

The Implementation of Traffic Ordinances in Vigan City: A Basis for Program Development

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Abstract:- This study aimed to assess the implementation of traffic ordinances in Vigan City for calendar year 2023. The populations of the study were the 42 traffic enforcers, 102 drivers and 93 commuters with a total of 237 respondents. It employed the correlational method of research to analyze the relationship between the assessment of the extent of implementation of traffic ordinances as assessed by the traffic enforcer-respondents, motorists and commuters relative to education, enforcement, engineering, environment and economy. The following statistical tools was used in the study, frequency and percentage which were used to describe the profile of the traffic enforcer-respondents. The weighted mean is used to describe the extent of the implementation of traffic ordinances by using the three-point scale and F-test or the analysis of variance to determine the significant differences of the three groups of respondents in terms of the dimension's education, enforcement, engineering, environment and economy.

The following are the salient findings of the study: 1) on the profile of the traffic enforcer-respondents most of them belong to the age bracket of 35-39 (30.95%), male (40 or 95.24%), married (38 or 90.48%), college graduate (41 or 97.62%) and having a gross monthly income of 5,001-10,000 (35 or 83.33%). 2) The weighted mean and the descriptive interpretation of the three respondents in the extent of implementation of traffic ordinances in terms of the five dimensions, the traffic enforcers rated all dimension as "always" with Environment and Economy garnering the highest of 2.96 and Engineering is the lowest. Furthermore, the Drivers rated as "always" the four Dimensions. The highest in on economy with a mean of 2.55 while education received the lowest mean of 1.96 which was describe as "sometimes". Moreover, there are three dimensions assessed as "always" and two rated as "sometimes" by the commuters.

In light of the findings, the following conclusion was drawn: The 5 E's of traffic namely: Education, Enforcement, Engineering, Environment and Economy are important factors to consider in the maintenance of order and safety in any thoroughfare as revealed by the assessment of the respondents. Improper observance and non-implementation of such goals lead to the congestion and traffic jam in a compact city like Vigan.

The researcher therefore recommends the following: 1) there must be quarterly trainings or seminars conducted to the traffic enforcers, drivers, and road users by the City Government of Vigan. 2) There must be a plan for widening of roads within the City to lessen the traffic jam or traffic congestion. 3) Proposed action plan should be strictly implemented. 4) A follow-up study should be conducted to include other dimensions not covered by the present study. And 5) Speed limit should be strictly implemented.

Keywords:- Implementation, Traffic Ordinances, Education, Enforcement, Engineering, Environment and Economy.

I. INTRODUCTION

A. The Problem and its Background

The world is created by the union of rocks, water and soil. It was established to be a world where humane society lives. Getting along with this historical perspective inclined to biblical theories, are the establishment of different systems in the society. These systems are called as one and it was named as government. As to part of the basic commodities, government needs to provide food, shelter, clean water, and clothing through the utilization of transportation. Through transportation of goods, economics was established and introduced.

Transportation is a big help for a fast-moving society. As one of its prerequisites, transportation needs land area to pass through and this area is called road. Based on history, the oldest known constructed roads found in Mesopotamia, presently known as Iraq. These stone paved streets date back to about 4000 B.C. in the Mesopotamia cities of Ur and Babylon. The location in the land of the Sumerian people offered fertile soil and, with irrigation, crops and livestock were raised successfully. The Sumerians used meticulous brick-making skills, forming identical mud bricks for building. After drying they would take them to the site of a temple and set them in place with bitumen. Bitumen is the natural sticky black substance found in asphalt. Centuries had passed before asphalt was used in Europe and America.

Looking through historical perspective of the Philippines on the construction of roads, the growth of the DPWH, as the main infrastructure arm of the country, spans even more than four centuries of colorful and significant development, starting from construction of settlement roads and "ObrasPublicas" (public works) during the Spanish colonial era to the public works construction activities of the

U.S. Army engineers in the Commonwealth period and eventually, the Philippine Republic. With this on-going development, problems on the road such as traffic management and increasing number of road accidents are rapidly rising. How does the government handle this serious situation? The main solution that the government had brought out is the implementation of laws and ordinances on traffic management.

The most intensive and related law implemented on traffic management is the Republic Act No. 4136 also known as the “Land Transportation and Traffic Code enacted on June 20, 1964.” Through this law, management on the numbers of vehicles are strictly observed through registration of motored vehicles based on Chapter II of R.A. 4136. The people permitted to handle motorized vehicles on the road are those who had procured license coming from the Land Transportation Office as to what is stated in Chapter III entitled Operation on Motor Vehicles of R.A. 4136. The speed limit and rules on overtaking are stated in Chapter IV, entitled Traffic Rules.

From seventeen regions (17) including the NCR Region divided into 81 provinces, down to 1490 municipalities, and 144 classified cities the republic of the Philippines promulgated these different laws and/or republic acts as well as presidential decrees to have control on traffic related issues. With these laws, the different cities have their own executive departments that can create and implement systems for traffic management. These different systems are called ordinances.

This study entered on the extent of implementation of the traffic ordinances. The researcher chose Vigan City among the two cities and 32 municipalities of the province of Ilocos Sur. Vigan was chosen for it was the residential address of the researcher. Moreover, Vigan has its treasured heritage village where local and international tourist visits and one of the observed problems now is traffic congestion.

Vigan is a perfect view of Spanish colonial period wherein preservation of culture as well as the heritage village been presented to nationals as well as international competitions. This recent year, the City Government of Vigan had just received its most precious title which was the “New Seven Wonder City.” Aside from this international title, the city had also been awarded as Child Friendly City as well as Cleanest and Greenest Component City.

