# STUDENTS' PERCEPTION OF SPACE AT THE CENTRAL UNIVERSITY OF TECHNOLOGY (BLOEMFONTEIN) AND FREE STATE SCHOOL OF NURSING CAMPUSES: AN EXPLORATORY STUDY.

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**BY**

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# Students' perception of space at the Central University of Technology (Bloemfontein) and Free State School of Nursing campuses: An exploratory study



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## DECLARATION (i)

I, the undersigned herby declare that this thesis is my own original work and has not previously in part or in its entirety been submitted at any university for a degree.

Signature Date

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## ACKNOWLEDGEMENTS (ii)

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Institutions of higher learning are faced with ever decreasing space to and from classes, libraries, offices and other facilities. This exploratory study was concerned with the perception of space by students as they constitute the majority in the institutions of higher learning. Two institutions Central University of Technology (Bloemfontein) and Free State School of Nursing campuses were involved in this study. There were 150 subjects who participated in the study, 70 were males and 80 were females. The age range of the participants was 18 to 38 years. The 150 sample of students who participated in the study, 50 were from Free State School of Nursing while 100 were from Central University of Technology. Students' perception on providing space for others was that students seem to be disrespectful of other people's space and the results were statistically significant ($p<0.001$). With regard to the behaviour displayed by students on campus in relation to space, about sixty nine (69.3%) of the respondents, agreed that they had been asked by other students to give space while about fifty four percent (54.7%) agreed that they were asked by lecturers to give space. Statistically this was approaching a level of statistical significance ($p<0.020$). Interesting results (52%), suggest that among the cultural groups in the South African context, Blacks seem to be poor in space perception.

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## Chapter 1: Introduction

### 1. Introduction

Perception of the environment, in its most strict sense, refers to the process of being aware of a space by the acquisition of information through the sensations of sight, hearing, smell, touch and taste. The mental processing of this sensory information is cognition. This may involve the activities of thinking about, remembering or evaluating the information (Karlen, 1992).

This study examines the relationship between individuals and their environment on how they perceive space and how they react to it. Hall (1990) asserts that, perception of one's environment is affected by sociological needs, psychological state, and individual differences. The environment itself also influences human behaviour. Both mental and physical stimuli affect behavioural responses.

People's perception of their environment influences their social interaction within that environment. Individual's interaction level is one mechanism used in achieving a desired level of space (Sandstrom, 1986). Besides needing enough space to move about and perform various tasks, each person moves within a domain that expands and contracts to meet individual needs and social circumstances. The size of a space determines perceptions, experiences, and uses of that particular environment (Freifeld, 1991).

A person's experience in the environment is very complex. Individual differences such as sex, age and health, to mention but a few, are important determinants of behavioural responses to an environment. People respond to the environment based upon perception, cognition and spatial behaviour (Hall, 1990). The ability to comprehend one's environment as well as to perform tasks within it, are strongly dependant upon vision and interpretation. The critical variables in human vision are visibility, legibility and recognition (Farren, 1988). Hearing is critical because it not only affects ability to

communicate but also the general capacity to perform specific tasks. The important factors in human hearing are: audibility, intelligibility, signal-to-noise ratio, and noise annoyance (Zeisel, 1981). Another variable to be noted in human environment is stability, which refers to elements that support individuals as they walk and move about or perform functional or manipulative tasks. Some of the elements that need to be considered in terms of mobility include slope of floors, width of walkways, depth of stair treads, location of handrails, and height of door thresholds (Sandstrom, 1986).

### 1.2 Statement of the problem

The point of concern is that, students lack a sense of awareness and recognition of space to allow other people to pass through when walking around university corridors and in other parts of the University campus or in any institution of higher learning. This undoubtedly interferes with other people's personal space and daily activities, such as rushing to and from classes. It also results to the crowding of other people's space, which happens when personal space mechanisms function ineffectively. The lack of space awareness or disrespect of other's space can be costly and up in interpersonal and social problems.

### 1.3 Motivation

The researcher has observed an alarming rate of students who seem not aware of other's space at least in one university campus. A sense of allowing another person a space to pass through while going to and from lecture theatres, offices and other university buildings is diminished. People's perception of space influences their social interaction and the manner in which they react to their environment. This study seeks to examine how students perceive space and how they react to it. Hall (1990: 44) asserts that, both mental and physical stimuli affect behavioural responses to both human beings and

animals. This study will however be limited to student behaviour in institutions of higher learning.

## 1.4 Aim

### 1.4.1 The major aims of the study are:

- To determine students' perception of space.
- To determine students' recognition of and allowance of space to others.

## 1.5 Methodology

### 1.5.1 Target population

This study will focus on the Central University of Technology (Bloemfontein) and Free State School of Nursing (FSSN).

### 1.5.2 Sampling method

Neuman (1977: 66) defines sampling as "the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected". Non-probability sampling procedure was undertaken. Purposive sampling method was employed to collect information from the participants.

### 1.5.3 Data collection instrument

Data was collected by means of structured questionnaires. The questionnaires were given to the participants who agreed to participate in the study. The researcher collected these questionnaires on completion.

### 1.5.4 Data analysis

Statistical analysis included Mann – Whitney, Friedman and 3-way analysis of variance of the data using the SPSS/PC statistical packages. A five percent significance level was chosen for all comparisons.

## 1.6 Limitations of the study

This study was initially intended to be conducted at two South African institutions of higher learning, one with predominantly black population and the other with predominantly white population. In this case it was University of Zululand and University of Kwa-Zulu Natal respectively. However this could not be executed due to geographical limitations, it resulted into white student population not being represented on the study. This would provide a chance to compare students with better perception of space in terms of race and their campuses. Alternatively two learning institutions were selected and used in this study. These institutions are: Central University of Technology (Bloemfontein) with all South African racial groups and Free State School of Nursing with blacks and coloured population.

## 1.7 Resume`

This chapter serves as an introductory phase for the entire study. It clarifies the researcher's intentions and motivation for conducting the study of this nature. It also outlines the methodology followed in the study. The next chapter covers literature review. It explains the concept of spatial perception. Various theories of different view points have been used to explain the concept of space and its perception.

## Chapter 2: Literature review

### 2.1 Introduction

Perceiving a suitable space implies that one has to define what space means. Secondly, to find a way to observe it and to understand it, as it is perceived by its users. Generally, when people think about space, they think about it as the thing enclosed in a building between walls, ceilings and floors. Other theorists tried to illustrate the space throughout the words, which are used to describe it. This indirect definition of space might be unsatisfactory, as each individual sees it in a different way (Lawson, 2001). As our environmental experience and space interpretation depends on the purpose of the observation, a global or universal definition of space is hard to achieve (Lynch, 2002).

*The definition of space is therefore relative to an individual's perception from a specific* point of view and at a specific given time. Perhaps the only way to fulfill a global, non-personal, objective definition of the space is by understanding the mechanism underneath the human perception, and the phenomena that have an influence on it. Once this step is completed, the global definition of the space can be built around the common characteristics of the space, which are shared by all the observers (space users) during the perceptive process (Cutting, 1995; Lynch, 2002).

### 2.2 Perception and space

This section focuses on spatial perception. Spatial perception is different from other perceptions as it is always possible to verify it by making use of several senses (Freksa, 1999). This fact makes us take any spatial perception for particularly real. Spatial perception is possible using the sense of vision or using the other senses. It is possible to perceive spatially using abstractions and language.

## 2.3 Experiencing space using different senses

It is possible to perceive spatially without using the eyes. As Freksa (1999) points out, we are able to perceive spatially with several of our senses which makes us more confident in our spatial perception: Our knowledge about physical space differs from all other knowledge in a very significant way. We can perceive space directly through various channels conveying distinct modalities. Unlike in the case of other perceivable domains, spatial knowledge obtained through one channel can be verified or refuted by perception through the other channels. As a consequence, we are disproportionately confident about what we know about space (Freksa, 1999).

Hearing sound spatially is perhaps the strongest spatial perception besides the visual one. The resolution of this perception is much coarser than the visual system but we are able to "hear" what place we are in and we can locate sound sources approximately. The acoustic sense allows humans to monitor the environment as it perceives from all directions at the same time. Spatial perception can be induced by the kinesthetic sense when moving at a high velocity. When moving in our environment the various senses allow spatial perception work together to give us multimedial perception of that environment (Durlach, 1978; Freksa, 1999).

## 2.4 Experiencing space using abstractions and language

Space can be perceived from abstractions. Iconics are very abstract drawings of an object or a situation. Those iconics often do not represent one particular object or situation but a class of objects or situations. Other commonly used abstractions to represent space are maps. They represent large spatial constructs at a high level of abstraction. While everybody can perceive spatially from pictures and simple drawings the reading of maps is a skill that has to be learnt. The most abstract way to represent objects is through the use of language either in spoken or written form. Written language evolved from iconics (Bolter, 2000).

### 2.4.1 Scale

Closely related to spatial perception is the scale. Properties of space or relations between objects in space are normally seen as scale-independent when studied as formal problems. Thought and behaviour in space are not scale independent when studied as problems of perception. Montello defines scale as the ratio between the dimensions of a representation and those of the thing that it represents (Montello, 2001).

