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Benefits of New Driver Training Curriculum (KPP) Implementation As A Means for Road User Awareness

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Abstract

This study is conducted to investigate the benefits of new Driver Training Curriculum (KPP) implementation as a means for road user awareness. In Malaysia, the issue of traffic accidents has become a serious social problem. Apart from that, governments and private sectors spend huge resources on road safety programmes, with the target of achieving zero fatality and reducing injury. Due to this case, the Government has launched a new KPP in 2014 and implemented in 2015. This programme aimed to improve the driver's knowledge and stricter license approval. The previous KPP equipped drivers with only cognitive and psychomotor skills with less emphasis on affective skills while the current KPP was developed to produce more courteous and disciplined drivers. This study is conducted in Muar area. In this study also, the researchers used questionnaire as the method of collecting data and information. A total of 150 were sampled for the study drawn from old and new KPP group. Since this programme has just been implemented by Road Transport Department (RTD), this study opens up many new research opportunities in the future.

Keywords: Driver Training Curriculum, Road Safety, Road Awareness, Muar, Road Transport Department.

1. Introduction

Road accidents have been and will continue to be one of the greatest health hazards. Every year, the number of road fatalities is increasing steadily, and this has caused a lot of concern to the government and the Malaysian people generally. The total number of

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deaths and injuries resulting from road accidents in Malaysia is very worrying. Due to this case, government have heightened the need for effective driver education program and stricter license approval. A lot of effort has already been done by government in order to reduce the problem of road accident. The lack awareness of road user is one of the issues that need to be concerned.

The new Driver Training Curriculum (Kurikulum Pendidikan Pemandu - KPP) focus on producing courteous and disciplined drivers compared to previous KPP which is dexterity and traffic rule comprehension. Historically, Road Transport Department (Jabatan Pengangkutan Jalan - JPJ) has introduced a lot of new initiatives to enhance the robustness and effectiveness of driver education and licensing in Malaysia. Among the initiatives are the Computerized Testing System introduced in 1996 to replace the written test, improvements through legal methods and the introduction of textbooks for Kurikulum Pendidikan Pemandu (KPP) in 2000 to replace the old KPP which is Kurikulum Baru Sekolah Memandu (KBSM). Then, in 2007, JPJ initiated a program which ultimately aimed at implementing a new KPP to improve the driver's education and licensing in Malaysia. This initiative was in line with the road safety plan developed specifically by the government under the 9th Malaysia Plan for a comprehensive and balanced set of planning in the implementation of road safety initiatives based on the concept of 4E which are Engineering, Education, Enforcement and Environment.

According to Seksyen 26(1) Akta Pengangkutan Jalan 1987, an individual who wants to drive a car or ride a motorcycle must have a license. An individual can be charged with an offence if they drives or rides the motor vehicle without a license as it is against the law. Driver training programs plays an important role in developing basic car control skills and imparting road law knowledge. It also helps to reduce casualty accident risk involvement.

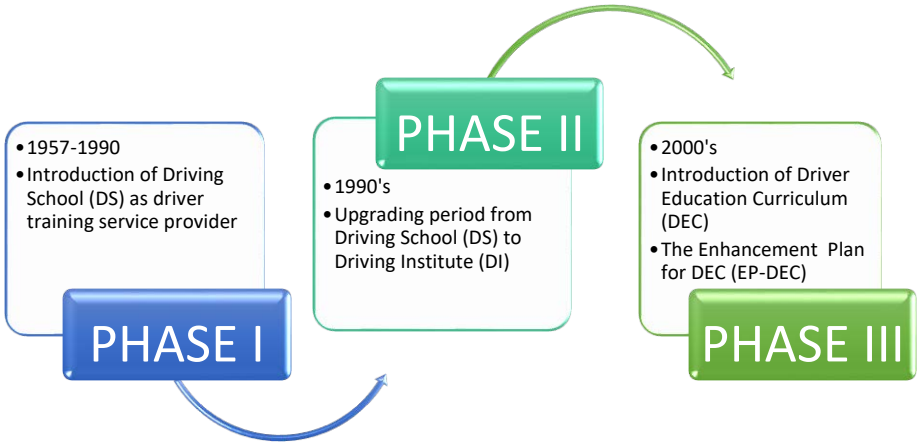

Figure 1:
The Evolution of Driver Training in Malaysia

To obtain driver's license nowadays has become more complex and costly than before. The cost of getting a driver's license has entwined with many different issues recently. The new format proposed by Road Transport Department (JPJ) is intended to improve the