With these prestigious awards that the city had received, Vigan became a “hot spot” area for tourists. This resulted to new challenges faced by the city government. One of the big challenges is traffic management. How does the government implement ordinances to lessen the burden on traffic problems? How does it extend from traffic enforcers then drivers up to community members or the commuters? How would these ordinances help the government to develop?

The researcher focused its study on the extent of the implementation of the city traffic ordinances of Vigan City, Province of Ilocos Sur. As a criminologist, it is important to study the ordinances, benefits that can be derived from it, and how it would help other programs to develop. This burden is not only placed on the shoulders of the local government unit. It is a shared responsibility among its people. As a Bigueño who loves his city, the researcher undertook this endeavor in order to contribute to the realization of the city’s goals.

With these things in mind, the researcher then entitled this study “The Implementation Traffic Ordinances of Vigan City: A Basis for Program Development.”

B. Statement of the Problem

This study assessed the extent of implementation of the Traffic Ordinances in Vigan City, Province of Ilocos Sur for Calendar year 2016.

➤ *Specifically, the Study Attempted to Answer the Following Questions:*

- What is the profile of the traffic enforcer- respondents in terms of the following variables?
 - ✓ Age
 - ✓ Gender
 - ✓ Civil Status
 - ✓ Highest Educational Attainment
 - ✓ Gross Monthly Income
- What is the extent of implementation of the city traffic ordinances as assessed by traffic enforcers-respondents, the motorists, and the community residents relative to:
 - ✓ Education
 - ✓ Enforcement
 - ✓ Engineering
 - ✓ Environment
 - ✓ Economics
- Is there a significant difference among the assessment of the three groups of respondents on the extent of implementation of the traffic ordinances in terms of the above mentioned dimensions?
- Is there a significant relationship between the assessments of the traffic enforcer-respondents on the extent of traffic ordinances and their profile variable?
- In what dimension/s of the traffic ordinances were not well implemented?
- What program interventions may be proposed to address the dimensions that were not well implemented?
- What are the problems encountered by the traffic enforcers-respondents in the implementation of the traffic ordinances?
- What actions can be taken to address the identified problems?

C. Research Design

The researcher used a correlational method in the study. Correlational research design is a specific type of non-experimental design used to describe the relationship between or among variables. It provides empirical evidence suggesting that two or more variables are – or are not – related. While this evidence does not establish causal relationships, it does contribute to a deeper understanding of the variables being studied and their relationship.

The researcher wanted to describe the extent of the implementation of the Traffic Ordinances in Vigan City: the assessed implementation of Traffic Ordinances; and the factors affecting the implementation of traffic rules and regulations. The researcher would also find out the comments/feedback of the public in the implementation of city traffic ordinances in Vigan City.

D. Respondents of the Study

The respondents of the study are the City Traffic Enforcers, the Drivers and the Commuters to be selected through purposive sampling from the barangays of Vigan City. Five respondents shall be selected in every barangay. The table below shows the distribution of the respondents.

Table 1: Respondents of the Study

	Respondents	Percentage (%)
Traffic Enforcers	42	17.72
Drivers	102	43.04
Commuters	93	39.24
Total	237	100

II. THE DISTRIBUTION OF RESPONDENTS

A. Data Gathering Tools

The instrument used in gathering data for the study was a questionnaire which was constructed by the researcher based on the traffic ordinances of Vigan City and in Republic Act No. 4136 also known as the “Land Transportation and Traffic Code”. The questionnaire is composed of two parts. One featured the personal profile of the traffic enforcer-respondents in terms of their age, gender, civil status, highest educational attainment, employment status and gross monthly income. The second part is the extent of implementation of traffic ordinances as assessed by the three groups of respondents in education, enforcement, engineering, environment and economy, they were rated using the degrees; Always, Sometimes, and Never.

B. Data Gathering Procedure

The researcher followed the following procedure in gathering the data needed in his research. First, the researcher sought approval from the City Mayor of Vigan City, the Office of Traffic Division and the Chief of Traffic for the conduct of the study and floating questionnaires among respondents. Then, the researcher tabulated and classified the retrieved questionnaires based on the respondent’s profile. The researcher tabulated and

determined the extent of the implementation of city traffic ordinances in Vigan City, Province of Ilocos Sur.

C. Statistical Tool

The result of statistical computation guided the researcher in the interpretation and analysis of the data. The statistical tools, which were used in this study, are as follows:

- Frequency and percentage distribution is computed to determine the proportion of part to the whole such as a given number of respondents in relation to the entire population.
- Weighted Mean is used to analyze the perceptions of the respondents. It also used to compute the over-all average of the responses or perceptions of the respondents. Formula: $WM = \frac{\sum(f_1x_1 + f_2x_2 + \dots + f_nx_n)}{\sum f_m}$ Whereas: $\sum f_m =$ Sum of the product frequency and the unit weight.
- F-Test or Analysis of Variance (ANOVA) is used to statistically test to determine a single, over-all decision as to whether a significant difference is present among three or more sample means. Formula: $F = \frac{MSb}{MSw}$ whereas MSb= Mean Square Between, MSw= Mean Square Within.

III. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the analysis and interpretation of data gathered in this study entitled “The Implementation of Traffic Ordinances in Vigan City: A Basis for Program Development”.

A. Profile of the Traffic Enforcers

➤ **Age**

Table 2(a): Frequency and Percentage Distribution of the Traffic Enforcers as to Age

Age	Frequency	Percentage
50-54	5	11.90
45-49	4	9.52
40-44	5	11.90
35-49	13	30.95
30-34	10	23.81
25-29	1	2.38
20-24	4	9.52
Total	42	100.00

Mean Age: 37.48

Table 2a presents the frequency and percentage distribution of the traffic enforcers’ age. There are 13 or 30.95% who are within the 35-39 years age bracket. On the other hand, 1 or 2.38% are within the 25-29 years old.