Goldstein (2002) and Montello (2001) introduced a different terminology that avoids ambiguity. He used a four level classification of psychological spaces. Montello distinguished classes of spaces according to the projective sizes of the space relative to the human body and not according to the actual or apparent absolute size. Therefore a large scale space viewed from a distance may become a smaller-scale space:

- Figural space is projectively smaller than the body. The properties of this type of space can be perceived directly from one place without movement. It can be subdivided into object space and pictorial space. Pictorial spaces are flat, whereas object spaces are three-dimensional. Examples for objects in figural space are pictures, small objects and distant landmarks. Sometimes objects in figural space may be tactically manipulated to apprehend their spatial properties. However no movement of the body is necessary to apprehend these spaces.
- Vista space is projectively as large as or larger than the body. Still it may be visually perceived from a single location without movement. Single rooms, but also a town square, and the horizon are examples for vista spaces. Examples for vista spaces are single rooms, town squares, small valleys and the horizon.
- Environmental space is projectively larger than the body and surrounds it. It is too large and partially obscured to be apprehended without locomotion. It requires integration of information over significant periods of time. Examples for such spaces are buildings, neighbourhoods and cities.
- Geographical space is projectively much larger than the body and must be learned using a symbolic representation like a map or model. Those symbolic

representations often are objects in figural space- that is they are tactically manipulable or are pictorial spaces. Examples for geographical spaces are countries or the solar system.

This distinction is important in the context of spatial communication and it can play an important role in the optimal design of spatial information systems. An important task involving spatial information is to communicate spatial relationship to other people. Communication of spatial relationships is closely related to the issue of scale as many verbal and gestural descriptions of space contain an assessment of scale (Goldstein, 2002; Montello, 2001).

### 2.4.2 Spatial memory

Human spatial behaviour is dependant on the individual's mental representation of the spatial environment. The representation is used to direct action and the experiences are used to further modify the representation. The various models of the ability to learn an environment and to remember spatial relationships form the basis to understanding misjudgment in spatial relationships. This section looks at diverse mental representations of space.

### 2.4.3 Cognitive maps

The common view of how people represent spatial relationships in an area mentally is based on the concept of cognitive map. This term hints towards a map-like construct in our minds that we are able to look at to answer questions about the area represented. This concept is not generally accepted today. The following citation avoids the term altogether and outlines the tasks the mental representation is needed for, be it a cognitive map or something else.

"A property of the physical environment of distinguished psychological importance is the fact that the environment completely surrounds us. Thus it is not possible for us to experience or perceive all of it at any one instance. We can only turn our attention to discrete aspects of the environment at successive points in time. However in order for our behaviour to be appropriate, effective, or adequate in relation to the physical environment, it is necessary for it to proceed in a continuous fashion. To explain the way in which this discrete experience can produce continuous interaction it is necessary to postulate some representational process on the part of the individual. This "representation" must amalgamate experience into a form which links discontinues in perception and allows extrapolation to facilitate preparation for future action" (Frank, Campari, & Formentini, 1997: 47).

### 2.4.4 Cognitive collage

The constructivist view assumes that people acquire disparate pieces of knowledge about environments. This knowledge is used when describing routes and when making judgments about locations, directions and distances. Those pieces of knowledge include various kinds of information like memories of maps, recollections of journeys, directions, facts and more. For environments, that are not known in full detail the information may be in different forms, some of them not map-like at all.

Ellis (1998) describes this representation like this: in this cases, rather than resembling maps, people's internal representations seem to be more like collages. Collages are thematic overlays of multimedia from different points of view.

As these constructs represent spatial relationships from various points of view they do not contain coherent metric information. The term metric here does not necessarily hint at the properties of a metric distance-function. The cognitive collage as an alternative representation of spatial knowledge sees spatial memory as a multimedial representation

of disparate pieces of spatial information. Cognitive collages do not contain coherent metric information (Ellis, 1998).

### 2.4.5 Spatial mental models

People seem to have a rather accurate representation of spatial layout when environments are simple or well-learnt. This layout information cannot be explained well using the cognitive collage model. Therefore a spatial mental model was proposed. Such mental models capture the spatial relations coherently and allow perspective-taking, reorientation and spatial inferences. Unlike cognitive maps however they (mental models) may not preserve metric information. Unlike cognitive collages, they do preserve coarse spatial relations coherently. These are relations that are easily comprehended from language as well as from direct experience (Ellis, 1998; Heelan, 1989).

Spatial mental model captures the inexact way people often speak about spatial relationships. That is they contain metric information but only on a coarse level. The spatial mental model is an adequate model for representing spatial knowledge used in descriptions of spaces where terms like "next to", "near" and so forth are commonly used.

### 2.4.6 Distortion in spatial memory

Depending on the model of spatial memory used, systematic mistakes in spatial memory can be explained. As spatial knowledge is acquired in small discontinuous steps, the pieces of the cognitive representation are not always strongly related to each other. This leads to various systematic errors in distance estimations and the estimation of alignment of objects (Ellis, 1998).

## 2.5 Perception and reality

Many cognitive psychologists hold that, as we move about in the world, we create a model of how the world works. That is, we sense the objective world, but our sensations map to percepts, and these percepts are provisional, in the same sense that scientific hypotheses are provisional. As we acquire new information, our percepts shift. In the case of visual perception, some people can actually see the percept shift in their mind's eyes. Others who are not picture thinkers, may not necessarily perceive the "shape-shifting" as their world changes. The "esemplastic" nature has been shown by experiment: an ambiguous image has multiple interpretations on the perceptual level (Rock, 1995).

Just as one object can give rise to multiple percepts, so an object may fail to give rise to any percept at all, if the percept has no grounding in a person's experience, the person may literally not perceive it. This confusing ambiguity of perception is exploited in human technologies such as camouflage, and also in biological mimicry, for example by Peacock butterflies, whose wings bear eyes markings that birds respond to as though they were the eyes of a dangerous predator (Lawson, 2001).

Cognitive theories of perception assume that, there is a poverty of stimulus. This (with reference to perception) is the claim that sensations are, by themselves, unable to provide a unique description of the world. Sensations require "enriching", which is the role of the mental model. A different type of theory is the perceptual ecology approach of James Gibson. Gibson rejected the assumption of a poverty of stimulus by rejecting the notion that perception is based in sensations. Instead, he investigated what information is actually presented to the perceptual systems. He (and the psychologists who work within this paradigm) detailed how the world could be specified to a mobile, exploring organism via the lawful projection of information about the world into energy arrays (Lynch, 2002).

## 2.6 Vision and perception

Empiric approach of psychology considers vision as the principal motor of perception. In that sense, vision is the active process in which the observer keeps a track of what he is doing, and the process of discovering the external world from a set of visual mental images (Marr, 2001). Those images mapped by the retina, are analyzed during the recognition process in order to extract useful information relevant to the object surrounding the observer or attracting his interest. Then, they are stored in the brain as long-term representations (memories). The observation and specific experiments made in normal and brain-damaged people have confirmed that when we think about an object, a mental imagery of its appearance is retrieved based on the long-term memories stored during the object recognition stage (Kohonen, 2001).

This means, the perception is the function of the individual himself, and that the appearance of the world at any given moment is only a personal expression of that individual. Thus, the interpretation of the images perceived depends integrally on the purpose of the observer. As a consequence, the only way to achieve a global perception of an environment is by overlapping the individual images of all its users. This public image constitutes a necessity for an individual in order to cooperate with other individuals, and to operate fruitfully within his environment (Lynch, 2002).

Schulz (1999), points out the fact that perception is somehow problematic, because it is not free from emotional contents. He argues that, the world is not what it appears to us, since we may sometimes judge situations unsatisfactory. He further argues that qualities of objects depend on the observer's state. Judging situations unsatisfactory could often be the result of distortion of the visual space (Schulz, 1999).

The new perception's approach came along with James J. Gibson and his ecological approach. His question about how can we obtain a constant perception of our environment with constantly changing sensations, emphasizes the fact that the previous philosophical approaches were inappropriate for the definition, and the understanding of

the phenomenon of perception (Marr, 2001). His information based theory considers environmental invariants, from where the senses forward information about valid properties of the environment. "These invariants correspond to permanent properties of the environment. They constitute, therefore, information about the permanent environment". Thus, perception becomes "function of the brain, when looped with its perceptual organs, is not to decode signals, nor to interpret messages, nor to accept messages, nor to organize the sensory input or to process the data". "It is to seek and extract information about the environment from the flowing array of light" (Marr, 2001).

Perception is the active process by which knowledge of the world is obtained, and the process by which we keep in touch with our surrounding environment. Although, five sensory systems corresponding to the five perceptual systems (ears, nose, eyes, tongue and skin) work to attain the perception, perception by means of picking up information picked by the eyes is the function of the observer's needs. Gibson draws a distinction between perception and sensations. The perception involves meaning and depends on light. It is defined as dimensions of the environment, variables of events, variables of surfaces, places, objects, animals and symbols. On the other hand, sensations depend on the sensitivity and or the use of the sense organs. They are defined as dimensions of qualities and quantities such as extensity and intensity, warmness and coldness. Therefore the visual perception is not based on having sensations or feelings, but it is based on attention to the information in the light, which is divided into two categories. In one side Gibson defines ambient light as the constant light, which surrounds an individual with an equal intensity. In the other side, he defines optic array or ambient optic array, which is the light that converges from different sources with different intensities. In the real world, the optic array can be caused by real variation of the light, as it can be caused by the movement of an individual or by an individual whose eyes are moving. Whenever the eyes move to a new stimulation point, a new optical array is created (Gibson, 1979).

