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Compliance to Crime Prevention through Environmental Design Principles of the University of the Cordilleras

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Abstract

Every society has crime lurking within it and it is well recognized that crime cannot be eliminated rather can be prevented. Crime prevention can be attributed to the design of the surrounding space of a certain institution. The environmental space, both existing and planned, is a crucial part in deterring would be criminals. These spaces can be manipulated to fit the existing security needs of an institution. This study assessed the compliance of the university as to Crime Prevention Through Environmental Design (CPTED). This study utilized both qualitative and quantitative methods in the conduct of the study. Descriptive-survey method. It was known from the study that the University of the Cordilleras has a high level of compliance from the laid principles of CPTED with mean of 3.06. Similarly, the existing designs and good practices in the University are the following: Establishment of Identity, Security, Being Dynamic. Further, the following challenges in the implementation/ compliance of the principles of CPTED: Non-reporting of lacking or inappropriate fixtures, Presence of violators. This opened the horizon in the identification of the university's weaknesses and strength as an opportunity towards the maintenance and improvement of such CPTED practices.

Index Terms—crime prevention, environmental design, level of compliance, strengths & challenges.

Introduction

"Crime Prevention through Environmental Design (CPTED) is a set of design principles used to discourage crime and promote building security" (Deutsch, 2019). According to Clarke (n.d.), "The theory of CPTED is based on one simple idea -- that crime results partly from the opportunities presented by physical environment. This being the case it

should be possible to alter the physical environment so that crime is less likely to occur".

As reported by UN on 2005 as cited by Costa, et. Al. (2013), crime levels for the recent decades has given increasing cause for alarm, bringing material and immaterial consequences that have still to be properly understood. Anti-crimes strategies urgently need to be implemented in order to promote safe communities and contribute to their sustainable development.

Oakland Police Department stated that CPTED is applied in the community through one of four overlapping strategies. Each strategy employs a slightly different method of sending a clear message to criminals that a responsible person is nearby and their activity is not welcome.

In addition, Nocheck in 2013 presented in her research entitled "Connecting site safety, design, and management: exploring and applying CPTED principles in planning policies and practices for green township, Ohio" the idea that there is a relationship between the conditions of the physical environment and criminal activity. The work of late Jane Jacobs roused widespread interest in the study of how environmental conditions influenced human behavior, specifically how the environment influenced criminal activity. He further discussed the ideas of Schneider & Kitchen (2002) that CPTED is a multi-disciplinary approach to crime deterrence and prevention through intentionally altering certain elements of the physical environment.

Deutsch (2019) further stated that CPTED principles are based on anticipating the thought processes of a potential offender and creating an environment that discourages follow-through. CPTED has the added advantage of creating a sense of security and well-being among employees and tenants.

In addition, CPTED focuses primarily on the natural approach, which is facilitated by the physical design of a location, rather than organized, which is conducted by people such as police or guards, or mechanical, which is facilitated by electronic or mechanical devices such as closed-circuit television (CCTV) monitoring systems. The natural approach is favored because it is believed to be most cost-effective, as well as the most sustainable (Schneider & Kitchen, 2002). These principles and strategies continue to be utilized today due to their flexibility (Llewelyn Davies, 2004). Flexibility, or adaptability, is essential as place-based crime prevention, including CPTED applications, must be tailored to fit the context of the specific location, in terms of both the physical environment and the social environment. The reason that CPTED applications must be tailored to fit the given locality is because of the complex nature of how, where, and why crime occurs.

And according to Clarke (n.d.), “The theory of CPTED is based on one simple idea -- that crime results partly from the opportunities presented by physical environment. This being the case it should be possible to alter the physical environment so that crime is less likely to occur”.

