. So that the researchers suggest, it is necessary to hold competency training for KB cadres or village administrators which aims to provide understanding and skills in conducting needs assessment.

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## INTRODUCTION

Industry 4.0 is an industry that combines automation technology with cyber technology. The industrial era 4.0 is also known as artificial intelligence, because it is presented with the era of super computers, genetic engineering, innovation and rapid change (Müller & Birkel, 2020; Rosin, et al., 2020; Silva, et al., 2020; Závadská & Závadský, 2020). Industry 4.0 also penetrates every aspect of human life, in various fields of human life besides the manufacturing industry, such as education, social, empowerment, culture, politics, defense, and even entertainment. One of the concerns is community empowerment. In essence, empowerment is one way to improve the position of individuals in society.

Community empowerment is “to help people to help themselves” in the sense of helping people to help themselves, empowerment is carried out to control the pressure of the strong on the poor. The term empowerment arises as a result of shared concern with community groups who are discriminated against from development program policies as a result of patriarchal ideas. This ideology results in a group of people who are helpless, such as farmers and community groups of the same fate with a low level of education, are poor, and are helpless due to dependence on other parties. In order for a balanced development to occur, empowerment efforts are needed to build access and control over financial resources. (Nazneen, et al., 2019; Thorne, 2020; Uwizeye, et al., 2020).

4.0 adaptive industry efforts towards community empowerment were implemented by community education programs. (Caride, 2020; Rogers, 2019) describes that ideologically the community education process is a process towards empowerment, both at individual and collective levels. The approach to community education is an interactive movement, not only talking about the content (material discussed) but the methodology and decision making, meaning that the implementation of community empowerment programs must be innovative, therefore the program can run effectively and efficiently in terms of decision making (Aluko & Okuwa, 2018; Arifianto, et al., 2018; Bhaat & Kim, 2017; Biggers, et al., 2014; Gazali, 2018; Sihite, 2018; Yemini, et al., 2018).

Community education in the context of the empowerment process means more than just promoting the acquisition of information and skills, but also emphasizes the use of abilities for collaborative problem solving. In other words, commu-

nity education in the framework of the empowerment process is oriented towards influencing socio-economic structures and relationships through action-taking groups. Regarding health, literacy, or the acquisition of skills, community education in the context of the empowerment process is designed to enable people to critically analyze their life situations and build their skills needs for activities to improve their situation. The role of community education changes from social institutions, involving individuals, groups, organizations, to society.

Welcoming the 4.0 industrial revolution through community empowerment programs with a touch of technology can be a solution and ease in making program decisions. Data processing and data rates are highly considered in this era, making it easier to communicate and obtain accurate also efficient information. One of the implementations of community empowerment programs in addressing current population problems is the *Kampung KB* (Family Planning village) program (Puspita, 2011; Singarimbun, 1968; Tinning, 2014; Utomo, et al., 2006). In an effort to run community empowerment programs, *Kampung KB* program optimizes data and information as the basis for implementing a program known as “Data Houses”. The data house aims to make it easier for those implementing activities to plan activity programs, provide data and information, improve synergy and work partners.

In the process, the community as an actor who reflects the individual needs and local needs of the developing community. The process of building community capacity is carried out in the form of involvement in decision making and policy formation in the community. Welcoming the era of the Industrial Revolution 4.0, this needs assessment process is carried out with a technological approach, especially in processing data and information carried out by stakeholders or field officers/facilitators, so that people’s needs can be mapped accurately, and can easily obtain regional potential data based on the indicators of 8 family functions (Handayani, et al., 2018; Hoesni & Firmansyah, 2020; Yöntem, 2019). Program empowerment of communities must describe the needs of the community itself; the analysis of the community needs to do through need assessment (Zajac & Godshall, 2020).

Therefore, these strategies and procedures can also be said to be the abilities or competencies possessed by the facilitator in collecting data and information. Facilitators must be able to master digital literacy which will make it easier for them to carry out empowerment programs,

especially at the need's assessment stage. (Astuti, 2019; Castilla *et al.*, 2018; Eshet, 2004; Purnomo, et al., 2020). There are various strategies that demonstrate the facilitator's ability to carry out a needs assessment, including: preparing for a needs assessment, designing a needs assessment, setting priority needs, and reporting and utilizing the results of identification. These four aspects serve as an indicator for researchers in knowing the level of knowledge of the facilitator's needs assessment in empowerment programs.