The mean age of the traffic enforcers is 37.48. This implies that majority of the traffic enforcers are in their late adulthood.

➤ Gender

Table 2(b): Frequency and Percentage Distribution of the Traffic Enforcer as to Gender

Gender	Frequency	Percentage
Male	40	95.24
Female	2	4.76
Total	42	100.00

The table above presents the frequency and percentage distribution of the traffic enforcers' gender. The results revealed that there are more males than females.

➤ Civil Status

Table 2(c): Frequency and Percentage Distribution of Traffic Enforcer as to Civil Status

Civil Status	Frequency	Percentage
Single	4	9.52
Married	38	90.48
Widow/er	0	0
Total	42	100.00

Table 2c presents the frequency and percentage distribution of the traffic enforcers' civil status. Majority of the traffic enforcers are married with 38 or 98.48% reflected in their mean age of 37.48.

➤ Educational Attainment

Table 2(d): Frequency and Percentage Distribution of the Traffic Enforcers as to Highest Educational Attainment

Highest Educational Attainment	Frequency	Percentage
College Graduate	41	97.62
Vocational	1	2.38
Total	42	100.00

Table 3(a): Weighted Mean and the Descriptive Interpretation of the respondents in Extent of Implementation of Traffic Ordinances in Vigan City in terms of Education

A. EDUCATION	Enforcer		Drivers		Commuters		Overall	
	Mean	DI	Mean	DI	Mean	DI	Mean	DI
1. Disseminate the traffic ordinances properly.	2.83	A	2.15	S	2.10	S	2.36	A
2. Conducts seminars to the public.	2.74	A	1.8	S	1.83	S	2.12	S
3. Conducts lectures before getting any permit or license.	2.79	A	2.28	S	2.13	S	2.4	S
4. Conducts examination before getting any permit or franchise.	2.79	A	2.35	A	2.07	S	2.40	A
5. Trainings given to the traffic enforcers, drivers and motorist.	2.81	A	2.48	A	2.33	S	2.54	A
6. Visible instructional signs or materials.	2.79	A	2.55	A	2.47	A	2.60	A
7. Adherence to the rules and regulations.	2.83	A	2.45	A	2.50	A	2.59	A
Category Mean	2.79	A	1.96	S	2.20	S	2.31	S

Table 3a shows the assessment by the traffic enforcers on the education dimension of the implementation of traffic ordinances. In item "Disseminates the traffic ordinances properly" and item "Adherence to the rules and regulations" has the highest mean of 2.83, interpreted as "always". It implies that the City of Vigan is always disseminating the traffic ordinances and they adhere to the rules and regulations about traffic. The lowest mean of 2.74 and interpreted as "always" in the item "Conducts seminars to the public". This also implies that the City of Vigan are

The above table shows that majority of the traffic enforcers are college graduates with 41 or 97.62% which is one of the requirements in applying as a traffic enforcer. Only one traffic enforcer is a vocational graduate.

➤ Gross Monthly Income

Table 2(e): Frequency and Percentage Distribution of the Traffic Enforcers as to Gross Monthly Income

Gross Monthly Income	Frequency	Percentage
Below 5,000	1	2.38
5,001-10,000	35	83.33
10,001-15,000	5	11.90
15,001 above	1	2.38
Total	42	100.00

Mean Gross Income = 7,750

Table 2e presents the frequency and percentage distribution of the traffic enforcers' gross monthly income. Majority are 35 or 83.33% of the traffic enforcers are having a gross monthly income of 5,001-10,000. This implies that the City is giving a low or minimal amount of salary to the traffic enforcers with a mean gross income of 7,750. This implies that the traffic enforcer-respondents are in a poverty line.

B. The Extent of Implementation of Traffic Ordinances as Assessed by Traffic Enforcer-Respondents, the Drivers and the Commuters in Vigan City.

➤ Education

This pertains solely to the extend to which the city government educates its people, both commuters and drivers on the different traffic rules and regulation.

always conducting seminars to the public as assessed by the traffic enforcers.

The overall mean of the first dimension as assessed by the traffic enforcers is 2.79 and interpreted as "always". It means that the ordinances in this category as assessed by the traffic enforcers are always put into actions or properly implemented by the Vigan City Officials.

The table shows that in the assessment of the drivers/motorists has the highest mean of 2.55 and interpreted as “always” to the item “visible instructional signs or materials”. It implies that the Government of Vigan are always following the Traffic Ordinances or there are always visible instructional signs or materials that are posted along the public roads. However, in the item “Conducts seminars to the public” with the lowest mean of 1.8 and interpreted as “sometimes”. It shows that the City Government of Vigan seldomly conducts seminars to the public on traffic rules and regulations regularly as assessed by the drivers/motorists.

The table shows that the overall mean of drivers/motorists on the first dimension is 1.96, interpreted as “sometimes”. It means that the ordinances in this dimension is sometimes put into actions or not properly implemented by the City Government Officials as assessed by the Drivers/Motorists.