Similarly, CPTED is one of the most popular urban planning strategies for improving safety in cities. The major purpose of CPTED is to deter potential criminals by modifying urban environments. It is based on the urban design and environmental psychology belief that human behavior can be influenced by the surrounding environment. CPTED is often used to renovate declining neighborhoods that suffer from crime. For example, local governments in Korea have carried out urban regeneration projects to improve the physical environment of low-rise neighborhoods. Since most deteriorated neighborhoods in Korea suffer from high crime rates, neighborhood restoration projects generally incorporate CPTED to reduce crime and fear of crime and, thus, improve social sustainability for residents. However, the effectiveness of CPTED implementation is still disputed. (Lee et.al., 2016)

“The issues of crime and violence on American college campuses have existed since the first institutions of higher learning were established in the United States; however, they had not been raised as a social concern until the late 1980s. Several fatal incidents that resulted in criminal proceedings shattered the historical image of universities as being sanctuaries and led to a new standard of legal responsibility, which held schools liable when appropriate protection measures were lacking for campus communities (Smith, 1989). Thus, campus crime is no longer considered a private problem solely related to victims and individual institutions. Researchers, advocacy groups, student victims, and their families have fought a long battle to bring this issue to the attention of legislators, policy-makers, and the general public (Sloan & Fisher, 2011; Tewksbury, 2013).” (Shariati, 2017)

The National Crime Prevention Council (NCPC) of Singapore (2003) has a parallel statement that “The basis of Crime Prevention Through Environmental Design (CPTED) is that proper design and effective use of the built environment can reduce the incidence and fear of crime. This in turn leads to improvements in the quality of life”.

The rising need for security of every individual is one of the considerations nowadays. News reports usually contains easily penetrated buildings and establishments due to poor planning of designs.

As reported by UN on 2005 as cited by Costa, et. Al. (2013), crime levels for the recent decades has given increasing cause for alarm, bringing material and immaterial consequences that have still to be properly understood. Anti-crimes strategies urgently need to be implemented in

order to promote safe communities and contribute to their sustainable development.

This study will be at a great help to the entire University of the Cordilleras (UC) community. This study would further assess the current situation of the university as to CPTED. It also allows the identification of the university's weaknesses and strength. The identification of these areas can now lead to the maintenance and/ or improvement of such CPTED practices. In attaining these, the safety and welfare of the stakeholders of the university will be improved.

CPTED Principles

The NCPC (National Crime Prevention Council) of Singapore (2003) identified certain guiding CPTED principles which are as follows:

Natural Surveillance explains that criminals do not wish to be observed. This increases the actual risk to offenders if being caught if under observation which is the primary aim. This principle can also be related to the theory of deterrence where restraint and discouragement is observed. (Mazarr, 2018).

Natural access control basically means those physical and mental barriers that are in place to control the ingress and egress of people in a certain area.

Territorial Reinforcement would explain the additional effort an individual initiates to show ownership or set clear boundaries.

Maintenance and Management would now be related to the sense of pride. In simple terms, it denotes the care and continuous grooming and employment of the other three principles.

The overlap of the four principles strengthens the promotion of safety and security in general.

Methodology

A. Research Design

The researcher utilized both qualitative and quantitative methods in the conduct of the study. The researcher further used descriptive- survey method and thematic analysis in processing the collected data. This provides a simple description on the installed environmental designs and the level of compliance of the University of the Cordilleras on the laid principles of CPTED.

B. Population and Locale of the Study

The study was conducted at the Main Campus and Legarda Campus of the University of the Cordilleras. The respondents and participants were the administrators and employees of the University assigned in different offices such as: Security Office, Building Maintenance Office,

Occupational Safety and Health Office, the Dean of the College of Engineering and Architecture, the Department Head of the Architecture Department, and a total number of two hundred sixty-nine (269) teaching and non-teaching staff of the University. The respondents and participants were chosen according the extent of their knowledge and involvement on designs, the implementation of plans regarding building designs, and safety and security procedures of the University. Two hundred sixty-nine (269) employees were chosen through total enumeration. It can however be noted that due to the ethical considerations, the researcher was not able to get responses from employees who refused to respond.

