

SOCIALIZATION OF SAFE USE OF ELECTRIC VEHICLES IN KINTAMANI TOURISM VILLAGE

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ABSTRACT

Electric vehicles (EVs) are currently one of the transportation options that are considered to be able to create a better environment. However, in practice, it has been found that EV users, especially electric motorcycles, have not behaved safely, such as underage drivers, not wearing helmets, and even exceeding the speed limit. Therefore, this socialization aims to provide education to the people of Kintamani Village on how to use EVs safely in traffic spaces. The socialization method is by giving lectures and tests to see the people's knowledge about safe driving before and after the socialization. The results of the pre-test and post-test showed that the people had an increase in understanding about safe driving

Keywords: electric vehicles; extension; transportation society

INTRODUCTION

Traffic safety socialization is a program to reduce the number of accidents and their consequences, because accidents cause poverty for the families of accident victims. Traffic safety aims to reduce the number of road traffic accidents. The number of victims of traffic accidents is much higher than sea, rail and air transportation accidents where traffic accidents that occur in Indonesia are dominated by motorcycles. The ease of maneuvering motorcycles and unsafe behavior such as the tendency to violate traffic rules, for example against the direction of traffic, exceeding the speed limit and using sidewalks to pass, make motorcyclists often endanger the safety of other road users.

Strategies that can be used to reduce accidents and improve traffic safety include limiting the speed of motorized vehicles, or limiting the engine capacity or power of motorized vehicles in circulation, especially in urban areas. Along with technological developments, motorbikes have undergone a lot of development, especially the fuel section, many motorbikes have switched to using electric fuel from gasoline because it is considered more efficient, (Ikhsan, 2022). In the same category, electric motorcycles have several characteristic differences with conventional oil-fueled motorcycles. The maximum speed that can be traveled by an electric bike is lower than a conventional motorcycle even though it has a higher torque so it is easier to reach its maximum speed. In addition, electric motorcycles have limited battery capacity, the mileage of electric motorcycles is also still lower than conventional motorcycles although it is still more than enough for city trips.

Improving road safety can start from reducing the speed of motorized vehicles. The existence of electric vehicles, especially electric motorbikes, which are the prima donna mode of public transportation in Indonesia, can be an opportunity to support motor vehicles that are more environmentally friendly and do not endanger other road users. (Tanuhardjo, 2023). At the same time, increasing awareness of all road users, as well as improving the quality of public transportation services and active transportation needs to be done. <Electric vehicles are one of the most important solutions in efforts to save the environment and manage natural resources sustainably. This is possible because the supporting technology of electric vehicles has developed in such a way that electric vehicles have been successfully made that are

reliable, economical, and have the same level of comfort as conventional motorized vehicles and even electric vehicle technology has better operating specifications compared to conventional motorized vehicles. (Nyoman S Kumara, 2009).

Awareness of traffic safety is also very crucial, considering that electric vehicles have recently been loved by many people. So, this provision is expected to be more embedded, so that in addition to self-understanding of traffic safety, they also become pioneers of safety for others. This activity is also an implementation of Law Number 22 Year 2009 Article 208 concerning Culture of Safety and Security of Traffic and Road Transportation. Where it is explained in paragraph 2a, that efforts to build and realize a culture of Security and Safety of Traffic and Road Transportation can be done through the implementation of traffic education. This activity is a type of preventive activity, so that awareness of traffic order is embedded. The prevention effort carried out is the provision of knowledge related to electric vehicles and also knowledge about orderly traffic on the highway in the form of Traffic Orderly Socialization with rules for using electric vehicles. In the socialization, knowledge is given about the rules in traffic, things that should not be done when driving on the highway. The target of this activity is the community. Understanding of traffic order is presented in the form of socialization of traffic order is packaged in the form of material exposure. The material in this activity is socialization related to the abuse of traffic vehicles, socialization related to traffic rules related to the use of electric vehicles, and socialization related to how to drive safely.