The table shows that in the assessment of the commuters, the highest mean of 2.50 and interpreted as “always” in the item “Adherence to the rules and regulations”. It implies that they are always adhering to the rules and regulation in traffic ordinances of Vigan City. However, in item “Conducts seminars to the public” has the lowest mean of 1.83 and interpreted as “sometimes”, it

➤ *Enforcement*

Table 3(b): Weighted Mean and the Descriptive Interpretation of the Respondents in Extent of Implementation of Traffic Ordinances in Vigan City in Terms of Enforcement

B. ENFORCEMENT	Enforcer		Drivers		Commuters		Overall	
	Mean	DI	Mean	DI	Mean	DI	Mean	DI
1. Prohibits the use of handheld electronic device while driving like cellphones.	2.52	A	2.55	A	2.63	A	2.56	A
2. Traffic signs in every intersection are visible.	2.82	A	2.50	A	2.60	A	2.64	A
3. Implementation of one way street.	3	A	2.6	A	2.40	A	2.66	A
4. Prohibiting the use of colorum tricycles for hire.	2.98	A	2.3	A	2.57	A	2.69	A
5. Assigned speed limit in every street.	2.26	S	2.28	S	2.30	S	2.28	S
6. Cancellation or revocation of franchise or permit of tricycle for hire when found using for illegal activities.	2.88	A	2.55	A	2.27	S	2.56	A
7. Assigned parking space for calesa.	2.95	A	2.78	A	2.83	A	2.85	A
Category Mean	2.77	A	2.54	A	2.51	A	2.60	A

Table 3b shows the assessment by the Traffic Enforcers in terms of the dimension Enforcement. The highest mean of 3.00 was calculated and interpreted as “always” in the item “Implementation of one way street”. It implies that the city government of Vigan is strictly implementing the one way street. However, the item “Assigned speed limits in every street” gained the lowest mean of 2.26, interpreted as “sometimes”. It implies that sometimes the city of Vigan is not strict in implementing speed limits, as assessed by the traffic enforcers.

The overall mean of the Traffic Enforcers in the assessment of the extent of implementation of traffic ordinances in Vigan City is 2.77 and interpreted as “always”. It means that the ordinances are always put into

implies that the City Government of Vigan is not conducting seminars to the public regularly.

The overall mean of 2.20 and interpreted as “sometimes”, it means that the ordinances in this category are sometimes put into actions or not properly implemented by the City Government of Vigan as assessed by the commuters.

The table shows the computed overall mean of the traffic enforcers, drivers/motorists and commuters. The item “Visible instructional signs or materials” has the highest mean of 2.60 and interpreted as “always”. It implies that the city government of Vigan is always making or installing instructional signs or materials to the public in terms of education as assessed by the three respondents. However, the lowest mean of the computed overall of the three respondents are 2.12 and interpreted as “sometimes” in the item “Conducts seminars to the public”. It implies that the City Government of Vigan seldomly conducts seminars to the public.

The computed overall mean of the three respondents has an overall mean of 2.31 and interpreted as “sometimes”. It means that the ordinances in this category are not properly disseminated to the public.

action or properly implemented by the City Government of Vigan as assessed by the Traffic Enforcers.

The table also shows the assessment by the Drivers. The highest computed mean is 2.78, interpreted as “always” in the item “Assigns parking space for calesa”. It implies that there is an observed proper parking area for the calesa assigned by the city. However, the mean of 2.28 and interpreted as “sometimes” in the item “Assigned speed limits in every street” is the lowest. It implies that the speed limits are not strictly observed in the city.

The table further shows that the overall computed mean of the drivers in assessing the extent of implementation of traffic ordinances in Vigan City is 2.54, interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the city of Vigan as assessed by the drivers.

The table shows that in the assessment by the Commuters, the item “Assigns parking space for calesa” has the highest computed mean of 2.83 and interpreted as “always”. It implies that there is an observed proper parking space for calesas-for-hire within the city. However, in the item “Cancellation or revocation of franchise or permit of tricycle-for-hire when found using for illegal activities” gained the lowest mean of 2.27, interpreted as sometimes. It shows that the city is not implementing this ordinance properly.

The overall mean in the assessment of the commuters in the dimension of enforcement is 2.57, interpreted as

➤ *Engineering*

Table 3(c): Weighted Mean and the Descriptive Interpretation of the Respondents in Extent of Implementation of Traffic Ordinances in Vigan City in Terms of Engineering

C. ENGINEERING	Enforcer		Drivers		Commuters		Overall	
	Mean	DI	Mean	DI	Mean	DI	Mean	DI
1. Installed traffic signs that are visible to the public.	2.83	A	2.55	A	2.40	A	2.59	A
2. Widening of roads in every street.	2.33	S	2.28	S	2.20	S	2.27	S
3. The old plate number of franchise is placed inside the sidecar.	2.88	A	2.58	A	2.23	S	2.56	A
4. Installed warning signs in every street.	2.95	A	2.45	A	2.33	S	2.57	A
5. No reservation of parking space within the poblacion area.	2.95	A	2.32	S	2.33	S	2.53	A
6. Visible pedestrian lane especially in school zones.	2.93	A	2.50	A	2.63	A	2.68	A
7. A private garage for every tricycle-for-hire is available.	2.31	S	2.12	S	2.07	S	2.16	S
Category Mean	2.74	A	2.40	A	2.31	S	2.48	A

The Table 3c reveals the assessment by the Traffic Enforcers in terms of the engineering dimension. The highest computed mean is 2.95 and interpreted as “always” in the items “Installed warning signs in every street” and “No reservation of parking space within the poblacion area.” It implies that the city government of Vigan are strictly implementing the no reservation of parking within the poblacion area and also the installation of warning signs in every road or street in the city. However, the item “A private garage for every tricycle-for-hire is available” has the lowest mean of 2.31, interpreted as “sometimes”. It implies that the city of Vigan does not require a private garage for every tricycle-for-hire as a requirement before getting a permit or franchise as perceived by the traffic enforcers.

The overall computed mean of the traffic enforcers in the assessment of the extent of implementation of traffic ordinances in Vigan City is 2.74 and interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the City Government of Vigan as assessed by the Traffic Enforcers.

“always”. It means that the ordinances in this category are always enforced by the city as assessed by the commuters.

The table shows the overall computed mean of the traffic enforcers, drivers/motorists and commuters. The item “Assigns parking space for calesa” has the highest mean of 2.85 and interpreted as always. It implies that the city government of Vigan is always observing the proper parking space for calesas-for-hire. However, the lowest overall computed of the three respondents is 2.28, interpreted as sometimes in the item “Assigned speed limit in every street”. It implies that the city government of Vigan is not observing the proper speed limits in every street.