This research provides important benefits for various parties, namely the government under the BKKBN policy to pay attention to the basic competency needs assessment of the facilitators who drive the *Kampung KB*. Their expertise needs to be adaptive to current technological developments, such as using the internet with Google Forms software or data assessment software via their smartphones. In addition, this research provides benefits to academic experts or further researchers to dig deeper into the basic training model developed for community empowerment program facilitators in increasing the competency *needs assessment* of community empowerment programs.

## METHOD

This research uses a quantitative approach, in the form of descriptive statistics, which is interpreting the percentage data from the answers given by respondents (Mutairi, 2018). This research was conducted for 5 months, from February 2020 to June 2020.

This descriptive statistic is only in the form of accumulation of basic data in the form of descriptions only in the sense of not looking for or explaining mutual relationships, testing hypotheses, making predictions, or making conclusions (Creswell, 2002; Sugiyono, 2015). The results of the questionnaire using the descriptive statistical method were processed into data in the form of averages, number and percentage of the questionnaires that were distributed to cadres of the *Kampung KB* as facilitators of community empowerment programs. The data collection technique used purposive sampling technique, namely the respondents were limited by several provisions including being active in managing the *Kampung KB* program and having been a facilitator for more than 2 years. Based on this technique, 42 research respondents were obtained. This research was conducted in *Kampung KB* Citeureup and *Kampung KB* Sukapura, which are located in Dayeuhkolot District, the reason for taking the

location is as one of the pilot areas of *Kampung KB* with technology and located in areas prone to annual floods and a densely populated industrial environment.

## RESULTS AND DISCUSSION

*Kampung KB* is one of the platforms for the empowerment of the community. Community empowerment in short is a concept of economic development that contains social values. A concept that is part of development, by fulfilling values such as "*people centered, participatory, empowering, and sustainable*". (Blewitt, 2014; Ledwith & Springett, 2010; Lynch, et al., 2020). This empowerment does not mean meeting basic needs, but in terms of alternatives that can be developed for the safety net. Empowerment will not be created without participation.

Participation is doing the parts in a stage or more of a process. Direct community involvement in an activity or program will have a good impact, such as the opportunity for the community to provide input according to their needs and wishes, provide convenience in planning formulations, increase public awareness and political skills (Damayanti & Syarifuddin, 2020; Mullen, 2019).

The level of community participation can be viewed from 5 indicators, namely the level of participation in planning, the level of participation in providing self-help, the level of participation in implementation, the level of participation in monitoring and evaluation, and the level of participation in utilizing development results. (Adila & Alfatih, 2018; Hadi, et al., 2013). Every community has the right to play a role in planning up to the evaluation stage of the development itself. So, in simple terms, participation is a means of realizing the influence of an individual/group which as long as it is not considered / taken into account in the formulation and determination of public policies (Bayoa, 2013; Gulo, 2019).

This is where one of the roles of cadres is needed as a crucial figure in *Kampung KB*. *Kampung KB* cadres who are facilitators of the empowerment program are the spearheads of the program that need to take advantage of their ability to use technology to pay attention to their environment. The facilitator can initiate what activities or programs are suitable to be implemented in their environment so that existing problems can be resolved. The initial process that can be carried out is a need assessment (Hardina, 2012; Williams, 2015). Needs assessment is the initial stage in community education program planning.

The link between need assessment and community education, Delaney and Nuttall (Durst, et al, 1999; Khumalo, 1999) argue that need assessment has an immediate and an ultimate purpose, what is meant by immediately is identification of needs which must be fulfilled immediately. Meanwhile, the final goal leads to activities to gather information intended for program planning, according to the needs they specify.

*Kampung KB* cadres as facilitators and developers of empowerment programs for the community must have good knowledge in carrying out the need's assessment. Because a good identification process will lead to priority programs needed by the community. Therefore, the researchers measured the level of knowledge and attitudes of the *Kampung KB* cadres. According to Ari-kunto (2010), the measurement of knowledge can be done by using interview or questionnaire data collection techniques by asking about the content of the material to be measured from the research subject. Researchers chose objective questions, namely true and false multiple-choice questions. To facilitate data analysis.