## 2.7 Perception as a mental construction

Philosophers refer to the belief or unconscious assumption that the world that we perceive is identical with a real world that exists independent of our experience of it as naïve realism. If that real world is simply identical with the world that we perceive, it is understandable why one might think that all we need to do to perceive it is to take a picture of it. To understand perception, however, we must discard this assumption. Only by doing so, can we appreciate that the mind does not simply record an exact image of the world but creates its own "picture" (Zeki, 1999).

Knowledge derived from physics informs us that the world from which we obtain sensory information is very different from the world as we experience it. If we had the sensory apparatus of some other of the earth's organisms, "reality" would seem quite different. Honeybees and snakes respond to frequencies of light to which we do not. Bats can navigate around thin obstructions by means of echolocation. Fish respond to sound frequencies and odors that have no perceptual reality for us. The perceptual world we create differs qualitatively from the physicists' descriptions because our experience is mediated by our senses and constructed internally as a representation of the world. Thus we perceive colours, tones, tastes, and smells- perceptions that either have no meaning in the world of physical reality or have a different meaning (Weschler, 2000).

The correctness of our perception is seldom affected by our knowledge of the world. Illusions, for instance, do not disappear merely because we discover that they are illusions. Even though we know intellectually that the moon remains stationary as we look at it, it still appears to be moving as we see it through a thin cloud passing in front of it or see it next to a moving cloud. To the extent that our perceptions are independent of our factual knowledge about the world, they should be distinguished from the domain of knowledge and thought. Our perceptions arise through the processing of sensory information in a manner largely independent of other cognitive processes (Moore, 2003; Weschler, 2000).

## 2.8 Perception as a science

All scientific inquiry begins with perceptions. It is through our perceptions that we arrive at the facts to be explained, whether these be the orbits of planets, the colours of foliage, the reaction of chemicals or the behaviour of things. The study of perception, however, differs from other fields of scientific inquiry in certain crucial respects. In other fields of science, the goal is to separate facts from illusions and to explain the objective properties or behaviours of things. The goal of the science of perception, by contrast, is to understand the act of perception itself, to discover how and why things appear the way they do. In this, illusions are as important as correct percepts and have equal status as facts (Rock, 1995).

While we cannot observe people's perceptions, we can confirm or disconfirm their generality and infer whether or not they actually occur. Perception, like other kinds of mental states has "first person ontology", its reality is subjective, but that doesn't make it any less real or entitle as to cast it aside as a subject unsuitable for scientific investigation, particularly in light of the fact that conscious and non-conscious mental events are caused by brain events (Marr, 2001; Myin, 2000).

In other respects, perception, as well as other mental processes, have long since been established as suitable for, and susceptible to, scientific investigation. In perception, before we can hope to understand an event in the brain that underlies the percept, we must possess an idea of the process that leads to the percept's formation. Suppose we want to know why a picture of a crator looks like a mound when it is inverted. In the absence of any understanding of the process of perception, we would have no idea what to look for in the brain. Suppose, however, that through experimentation we discover that, when people are shown pictures of an enclosed region with a shadow at the top, they perceive it as a hole or indentation, whereas, when they are shown the same picture with the shadow at the bottom, they perceive a mound or elevation (Marr, 2000).

We can try to penetrate the problem further by asking about the origin of the principle. Since light in our environment almost always comes from above, a hole will tend to be shadowed at its top. Thus the principle might be one that is learned. If we discover that the principle is learned, we will know that the kind of brain event we should expect to find to explain the shadow effect will be the one encompassing the storage of a learned principle.

### 2.9 Explanation of perception

In exploring what kinds of processes lie behind our perceptions, we need to draw on work in four major and frequently conflicting, traditions that inform modern investigation of perception. These traditions are the Inference Theory (usually associated with the empiricist perspective), the Gestalt Theory (associated with the tradition that emphasized innate tendencies of mind) the Stimulus Theory (associated with the tradition that searches for correspondences between physical and sensory variables and thus sometimes called the psychophysical approach), and, most recently, the information Processing Approach (in which the metaphor for the mind is digital computer) (Rock, 1995).

### 2.10 The Inference and Empiricist perspective

These theories about perception originated with philosophers concerned with the problem of knowledge, or epistemology. The early British empiricists argued that knowledge is acquired solely by sensory experience and association of ideas.

The mind at birth is a blank state, a "tabula rasa", upon which experience "write" through sensations received. In particular, as regards perception, Berkeley (1910) cited in Rock (1995), argued that, what vision directly gives us is inadequate for correctly perceiving the world. In order to achieve correct perceptions, we must learn how to interpret visual sensations. We do this through a process of association. For example, in theorizing about the perception of distance, Berkeley reasoned as follows, the third dimension cannot be directly given by vision since the retina is two-dimensional. In order to see the world three-dimensionally, we must learn to associate certain sensations given by looking at an

object with its actual distance from us, the knowledge of which we must obtain through other means. Specifically, we can ascertain how far away from us an object is by grasping, touching, or otherwise moving towards it. When we do this, certain signs or cues become available to us, such as the degree of thickening of the lens in the eye. We directly sense this thickening by the degree of the strain on the muscle attached to the lens. We associate this sign with the distance to reach the object. In subsequent experience, the sign tells us how far away the object is (Rock, 1995).

Helmholtz contributed to our knowledge about almost every topic in the fields of sensory process and perception and systematized this knowledge in his epic volumes on physiological optics. He argued that, perception was based upon a process of inference, in which, through past experience, we infer from the sensations we receive at a given time the nature of the object or event that they probably represent. Because we ordinarily are not aware of drawing such a conclusion, Helmholtz described the process as one of unconscious inference: "the sensations of the senses are tokens for our consciousness, it being left to our intelligence to learn how to comprehend their meaning."(Rock, 1995).

### 2.11 The Gestalt perspective

Descartes held that, the mind was far from the tabula rasa that the British empiricists described, but rather possessed innate ideas about form, size, and other properties of objects. Kant explicitly took the issue with empiricist view that "there is no conception in man's mind which had not at first, been begotten upon the organs of sense", as Hobbes argued that, the mind imposes its own internal conception of space and time upon the sensory information it receives (Marr, 2001).

The central Gestalt concept was that of perceptual organization. Whereas sensations are logically separate and unrelated, our perceptions are of whole units or things. It is difficult to maintain that we begin life with a chaotic amalgamation or sum of sensations and somehow learn to organize them into distinct and segregated units such as objects with specific shapes separated from a background (Scharf, 1986).

To Gestaltist, our perceptions are the result of spontaneous interactions in the brain to which sensory stimulation gives rise, to Helmoholtzian, they are the results of the unconscious interpretations we make of sensations, based on past experience (Marr, 2001).

## 2.12 The Stimulus perspective

The Empiricist and Gestalt theories assume that the stimulus the eye receives is inadequate, ambiguous, or impoverished and thus cannot provide an adequate explanation of our perceptions. However, researchers, in the third major theoretical perspective, argue that all the information necessary to explain our perceptions is present in the environment, waiting to be picked up by the moving eye of the observer. For each type of perception- whether it be of colour, shape, size depth, motion, or whatever else, there is a unique stimulus or type of stimulus information. Thus there is no need to postulate such mechanisms as unconscious inference or spontaneous neutral interaction to explain perception. Clearly, the stimuli we receive are integral to the mental pictures of the world our brain creates (Marr, 2000; Schwartz, 1999).

## 2.13 The Information processing perspective

In the last several decades a new approach has arisen. Instead of thinking of the stimulus on the retina in terms of energy, it is thought of as information that is then processed by the brain. A number of separate developments converged to form the basis of this approach, such as the invention of computers and cybernetics, which made use of concepts such as bits and channels of information (Rock, 1995).

One of the founding fathers of this approach was the British investigator Colin Cherry, in which different messages were transmitted to the ears simultaneously, Broadbent outlined a theory in which attention was thought of as the solution of one channel or another by means of filters that allowed only the stimuli from one channel to be transmitted deeper

into the brain. Other investigators sought to analyze the stages of information processing that led to the development of internal representations. From these various sources, a new discipline called Cognitive Psychology arose. The idea here was to seek to explain mental events as analogous to the workings of digital computer that manipulated formal symbols- the representations of the stimulus input to perceptions, thought of as the output. To the extent that computations are similar to inferences, this approach has much in common with the inference approach (Sedgwick, 1986; Rock, 1995).

None of the major theoretical perspectives, at least in the manner, in which they have been formulated, constitutes an adequate, unified theory of all the phenomena of perception. An explanation that would encompass all such phenomena would have to do justice to a wide variety of perceptions and to the specific facts now known about them. Before we can reach any conclusion about the correctness of a major perspective, it is essential that we explore in more detail the various kinds of perception of objects and events (Rock, 1995).