The computed overall mean of the three respondents is 2.60, interpreted as always. It means that the ordinances in this category are always being implemented by the city government of Vigan as perceived by the three respondents.

The table also shows that in the assessment by the drivers, the highest mean is 2.58 and interpreted as “always” in the item “The old plate number of franchise is placed inside the sidecar”. It implies that the city is strictly implementing the placing of the old plate number of franchise inside the sidecar of the tricycle-for-hire. However, the item “A private garage for every tricycle-for-hire is available” gained the lowest computed mean of 2.12, interpreted as “sometimes”. It implies that in the assessment by the drivers, not all owners of tricycle-for-hire have their own private garage.

The table also reveals that the extent of implementation of traffic ordinances in Vigan City has an overall mean of 2.40 and interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the city of Vigan as assessed by the drivers.

The table also present the assessment by the commuters. The item “Visible pedestrian lane especially in school zones” has the highest mean of 2.63 and interpreted as “always”. It significantly implies that the city of Vigan is putting extra effort in repairing the pedestrian lanes as seen

by the commuters. However, in item “A private garage for every tricycle-for-hire is visible” has the lowest mean of 2.07 and interpreted as “sometimes”. It shows that the city is not requiring private garage for every tricycle-for-hire owner as assessed by the commuters.

The overall mean in the assessment of the commuters in this dimension is 2.31 and interpreted as “sometimes”. It means that the ordinances in this category are consistently implemented by the city as assessed by the commuters.

The table shows the computed overall mean of the traffic enforcers, drivers/motorists and commuters. The highest computed mean is 2.68 and interpreted as “always” in the item “Visible pedestrian lane especially in school

zones”. It implies that the City Government of Vigan is always doing their job in making the pedestrian lane visible especially in school zones. However, the lowest computed overall mean of the three respondents is 2.16 and interpreted as “sometimes” in the item “A private garage for every tricycle-for-hire is available”. It implies that the city government of Vigan is not requiring a private garage for every tricycle-for-hire as assessed by the three respondents.

The computed overall of the three respondents has an overall mean of 2.48 and interpreted as “always”, it means that the ordinances in this category are always put into action by the city government of Vigan as assessed by the three respondents.

➤ *Environment*

Table 3(d): Weighted Mean and the Descriptive Interpretation of the Respondents in Extent of Implementation of Traffic Ordinances in Vigan City in terms of Environment

D. ENVIRONMENT	Enforcer		Drivers		Commuters		Overall	
	Mean	DI	Mean	DI	Mean	DI	Mean	DI
1. Calesas-for-hire is equipped with adequate receptacles for horse manure.	2.83	A	2.43	A	2.20	S	2.48	A
2. Requires all tricycle-for-hire to undergo smoke emission test.	3	A	2.55	A	2.50	A	2.68	A
3. Submits the horses for physical check-up regularly.	2.95	A	2.18	S	1.97	S	2.7	A
4. The tricycle for hire is equipped with trash can inside his/her tricycle.	2.95	A	2.35	A	2.33	S	2.54	A
5. The drivers are required to undergo for medical examinations.	2.98	A	2.50	A	2.50	A	2.66	A
6. Prohibits the use of mufflers.	2.98	A	2.62	A	2.80	A	2.8	A
7. Requires smoking area within poblacion area.	3	A	2.25	S	2.37	A	2.54	A
Category Mean	2.96	A	2.41	A	2.39	A	2.58	A

Table 3d shows that in the assessment by traffic enforcers in the items “Requires all tricycle-for-hire to undergo smoke emission test” and “Requires smoking area within poblacion area” have the highest computed mean of 3.00 and interpreted as “always”. It significantly implies that the city government of Vigan is strictly implementing that tricycles must undergo smoke emission test before getting a permit or franchise. It also strictly implements the no smoking area within poblacion. Although, the lowest mean of 2.83 and interpreted as “always” was the item “Calesas-for-hire is equipped with adequate receptacles for horse manure”, this implies that the city of Vigan is also strict in implementing the calesas must be equipped with receptacles for horse manure to maintain the cleanliness of the city.

The overall mean of the dimension Environment as assessed by the traffic enforcers is 2.96 and interpreted as “always”. It means that the ordinances in this category as assessed by the traffic enforcers are always put into action or properly implemented by the Vigan City officials.

The table also shows that in the assessment by the drivers/motorists the highest mean of 2.62, interpreted as “always”, is computed no the item “Prohibits the use of mufflers”. It significantly implies that the city government of Vigan is strictly prohibiting the use of mufflers within the city to lessen the noise emitted from the vehicles. However,

the lowest mean of 2.18 is computed in the item “Submits the horses for physical check-up regularly”, interpreted as “sometimes”. It shows that the city government of Vigan rarely submits the horses for physical check-up regularly before getting any franchise or permit to operate.

The table also shows that the overall mean is 2.41 and interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the city government of Vigan as assessed by the drivers/motorists.

The table reveals in the assessment by the Commuters, the highest mean of 2.80 and interpreted as “always” in the item “Prohibits the use of mufflers”. It implies that the city is strictly implementing the “no using of mufflers” to lessen the noise in the area. However, the item “Submits the horses for physical check-up regularly” has the lowest mean of 1.97 and interpreted as “sometimes”. It implies that the city government of Vigan does not require the calesa operators to submit their horses for physical check-up regularly before getting any franchise or permit.

The overall mean in this area is 2.39 and interpreted as “always”. It means that the ordinances in this category are always put into actions or properly implemented by the city government of Vigan as assessed by the commuters.

