

# Fuzzy rule-based method for determining the educational curriculum for terrorism convicts in the penitentiary

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## Fuzzy rule-based method for determining the educational curriculum for terrorism convicts in the penitentiary

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**Abstract.** The deradicalization program is run by the government against terrorism convict while in the penitentiary. The education program should be carried out by convicted individuals. To be able to achieve the results optimally, the substance of the educational curriculum applied to terrorism. The basis for its consideration based on particular criteria that give attention to the background of the convicted person. These specific criteria include the Courts Verdict, Education Level, Age, and Gender. The intended education curriculum covers life skills education, nationalism education and multiculturalism, and religious education. The purpose of the study is to determine the right curriculum for convict based on the existing criteria. We determine the curriculum using the fuzzy logic approach. The use of fuzzy rule-based methods facilitates the resolution of the right curriculum. The aim of this research insistence improves performance in the best decision making for terrorism convicts' educational curriculum.

### 1. Introduction

The series of bombing events launched by the terrorists occurring in the territory of the Republic of Indonesia has caused fear among the wider community, Bali bombing cases 1 and 18 as well as a series of similar events resulting in Loss of life and property loss to cause an unfortunate influence on social, economic, political, and Indonesian relations with the international world [1]. Fakhri Usmita mentioned that there are at least 15 terrorism crime events from 2000 – 2011 in which terrorist attacks in Indonesia generally do not directly attack the government or military facilities, but in public facilities, so that falling victim is not necessarily guilty or directly related to the "enemy" of the perpetrators [2].

Kofi Annan and Marry Robinson, in his writings, confirmed the position of terrorist crimes as a form of crimes against humanity, where the measure is that this crime presents a directly attack on the population Civil (non-combatant) [3]. Terrorism considered not an ordinary form of destructive violence but rather is a crime against the peace and security of humanity [4]. From the impact, in the fact that terrorism has caused a decline in physical conditions due to severe injuries to victims, even psychological trauma that is common to the victims and their families. Individually even for the victims in reality often lose their job or career undoing due to the events that overtook [5].

The war on terrorism in Indonesia stood on two strategies, namely the hard power, by conducting enforcement and enforcement of laws, moving the police officers especially Special Detachment 88 (Densus 88) and task force suppressing National Counterterrorism Agency (BNPT), then with the soft power of Seeks the deradicalization, disengagement, and incapacitation that entirely incorporated into



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counter-terrorism efforts. Disengagement is another soft line approach that emphasizes the improvement of social relations of former perpetrators of terrorism crimes to prevent their re-entry on its network or community as well as preventing the repetition of the same crimes [6].

The institutional National Counterterrorism Agency (BNPT) has had a special program for terrorism convicts. In reality, the model of mentoring and the construction of terrorism convicts such as the BNPT is still sporadic and impressed to depend on the policy is temporary and yet integrated. This policy institutionally executed on an integrated basis with correctional institutions under the Directorate General of Correctional Ministry of Law and Human rights. Awareness that deradicalization programs still need to be perfected is very important.

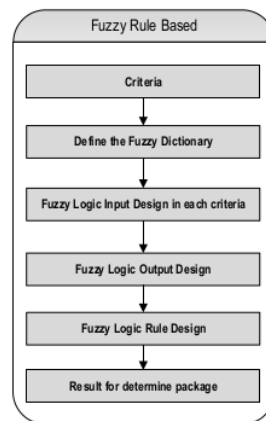
In this context, it offered an improvement in the field of education that is special for terrorism convicts. The substance of this education can include three main areas of education, life skills, education nationalism and multiculturalism, and religious education. These three areas of education require a further description of concept models and implementations. There is a special education program for terrorism convicts that carried out in a deradicalization program if it will be able to produce the optimizing counter-terrorism efforts in Indonesia. Where, in this case, what can be measured later in search results process of social integration of inmates in the community.