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safety of the road user. Previous studies (Bates, Filtness & Watson, 2018; Masten, Foss & Marshall, 2011; Foss, 2007) suggested that new drivers should obtain as much practical experience as possible driving in realistic conditions in order to reduce crash rates. However, the implementation of this format has not been discovered holistically as the new format still receives many complaints from customers in term of high cost and longer duration. As such, previous studies had shown lack of knowledge and experience in driving a motor vehicle influenced the safety of people. Experienced drivers were equally proficient at hazard detection and detect potential hazardous events (Poirier, Blais & Faubert, 2018; Borowsky, Oron-Gilad, Meir & Parmet, 2012). The differences between the old syllabus and the improved curriculum requires longer teaching hours and lower ratio of students to instructor, theory workshops in the old syllabus are replaced with more hours in the driving circuit, the driver's curriculum module for vehicles are separated. Also, the computer test for car and motorcycle are separated. The improvement proposed by JPJ is to ensure the safety of the public.

The main objective of this research is to determine the most influential factor of improved driver training curriculum implementation as a means for road user awareness. In addition, the study also looks at the benefits of this new training curriculum.

2. Literature Review

2.1 Road User Awareness

According to Bates, Filtness & Watson (2018) awareness of the driver is important in preventing accidents. Road safety is a safety measure to reduce the risk of road accidents and road side injury because of the mistakes of people while driving on the public road. There are many cases of death daily because of the driving mistakes and lack of road traffic rules followers. Every person who going on the road has risk of injury or death such as pedestrians, motorists, cyclists and passengers. There are many ideas that are created to ensure a safe and pleasurable driving experience which are avoiding aggressive drivers, alertness while driving, and vehicle following distance and vehicle speed.

Miles & Johnson (2003) stated that one of many factors in remaining safe on the roads is the ability to control emotions and stress. This emotion can hinder the ability to drive safely and ensure safety on the roads. On top of that, aggressive driving behaviors are extremely problematic in Malaysia, as well as in many other countries. According to Miles & Johnson (2003) aggressive driving refers to the unsafe operation of a motor vehicle in a hostile manner, without regard for the safety of other users of the road. Aggressive driving includes frequent or unsafe lane changes, failing to signal, tailgating, failing to yield right of way, and disregarding traffic controls.

Several studies (Poirier et al., 2018; Bates, Darvell & Watson, 2015;Palarma et al., 2012) said that young drivers are more likely to speed, not use seat belts, drive while distracted or fatigued, drive after drinking, and drive without an appropriate license and that the young people who engage in these risky driving behaviors. Due to lack of awareness among young drivers, it will cause the greater risk of being killed in a collision per distance traveled than any other group because of their risky driving. In fact, young drivers are more likely to be involved in fatal and injury collision compared to older drivers. As such,

previous studies had shown young drivers are more likely than older drivers to be involved in speed related fatal and injury collision.

2.2 The New Drive Training Curriculum (KPP)

The old Driver Training Curriculum (KPP) equips drivers with only cognitive and psychomotor skills with less emphasis on effective skills while for new curriculum was developed to produce more courteous and disciplined drivers. The new curriculum was launched by government in 2014 but it has only been implemented in 2015. There are few improvement and added values that introduced by Road Transport Department (JPJ) in the new KPP implementation as compared to the previous KPP which are:

1) Improvement based on Gap Analysis and Learning Outcomes Approach

Driving Curriculum Improvement Committee was formed to study the weaknesses of prior driver's education program in Malaysia and formulate improvement plans. The workshops conducted by the committee, a gap analysis was conducted to assess the gaps existed in the current curriculum towards producing safer drivers. As a result, a new training module based on the learning outcomes was introduced to strengthen the existing contents of the training module. Taxonomy of learning Effects of New Driver Training Curriculum (KPP) on Novice Drivers' Hazard Perception Skills 4 matrix containing the input and learning outcomes have also been produced along with the targeted driving characteristics namely:

a) Improved knowledge in overall safe driving (Cognitive Domain)
b) Improved competency in hazard perception and responding (Psychomotor Domain)
c) Overall improvement in building the culture of safe driving (Affective Domain)

In the new KPP, a new approach based on learning outcomes is a crucial element than old module. The old module was prescriptive and process-based and focused heavily on the input without having a specific module to evaluate the performance of novice drivers based on the content of the curriculum. This module has also taken into account the different levels of learning ability of the novice drivers which are translated into the Bloom's taxonomy of learning. In addition, a special module for the exit and testing process was also updated, streamlined and given special concerntration through the production of specific manuals for instructors and testers.