C. Research Instrument

The researcher utilized an interview guide to identify the installed environmental designs installed to prevent crimes. The next part is a questionnaire made based on the laid concepts and principles of CPTED. The first part of the questionnaire is concerned with the personal circumstances of the respondents which include the name, the age, the gender, and the occupation of the respondents. The next part was composed of a set of questions that is concerned with the level of adherence of the University from the laid principles of CPTED. The qualifications or guiding statements under each principle seeking for the identification on adherence are adopted from the CPTED Security Handbook of The Oakland Police Department Neighborhood Division, page 10.

D. Statistical Treatment

Table 1. Scales of Measure

Statistical Limit	Numeric Value	Description	Explanation
3.25- 4.00	4	VHC	The University of the Cordilleras has Very High Compliance from the laid principles of CPTED.
2.50- 3.24	3	HC	The University of the Cordilleras has High Compliance from the laid principles of CPTED.
1.75- 2.49	2	FC	The University of the Cordilleras has Fair Compliance from the laid principles of CPTED.
1.0- 1.74	1	LC	The University of the Cordilleras has Low Compliance from the laid principles of CPTED.

Results and Discussion

1. Level of compliance of the University of the Cordilleras from the laid principles of CPTED

This section presents the level of compliance of the University of the Cordilleras from the laid principles of CPTED.

As reflected on Table 2, the overall Mean provides that there is a High Compliance in the laid principles of CPTED in the University of the Cordilleras with a value of 3.06 which lies in between the 2.50-3.24 scale. This implies that UC follows and abides with laid principles of CPTED with 123 participants saying such. However, it can be noted that even though the university follows and abides with the principles, there is still an area for improvement in order to increase its level and continuous development.

Table 2. Overall level of compliance of the University of the Cordilleras from the laid principles of CPTED

INDICATOR	FREQUENCY 1	2	3	4	MEAN (1a)+(2b)+(3c)+(4d) / Total participants	RANK	RANK per AREA
NATURAL SURVEILLANCE							
1. All doorways that open to the outside are well lit.	6	43	124	96	3.15	8	2
2. The front doors are at least partially visible from the street.	11	32	106	120	3.25	5	1
3. Windows on all sides of the school campus provide full visibility of the property.	12	85	118	54	2.80	19	8
4. Sidewalks and all areas of the yard are well lit.	12	61	132	64	2.92	14	5
5. The driveway, or carpark, are visible from either the front or back door and at least one window.	14	73	123	59	2.84	18	7
6. Landscaping do not create blind spots or hiding spots.	10	57	129	73	2.99	13	4
7. Front facing balcony railings, fences, or walls are not constructed of solid material or be higher than 36".	7	52	141	69	3.01	12	3
8. Window treatments on 2nd story, front-facing windows are kept open and provides a view to the front of the property.	12	56	150	51	2.89	16	6
			AREA MEAN		2.98		
NATURAL ACCESS CONTROL							
9. Campus lines and areas are defined with plantings, pavement treatments, short walls, or fences.	3	37	133	96	3.20	6	1
10. The street address is clearly visible from the street with numbers a minimum of 5" high that are made of non-reflective material. The numbers are clearly lighted at night.	27	69	122	51	2.73	20	3
11. The campus is encouraging interaction between neighbors with low property-division fences, bushes, or landscaping transitions.	16	53	137	63	2.92	15	2
12. The mail receiving area is clearly marked with the street address. It is also close to the front of the school and visible from the school.	34	80	103	52	2.64	21	4
			AREA MEAN		2.87		
TERRITORIAL REINFORCEMENT							
13. Walkways and landscaping direct visitors to the proper entrance and away from private areas.	10	44	125	90	3.10	9	2
14. Door locks are located at a minimum of 40 inches from adjacent windows.	8	44	137	80	3.07	11	4
15. Exterior doors or interior carpark doors are hinged on the inside and have a single cylinder dead bolt lock with a minimum one-inch throw.	9	57	158	45	2.89	17	5
16. All windows have locks. Sliding glass doors have a locking device or locking pin on the movable portion of the door.	7	44	118	100	3.16	7	1
17. Detached storage sheds or other buildings are equipped with lockable windows and doors.	7	45	136	81	3.08	10	3
			AREA MEAN		3.06		
MAINTENANCE AND MANAGEMENT							
18. Keeps campus structure painted and in a condition of good repair.	3	27	104	135	3.38	3	3
19. Keep weeds abated. Trim bushes to 36" (thirty- six inches) high and trees up 7' (seven feet) from the ground.	4	26	107	132	3.36	4	4
20. Don't store old automobiles, boats, trailers, or other vehicles in your front yard.	3	25	83	158	3.47	1	1
21. Keep landscaping tidy and in good repair.	2	18	103	146	3.46	2	2
			AREA MEAN		3.42		
OVERALL MEAN					3.06		