## 2.14 Resume`

This chapter forms the core of this study., It gives an overview of literature regarding perception. The following chapter outlines the method used to conduct the study.

## Chapter 3: Methodology

### 3.1 Introduction

This chapter outlines the research design used by the researcher to collect data. According to Sarantakos (2005), the research entails two major stages: one is the stage of planning, and the other is the stage of execution. During the first stage, researchers construct a design, a plan of the research, and during the second they collect and analyse the data. The design explains in some detail how the researcher intends to conduct the work, namely how the question asked in each research will be addressed. It indicates the data collected as well as the methods, procedures and instrument used in the study (Sarantakos, 2005).

There are many forms of research design, some focus on the process of data collection only (Diekmann, 1995), while others extend their boundaries to cover data analysis (Ragin, 1994).

### 3.2 The aim of the study

The major aims of the study is to determine students' perception of space as well as determining students' recognition of and allowance of space to others.

### 3.3 Research technique

Quantitative research method was used in this study. Sarantakos (2005) defines quantitative methods as the methods employing quantitative theoretical and methodological principles and techniques, including statistics. One of the characteristics of quantitative methodology is that it perceives reality to be objective, simple and fixed. Human beings are rational individuals who are governed by social laws their behaviour is

learned through observation and governed by external causes that produce consistant results (Sarantakos, 2005).

### 3.4 Participants

The total number of 150 participants was used in this study. The participants were composed of 70 males and 80 females with the age ranging from 18 to 38 years. Fifty participants were drawn from Free State School of Nursing and 100 participants from Central University of Technology. All South African racial groups were represented in the study, though not as the research would like to as a result of time constraints.

### 3.5 Sample

The sample was drawn from a population of students from Central University of Technology as well as Free State School of Nursing in Bloemfontein. Purposive sampling method was used in this study. Rea and Parker (2005), defines purposive sampling as the type of non-probability sampling in which the researcher uses judgment in selecting respondents who are considered to be knowledgeable in subject areas related to the research.

Purposive sampling is the technique that is targeted and specifies pre-established criteria for recruiting the sample. The need for purposive sampling is dependant on the research question. (Crosby, DiClemente & Salazar, 2006).

### 3.6 Measuring instrument

A questionnaire was used to collect data from the participants. Goldstein (2002) asserts that survey questionnaires are most commonly used method of data collection in the social sciences; so common, that they quite often are mistakenly taken to be the method of social research (Goldstein, 2002). Questionnaires provide a way of gathering structured and unstructured data from respondents in a standardized way either as part of

a structured interview or through self-completion. Often the data collected can be represented numerically and can thus be analyzed using statistical techniques. The questionnaire used in this study was in English and consisted of eight questions.

### 3.7 Procedure

The permission for conducting the study was requested and obtained from the school authorities, Central University of Technology (CUT) and Free State School of Nursing (FSSN).

### 3.8 Informed consent, confidentiality and anonymity

The full explanation and the purpose of the study were provided to respondents so they could give their consent to participate in the study and to foster full co-operation of participants. Ethical commitment with regard to informed consent, confidentiality and anonymity throughout the process were maintained. The names of respondents were not used in the study.

### 3.9 Scoring

The researcher scored the data collected. Information on scoring is reported in chapter 4.

### 3.10 Data analysis

To analyze the data collected, frequencies of responses were tabulated for the total sample. The Statistical Package for the Social Sciences (SPSS) which Sarantakos (2005), defines as, a popular method of statistical analysis by means of computers was used to analyse data.

### 3.11 Resume`

This chapter explains the method used to conduct the study. The aims and sample used are briefly discussed. The procedure used to collect, score and analyze data was outlined. The following chapter discusses the results obtained from data collected.

## Chapter 4: Results and discussion

### 4.1 Introduction

Below follows the participants' demographic information and descriptions.

About 33.3% of the sample was composed of participants from Free State School of Nursing (FSSON) and 66.7% was composed of participants from the Central University of Technology (CUT) (Table 1).

**Table 1: Institutions' representations**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | FSSON | 50 | 33.3 | 33.3 | 33.3 |
| | CUT | 100 | 66.7 | 66.7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

The participants' age is displayed in Table 2 below.

**Table 2: Participants' age**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | not stated | 1 | .7 | .7 | .7 |
| | 18.00 | 7 | 4.7 | 4.7 | 5.3 |
| | 19.00 | 12 | 8.0 | 8.0 | 13.3 |
| | 20.00 | 25 | 16.7 | 16.7 | 30.0 |
| | 21.00 | 23 | 15.3 | 15.3 | 45.3 |
| | 22.00 | 27 | 18.0 | 18.0 | 63.3 |
| | 23.00 | 12 | 8.0 | 8.0 | 71.3 |
| | 24.00 | 9 | 6.0 | 6.0 | 77.3 |
| | 25.00 | 7 | 4.7 | 4.7 | 82.0 |
| | 26.00 | 5 | 3.3 | 3.3 | 85.3 |
| | 27.00 | 4 | 2.7 | 2.7 | 88.0 |
| | 28.00 | 5 | 3.3 | 3.3 | 91.3 |
| | 29.00 | 2 | 1.3 | 1.3 | 92.7 |
| | 30.00 | 3 | 2.0 | 2.0 | 94.7 |
| | 32.00 | 2 | 1.3 | 1.3 | 96.0 |
| | 33.00 | 2 | 1.3 | 1.3 | 97.3 |
| | 35.00 | 2 | 1.3 | 1.3 | 98.7 |
| | 36.00 | 1 | .7 | .7 | 99.3 |
| | 38.00 | 1 | .7 | .7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

About 46.7% of the participants were male and 53.3% were females (Table 3). The White student population was not represented in the sample. About 0.7% of the participants did not state their race; 95.3% were Black, 3.3% were Coloured, and 0.7% were Indian (Table 4).

**Table 3: Participants' gender**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | male | 70 | 46.7 | 46.7 | 46.7 |
| | female | 80 | 53.3 | 53.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

**Table 4: Participants' race**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Black | 143 | 95.3 | 95.3 | 95.3 |
| | Coloured | 5 | 3.3 | 3.3 | 98.7 |
| | not stated | 1 | .7 | .7 | 99.3 |
| | Indian | 1 | .7 | .7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

1.3% of the sample did not state their marital status. About 95.3% are single, 2.7% are married, and 0.7% are divorced (Table 5).

**Table 5: Participants' marital status**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | not stated | 2 | 1.3 | 1.3 | 1.3 |
| | single | 143 | 95.3 | 95.3 | 96.7 |
| | married | 4 | 2.7 | 2.7 | 99.3 |
| | divorced | 1 | .7 | .7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

About 0.7% of the participants were registered under the Faculty of Arts; 25.3% were registered under the faculty of Commerce; 1.3% were registered under the Faculty of Education; 36.7% were registered under the Faculty of Health Studies; 0.7% were registered under the Faculty of Social Sciences; and 35.3% were registered under the Faculty of Science (Table 6). The courses they enrolled for are displayed in Table 7 below.

**Table 6: Faculties represented**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | arts | 1 | .7 | .7 | .7 |
| | commerce | 38 | 25.3 | 25.3 | 26.0 |
| | education | 2 | 1.3 | 1.3 | 27.3 |
| | health studies | 55 | 36.7 | 36.7 | 64.0 |
| | social sciences | 1 | .7 | .7 | 64.7 |
| | science | 53 | 35.3 | 35.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

**Table 7: Courses enrolled for**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Clothing & Interior Design | 1 | .7 | .7 | .7 |
| | Economic Management | 1 | .7 | .7 | 1.3 |
| | Education | 2 | 1.3 | 1.3 | 2.7 |
| | Engineering | 43 | 28.7 | 28.7 | 31.3 |
| | Environmental Health | 1 | .7 | .7 | 32.0 |
| | Health Science | 5 | 3.3 | 3.3 | 35.3 |
| | Management | 37 | 24.7 | 24.7 | 60.0 |
| | Nursing Science | 50 | 33.3 | 33.3 | 93.3 |
| | Information Technology | 10 | 6.7 | 6.7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

About 42.7% of the participants were at the first level of their studies, while 22% were at the second level, 26% were at the third level, and 9.3% were at the fourth level (Table 8).