2) New and separate module to address skills improvement for Learner Motorcyclists

The new KPP in terms of learning, training and testing module are separated from the car driver's module. The enhancement for motorcycle license is the increasing coverage and focus on defensive driving and safe riding in risky traffic situations and environments. Particular skills being emphasized are detecting and responding to possible hazards on the roads.

3) Massive Revamp of National Program for New Drivers' Licensure

The new KPP is part of a massive revamp of nation's program for new drivers' licensure, which involves enhancement in standards of training delivery and testing.

4) Improvement in the module for theory classes

The syllabus for theory class is improvised to six chapters compared to previous which is seven chapters. This is to teach them the defensive driving skills with 6 hours of lectures added to the previous teaching requirement. This improvement was expected to give a significant impact on the improvement of hazard perception and overall safe driving performances.

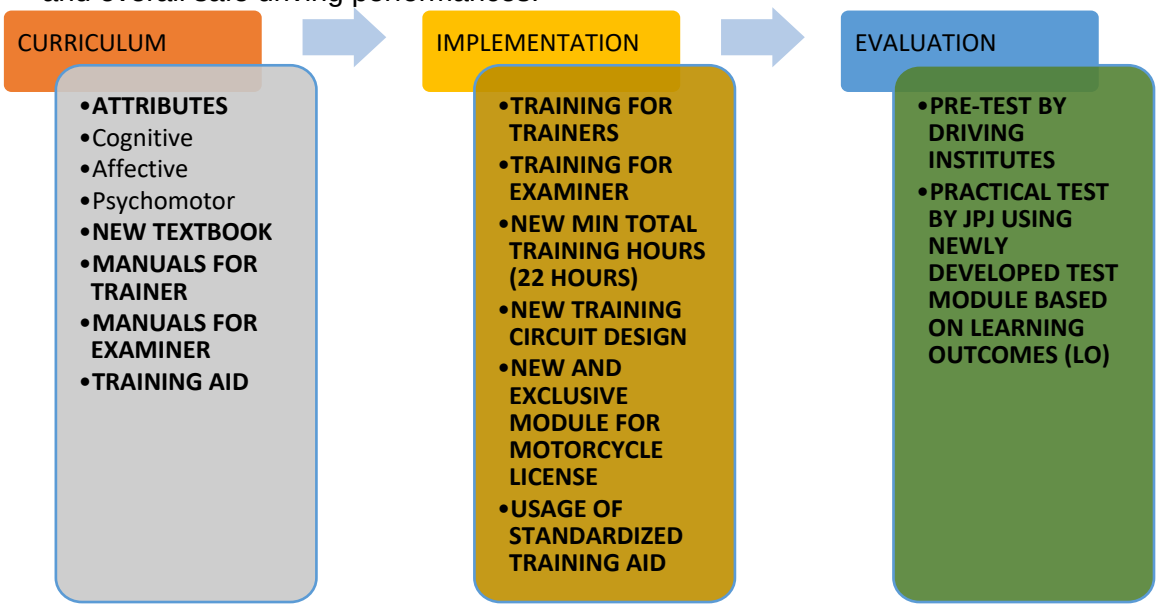

Figure 2:
Summary the new Drivers Education Curriculum (KPP) and Licensing program structure

3. The Study

The present study was conducted in Muar district, Johor. The purpose of this study is to ascertain the benefits of new driver training curriculum implementation as a means for road user awareness. The information was gathered to study more regarding the variables and also to understand better about the new syllabus proposed by Road Transport Department (JPJ). 150 questionnaires were collected in this study. The sample were chosen through purposive sample random sampling, where the targeted respondents are those who are taking driver's license course at driving school around Muar District.

4. Findings

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4.1 Demographic Profile

Table 1 summarised the demographic profiles of the respondents participated in this study.