The table shows that the computed overall mean of the traffic enforcers, drivers/motorists and commuters. The highest mean of 2.8 and interpreted as “always” in the item “Prohibits the use of mufflers”. It significantly implies that the city government of Vigan is strictly implementing the “no using of mufflers” to lessen the noise coming from the vehicles. The lowest computed overall mean of the three respondents is 2.48 and interpreted as “always” in the item “Calesas-for-hire is equipped with adequate receptacles for

horse manure”. It implies that the city government of Vigan is very strict when it comes to the horse manure to maintain the cleanliness in the city.

The computed overall mean of the three respondents has a value of 2.58 and interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the city government of Vigan as assessed by the three respondents.

➤ *Economy*

Table 3(e): Weighted Mean and the Descriptive Interpretation of the Respondents in Extent of Implementation of Traffic Ordinances in Vigan City in Terms of Economy

E. ECONOMY	Enforcer		Drivers		Commuters		Overall	
	Mean	DI	Mean	DI	Mean	DI	Mean	DI
1. Requires tricycle-for-hire to place the fare matrix inside their side car.	2.83	A	2.43	A	2.46	A	2.57	A
2. At night, tricycle-for-hire is required to have a light inside his/her sidecar.	3	A	2.53	A	2.37	A	2.63	A
3. Scheduled fare for every territorial jurisdiction is posted inside the vehicle.	2.95	A	2.53	A	2.33	S	2.56	A
4. Discounted fare for student and senior citizen is strictly implemented.	2.95	A	2.53	A	2.37	A	2.61	A
5. Fines for simple traffic violations are collected by the city government.	2.98	A	2.6	A	2.40	A	2.66	A
6. Requires fees/requirements in getting a franchise or permit.	2.98	A	2.75	A	2.40	A	2.71	A
7. Requires student to get permit or driver license before operating a motor vehicle.	3	A	2.70	A	2.70	A	2.8	A
Category Mean	2.96	A	2.55	A	2.43	A	2.64	A

Table 3e shows the assessment of the Traffic Enforcers in terms of the dimension Economy. The highest mean of 3.00 is computed and interpreted as “always” in the items “At night, tricycle-for-hire is required to have a light inside his/her sidecar” and “requires students to get permit of license before operating a motor vehicle”. It significantly implies that the city government of Vigan is strictly obliges the tricycles-for-hire must equipped with light especially at night to lessen the fear of the commuters. They are also strict in acquiring driver’s license or student’s permit before operating a motor vehicle. The item “Requires tricycle-for-hire to place the fare matrix inside their sidecar” has the lowest mean of 2.83 and interpreted as “always”. It implies that the City of Vigan is requiring the tricycle operators to place the fare matrix inside their tricycle to show how much the fare in every territorial jurisdiction as assessed by the traffic enforcers.

The overall mean computed from the responses of the traffic enforcers in the assessment of the extent of implementation of traffic ordinances in Vigan City is 2.96 and interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the City Government of Vigan as assessed by the Traffic Enforcers.

The table also shows that in the assessment by the drivers, the highest mean of 2.75 is computed and interpreted as “always” in the item “Requires fees

/requirements in getting a franchise or permit”. It implies that the city is strict in procuring the requirements or fees needed before getting a franchise or permit to operate. However, the mean of 2.43 and interpreted as “always” in the item “Requires tricycle-for-hire drivers to place the fare matrix inside his/her sidecar” is computed as the lowest. It implies that in the assessment of the drivers, the City of Vigan is strictly implementing this ordinance on placing the fare matrix inside the sidecar of the tricycle to guide the commuters on the fare in every territorial jurisdiction.

The table also displays the overall mean in assessing the extent of implementation of traffic ordinances in Vigan City is 2.55 and interpreted as “always”. It means that the ordinances in this category are always put into action or properly implemented by the city of Vigan as assessed by the Drivers.

The table further shows that in the assessment by the commuters, the item “Requires student to get a permit or driver’s license before operating a motor vehicle” has the highest mean of 2.70 and interpreted as “always”. It significantly implies that the city is strict when it comes to the operation of motor vehicles. The driver must first secure a student permit or driver’s license before operating a motor vehicle. However, the item “Scheduled fare for every territorial jurisdiction is posted inside the vehicle” has the lowest mean of 2.33 and interpreted as “sometimes”. It

shows that the city does not require the drivers to post the fare matrix inside the sidecar as assessed by the commuters.

The overall mean in the assessment by the commuters in the dimension economy is 2.43 and interpreted as “always”. It means that the ordinances in this category are always being practiced by the city as assessed by the commuters.

The table shows the computed overall mean of the traffic enforcers, drivers or motorists and commuters. The item “Requires student to get permit or driver’s license before operating a motor vehicle” has the highest computed mean of 2.8 and interpreted as “always”. It significantly implies that the city government of Vigan is strictly

requiring its drivers to first get a student permit or driver’s license before operating a motor vehicle. Although, has the lowest among the overall computed mean in the dimension is 2.56, it is still interpreted as “always” in the item “Scheduled fare for every territorial jurisdiction is posted inside the vehicle”. It implies that the city government of Vigan obliges its drivers to post a scheduled fare for every territorial jurisdiction and must be posted inside of the vehicle.

The overall computed mean of the three respondents has a value of 2.64 and interpreted as “always”, it means that the ordinances is always put into action or properly implemented by the city government of Vigan as assessed by the three respondents.