Presentation of descriptive statistics in the findings of this field, the researcher refers to the theory of mentioning 3 categories of knowledge levels summarized in the form of a percent-

age, including: Good category knowledge level if the value is  $\geq 75\%$  , Sufficient category knowledge level if the value is  $56\% - 74\%$  , Knowledge level category Less if the value is  $\leq 55\%$

Based on the results of distributing questionnaires to 40 respondents of KB village cadres, it was obtained a description of the knowledge achievement of KB village cadres regarding the needs assessment. The needs assessment indicator revealed consists of 4 criteria, namely: preparing for a *needs assessment*, designing a needs assessment, setting priority needs, reporting and making use of identification results (Khumalo, 1999). The following is an overview of the knowledge of the KB village cadres about needs assessment (Table 1).

Based on the Table 1, the maximum score of the questionnaire is 4 questions x 42 respondents x weight 1 = 168. It is known that cadres' knowledge of the ability to prepare themselves for *needs assessment* shows a score of 142 true statements (84%) and 26 false statements (15%) . Thus, cadres' knowledge is included in the Good category, which means that *Kampung KB* cadres have understood the concept of self-readiness when carrying out the need's assessment.

Based on the Table 2, the maximum score

**Table 1.** Knowledge of Cadres about the Ability to Prepare Themselves for A Need Assessment

Question	Number of Answers	
	Right	Wrong
The competence that cadres need to have in implementing the identification of needs	30	12
The characteristic of cadres' readiness in responding to social and environmental problems	40	2
Abilities possessed by cadres prior to identification	42	0
Behavior that shows the ability of <i>Kampung KB</i> cadres to conduct needs assessment to the community	30	12
Total	142	26
Percentage	84%	15%

**Table 2.** Cadre's Knowledge of Ability to Design Needs assessment

Question	Number of Answers	
	Right	Wrong
The definition of a method as a work system	32	10
Different methods and techniques in gathering information on community needs	40	2
The principle of community empowerment program needs	22	20
Examples of specific coverage of community needs	18	24
Procedures for analyzing data and reporting findings	30	12
Total	142	68
Percentage	68%	32%

of the questionnaire is 5 questions x 42 respondents x weight 1 = 210. It is known that cadres' knowledge of the ability to design needs assessment shows a score of 142 true statements (68%) and 68 false statements (32%). Thus, cadres' knowledge is included in the Sufficient category, which means that KB village cadres have understood the concept of designing needs assessment in the Sufficient category and the cadres' knowledge needs to be increased about designing needs assessment.

Based on the Table 3, the maximum score of the questionnaire is 8 questions x 42 respondents x weight 1 = 336. It is known that cadres' knowledge of the ability to set priority needs shows a score of 182 true statements (54%) and 154 false statements (46%). So, cadres' knowledge is included in the Inadequate category, which means that cadres in the *Kampung KB* do not fully understand about setting priority needs. In this case, the cadres of the *Kampung KB* need to be given an understanding of the concept of setting priority needs.

Based on the Table 4, the maximum score of the questionnaire is 3 questions x 42 respondents x weight 1 = 126. It is known that cadres' knowledge of the ability to prioritize needs shows a score of 80 true statements (63%) and 46 false statements (36%). Thus, the cadres' knowledge

was included in the Sufficient category, which meant that the *Kampung KB* cadres had sufficient understanding of reporting the results of the needs assessment. In this case, the cadres of the *Kampung KB* need to be given more understanding or reinforcement of the concept of reporting the results of the needs assessment. Based on the elaboration of the Table 4 regarding the ability of *Kampung KB* cadres to carry out the need's assessment, researchers try to simplify it in the Table 5.

Based on the Table 5, the total score of the *Kampung KB* cadres' knowledge about the need's assessment is 546 (65%), including in the Enough category. The highest score is indicated by the cadres' understanding of preparing for a need's assessment, amounting to 142 (84.5%). Meanwhile, the lowest score is the ability to set priority needs, amounting to 182 (54.1%). If you look at the overall score, it can be concluded that the cadres of the *Kampung KB* need to increase their knowledge of the need's assessment, especially through training or similar education.