It is in fact that the three main areas of this education hypothetically considered able to encourage the change of character and behavior of convicts not only when in society but while still in correctional institutions. However, these three areas of education require further study. The second thing is related to the portion or weight point of the education curriculum that will apply to terrorism convicts. The weighted point of an education curriculum for prisoners is not the same as it depends on the criminal background that needs to calculate as the basis for implementing.

Based on the explanation above, the core problem is that first, whether the urgency of the social life education program that includes education of life skills, education of nationalism and multiculturalism, and religious education for convicts Terrorism? Second, what is the correct curriculum indicator for terrorism convicts?

**2. Propose method**

The object of this research is the terrorism convicts in the penitentiary. The method used in determining the terrorism convicts learning package shown in Figure 1. There are six stages of determining the learning package for terrorism prisoners, namely determine the criteria, define the fuzzy dictionary, design the fuzzy logic input, design the fuzzy logic output, design the fuzzy logic rule, then determine the result.



**Figure 1.** Method for determining the package of terrorism convicts.

### 3. Result and discussion

#### 3.1. Urgency education program for terrorism convicts

Terrorism, in its presence, not considered merely a mere social movement but also an ideology. In the context of coping against crimes based on ideology, cross-field handling required [7]. Deradicalisation claimed by the Indonesian government as a way of effective counterterrorism [8]. Conceptually the deradicalization program by Seiza Institute is referred to as an early detecting effort, ward off from the start, and targeting a variety of potential layers with various forms and relevant variants for each group that becomes target [9].

**Table 1.** Curriculum package.

Curriculum	Life Skill	Nasionalism and Multiculturalism	Religion
Package 1	30%	30%	40%
Package 2	30%	40%	30%
Package 3	40%	40%	20%
Package 4	20%	40%	40%

#### 3.2. Life skills education

Life skills are increased ability and skills that give basic provisions and exercises done properly to the community (participants) about the values of everyday life so that the concerned, able, and skilled Life is to maintain its survival and its development [10]. Francis, as quoted Trisanti, stated that life skills include leadership coverage, ethics, accountability, adaptive ability, personal productivity, personal responsibility, and towards others and self-guidance [11]. Life skills such as above are very important to the prisoners of terrorism to be able to live normally not only in society but also in correctional institutions. The ability of life skills with indicators mentioned by Francis above will be able to improve the quality of life of inmates both in prison and after the free. Improving life skills thus becomes very important to continue to be implemented in correctional institutions.

#### 3.3. Education of nationalism and multiculturalism

According to Hara, nationalism interpreted as the equality of membership and citizenship of all ethnic and cultural groups within a nation [12]. As a compound nation, nationalism must build in a multicultural Indonesia concept. In this context, it is necessary to build on the character of the nation. While building the nation character will be achieved through multicultural education. Hernandez is quoted as Awaru, interpreting a multicultural education as a perspective that recognizes the social, political, and economic realities experienced by each individual in a complex and culturally diverse human gathering, and the importance of culture, race, sexuality, and gender, ethnicity, religion, social status, economics, and exceptions in the education process [13].

#### 3.4. Religious education

Yulistiana, in his research, reveals the facts and important values of religious guidance in changing the nature of terrorism convict behavior. The Correctional Institution function becomes extraordinary in case of terrorism convicts. Each convict will get religious guidance in a correctional institution because that place will change their way of thinking and their last place to be made [14].

The approach of religious guidance is important to be carried out together with the education of life skills and education of nationalism and multiculturalism. It can be run in different portions depending on the needs of the convicts themselves. Although, conceptually, three areas of education are within the same level of importance in educating the convicted terrorism.



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3.5. *Determining the right curriculum indicator for terrorism convicts*

In the context of determining the appropriate portion of the education curriculum for terrorism convicts, a few things should have a significant effect on achieving educational objectives. The criminal verdict, the level of education, age, sex in this matter posed as the things that determine the proper curriculum. The four points became a decisive indicator of the curriculum selection in a proportional calculation of the substance aspect for inmates. These points take from a convicted background.