This socialization is also carried out against the background of cases that have occurred, such as the current rife of minors riding their own electric bicycles on the highway. In fact, this condition is certainly prone to traffic accidents. In fact, recently there was a traffic accident on the highway, namely an electric bicycle ridden by a minor hit a merchant cart that was traveling around, resulting in the electric bicycle rider being injured (Sekarini, 2023). This accident occurred because children using electric bicycles did not understand the rules of traffic on the highway such as not wearing helmets and lack of knowledge about traffic. Therefore, socialization related to electric vehicles is needed.

The purpose of this community service activity is held with the aim of: Provide provisions about electric vehicles and traffic order to the community through the Socialization of Electric Vehicle Use. Raising awareness of the importance of obeying good and correct traffic rules. Improving understanding of the rules for using electric vehicles. Improve understanding of traffic signs.

METHOD

The implementation of this community service program is carried out as an effort to increase public awareness in the Bali Province area, especially in Kintamani Village so that people are more vigilant and maintain safety in traffic. The steps of providing understanding are carried out by methods: Lecture method to the community using PPT containing material related to electric vehicles. Questionnaire method using Pre Test and Post Test questions to the community in the hope that understanding after being held increases.

RESULTS AND DISCUSSION

Electric Vehicles are vehicles that use one or more electric motors or traction motors as propulsion. Electric vehicles include electric cars, electric trains, electric trucks, electric airplanes, electric boats, electric scooters and motorcycles, and electric spacecraft. There are 3 kinds of electric vehicles currently on the market, namely electric cars that get power from external charging stations, electric cars that get power from stored electricity whose initial power comes from external sources, and electric cars that get their electricity from electric generators, such as internal combustion engines (also called hybrid electric vehicles), or hydrogen cells. According to PM No. 45 of 2020 concerning Certain Vehicles Using Electric Motor Drives, it is stated that the requirements for driving Electric vehicles are, Using a helmet, At least 12 years old, not allowed to carry passengers except Electric Bicycles equipped with passenger seats, . not allowed to make modifications to motor power that can increase speed, and Understand and comply with traffic procedures including: riding in an orderly manner, prioritizing pedestrians, maintaining a safe distance, being 12-15 years old and accompanied by an adult and riding with full concentration. Furthermore, it also regulates the location of Electric vehicles operated, namely the first in special lanes, such as bicycle lanes and lanes provided specifically. Then the second is in certain areas, such as settlements, namely roads designated for motor vehicle-free days.

The problem faced today is the prevalence of minors riding their own electric bicycles on the highway. In fact, this condition is certainly prone to traffic accidents. In August, there was a traffic accident on Jalan Cibuntu Sayuran, Bandung Kulon Subdistrict, Bandung City, where an electric bicycle ridden by minors crashed into a merchant cart that was traveling around, resulting in the electric bicycle rider being injured. This accident occurred because children using electric bicycles did not understand the rules of traffic on the highway such as not wearing helmets and lack of knowledge about traffic.

As an Educational Institution, Politeknik Transportasi Darat Bali (POLTRADA Bali) has an obligation to carry out the Tri Dharma of Higher Education, one of which is Community Service (PKM). Through this PKM activity, POLTRADA Bali socializes the rules governing the use of electric vehicles, especially electric bicycles based on PM No. 45 of 2020 concerning Certain Vehicles Using Electric Motor Drives to the Kintamani Tourism Village Community, Bangli. The implementation of this Community Service Program activity was carried out with the following activity results:

Preparation for Implementation

The preparation stage, a breafing was held with the P3M, Lecturers and all cadets who were involved in this PKM activity. Located in Mini Theater Room B on Wednesday, November 15, 2023. Furthermore, on Thursday, November 15, 2023 preparations for departure by carrying out discussions again before the PKM activity and loading all PKM needs into the vehicle (bus).



Figure 1: Departure Preparation

Preparation at the socialization location

Arrived at the socialization location and unloaded the socialization items / materials and prepared all the needs at the implementation location, namely at the Kintamani Village Perbekel Office, Kec. Kintamani, Bangli Regency. Then proceed with the registration of participants and at the same time distributed brochures related to the use of Electric vehicles.