Demographic Part	Item (s)	Frequency	Percentage (%)
Gender	Male	74	49.3
	Female	76	50.7
	Total	150	100.0
Age	16-18	27	18.0
	19-21	27	18.0
	22-24	40	26.7
	25 and above	56	37.3
	Total	150	100.0
Race	Chinese	37	24.7
	Indian	8	5.3
	Malay	105	70.0
	Total	150	100.0
Education Level	Degree	39	26.0
	Diploma	50	33.3
	High School	50	33.3
	Others	11	7.3
	Total	150	100.0
Classes of Driving License	B	3	2.0
	B/D	9	6.0
	B2	13	8.7
	B2/D	69	46.0
	D	56	37.3
	Total	150	100.0
Who Taught You To Drive	Family Member	10	6.7
	Friend	5	3.3
	Qualified Instructor	135	90.0
	Total	150	100.0
Do You Mostly Drive In	Both U/R	116	77.3
	Rural	17	11.3
	Urban	17	11.3
	Total	150	100.0
Experience of Driving	Less Than 2	62	41.3
	More Than 2	88	58.7
	Total	150	100.0

Table 1:
Overall view on Respondents' Demographic Profile

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4.2 Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Fatal Accident	150	1.25	5.00	4.3617	.66399
Driving Skills	150	1.0	5.0	3.987	.6540
Knowledge	150	1.0	5.0	4.155	.6800
Road User Awareness	150	1.00	5.00	4.4483	.65301
Valid N (Listwise)	150				

Table 2:
Descriptive Analysis

Based on the table above, it shows the descriptive data for the overall variables for the fatal accident, driving skills and knowledge. It can be seen for fatal accident the mean is 4.3617 which interpret that from 150 respondents with answering the scale of 1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly Agree indicates that people answers the average of 4.3617 which is between agree and strongly agree scale with the standard deviation 0.664. As for driving skills, the mean for the variable is 3.987 which interpret that people answer the scale between neutral and strongly agree with the standard deviation of 0.654. The knowledge show the mean 4.155 which interpret that respondent answer the scale between neutral and strongly agree with the standard deviation of 0.68. Finally, the last variable is road user awareness that has a mean of 4.4483 and standard deviation is 0.653 at the same time show that people most answer the scale between agree and strongly agree.

4.3 Reliability Analysis

According to the Tavakol & Dennick (2011), Cronbach's Alpha test is the most common used test to determine the reliable of the question in the questionnaire of the study. Based on Sekaran and Bougie (2016), reliability test is conducted to test the consistency and stability of items. In the reliability test, Cronbach's alpha is used to indicate how well the items in a set are positively correlated to each other. The closer the Cronbach's alpha is to 1, the higher the internal consistency reliability.

Variable	Cronbach's Alpha Based on Standardized Items	No. of Item

Fatal Accident	.848	4
Driving Skills	.854	5
Knowledge	.916	5
Road User Awareness	.841	4

Table 3:
Reliability Analysis

Table 3 shows Cronbach's alpha value of variables. Cronbach's alpha value for fatal accident with 4 items is 0.848 in which according to Sekaran & Bougie (2016), it is good since it is more than 0.80. Next for the Cronbach's alpha value for the driving skills with 5 items is 0.854 in which according to Sekaran & Bougie (2016), it is also good since it is more than 0.80. The value for the Cronbach's alpha of quality of knowledge with 5 items is 0.916 in which according to Sekaran & Bougie (2016), it considered good since it is more than 0.80. Last but not least, for the frequency of road user awareness cronbach's alpha value with 4 items is 0.841 in which according to the Sekaran & Bougie (2016), reliabilities more than 0.80 are indicates good reliability. Therefore, the reliability for all variables was very high and those items tested were very good. This shows that all the variable is positively correlated to each other.

4.4 Correlation Analysis

Correlation is used to look at the net strength relationship between two continuous variables (Sweet and Martin, 2008). A correlation coefficient shows the direction, strength, and significance of the bivariate relationship among all the variable that were measure at an interval or ratio level. There could be a perfect positive correlation between two variables, represented by 1.0 (plus 1) or a perfect negative correlation, which would be -1.0 (minus 1). Hence, it does not tell which variable causes which but it tells that the two variable are associated with each other.

	Road User Awareness	**Fatal Accident**	**Driving Skills**	**Knowledge**
Road User Awareness	1			
Fatal Accident	.655**	1		
Driving Skills	.628**	.470**	1	
Knowledge	.652**	.516**	.754**	1

Table 4:
Correlation Analysis

Table 4.4 above present the overall result of Person's Correlation test. The table shows the correlation between dependent variable and independent variables. Based on the result it is proven that there is positive relationship between road user awareness and fatal accident. The value of 0.655 shows the strength between road user awareness and fatal

accident, which means there is moderate correlation but substantial relationship. Next, between road user awareness and driving skills have a positive relationship which the value is 0.628. It also shows that the strength of relationship between these variables, there is moderate correlation but substantial relationship. The relationship between road user awareness and knowledge have a positive relationship which the value is 0.652. It also shows that the strength of relationship between these variables, there is is moderate correlation but substantial relationship. Furthermore, according to Sekaran and Bougie (2016), the correlations for those variables are significant at the 0.01 level (2-tailed).