**Table 8: Level of study**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1st | 64 | 42.7 | 42.7 | 42.7 |
| | 2nd | 33 | 22.0 | 22.0 | 64.7 |
| | 3rd | 39 | 26.0 | 26.0 | 90.7 |
| | 4th | 14 | 9.3 | 9.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

Following are the participants' responses to the eight questions in the questionnaire regarding their perception of space. Table 9 to Table 12 display the participants' responses to Questions 1, 2, 3, and 7

**Table 9: The campus environment is stimulating enough to enhance students' awareness of space.**

| | | Frequency | Percent | Valid | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly | 20 | 13.3 | 13.3 | 13.3 |
| | disagree | 44 | 29.3 | 29.3 | 42.7 |
| | neither agree disagree | 26 | 17.3 | 17.3 | 60.0 |
| | agree | 49 | 32.7 | 32.7 | 92.7 |
| | strongly agree | 11 | 7.3 | 7.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

**Table 10: In your opinion, students are disrespectful of other's space.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly disagree | 18 | 12.0 | 12.0 | 12.0 |
| | disagree | 52 | 34.7 | 34.7 | 46.7 |
| | neither agree nor disagree | 24 | 16.0 | 16.0 | 62.7 |
| | agree | 42 | 28.0 | 28.0 | 90.7 |
| | strongly agree | 14 | 9.3 | 9.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

**Table 11: The physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly disagree | 21 | 14.0 | 14.0 | 14.0 |
| | disagree | 52 | 34.7 | 34.7 | 48.7 |
| | neither agree nor disagree | 22 | 14.7 | 14.7 | 63.3 |
| | agree | 42 | 28.0 | 28.0 | 91.3 |
| | strongly agree | 13 | 8.7 | 8.7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

**Table 12: In your opinion, the blockage is as a result of overcrowding on campus.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | not stated | 1 | .7 | .7 | .7 |
| | strongly disagree | 9 | 6.0 | 6.0 | 6.7 |
| | disagree | 47 | 31.3 | 31.3 | 38.0 |
| | neither agree nor disagree | 39 | 26.0 | 26.0 | 64.0 |
| | agree | 40 | 26.7 | 26.7 | 90.7 |
| | strongly agree | 14 | 9.3 | 9.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

These responses have been condensed and displayed in Table 13 below to indicate the sum (percentage) of those who strongly disagreed/disagreed, those who neither agreed nor disagreed (NAND) and those who strongly agreed/agreed. A column has been added to indicate whether the lager percentage reflects a positive or a negative perception.

**Table 13: Condensed participant's responses**

| **Question** | **SD / D** | **NA / ND** | **SA / A** | **Positive / Negative** |
|---|---|---|---|---|
| 1. The campus environment is stimulating enough to enhance students' awareness of space. | 42.6% | 17.3% | 40% | Negative |
| 2. In your opinion, students are disrespectful of other's space. | 46.7% | 16% | 37.3% | Negative |
| 3. The physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space. | 48.7% | 14.7% | 36.7% | Negative |
| 7. In your opinion, the blockage is as a result of overcrowding on campus. | 37.3% | 26% | 36% | Negative |

Most participants, but below 50%, were found to hold a negative perception of space in their respective campuses. About 42.6% of the participants disagree that the campus

environment is stimulating enough to enhance students' awareness of space, while 40% agree. About 46.7% disagree that students are disrespectful of other's space, while 37.3% agree. About 48.7% disagree that the physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space, while 36.7% agree. About 37.3% of the participants disagree that the blockage is as a result of overcrowding on campus, while 36% agree (Table 13).

**Table 14: How often do you find students blocking your way when rushing to classes?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | always | 22 | 14.7 | 14.7 | 14.7 |
| | frequently | 28 | 18.7 | 18.7 | 33.3 |
| | occasionally | 77 | 51.3 | 51.3 | 84.7 |
| | never | 23 | 15.3 | 15.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

Table 14 displays that about 14.7% of the participants indicated that they always find students blocking their way when rushing to classes, while 18.7% frequently find students blocking their way when rushing to classes, 51.3% occasionally find students blocking their way when rushing to classes, and 15.3% never find students blocking their way when rushing to classes (Table 14).

**Table 15: How often are you asked by lecturers rushing to classes to give way so that they can go pass quickly?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | always | 8 | 5.3 | 5.3 | 5.3 |
| | frequently | 19 | 12.7 | 12.7 | 18.0 |
| | occasionally | 55 | 36.7 | 36.7 | 54.7 |
| | never | 68 | 45.3 | 45.3 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

Table 15 above displays that 5.3% of the participants indicated that they are always asked by lecturers rushing to classes to give way so that they can go pass quickly; while 12.7% indicated that this occurs frequently; 36.7% indicated that it occurs occasionally; and

45.3% indicated they are never asked by lecturers rushing to classes to give way so that they can go pass quickly (Table 15).

**Table 16: How often are you asked by students rushing to classes to give way so that they can go pass quickly?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | always | 20 | 13.3 | 13.3 | 13.3 |
| | frequently | 27 | 18.0 | 18.0 | 31.3 |
| | occasionally | 57 | 38.0 | 38.0 | 69.3 |
| | never | 46 | 30.7 | 30.7 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

Table 16 shows that 13.3% of the participants are always asked by students rushing to classes to give way so that they can go pass quickly; 18% indicated that this happens frequently; 38% indicated that this happens occasionally; and 30.7% indicated that they are never asked by students rushing to classes to give way so that they can go pass quickly (Table 16).

According to the results displayed in Table 17, about 10.7% indicated that according to their own observation, none of the racial/cultural groups is generally poor in space recognition, while 6.7% indicated that all racial/cultural groups are generally poor in space recognition. About 52% indicated that Blacks are generally poor in space recognition; 5.3% indicated that Coloured are generally poor in space recognition; 07% indicated that Indian are generally poor in space recognition; 16.7% indicated that White are generally poor in space recognition (Table 17). About 4% of the participants felt that both Black and White are generally poor in space recognition; 1.3% felt that the Chinese are generally poor in space recognition; 0.7% felt that the disabled people are generally poor in space recognition; and 2% of the participants were not sure which racial/cultural group is generally poor in space recognition (Table 17).

**Table 17: According to your own observation, which racial/cultural group is generally poor in space recognition?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | none | 16 | 10.7 | 10.7 | 10.7 |
| | Black | 78 | 52.0 | 52.0 | 62.7 |
| | Coloured | 8 | 5.3 | 5.3 | 68.0 |
| | Indian | 1 | .7 | .7 | 68.7 |
| | White | 25 | 16.7 | 16.7 | 85.3 |
| | all | 10 | 6.7 | 6.7 | 92.0 |
| | Black & White | 6 | 4.0 | 4.0 | 96.0 |
| | Chinese | 2 | 1.3 | 1.3 | 97.3 |
| | disabled | 1 | .7 | .7 | 98.0 |
| | not sure | 3 | 2.0 | 2.0 | 100.0 |
| | Total | 150 | 100.0 | 100.0 | |

The One Way Analysis of Variance (ANOVA) test was run to test the difference between the two groups of participants and the difference within the two groups of participants i.e. to test the effect of error plus systematic variance, and the effect of error variance, and to determine whether this effect is statistically significant or not.

Table 18 reflects that there is no statistically significant effect in the participants' responses for Questions 1, 3, 4, 5, 7 and 8 ($p > 0.05$). However, there is a statistically significant effect in the responses for Questions 2 and 6 ($p < 0.05$).

**Table 18: One Way ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| q1 | Between Groups | 1.288 | 1 | 1.288 | .888 | .348 |
| | Within Groups | 214.586 | 148 | 1.450 | | |
| | Total | 215.873 | 149 | | | |
| q2 | Between Groups | 14.919 | 1 | 14.919 | 10.775 | .001 |
| | Within Groups | 204.921 | 148 | 1.385 | | |
| | Total | 219.840 | 149 | | | |
| q3 | Between Groups | .220 | 1 | .220 | .145 | .704 |
| | Within Groups | 225.273 | 148 | 1.522 | | |
| | Total | 225.493 | 149 | | | |
| q4 | Between Groups | .034 | 1 | .034 | .041 | .839 |
| | Within Groups | 122.959 | 148 | .831 | | |
| | Total | 122.993 | 149 | | | |
| q5 | Between Groups | 1.890 | 1 | 1.890 | 2.546 | .113 |
| | Within Groups | 109.850 | 148 | .742 | | |
| | Total | 111.740 | 149 | | | |
| q6 | Between Groups | 5.401 | 1 | 5.401 | 5.526 | .020 |
| | Within Groups | 144.659 | 148 | .977 | | |
| | Total | 150.060 | 149 | | | |
| q7 | Between Groups | 2.170 | 1 | 2.170 | 1.728 | .191 |
| | Within Groups | 185.830 | 148 | 1.256 | | |
| | Total | 188.000 | 149 | | | |
| q8 | Between Groups | .001 | 1 | .001 | .000 | .989 |
| | Within Groups | 846.559 | 148 | 5.720 | | |
| | Total | 846.560 | 149 | | | |

Following is a further analysis of the participants' responses to each of the questions in the questionnaire, analysed against the participants' race and level of study.

***Question 1: The campus environment is stimulating enough to enhance students' awareness of space.***

In total, table 19 displays that of those participants who strongly disagreed/disagreed that the campus environment is stimulating enough to enhance students' awareness of space, 40% were Black; and 2.6% were Coloured. Of those participants who neither agreed nor disagreed that the campus environment is stimulating enough to enhance students' awareness of space, 16% were Black; 0.7% were Coloured; and 0.7% were Indian. From those who strongly agreed/agreed, 39.3% were Black and 0.7% did not state their race (Table 19).