➤ *Summary Table*

Table 3(f): Summary Table on the Extent of Implementation of Traffic Ordinances as Assessed by the Three Groups of Respondents

Dimensions	Traffic Enforcers		Drivers		Commuters		Overall	
	Mean	DI	Mean	DI	Mean	DI	Mean	DI
Education	2.79	A	1.96	S	2.20	S	2.31	S
Enforcement	2.77	A	2.54	A	2.51	A	2.60	A
Engineering	2.74	A	2.40	A	2.31	S	2.48	A
Environment	2.96	A	2.41	A	2.39	A	2.55	A
Economy	2.96	A	2.55	A	2.43	A	2.64	A
Category Mean	2.84	A	2.37	A	2.37	A	2.52	A

Table 3f presents the summary on the extent of implementation of traffic ordinances as assessed by the three groups of respondents. The traffic enforcers rated all dimension as “always” with environment and economy garnering the highest value of 2.96, however, the engineering dimension has the lowest rated value of 2.74. The drivers, on the other hand rated the four dimensions with “always”. The highest is economy with a mean of 2.55 while education received the lowest mean of 1.96 which is

described as “sometimes”. Moreover, the commuters rated three dimensions as “always” and two rated as “sometimes”. enforcement has the highest mean of 2.51 which is described as “always” and education was rated as the lowest with a mean of 2.20 which is interpreted as “sometimes”.

In general, the three groups of respondents rated the ordinances as “always”, bearing the values of 2.84, 2.37 and 2.37.

C. Comparing the Assessment of the Three Groups of Respondents on the Extent of Traffic Ordinances in Terms of the Above Dimension

Table 4(a): Analysis of Variance on Assessment of the Three Groups of Respondents on the Extent of Implementation of Traffic Ordinances

Dimensions	F-ratio	Probability	Decision
Education	5.415	.0144	Reject Ho at .05 level
Enforcement	3.062	.0717	Accept Ho at .05 level
Engineering	7.473	4.338 E03	Reject Ho at .05 level
Environment	20.337	2.407 E05	Reject Ho at .05 level
Economics	47.951	6.147 E04	Reject Ho at .05 level

The above table reveals that there is a significant difference along education, engineering, enforcement, environment and economics. Hence the rejection of the null hypothesis at .05 level. This implies that the three groups of respondents assessed the implementation of the traffic ordinances in different manners.

On the other hand, in enforcement there is no significant difference on the assessments of the three groups of respondents, thus accepting the null hypothesis at .05 level.

Table 4(b): Table of Difference between Ordered Mean for Education, Engineering, Environment and Economy

	X3= 1.96	X2= 2.20	X1= 2.79
X3	--	.24	.83
X	--	--	.5
X1	--	--	--
HSD = .62 for Education			
	X2 = 2.31	X3 = 2.40	X1 = 2.74
X2	--	.09	.44*
X	--	--	.34*
X1	--	--	--
HSD = .27 for Engineering			
	X2 = 2.39	X3 = 2.41	X1 = 2.96
X2	--	.02	.57*
X3	--	--	.55*
X1	--	--	--
HSD = .23 for Environment			
	X2 = 2.43	X3 = 2.58	X1 = 2.97
X2	--	.13*	.54*
X3	--	--	.39*
X1	--	--	--
HSD = .13 for Economics			

The table of difference between ordered mean for Education is regarded statistically significant. Any obtained mean difference must be equal or exceed HSP of .62. As a result, the researcher concludes that the mean difference between the assessment by commuters and traffic enforcers are statistically significant at .05 level. Therefore, the assessment by commuters and the drivers are not significant and the drivers and the traffic enforcer’s assessments are not significant also.

The HSD must be .27 for the engineering dimension mean difference to be significant. As reflected on the above table, the drivers and the traffic enforcers are significant, the commuters and the traffic enforcers are likewise significant under engineering dimension at .05 level.

The HSP must be .23 for the mean difference to be significant for the environment dimension. As shown on the above table, the drivers and traffic enforcers are statistically significant at .05 level. Likewise, the commuters and the enforcers are also significant at .05 level.

However, there is no significant difference between the drivers and commuters since the mean difference is only .02.

The HSP for economics is .13. As shown on the above table, all the 3 groups of respondents are statistically significant at .05 level.

D. Correlating the Assessment of the Traffic Enforcer-Respondents on the Extent of Implementation of Traffic Ordinances and their Profile Variable

Table 5: Pearson-r Result on the Correlation Between Assessment of Traffic Enforcers and their Profile Variables

Profile Dimension	Age	Gender	Civil Status	Educational attainment	Income
Education	.25469*	.36320*	.15411*	.15842*	.29705*
Enforcement	.22493*	.30796*	.30472*	.03702*	.37924*
Engineering	.27063*	.29738*	.23284*	.08517*	.20813*
Environment	.32593*	.36101*	.30311*	.03664*	.20781*
Economics	.36370	.38651*	.27205*	.02290*	.28012*

CV = + .18560

Table 5 presents the Pearson-r result on the correlation between the assessment of the traffic enforcers and their profile variables.

As shown in the above table age, gender, civil status, highest educational attainment and income reveal significant relationship on education, enforcement, engineering, environment and economics. Thus the rejection of the null hypothesis at .05 level. This implies that the profile

variables mentioned above influence, to a great extent, the dimensions on the study.

A closer scrutiny reveals that education does not influence the dimensions in the study, hence the acceptance of the null hypothesis at .05 level.

E. Identifying the Traffic Ordinances that were Not Well Implemented.

➤ The Traffic Ordinances that were Not Well Implemented are the Following:

- Conducts seminars to the public.
- Assigned speed limits in every street.
- A private garage for every tricycle-for-hire is available.
- Submits horses for physical check-up regularly.
- Scheduled fare for every territorial jurisdiction is posted inside the vehicle.