Court Verdict, Education Level, Age and Gender

The court ruling included as a deciding indicator for the focus of terrorism convict curriculum. In the context of determining the right curriculum for the convicted, the consideration ideally based on the verdict aspect of the court. A person who sentenced to life imprisonment or even criminal death, of course, has a different interest and needs related to education programs. The education program that will conduct for him based on a priority scale can be selected sequentially, i.e. first, religious education. Second, educational life skills. Third, education of nationalism and multiculturalism.

The scale of that priority is subject to change when the corresponding court verdict is subject to a lesser trial. It means that concerned have the importance and need to re-struggle accepted and accept the difference in society after free later. In such situations, the curriculum prioritized for such inmates, such as sequentially covering first, education of life skills. Second, national education and multiculturalism. Third, religious education.

While the background of the education level of each convict should take into account as a very decisive indicator for the successful education program that conducted, the difficulty of changing the paradigm of thinking, the attitude of acts of terrorism convicts inevitably relates to the backdrop of individual convict education levels. In this context, the educational material must adjust according to the classification.

In the age aspect, the maturity level accounted for as one of the indicators that determine what area of education to strengthened against each terrorism convicts. The educational program that will run terrorist convicts should take into account age aspects. In addition to the above three aspects, the gender aspect included as the main consideration in determining the right curriculum for convicts in the last development more events involving women, even children as perpetrators in criminal acts of terror.

Gender considerations became important for later enforcing the appropriate education system for terrorism convicts. Gender equality education, for example, can be included in the education curriculum so that the concept of gender equality along with the education of life skills and education of nationalism, multiculturalism, and religious education, will be sufficiently capable of changing the mindset and attitude of the radical act of this woman inmate.

The next step we design the fuzzy logic input consists of a sentence, education, and age. We design the input in each indicator — the input design shown in Figure 2.

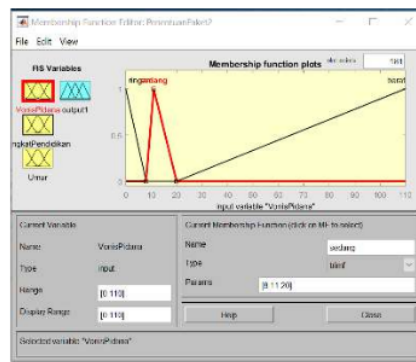


Figure 2. The fuzzy logic input design.

Next, the step is the output design of fuzzy logic. We determine the output based on the package, which determines in Table 1. The output design show in Figure 3.

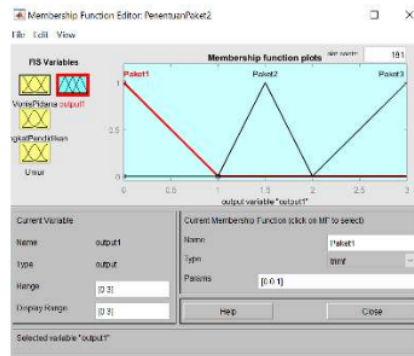


Figure 3. The fuzzy logic output design.

The next step is to define the rule in fuzzy logic. There are twenty-seven rules as the combination of each criterion. Figure 4 shows the rule determination in fuzzy logic.

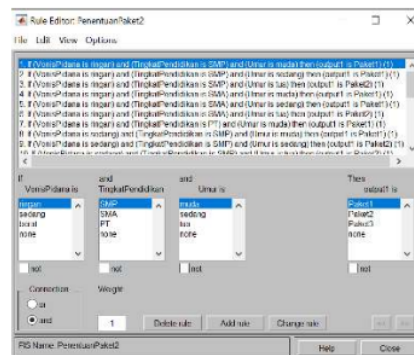


Figure 4. Determine rule in fuzzy logic.

4. Conclusion

Terrorism as organized crime in its development is no longer an ordinary crime but in a challenge that has been approved by the state's existence. Threats to the state in this context cannot only be from the aspect of state security but also the aspect of state security. Threats to the security and defense of this country require special policies.

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