Picture 2. Preparation at the Activity Site

Opening and Welcome

The opening of the activity was carried out by the MC, followed by remarks by village officials as well as acceptance of remarks by the campus / lecturer.



Opening and welcome as well as registration of participants

Implementation of pre-test

A pre-test was carried out before the socialization of the use of Electric vehicles began, with the provision that each participant was invited to carry out a pre-test for 15 minutes, and was attended by 45 participants from the Kintamani tourism village community, This test aims to determine the extent to which the material or material to be taught can already be mastered by the community. Then it was found that most people did not know more about the rules and

regulations in driving with Electric vehicles. The following results are obtained from the pre-test:



Grafik 1. Pre Test Score



Pictur 4. Pelaksanaan Pre Test

Pemaparan

Pemaparan terkait penggunaan kendaraan Listrik, diberikan waktu maksimal waktu 15 menit.



Figure 5: Exposure to the use of electric vehicles

Implementation of Post Test

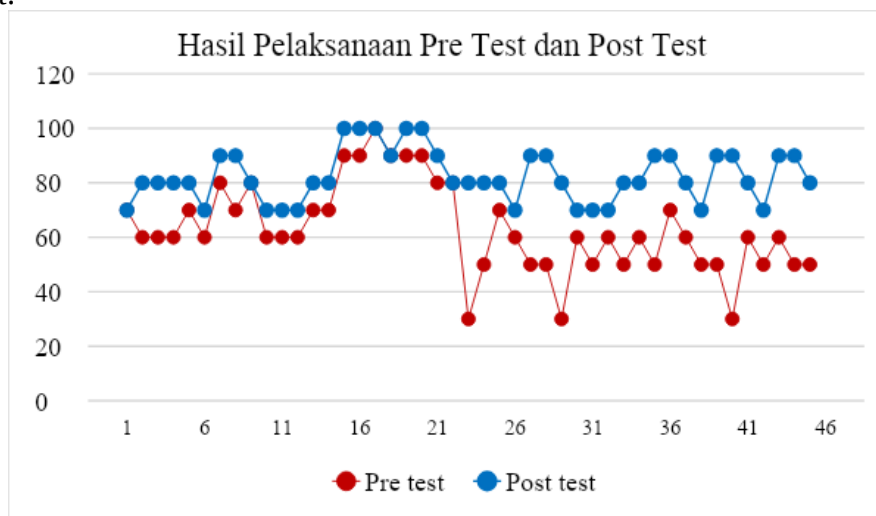
Each participant is invited to answer post test questions within 15 minutes and is expected to be able to answer questions in accordance with the material that has been given. The provisions of each participant are allowed to carry out a pre-test for 15 minutes, and was attended by 45 participants from the Kintamani tourism village community, this test aims to determine the level of knowledge of the material that has been delivered, and can increase knowledge about the rules for using Electric vehicles among the community. After being implemented, it was seen that the value of the post-test results jumped high, so it was hoped

that the community could find out more about the rules and regulations in driving with Electric vehicles. The following are the results obtained from the pre-test:



Figure 6. Post test

Based on the results of the Pre Test and Post test activities, it shows that there was a 19% increase in scores. It is expected to increase knowledge and understanding of the rules and regulations that must be obeyed to prevent traffic accidents involving minors due to the use of electric bicycles on the highway. It is hoped that this can become knowledge for parents so that they are not careless and monitor their children in operating electric bicycles. So that traffic accidents can be anticipated. The following graph compares the results of the pre-test and post-test:



Closing

This community service was closed with the distribution of prizes to the top 3 post test results, distribution of goodie bags, souvenirs and group photos.



Picture 8. Prize giving to post test winners

CONCLUSION

The Community Service Program for the Use of Electric Vehicles to the Kintamani Tourism Village Community in Bangli Regency, can increase knowledge and understanding of the rules and regulations that must be obeyed to prevent traffic accidents involving minors due to the use of electric bicycles on the road. This is expected to be knowledge for parents so that they are not careless and monitor their children in operating electric bicycles. So that traffic accidents can be anticipated.

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