**Table 19: Question 1 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Indian | Total |
| q1 | strongly disagree | Count | 18 | 2 | 0 | 0 | 20 |
| | | % within q1 | 90.0% | 10.0% | .0% | .0% | 100.0% |
| | | % within race | 12.6% | 40.0% | .0% | .0% | 13.3% |
| | | % of Total | 12.0% | 1.3% | .0% | .0% | 13.3% |
| | disagree | Count | 42 | 2 | 0 | 0 | 44 |
| | | % within q1 | 95.5% | 4.5% | .0% | .0% | 100.0% |
| | | % within race | 29.4% | 40.0% | .0% | .0% | 29.3% |
| | | % of Total | 28.0% | 1.3% | .0% | .0% | 29.3% |
| | neither agree nor disagree | Count | 24 | 1 | 0 | 1 | 26 |
| | | % within q1 | 92.3% | 3.8% | .0% | 3.8% | 100.0% |
| | | % within race | 16.8% | 20.0% | .0% | 100.0% | 17.3% |
| | | % of Total | 16.0% | .7% | .0% | .7% | 17.3% |
| | agree | Count | 48 | 0 | 1 | 0 | 49 |
| | | % within q1 | 98.0% | .0% | 2.0% | .0% | 100.0% |
| | | % within race | 33.6% | .0% | 100.0% | .0% | 32.7% |
| | | % of Total | 32.0% | .0% | .7% | .0% | 32.7% |
| | strongly agree | Count | 11 | 0 | 0 | 0 | 11 |
| | | % within q1 | | .0% | | .0% | 100.0% |
| | | % within race | 7.7% | .0% | .0% | .0% | 7.3% |
| | | % of Total | 7.3% | .0% | .0% | .0% | 7.3% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q1 | 95.3% | 3.3% | .7% | .7% | |
| | | % within race | | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

Table 20 displays that of those participants who strongly disagreed/disagreed that the campus environment is stimulating enough to enhance students' awareness of space, 18% were at their first level of study; 8.7% were at their second level; 14% were at their third level; and 2% were at their fourth level. Of those participants who neither agreed nor disagreed that the campus environment is stimulating enough to enhance students' awareness of space, 7.3% were at their first level of study; 4.7% were at their second level; 3.3% were at their third level; and 2% were at their fourth level. From those who strongly agreed/agreed, 17.4% were at their first level of study; 8.7% were at their second level; 8.7% were at their third level; and 5.4% were at their fourth level (Table 20).

**Table 20: Question 1 by level Cross Tabulation**

| | | | level | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | Total |
| q1 | strongly disagree | Count | 8 | 4 | 7 | 1 | 20 |
| | | % within q1 | 40.0% | 20.0 | 35.0% | 5.0% | 100.0% |
| | | % within level | 12.5% | 12.1 | 17.9% | 7.1% | 13.3% |
| | | % of Total | 5.3% | 2.7% | 4.7% | .7% | 13.3% |
| | disagree | Count | 1 | 9 | 14 | 2 | 44 |
| | | % within q1 | 43.2% | 20.5 | 31.8% | 4.5% | 100.0% |
| | | % within level | 29.7% | 27.3 | 35.9% | 14.3% | 29.3% |
| | | % of Total | 12.7% | 6.0% | 9.3% | 1.3% | 29.3% |
| | neither agree nor disagree | Count | 1 | 7 | 5 | 3 | 26 |
| | | % within q1 | 42.3% | 26.9 | 19.2% | 11.5% | 100.0% |
| | | % within level | 17.2% | 21.2 | 12.8% | 21.4% | 17.3% |
| | | % of Total | 7.3% | 4.7% | 3.3% | 2.0% | 17.3% |
| | agree | Count | 2 | 1 | 7 | 7 | 49 |
| | | % within q1 | 44.9% | 26.5 | 14.3% | 14.3% | 100.0% |
| | | % within level | 34.4% | 39.4 | 17.9% | 50.0% | 32.7% |
| | | % of Total | 14.7% | 8.7% | 4.7% | 4.7% | 32.7% |
| | strongly agree | Count | 4 | 0 | 6 | 1 | 11 |
| | | % within q1 | 36.4% | .0% | 54.5% | 9.1% | 100.0% |
| | | % within level | 6.3% | .0% | 15.4% | 7.1% | 7.3% |
| | | % of Total | 2.7% | .0% | 4.0% | .7% | 7.3% |
| Total | | Count | 6 | 33 | 3 | 14 | 150 |
| | | % within q1 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

***Question 2: In your opinion, students are disrespectful of other's space.***

Table 21 displays that of those participants who strongly disagreed/disagreed that students are disrespectful of other's space, 44% were Black; 2% were Coloured; and 0.7% did not stated their race. Of those participants who neither agreed nor disagreed that students are disrespectful of other's space, 15.3% were Black and 0.7% were Indian. From those who strongly agreed/agreed, 36% were Black and 1.4% were Coloured (Table 21).

**Table 21: Question 2 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Indian | Total |
| q2 | strongly disagree | Count | 16 | 1 | 1 | 0 | 18 |
| | | % within q2 | 88.9% | 5.6% | 5.6% | .0% | 100.0% |
| | | % within race | 11.2% | 20.0% | 100.0% | .0% | 12.0% |
| | | % of Total | 10.7% | .7% | .7% | .0% | 12.0% |
| | disagree | Count | 50 | 2 | 0 | 0 | 52 |
| | | % within q2 | 96.2% | 3.8% | .0% | .0% | 100.0% |
| | | % within race | 35.0% | 40.0% | .0% | .0% | 34.7% |
| | | % of Total | 33.3% | 1.3% | .0% | .0% | 34.7% |
| | neither agree nor disagree | Count | 23 | 0 | 0 | 1 | 24 |
| | | % within q2 | 95.8% | .0% | .0% | 4.2% | 100.0% |
| | | % within race | 16.1% | .0% | .0% | 100.0% | 16.0% |
| | | % of Total | 15.3% | .0% | .0% | .7% | 16.0% |
| | agree | Count | 41 | 1 | 0 | 0 | 42 |
| | | % within q2 | 97.6% | 2.4% | .0% | .0% | 100.0% |
| | | % within race | 28.7% | 20.0% | .0% | .0% | 28.0% |
| | | % of Total | 27.3% | .7% | .0% | .0% | 28.0% |
| | strongly agree | Count | 13 | 1 | 0 | 0 | 14 |
| | | % within q2 | 92.9% | 7.1% | .0% | .0% | 100.0% |
| | | % within race | 9.1% | 20.0% | .0% | .0% | 9.3% |
| | | % of Total | 8.7% | .7% | .0% | .0% | 9.3% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q2 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

Table 22 displays that of those participants who strongly disagreed/disagreed that students are disrespectful of other's space, 18% were at their first level of study; 11.4% were at their second level; 12.7% were at their third level; and 4.7% were at their fourth level. Of those participants who neither agreed nor disagreed that students are disrespectful of other's space, 6% were at their first level of study; 4.7% were at their second level; 3.3% were at their third level; and 2% were at their fourth level. From those who strongly agreed/agreed, 18.7% were at their first level of study; 6% were at their second level; 10 % were at their third level; and 2.7% were at their fourth level (Table 22).

**Table 22: Question 2 by level Cross Tabulation**

| | | | level | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | Total |
| q2 | strongly disagree | Count | 8 | 4 | 3 | 3 | 18 |
| | | % within q2 | 44.4% | 22.2% | 16.7% | 16.7% | 100.0% |
| | | % within level | 12.5% | 12.1% | 7.7% | 21.4% | 12.0% |
| | | % of Total | 5.3% | 2.7% | 2.0% | 2.0% | 12.0% |
| | disagree | Count | 19 | 13 | 16 | 4 | 52 |
| | | % within q2 | 36.5% | 25.0% | 30.8% | 7.7% | 100.0% |
| | | % within level | 29.7% | 39.4% | 41.0% | 28.6% | 34.7% |
| | | % of Total | 12.7% | 8.7% | 10.7% | 2.7% | 34.7% |
| | neither agree nor disagree | Count | 9 | 7 | 5 | 3 | 24 |
| | | % within q2 | 37.5% | 29.2% | 20.8% | 12.5% | 100.0% |
| | | % within level | 14.1% | 21.2% | 12.8% | 21.4% | 16.0% |
| | | % of Total | 6.0% | 4.7% | 3.3% | 2.0% | 16.0% |
| | agree | Count | 18 | 7 | 13 | 4 | 42 |
| | | % within q2 | 42.9% | 16.7% | 31.0% | 9.5% | 100.0% |
| | | % within level | 28.1% | 21.2% | 33.3% | 28.6% | 28.0% |
| | | % of Total | 12.0% | 4.7% | 8.7% | 2.7% | 28.0% |
| | strongly agree | Count | 10 | 2 | 2 | 0 | 14 |
| | | % within q2 | 71.4% | 14.3% | 14.3% | .0% | 100.0% |
| | | % within level | 15.6% | 6.1% | 5.1% | .0% | 9.3% |
| | | % of Total | 6.7% | 1.3% | 1.3% | .0% | 9.3% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q2 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

***Question 3: The physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space.***

From those participants that strongly disagreed/disagreed that the physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space, 47.3% were Black and 1.4% were Coloured. From those participants that neither agreed nor disagreed that the physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space, 14% were Black and 0.7% were Coloured. From those who strongly agreed/agreed, 34% were Black; 1.4% were Coloured; 0.7% did not state their race; and 0.7% were Indian (Table 23).