In the principles of Crime Prevention Through Environmental Design (CPTED), there are four (4) main areas that we are looking upon. When we take into consideration such areas in the data, it is evident that the most agreed area is the Maintenance and Management having an average of 3.42, followed by the Territorial Reinforcement with an average of 3.06, and the third area is the Natural Surveillance having an average of 2.98, and lastly is the Natural Access Control having an average of 2.87.

Table 3. A Comparison on the level of compliance of the University of the Cordilleras from the laid principles of CPTED between its campuses

INDICATOR	MEAN $\frac{(1a)+(2b)+(3c)+(4d)}{\text{Total participants}}$ MAIN	RANK	MEAN $\frac{(1a)+(2b)+(3c)+(4d)}{\text{Total participants}}$ LEGARDA	RANK
NATURAL SURVEILLANCE				
1. All doorways that open to the outside are well lit.	3.17	7	2.86	14.5
2. The front doors are at least partially visible from the street.	3.27	5	2.86	14.5
3. Windows on all sides of the school campus provide full visibility of the property.	2.80	19	2.79	16.5
4. Sidewalks and all areas of the yard are well lit.	2.92	15	2.93	12
5. The driveway, or carpark, are visible from either the front or back door and at least one window.	2.85	18	2.79	16.5
6. Landscaping do not create blind spots or hiding spots.	2.99	13	2.93	12
7. Front facing balcony railings, fences, or walls are not constructed of solid material or be higher than 36”.	3.00	12	3.21	6.5
8. Window treatments on 2nd story, front-facing windows are kept open and provides a view to the front of the property.	2.89	17	3.00	9.5
AREA MEAN	2.98		2.92	
NATURAL ACCESS CONTROL				
9. Campus lines and areas are defined with plantings, pavement treatments, short walls, or fences.	3.19	6	3.36	3.5
10. The street address is clearly visible from the street with numbers a minimum of 5” high that are made of non-reflective material. The numbers are clearly lighted at night.	2.75	20	2.36	20
11. The campus is encouraging interaction between neighbors with low property-division fences, bushes, or landscaping transitions.	2.94	14	2.57	19
12. The mail receiving area is clearly marked with the street address. It is also close to the front of the school and visible from the school.	2.68	21	1.93	21
AREA MEAN	2.89		2.55	
TERRITORIAL REINFORCEMENT				
13. Walkways and landscaping direct visitors to the proper entrance and away from private areas.	3.11	9	2.93	12
14. Door locks are located at a minimum of 40 inches from adjacent windows.	3.08	10	3.00	9.5
15. Exterior doors or interior carpark doors are hinged on the inside and have a single cylinder dead bolt lock with a minimum one-inch throw.	2.90	16	2.64	18
16. All windows have locks. Sliding glass doors have a locking device or locking pin on the movable portion of the door.	3.15	8	3.21	6.5
17. Detached storage sheds or other buildings are equipped with lockable windows and doors.	3.07	11	3.21	6.5
AREA MEAN	3.06		3.00	
MAINTENANCE AND MANAGEMENT				
18. Keeps campus structure painted and in a condition of good repair.	3.37	3.5	3.50	2
19. Keep weeds abated. Trim bushes to 36” (thirty- six inches) high and trees up 7’ (seven feet) from the ground.	3.37	3.5	3.21	6.5
20. Don’t store old automobiles, boats, trailers, or other vehicles in your front yard.	3.48	1	3.36	3.5
21. Keep landscaping tidy and in good repair.	3.45	2	3.71	1
AREA MEAN	3.42		3.45	
OVERALL MEAN	3.07		2.97	

In the perception on the level of adherence of the university on the laid principles of CPTED, we would now see the difference in the perception of the two different campuses as to their collective perception.