Implementation of needs assessment requires accuracy in collecting and processing data, either by applying qualitative and quantitative approaches. In the process, the user needs an appropriate method so that all information can be

**Table 3.** Knowledge of Cadres about the Ability to Set Priority Needs

Question	Number of Answers	
	Right	Wrong
Definition of priority needs	30	12
The process of determining needs through interviews	18	24
Goals determine the priority needs of the community	28	14
Prioritizing needs is part of the evaluation process	18	24
The essence of community needs assessment	22	20
The relationship between different situations and types of community needs	18	24
The nature of prioritizing community needs	20	22
Definition of normative needs	28	14
Total	182	154
Percentage	54%	46%

**Table 4.** Cadre's Knowledge of Ability to Report and Utilize Identification Results

Question	Number of Answers	
	Right	Wrong
Purpose of the report on community needs	22	20
Usefulness of the results of the identification of community needs in programming	24	18
Follow up reports on the identification of community needs	34	8
Total	80	46
Percentage	63%	36%

**Table 5.** Recapitulation of Cadre Knowledge Score about Needs assessment

No.	Indicator	Answer				Category
		Right	%	Wrong	%	
1	Prepare yourself for a <i>need's assessment</i>	142	84.5	26	15.5	Well
2	Designing <i>needs assessment</i>	142	67.6	68	32.4	Enough
3	Set priority needs	182	54.1	154	45.9	Less
4	Report and make use of the identification results	80	63.5	46	36.5	Enough
Total		546	65%	294	35%	Enough

obtained by complete. In order to enable the collection of data that is more leverage and concrete, but it becomes difficult when done by the population a lot. Facilitators are faced with maximum data analysis and processing skills so that they are able to decide which program needs are considered priority. Needs assessment directly related to the identification, organization, and information about the documents that need to be met. Determination of need assessment is directly related to various opinions, different situations, and various types of needs. Therefore, the strategies and procedures used in the assessment activities will vary. There are various procedures and stages used in the needs assessment, including: 1) Prepare to do a needs assessment, such as conducted on methods of inquiry, need to be prepared with a variety of insightful questions. Curiosity will guide program compilers toward real community needs. In addition, according to Suarez (Khumalo, 1999) due to the need for education based on the values of the institution or society, procedures must be integrated into the process to ensure that these values are represented. 2) Designing need assessment, beginning with the in-depth review through preliminary studies, the clarity of the assessment/needs who want to be revealed. This stage includes activities to describe the specific objectives of the program, areas with needs to be met and types of needs identified. According to Suaraz (Khumalo, 1999) explains that the completeness of the design includes procedures for analyzing data and reporting the results. 3) Establish priority needs, need assessment through identification will produce a variety of needs. In order to obtain maximum results, the results of identification of needs must be sorted according to their immediate nature / urgency / importance. This process of prioritizing needs is a complex analysis. 4) Report and utilize the results of identification, emphasizing that the ultimate goal of community education is to develop a process where community members learn to work together to identify problems and to find solutions to these problems.

The knowledge of *Kampung KB* cadres regarding this need's assessment needs to be readjusted to an operational model that is easier to implement. Through the concept of *Kampung KB* with the use of information technology. The use of ICT in the social sector will provide opportunities for everyone to access information presented in an interactive form via computer networks. The use of information and communication technology is expected to be able to increase success in the social sector, human relations through communication. For this reason, the use of communication information technology in order to be useful should be adjusted to the prevailing life and culture in society. Utilization of technology in the social sector can use various tools to assist the implementation of empowerment programs, for example in processing data, numbers, creating graphic elements, databases, and so on. The media in ICT-based empowerment activities can be in the form of 1) Internet: the media used for communication purposes, because of its development, various internet-based communication models have emerged. 2) Intranet: an important alternative to ICT-based activities when there are obstacles in the provision of internet infrastructure. Almost the same as the internet but only for local areas such as in a classroom, building, room, and so on. 3) Mobile Phone/Handphone/Smartphone: the advancement of cellular telephone technology means that one can access all information, follow the process directly (streaming), discuss, communicate and even use some software downloaded on *google play* for the benefit of data processing. 4) CD-ROM / Flash Disk: an option if the internet network connection is not available. The data is stored on a CD-ROM or Flash Disk and then opened and studied on a computer.