**Table 23: Question 3 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Indian | Total |
| q3 | strongly disagree | Count | 20 | 1 | 0 | 0 | 21 |
| | | % within q3 | 95.2% | 4.8% | .0% | .0% | 100.0% |
| | | % within race | 14.0% | 20.0% | .0% | .0% | 14.0% |
| | | % of Total | 13.3% | .7% | .0% | .0% | 14.0% |
| | disagree | Count | 51 | 1 | 0 | 0 | 52 |
| | | % within q3 | 98.1% | 1.9% | .0% | .0% | 100.0% |
| | | % within race | 35.7% | 20.0% | .0% | .0% | 34.7% |
| | | % of Total | 34.0% | .7% | .0% | .0% | 34.7% |
| | neither agree nor disagree | Count | 21 | 1 | 0 | 0 | 22 |
| | | % within q3 | 95.5% | 4.5% | .0% | .0% | 100.0% |
| | | % within race | 14.7% | 20.0% | .0% | .0% | 14.7% |
| | | % of Total | 14.0% | .7% | .0% | .0% | 14.7% |
| | agree | Count | 39 | 1 | 1 | 1 | 42 |
| | | % within q3 | 92.9% | 2.4% | 2.4% | 2.4% | 100.0% |
| | | % within race | 27.3% | 20.0% | 100.0% | 100.0% | 28.0% |
| | | % of Total | 26.0% | .7% | .7% | .7% | 28.0% |
| | strongly agree | Count | 12 | 1 | 0 | 0 | 13 |
| | | % within q3 | 92.3% | 7.7% | .0% | .0% | 100.0% |
| | | % within race | 8.4% | 20.0% | .0% | .0% | 8.7% |
| | | % of Total | 8.0% | .7% | .0% | .0% | 8.7% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q3 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

Table 24 displays that of those participants who strongly disagreed/disagreed that the physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space, 20.6% were at their first level of study; 8% were at their second level; 15.3% were at their third level; and 4.7% were at their fourth level. Of those participants who neither agreed nor disagreed that the physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space, 6.7% were at their first level of study; 4.7% were at their second level; 2.7% were at their third level; and 0.7% were at their fourth level. From those who strongly agreed/agreed, 15.3% were at their first level of study; 9.3% were at their second level; 8 % were at their third level; and 4% were at their fourth level (Table 24).

**Table 24: Question 3 by level Cross Tabulation**

| | | | level | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | Total |
| q3 | strongly disagree | Count | 11 | 1 | 8 | 1 | 21 |
| | | % within q3 | 52.4% | 4.8% | 38.1% | 4.8% | 100.0% |
| | | % within level | 17.2% | 3.0% | 20.5% | 7.1% | 14.0% |
| | | % of Total | 7.3% | .7% | 5.3% | .7% | 14.0% |
| | disagree | Count | 20 | 11 | 15 | 6 | 52 |
| | | % within q3 | 38.5% | 21.2% | 28.8% | 11.5% | 100.0% |
| | | % within level | 31.3% | 33.3% | 38.5% | 42.9% | 34.7% |
| | | % of Total | 13.3% | 7.3% | 10.0% | 4.0% | 34.7% |
| | neither agree nor disagree | Count | 10 | 7 | 4 | 1 | 22 |
| | | % within q3 | 45.5% | 31.8% | 18.2% | 4.5% | 100.0% |
| | | % within level | 15.6% | 21.2% | 10.3% | 7.1% | 14.7% |
| | | % of Total | 6.7% | 4.7% | 2.7% | .7% | 14.7% |
| | agree | Count | 18 | 11 | 8 | 5 | 42 |
| | | % within q3 | 42.9% | 26.2% | 19.0% | 11.9% | 100.0% |
| | | % within level | 28.1% | 33.3% | 20.5% | 35.7% | 28.0% |
| | | % of Total | 12.0% | 7.3% | 5.3% | 3.3% | 28.0% |
| | strongly agree | Count | 5 | 3 | 4 | 1 | 13 |
| | | % within q3 | 38.5% | 23.1% | 30.8% | 7.7% | 100.0% |
| | | % within level | 7.8% | 9.1% | 10.3% | 7.1% | 8.7% |
| | | % of Total | 3.3% | 2.0% | 2.7% | .7% | 8.7% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q3 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

***Question 4: How often do you find students blocking your way when rushing to classes?***

From those participants who indicated that they always find students blocking their way when rushing to classes, 13.3% were Black and 1.3% were Coloured. From those participants who frequently find students blocking their way when rushing to classes, 18.7% were Black and none of the other races indicated this. From those who occasionally find students blocking their way when rushing to classes, 48.7% were Black; 1.3% were Coloured; 0.7% were Indian; and 0.7% did not state their race. From those

who never find students blocking their way when rushing to classes, 14.7% were Black and 0.7% were Coloured (Table 25).

**Table 25: Question 4 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Asian | Total |
| q4 | always | Count | 20 | 2 | 0 | 0 | 22 |
| | | % within q4 | 90.9% | 9.1% | .0% | .0% | 100.0% |
| | | % within race | 14.0% | 40.0% | .0% | .0% | 14.7% |
| | | % of Total | 13.3% | 1.3% | .0% | .0% | 14.7% |
| | frequently | Count | 28 | 0 | 0 | 0 | 28 |
| | | % within q4 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 19.6% | .0% | .0% | .0% | 18.7% |
| | | % of Total | 18.7% | .0% | .0% | .0% | 18.7% |
| | occasionally | Count | 73 | 2 | 1 | 1 | 77 |
| | | % within q4 | 94.8% | 2.6% | 1.3% | 1.3% | 100.0% |
| | | % within race | 51.0% | 40.0% | 100.0% | 100.0% | 51.3% |
| | | % of Total | 48.7% | 1.3% | .7% | .7% | 51.3% |
| | never | Count | 22 | 1 | 0 | 0 | 23 |
| | | % within q4 | 95.7% | 4.3% | .0% | .0% | 100.0% |
| | | % within race | 15.4% | 20.0% | .0% | .0% | 15.3% |
| | | % of Total | 14.7% | .7% | .0% | .0% | 15.3% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q4 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

Table 26 displays that of those participants who indicated that they always find students blocking their way when rushing to classes, 4.7% were at their first level of study; 3.3% were at their second level; 5.3% were at their third level; and 1.3% were at their fourth level. Of those participants who indicated that they frequently find students blocking their way when rushing to classes, 8.7% were at their first level of study; 4% were at their second level; 4% were at their third level; and 2% were at their fourth level. From those who indicated that they occasionally find students blocking their way when rushing to classes, 19.3% were at their first level of study; 14% were at their second level; 12 % were at their third level; and 6% were at their fourth level. From those who never find

students blocking their way when rushing to classes, 10% were at their first level of study; 0.7% were at their second level; and 4.7% were at their third level of study (Table 26).

**Table 26: Question 4 by level Cross Tabulation**

| | | | level | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | Total |
| q4 | always | Count | 7 | 5 | 8 | 2 | 22 |
| | | % within q4 | 31.8% | 22.7% | 36.4% | 9.1% | 100.0% |
| | | % within level | 10.9% | 15.2% | 20.5% | 14.3% | 14.7% |
| | | % of Total | 4.7% | 3.3% | 5.3% | 1.3% | 14.7% |
| | frequently | Count | 13 | 6 | 6 | 3 | 28 |
| | | % within q4 | 46.4% | 21.4% | 21.4% | 10.7% | 100.0% |
| | | % within level | 20.3% | 18.2% | 15.4% | 21.4% | 18.7% |
| | | % of Total | 8.7% | 4.0% | 4.0% | 2.0% | 18.7% |
| | occasionally | Count | 29 | 21 | 18 | 9 | 77 |
| | | % within q4 | 37.7% | 27.3% | 23.4% | 11.7% | 100.0% |
| | | % within level | 45.3% | 63.6% | 46.2% | 64.3% | 51.3% |
| | | % of Total | 19.3% | 14.0% | 12.0% | 6.0% | 51.3% |
| | never | Count | 15 | 1 | 7 | 0 | 23 |
| | | % within q4 | 65.2% | 4.3% | 30.4% | .0% | 100.0% |
| | | % within level | 23.4% | 3.0% | 17.9% | .0% | 15.3% |
| | | % of Total | 10.0% | .7% | 4.7% | 0% | 15.3% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q4 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

***Question 5: How often are you asked by lecturers rushing to classes to give way so that they can go pass quickly?***

Only 5.3% of participants indicated that they are always asked by lecturers rushing to classes to give way so that they can go pass quickly, and they were Black. Only 12.7% of participants indicated that they are frequently asked by lecturers rushing to classes to give way so that they can go pass quickly, and they were Black. From those who are occasionally asked by lecturers rushing to classes to give way so that they can go pass quickly, 36% were Black and 0.7% were Coloured. From those who are never asked by lecturers rushing to classes to give way so that they can go pass quickly, 41.3% were

Black; 2.7% were Coloured; 0.7% were Indian; and 0.7% did not state their race (Table 27).