4.5 Regression Analysis

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.705	.262		2.688	.008
Fatal accident	.401	.062	.407	6.496	.000
Driving skills	.238	.082	.239	2.919	.004
Knowledge	.252	.081	.262	3.112	.002
F value	69.307				
Sig	.000				
Adjusted R^2	.579				
R^2	.587				

Table 5:
Results of Regression Analysis (Road User Awareness)

Table 5 shows the summary of regression analysis for dependent variable which is road user awareness. R^2 indicates the percentage variance in the dependent variable that is explained by the variation in the independent variables which are fatal accident, driving skills and knowledge. The R^2 of 0.587 implies that all the independent variable explained 59% percent of the variance in the dependent variable, while 41.3% percent of the variance in the dependent variable is not explained by the independent variable in this study. This indicates that, there are other independent variable which is not included in the study and could further strengthen the regression analysis. Every 1% change in road user awareness is resulted from fatal accident, driving skills and knowledge.

The F- test is significant based on the value of 0.000. Therefore it can be concluded that the independent variables which are fatal accident, driving skills and knowledge significantly explained dependent variable that is road user awareness.The result for fatal accident variable is 0.000 (0%), which is below the 5% significant level. Therefore, fatal accident variable is significant. Hence, fatal accident is positively related with dependent variable. The variable for driving skills is significant. It is because the p-value for driving skills variable is 0.004 (0.4%), which is below the 5% significant level. Hence, driving skills is related with dependent variable. The knowledge variable is significant with a p-value of 0.002 (0.2%). Thus, shows it is below the 5% significant level. Hence, knowledge is positively related with dependent variable.

4.6 Standardized Beta Coefficients

The beta is used as a standard unit that is the same for all variables in the equation. As fatal accidents increased by one standard deviation, road user awareness increased by 0.407 of a standard deviation. As driving skills increased by one standard deviation, road user awareness increased by 0.239 of a standard deviation. As knowledge increased by one standard deviation, road user awareness increased by 0.262 of a standard deviation. Therefore, the strongest predictor in this study is fatal accident with a beta weight of 0.407. The second would be knowledge with beta weight of 0.262. The weakest variable would be driving skills with beta weight of 0.239.

5. Conclusion

The findings of this research indicate that there are many benefits of the new driver training curriculum (KPP) implementation as a means for road user awareness. This study findings congruent with findings in past studies (Poirier et al. 2018; Bates et al. 2015; Curry, Foss & Williams, 2017) There are three factors of new KPP that have been considered in this research which are fatal accident, driving skills and knowledge. Other than that, the concern of new KPP is the quality and standard of the teaching delivery, training and testing. The driver licensure needs to be improved in these three core aspects in order to ensure the safety of road user. Furthermore, Road Transport Department (JPJ) also should play an important role to oversee the level of qualities of the three core aspects as mentioned. The introduction of separated module for vehicles in the new KPP is highly recommended. This programme is to ensure the driver competency at satisfactory level.

The purpose of the study is to determine the most influential factor of new improved driver training curriculum (KPP) implementation as a means for road user awareness and to identify the benefits of improved driver training curriculum (KPP) implementation as a means for road user awareness. The current study has identified that all independent variables; fatal accident, driving skills and knowledge is significant and shows good relationship with road user awareness. It shows that the research objectives are achieved. The result for fatal accident, driving skills and knowledge variables is 0.000 (0%), 0.004 (0.4%) and 0.002 (0.2%) which are below the 5% significant level. Therefore, all these three variables are significant. Hence, fatal accident, driving skills and knowledge are positively related with dependent variable that is road user awareness. Based on the result, it is proven that there is a positive relationship between road user awareness and independent variables which are fatal accident, driving skills and knowledge, which means there is moderate correlation but substantial relationship. Since the improved KPP has just newly been implemented, the researchers believe that this research opens up many new research opportunities in the future. Future studies may be conducted in different environment settings such as conducting the research in the urban cities such as Kuala Lumpur and Georgetown as well as focusing on certain age group, for example, the 16- to 30-year-old, of which this group has been recently identified by the Malaysian government as largest age group involved in road accidents in Malaysia.

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