From the data above, it can be observed that the employees at the Main Campus located at Governor Pack Road corner Harrison Road perceive that the University has High level of compliance to the laid principles of CPTED with an average of 3.07. While in the Legarda Campus, the employees also perceive that the University has a high level of compliance to the laid principles of CPTED with an average of 2.97. It can however be observed that even though both campuses have High level of compliance to the laid principles of CPTED, the main campus has a higher compliance to said principles as compared to Legarda campus with a difference of 0.10 in their means.

Table 4. A Comparison on the level of compliance of the University of the Cordilleras from the laid principles of CPTED in the eyes of the employees' sex

INDICATOR	MEAN		MEAN	
	MALE	RANK	FEMALE	RANK
NATURAL SURVEILLANCE				
1. All doorways that open to the outside are well lit.	3.22	6	3.11	8
2. The front doors are at least partially visible from the street.	3.27	5	3.23	5
3. Windows on all sides of the school campus provide full visibility of the property.	2.76	19	2.82	19
4. Sidewalks and all areas of the yard are well lit.	2.93	13	2.92	16.5
5. The driveway, or carpark, are visible from either the front or back door and at least one window.	2.81	17	2.87	18
6. Landscaping do not create blind spots or hiding spots.	2.94	12	3.02	13
7. Front facing balcony railings, fences, or walls are not constructed of solid material or be higher than 36".	2.89	14	3.09	10
8. Window treatments on 2nd story, front-facing windows are kept open and provides a view to the front of the property.	2.84	15.5	2.93	15
AREA MEAN	2.96		3.00	
NATURAL ACCESS CONTROL				
9. Campus lines and areas are defined with plantings, pavement treatments, short walls, or fences.	3.16	7	3.22	6
10. The street address is clearly visible from the street with numbers a minimum of 5" high that are made of non-reflective material. The numbers are clearly lighted at night.	2.72	20	2.74	21
11. The campus is encouraging interaction between neighbors with low property-division fences, bushes, or landscaping transitions.	2.80	18	3.00	14
12. The mail receiving area is clearly marked with the street address. It is also close to the front of the school and visible from the school.	2.46	21	2.77	20
AREA MEAN	2.79		2.93	
TERRITORIAL REINFORCEMENT				
13. Walkways and landscaping direct visitors to the proper entrance and away from private areas.	3.12	9	3.08	12
14. Door locks are located at a minimum of 40 inches from adjacent windows.	3.05	11	3.09	10
15. Exterior doors or interior carpark doors are hinged on the inside and have a single cylinder dead bolt lock with a minimum one-inch throw.	2.84	15.5	2.92	16.5
16. All windows have locks. Sliding glass doors have a locking device or locking pin on the movable portion of the door.	3.13	8	3.18	7
17. Detached storage sheds or other buildings are equipped with lockable windows and doors.	3.07	10	3.09	10
AREA MEAN	3.04		3.07	
MAINTENANCE AND MANAGEMENT				
18. Keeps campus structure painted and in a condition of good repair.	3.38	3	3.38	4
19. Keep weeds abated. Trim bushes to 36" (thirty- six inches) high and trees up 7' (seven feet) from the ground.	3.28	4	3.42	3
20. Don't store old automobiles, boats, trailers, or other vehicles in your front yard.	3.46	1	3.48	1
21. Keep landscaping tidy and in good repair.	3.45	2	3.47	2
AREA MEAN	3.40		3.44	
OVERALL MEAN	3.03		3.09	

Overall, male and female employees perceive that the university has a High level of compliance to the laid principles of CPTED. While both sexes have perceived it to be High, female employees has a higher mean with 3.09 as compared to male employees with a mean of 3.03 leaving a 0.06 difference. With that being said, female employees believe that the University of the Cordilleras has Higher Compliance in the laid principles of CPTED as than that of male employees.