Previously, the implementation of needs assessment used conventional methods. The *UPTD* has provided formats, so it is enough for cadres to fill in the format based on the findings in the field. Of course, the database is hardcopy, the process is quite complicated because it re-



quires a more specific component analysis than general needs with a manual process. This process takes a long time, the analysis is general to specific, not based on the immediate needs of the community or specific to the general. Now it has been transformed into a digitalization model. Utilization of ICT facilitates the process of identifying needs analysis, but it should be emphasized that cadres are required to master the technology used. The community empowerment program in *Kampung KB* was created from the efforts of cadres in optimizing data and information as the basis for implementing a program known as "Data Houses". The data house aims to make it easier for implementers of activities to plan program activities, provide data and information, improve the synergy of BKKBN and its partners. The participation of cadres in completing this data house is an effort in the context of community administration. Meanwhile, in relation to needs assessment. This data collection and processing utilizes a web-based application, namely the address <http://asesmendata.com/>. This application has been set by the operator so that it includes work indicators related to the objectives of the *Kampung KB*. Cadres can directly access the website page using a cellphone which on average is owned by everyone. Of course, this cellphone needs to have internet access in order to open its web-based application.

This web-based application is used to simplify the process of recording, processing and producing data, so needs assessment activities need to be analyzed carefully, one of which is through data base software. Data assessment software is an implementation of a database management system that is used to define, create, retrieve data, and control access to databases. After conducting a survey of each household head and determining each option, the program will automatically calculate the percentage of the survey activity so as to produce a quadrant that determines the priority level of program needs. This is a good innovation in digital-based needs assessment activities. Needs assessment based digital not be separated with management functions, namely that the management in formulating development programs more efficient and effective. The technology or digitalization approach in gathering community needs has the aim that the cost of the data collection process can be reduced more efficiently, while in terms of time it can be reduced more effectively.

That way, innovation in the use of technology in the need's assessment can be carried out continuously to find out the needs of the com-

munity in every program implementation. So that empowerment that is right on target will support sustainable development. (Martellozzo, et al., 2017; Puspitorini & Putra, 2019). The empowerment that is carried out will always be in accordance with the needs of the community. Therefore, the knowledge of the facilitator in conducting the *needs assessment* is very important. Knowledge is a determining aspect of the attitude that a person takes towards an object he sees and knows. Meanwhile, behavior is all human activities that can be observed directly or cannot be observed by outsiders. Meanwhile, knowledge can influence a person's attitude and behavior in doing something. Thus, the knowledge of the *need's assessment* held by the *KB* village cadres is a determining aspect of behavior and attitudes which have been said to be competence. Basically, knowledge is a treasure trove of mental wealth that directly or indirectly enriches life, so that the knowledge a person has will affect his behavior. The results of the research that have been described in the previous point show that the level of knowledge of *Kampung KB* cadres about *needs assessment* is in the "Enough" category.

## CONCLUSION

The needs assessment process in community empowerment programs aims to assess learning needs so that the programs implemented can be precisely in accordance with community needs. Thus, facilitators need to have good skills regarding the need's assessment. In this study, it is known that the ability of the *Kampung KB* cadres' needs assessment is included in the category of "Enough", an indicator that needs to be paid attention to or includes "Inadequate", namely knowledge of determining priority needs. Therefore, the researcher suggests that there should be competency training for cadres or village management of family planning with the aim of providing understanding and skills in carrying out need's assessment in community empowerment programs. The benefit of this research for the government under the BKKBN policy is the need to pay attention to the basic competency needs assessment of the facilitators of the community empowerment program in the *Kampung KB*. The skills of facilitators need to be adaptive to current technological developments, especially in using the internet such as google forms or data assessment software via smartphones. In addition, the benefit of this research for academics or future researchers is to dig deeper into the basic

training model developed for community empowerment program facilitators in increasing the competency needs assessment of community empowerment programs. Meanwhile, for the facilitators who drive the community empowerment program, it is useful to know the indicators or components of the needs assessment that need to be mastered.

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