➤ Program Interventions to Address the Problem that were not Well Implemented

- The City of Vigan must conduct seminars for the public to minimize or lessen the unawareness of the public in the different traffic ordinances that are being implemented within the city.
- There must be an assigned speed limit in every street within the city to control the motor vehicles in over speeding and to lessen the vehicular accidents within the city.
- A private garage for every tricycle-for-hire must be required by the city government of Vigan before getting a franchise to minimize the tricycles that park within the public roads or streets and also to lessen the crime of car napping.
- The city government of Vigan must also require the operators of calesas-for-hire to submit their horses for physical check-up to avoid or control the spread of diseases within the city.
- There must be a scheduled fare for every territorial jurisdiction posted inside the side car of the tricycle for hire to avoid the unfamiliarity of the commuters.

➤ Identifying the Problems Encountered by the Traffic Enforcer-Respondents in the Implementation of Traffic Ordinances

In the assessment of the traffic enforcer-respondents, the following problems are encountered in the implementation of traffic ordinances:

- The assigned speed limits in every street
- The widening of roads in every street
- Another problem that encountered by the traffic enforcer-respondents is the need of private garage for every tricycle-for-hire

IV. CONCLUSIONS

➤ On the Basis of the Finding in this Study, the following Conclusions Were Drawn;

- The 5 E's of traffic namely: Education, Enforcement, Engineering, Environment and Economy are important factors to consider in the maintenance of order and safety in any thoroughfare as revealed by the assessment of the respondents. Improper observance and

non-implementation of such goals lead to the congestion and traffic jam in a compact city like Vigan.

RECOMMENDATIONS

➤ Based on the Conclusions Drawn from this Study, the Following Recommendations are Given:

- There must be quarterly trainings or seminars conducted to the traffic enforcers, drivers, and road users by the City Government of Vigan.
- There must be a plan for widening of roads within the City to lessen the traffic jam or traffic congestion.
- Proposed action plan should be strictly implemented.
- A follow-up study should be conducted to include other dimensions not covered by the present study.
- Speed limit should be strictly implemented.

REFERENCES

➤ Books

- [1]. Delizo, Darlito Bernard G., RKMAnwong Production and Publication (first edition),(2008) Traffic Management and Accident Investigation.
- [2]. Sigua, Ricardo G. (2007). Fundamentals of Traffic Engineering. Quezon City: University of the Philippines Press, c2008.
- [3]. Mayor Benjamin N. Calderon (1979 December 5), Traffic Management Manila: Philippine College of Criminology.

➤ Unpublished Thesis

- [4]. ASSESSMENT OF A ONE-WAY POLICY IN A MAJOR ROAD: THE CASE OF QUEZON AVENUE IN VIGAN CITY, ILOCOS SUR. Franklyn T. Amistad (2012) Retrieved Date: March 8, 2017.
- [5]. ASSESSING THE NEED FOR TRAFFIC SIGNALIZATION FROM THE PERSPECTIVE OF LOCAL GOVERNMENT UNITS. Franklyn T. Amistad (2006) Retrieved Date: March 8, 2017.

➤ Internet

- [6]. <http://ncts.upd.edu.ph/old/research/docs/research/ugrad/200604/Aricayos-Ilaban.pdf>
- [7]. Comparison of the Implemented Traffic Regulations in Different Cities in Metro Manila
- [8]. RHEALYN P. ARICAYOS GAYNDA MARIE T. ILABAN Department of Civil Engineering, University of the Philippines Diliman Published Date: March 22, 2006 Retrieved date: March 8, 2017
- [9]. <http://www.monash.edu/muarc/research/our-publications/muarc053>
- [10]. Traffic Law Enforcement: A Review of Literature – Accident Research Centre
- [11]. D. Zaal Published Date: 2001 Retrieved Date: March 13, 2017

- [12]. <http://www.maxwellsci.com/print/rjaset/v7-5297-5303.pdf>
- [13]. Attitudes and Awareness of Traffic Safety among Drivers in Tripoli-Libya. Hussin A.M. Yahia, Amiruddin Ismail, Shaban Ismael Albrka, Aldukali Salem Almselati and Mohd Azizul Ladin
- [14]. UniversitiKebangsaan Malaysia, 43600 UKM Bangi, Selangor Darul Ehsan, Malaysia
Published Date: June 25, 2014
Retrieve date: March 8, 2017
- [15]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3410057/>
- [16]. ATTITUDE AND PRACTICE TOWARDS ROAD TRAFFIC REGULATIONS AMONG STUDENTS OF HEALTH SCIENCES COLLEGE IN ASEER REGION
- [17]. Yahia M. Al-Khaldi, MBBS, ABFM
Published Date: September 2006
Retrieved Date: March 13, 2017
- [18]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4725408/>
- [19]. Knowledge, attitudes, and practice of drivers towards traffic regulations in Bandar-Abbas, Iran
- [20]. AbdolhamidTajvar, Mir Saeed Yekaninejad, TeamurAghamolaei, Soudabeh Hamedei Shahraki, Abdolhossein Madani, and Leila Omid
Published Date: December 20, 2015
Retrieved Date: March 8, 2017
- [21]. <http://www.sciencedirect.com/science/article/pii/S038611211000057>
- [22]. Education influence in traffic safety: A case study in Vietnam
- [23]. Khuat Viet Hung, Le Thu Huyen
Published Date: March 2011
Retrieved Date: March 8, 2017
- [24]. <http://journals.iium.edu.my/imjm/index.php/eimj/article/view/26>
- [25]. KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS ROAD TRAFFIC REGULATIONS AMONG UNIVERSITY STUDENTS, MALAYSIA
- [26]. Redhwan A A, Karim A J
Published Year: 2015
Retrieved Date: March 13, 2017
- [27]. https://www.researchgate.net/profile/Ahmad_Abu_Abd/publication/258885398_Assessment_of_Traffic_Safety_and_Awareness_among_Youth_in_Al-Ahsa_Region_Saudi_Arabia/links/02e7e5295a6c3f2bf4000000.pdf
- [28]. Ahmad M. Abu Abdo
Published date: 2011
Retrieved date: March 13, 2017