Observing the four (4) areas of the principles of CPTED, it can be deduced that both sexes have almost the same ranking for such compliance. Coming in first is the area of Maintenance and Management, male employees has a mean of 3.40 while female employees has a mean of 3.44 leaving a 0.04 difference. Secondly, the area of Territorial Reinforcement, male employees' mean is 3.04 a little bit lower (with 0.03 difference) than that of female employees' mean of 3.07. The area of Natural Surveillance is coming in third with 2.96 as the male employees' mean and 3.00 as the female employees' mean making female employees 0.04 higher. Lastly, is the area of Natural Access Control, with a 0.14 difference, female employees have a higher mean with 2.93 as compared to the male employees' mean of 2.79.

As to the specific indicators on the laid principles of CPTED, the indicator where both sexes perceive as the top complied is item number 20 (Don't store old automobiles, boats, trailers, or other vehicles in your front yard.) with means of 3.46 for male employees and 3.48 for female employees. On the other hand, the least complied indicator for male employees is item number 12 (The mail receiving area is clearly marked with the street address. It is also close to the front of the school and visible from the school.) with mean of 2.46 and for female employees is item number 10 (The street address is clearly visible from the street with numbers a minimum of 5" high that are made of non-reflective material. The numbers are clearly lighted at night.) with mean of 2.74.

Table 5. The level of compliance of the University of the Cordilleras from the laid principles of CPTED differentiated in the employees' nature of work

INDICATOR	MEAN Teaching Staff	RANK	MEAN Non-Teaching Staff	RANK
NATURAL SURVEILLANCE				
1. All doorways that open to the outside are well lit.	3.13	8	3.20	6
2. The front doors are at least partially visible from the street.	3.20	6	3.35	3
3. Windows on all sides of the school campus provide full visibility of the property.	2.82	19	2.73	18.5
4. Sidewalks and all areas of the yard are well lit.	2.97	13.5	2.80	15
5. The driveway, or carpark, are visible from either the front or back door and at least one window.	2.84	18	2.84	14
6. Landscaping do not create blind spots or hiding spots.	2.96	15.5	3.04	11
7. Front facing balcony railings, fences, or walls are not constructed of solid material or be higher than 36".	3.05	12	2.91	13
8. Window treatments on 2nd story, front-facing windows are kept open and provides a view to the front of the property.	2.94	17	2.78	17
AREA MEAN	2.99		2.96	

NATURAL ACCESS CONTROL				
9. Campus lines and areas are defined with plantings, pavement treatments, short walls, or fences.	3.21	5	3.16	7
10. The street address is clearly visible from the street with numbers a minimum of 5" high that are made of non-reflective material. The numbers are clearly lighted at night.	2.77	20	2.65	20
11. The campus is encouraging interaction between neighbors with low property-division fences, bushes, or landscaping transitions.	2.97	13.5	2.79	16
12. The mail receiving area is clearly marked with the street address. It is also close to the front of the school and visible from the school.	2.68	21	2.56	21
AREA MEAN	2.91		2.79	
TERRITORIAL REINFORCEMENT				
13. Walkways and landscaping direct visitors to the proper entrance and away from private areas.	3.10	10	3.10	9.5
14. Door locks are located at a minimum of 40 inches from adjacent windows.	3.11	9	2.99	12
15. Exterior doors or interior carpark doors are hinged on the inside and have a single cylinder dead bolt lock with a minimum one-inch throw.	2.96	15.5	2.73	18.5
16. All windows have locks. Sliding glass doors have a locking device or locking pin on the movable portion of the door.	3.16	7	3.15	8
17. Detached storage sheds or other buildings are equipped with lockable windows and doors.	3.07	11	3.10	9.5
AREA MEAN	3.08		3.01	
MAINTENANCE AND MANAGEMENT				
18. Keeps campus structure painted and in a condition of good repair.	3.40	3	3.33	4.5
19. Keep weeds abated. Trim bushes to 36" (thirty- six inches) high and trees up 7' (seven feet) from the ground.	3.38	4	3.33	4.5
20. Don't store old automobiles, boats, trailers, or other vehicles in your front yard.	3.49	1	3.44	2
21. Keep landscaping tidy and in good repair.	3.47	2	3.45	1
AREA MEAN	3.43		3.39	
OVERALL MEAN	3.03		3.09	

Overall the teaching and non-teaching staffs of the university perceives that the university has a High level of compliance to the laid principles of CPTED. There is, however, a 0.06 difference in their mean, the teaching staff has a mean of 3.03 while the non-teaching staff has a mean of 3.09. This will now mean that the non-teaching staffs has higher belief that UC has compliance to CPTED when compared to the teaching staffs.

In the four (4) main areas of the principles of CPTED, both teaching and non-teaching staffs agree on each other on the ranks of such area. The ranking from most complied to the least complied is in the following manner, the most complied area is the area of Maintenance and Management, coming on second is the area of Territorial Reinforcement, the third is the area of Natural Surveillance, and the least complied is the area of Natural Access Control. The averages of such areas are as follows: the teaching staffs have an average of 3.43 while the non-teaching staffs have an average of 3.39 for the area of Maintenance and Management, the teaching staffs have an average of 3.08 while the non-teaching staffs have an average of 3.01 for the area of Territorial Reinforcement, the teaching staffs have an average of 2.99 while the non-teaching staffs have an average of 2.96 for the area of Natural Surveillance, and the teaching staffs have an average of 2.91 while the non-teaching staffs have an average of 2.79 for the area of Natural Access Control.

The existing designs and good practices in the University in line with the laid principles of CPTED

Identity

According to McLeod (2019), stating the work Henri Tajfel's (1979), the social identity theory which is the greatest contribution to psychology

wherein it is a person's sense of who they are based on their group membership(s).

In the University of the Cordilleras, establishment of identity is being done initially from the entrances or gates of the school campus. The posted security guards equipped with necessary equipment such as the batons and service firearms are the first ones to identify those people who are entering the university

In a similar manner, the security guards in the University for this matter now categorizes persons as to their affiliation and purpose of entering the university. After identity, a decision can be made to whether allow entry or not. In the same manner, CCTV cameras installed are helpful in in identification and at the same time monitoring.

Another design that establishes identity are the ID tapping machines on the gates. These identifies the students and records the entry and exits of the students.

Security

Another design the University of the Cordilleras has is security. Aside from the equipped security guards, the university have lighting, proper signages, and clean and unobstructed passageways. Safety and Security needs discussed by Kelly (2014) citing Maslow, are found on the second level which means that the need for safety and security becomes a primary concern. People want peace and order in their community, for them to have a better life and to arrive at the highest level which is self-actualization. As a way of preserving peace and order, preventive measures are also considered, and it includes CPTED

In ensuring safety and security and as reflected on the laid principles of CPTED, lighting is an essential means of security. Participant three (3) mentioned that the university have adequate lighting. For security guards and even employees of the university, light is needed for the workers to carry out the job efficiently (ILO.org., n.d). Illuminating the campus both inside and outside is so helpful that activities can be monitored and that any illegal actions can be prevented, or violators be dealt with accordingly. Deterrence, "the striking of fear on the hearts of the would-be offenders" (Mazarr,2018) has also an important role in keeping the surroundings safe. Light also has a deterrent effect on people and as stated by Tan (2016), "some studies have shown that less crime occurs along well-lit streets".

Another way of maintaining security is the visibility of the campus and the interior of the classrooms. These were reflected on the availability of control gates, posted security guards , CCTV's, viewing glass panels on the door and sometimes one side of the classroom is viewing glass panels.

All of us needs safety in our lives to include the places we go(Hopper, 2020). As one of the areas on the laid principles of CPTED, Maintenance and Management is an important ingredient in maintaining the non-prevalence of crime. The administration has been so supportive when it comes to the maintenance and management of the university. Some of the practices are the signages, informational materials, maintenance of cleanliness and orderliness, and unobstructed hallways and surroundings.

Similarly, maintenance is a big thing wherein it can be reflected to the broken windows theory. Weele et.al. (2017) cited the theory of Kelling and Wilson (1982) saying that Kelling and Wilson asserted that broken windows send a signal of indifference and lack of enforcement, leading to increased fear of crime and weakening of social controls, thus paving the way for bigger transgressions. Putting into context, the failure of the university in cleaning any vandals or failure in not repairing any damaged fixtures may now send a message that it is okay to vandal or destroy any fixtures.

Dynamic

The university being dynamic can be reflected by joining disaster preparedness like the "Gawad Kalasag" Keeping up with the trends through joining various competitions such as the Gawad Kalasag now helps in the assessing and checking with the conformity of the university.

The challenges in the implementation/ compliance of the laid principles of CPTED and what steps are undertaken to address such challenges

Non-reporting of lacking or inappropriate fixtures

The non-reporting of arising problems in an institution is crucial in its overall welfare and development. One problem is the absence of exhaust fans in some areas like some of the comfort rooms. It can be noted that the primary purpose for having an exhaust fan is to help improve the quality of indoor air (Unsdorfer, S. (n.d.).

In addressing such, a request is to be made to the building maintenance to install such lacking exhaust fans in order to divert any unpleasant smell out into the open in order not to cause any discomfort to the nearby offices/ classrooms. A simple reporting procedure will help you obtain important information about health and safety issues in the workplace, identify problems when they arise, and address them (www.worksafe.qld.gov.au, n.d.).

Presence of violators

One of the problems are those students who are not followingthe "Clean As You Go" policy. The presence of violators can be explained by a variety of theories and that here is no one cause of crime, it was also

added that crime is a highly complex phenomenon that changes across cultures and across time. (University of Glasgow, 2016). Furthermore, the presence of violators can be explained by Durkheim noting that crime has a ubiquitous character, i.e. there was and is no society in which there were no deviations from the norm (Wickert, C., 2019). In order to combat this, the university are putting informative materials and plans to conduct information education campaign to reduce the prevalence of infractions amongst students. In addition, a more stringent and security actions will be performed. It can be noted that information dissemination is a very low level of participation with only one-way communication however it has a role in awareness raising and can support other participatory tools as it does in the case study (Claridge, T., 2004).

Conclusion

As gleaned from the results of the study, the following conclusions are drawn: Generally, the University of the Cordilleras has a High level of compliance from the laid principles of Crime Prevention Through Environmental Design. Further, the Main campus has a higher compliance than the Legarda campus. Female employees also have higher belief that the university has High compliance as compared to male employees. Non-teaching staffs also have higher belief that the university has High compliance as compared to teaching staffs.

It was also known that the existing designs and good practices in the University in line with the laid principles of Crime Prevention Through Environmental Design are the following: (1)Establishment of Identity, (2)Security, and (3)Being Dynamic

The challenges in the implementation of the laid principles of CPTED the appropriate steps undertaken to address such challenges are the following: (1)Non-reporting of lacking or inappropriate fixtures can be resolved through prompt reporting of lacking or inappropriate fixtures for modification or installation of such.(2)The presence of violators can be resolved through information campaign and strict guarding.

In order for the University of the Cordilleras to maintain or even go to a higher level of compliance from the laid principles of CPTED, the university needs to be proactive and be strict in the implementation of its policies and guidelines. The University of the Cordilleras may also adopt the “CPTED Evaluation”. This “CPTED Evaluation” will now be utilized in the timely and regular evaluation of the school concerning CPTED. Furthermore, this will now allow the administration in immediately provide solutions to the problems. Being at par with the standards of CPTED will result not only into a safe and secure environment but also a tranquil mind for the stakeholders.

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