**Table 27: Question 5 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Indian | Total |
| q5 | always | Count | 8 | 0 | 0 | 0 | 8 |
| | | % within q5 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 5.6% | .0% | .0% | .0% | 5.3% |
| | | % of Total | 5.3% | .0% | .0% | .0% | 5.3% |
| | frequently | Count | 19 | 0 | 0 | 0 | 19 |
| | | % within q5 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 13.3% | .0% | .0% | .0% | 12.7% |
| | | % of Total | 12.7% | .0% | .0% | .0% | 12.7% |
| | occasionally | Count | 54 | 1 | 0 | 0 | 55 |
| | | % within q5 | 98.2% | 1.8% | .0% | .0% | 100.0% |
| | | % within race | 37.8% | 20.0% | .0% | .0% | 36.7% |
| | | % of Total | 36.0% | .7% | .0% | .0% | 36.7% |
| | never | Count | 62 | 4 | 1 | 1 | 68 |
| | | % within q5 | 91.2% | 5.9% | 1.5% | 1.5% | 100.0% |
| | | % within race | 43.4% | 80.0% | 100.0% | 100.0% | 45.3% |
| | | % of Total | 41.3% | 2.7% | .7% | .7% | 45.3% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q5 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

**Table 28: Question 5 by level Cross Tabulation**

| | | | level | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | |
| q5 | always | Count | 4 | 2 | 2 | 0 | 8 |
| | | % within q5 | 50.0% | 25.0% | 25.0% | .0% | 100.0% |
| | | % within level | 6.3% | 6.1% | 5.1% | .0% | 5.3% |
| | | % of Total | 2.7% | 1.3% | 1.3% | .0% | 5.3% |
| | frequently | Count | 7 | 3 | 8 | 1 | 19 |
| | | % within q5 | 36.8% | 15.8% | 42.1% | 5.3% | 100.0% |
| | | % within level | 10.9% | 9.1% | 20.5% | 7.1% | 12.7% |
| | | % of Total | 4.7% | 2.0% | 5.3% | .7% | 12.7% |
| | occasionally | Count | 30 | 11 | 11 | 3 | 55 |
| | | % within q5 | 54.5% | 20.0% | 20.0% | 5.5% | 100.0% |
| | | % within level | 46.9% | 33.3% | 28.2% | 21.4% | 36.7% |
| | | % of Total | 20.0% | 7.3% | 7.3% | 2.0% | 36.7% |
| | never | Count | 23 | 17 | 18 | 10 | 68 |
| | | % within q5 | 33.8% | 25.0% | 26.5% | 14.7% | 100.0% |
| | | % within level | 35.9% | 51.5% | 46.2% | 71.4% | 45.3% |
| | | % of Total | 15.3% | 11.3% | 12.0% | 6.7% | 45.3% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q5 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

Of those participants who indicated that they are always asked by lecturers rushing to classes to give way so that they can go pass quickly, 2.7% were at their first level of study; 1.3% were at their second level; and 1.3% were at their third level. Of those participants who indicated that they are frequently asked by lecturers rushing to classes to give way so that they can go pass quickly, 4.7% were at their first level of study; 2% were at their second level; 5.3% were at their third level; and 0.7% were at their fourth level. From those who indicated that they are occasionally asked by lecturers rushing to classes to give way so that they can go pass quickly, 20% were at their first level of study; 7.3% were at their second level; 7.3 % were at their third level; and 2% were at their fourth level. From those who indicated that they are never asked by lecturers rushing to classes to give way so that they can go pass quickly, 15.3% were at their first level of study; 11.3% were at their second level; 12% were at their third level of study; and 6.7% were at their fourth level of study (Table 28).

***Question 6: How often are you asked by students rushing to classes to give way so that they can go through quickly?***

From those participants who indicated that they are always asked by students rushing to classes to give way so that they can go pass quickly, 12% were Black and 1.3% were Coloured. Of those participants who indicated that they are frequently asked by students rushing to classes to give way so that they can go pass quickly, 17.3% were Black and 0.7% were Coloured. From those who are occasionally asked by students rushing to classes to give way so that they can go pass quickly, 37.3% were Black and 0.7% did not state their race. From those who are never asked by students rushing to classes to give way so that they can go pass quickly, 28.7% were Black; and 0.7% were Indian (Table 29).

**Table 29: Question 6 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Indian | Total |
| q6 | always | Count | 18 | 2 | 0 | 0 | 20 |
| | | % within q6 | 90.0% | 10.0% | .0% | .0% | 100.0% |
| | | % within race | 12.6% | 40.0% | .0% | .0% | 13.3% |
| | | % of Total | 12.0% | 1.3% | .0% | .0% | 13.3% |
| | frequently | Count | 26 | 1 | 0 | 0 | 27 |
| | | % within q6 | 96.3% | 3.7% | .0% | .0% | 100.0% |
| | | % within race | 18.2% | 20.0% | .0% | .0% | 18.0% |
| | | % of Total | 17.3% | .7% | .0% | .0% | 18.0% |
| | occasionally | Count | 56 | 0 | 1 | 0 | 57 |
| | | % within q6 | 98.2% | .0% | 1.8% | .0% | 100.0% |
| | | % within race | 39.2% | .0% | 100.0% | .0% | 38.0% |
| | | % of Total | 37.3% | .0% | .7% | .0% | 38.0% |
| | never | Count | 43 | 2 | 0 | 1 | 46 |
| | | % within q6 | 93.5% | 4.3% | .0% | 2.2% | 100.0% |
| | | % within race | 30.1% | 40.0% | .0% | 100.0% | 30.7% |
| | | % of Total | 28.7% | 1.3% | .0% | .7% | 30.7% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q6 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | 95.3% | 3.3% | .7% | .7% | 100.0% |

Table 30 displays that from those participants who indicated that they are always asked by students rushing to classes to give way so that they can go pass quickly, 6% were at

their first level of study; 2.7% were at their second level; and 4.7% were at their third level. Of those participants who indicated that they are frequently asked by students rushing to classes to give way so that they can go pass quickly, 8.7% were at their first level of study; 2.7% were at their second level; 4.7% were at their third level; and 2% were at their fourth level. From those who indicated that they are occasionally asked by students rushing to classes to give way so that they can go pass quickly, 14% were at their first level of study; 12% were at their second level; 9.3 % were at their third level; and 2.7% were at their fourth level. From those who indicated that they are never asked by students rushing to classes to give way so that they can go pass quickly, 14% were at their first level of study; 4.7% were at their second level; 7.3% were at their third level of study; and 4.7% were at their fourth level of study (Table 30).

**Table 30: Question 6 by level Cross Tabulation**

| | | | level | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | Total |
| q6 | always | Count | 9 | 4 | 7 | 0 | 20 |
| | | % within q6 | 45.0% | 20.0% | 35.0% | .0% | 100.0% |
| | | % within level | 14.1% | 12.1% | 17.9% | .0% | 13.3% |
| | | % of Total | 6.0% | 2.7% | 4.7% | .0% | 13.3% |
| | frequently | Count | 13 | 4 | 7 | 3 | 27 |
| | | % within q6 | 48.1% | 14.8% | 25.9% | 11.1% | 100.0% |
| | | % within level | 20.3% | 12.1% | 17.9% | 21.4% | 18.0% |
| | | % of Total | 8.7% | 2.7% | 4.7% | 2.0% | 18.0% |
| | occasionally | Count | 21 | 18 | 14 | 4 | 57 |
| | | % within q6 | 36.8% | 31.6% | 24.6% | 7.0% | 100.0% |
| | | % within level | 32.8% | 54.5% | 35.9% | 28.6% | 38.0% |
| | | % of Total | 14.0% | 12.0% | 9.3% | 2.7% | 38.0% |
| | never | Count | 21 | 7 | 11 | 7 | 46 |
| | | % within q6 | 45.7% | 15.2% | 23.9% | 15.2% | 100.0% |
| | | % within level | 32.8% | 21.2% | 28.2% | 50.0% | 30.7% |
| | | % of Total | 14.0% | 4.7% | 7.3% | 4.7% | 30.7% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q6 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

***Question 7: In your opinion, the blockage is as a result of overcrowding on campus.***

About 0.7% of the participants did not state their opinion with regard to this question, and they were Black. From those participants that strongly disagreed/disagreed that the blockage is as a result of overcrowding on campus, 36% were Black and 1.4% were Coloured. From those participants that neither agreed nor disagreed that the blockage is as a result of overcrowding on campus, 24.7% were Black; 0.7% were Coloured; and 0.7 were Indian. From those who strongly agreed/agreed, 34% were Black; 1.3% were Coloured; and 0.7% did not state their race (Table 31).

**Table 31: Question 7 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Indian | Total |
| q7 | not stated | Count | 1 | 0 | 0 | 0 | 1 |
| | | % within q7 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | .7% | .0% | .0% | .0% | .7% |
| | | % of Total | .7% | .0% | .0% | .0% | .7% |
| | strongly disagree | Count | 8 | 1 | 0 | 0 | 9 |
| | | % within q7 | 88.9% | 11.1% | .0% | .0% | 100.0% |
| | | % within race | 5.6% | 20.0% | .0% | .0% | 6.0% |
| | | % of Total | 5.3% | .7% | .0% | .0% | 6.0% |
| | disagree | Count | 46 | 1 | 0 | 0 | 47 |
| | | % within q7 | 97.9% | 2.1% | .0% | .0% | 100.0% |
| | | % within race | 32.2% | 20.0% | .0% | .0% | 31.3% |
| | | % of Total | 30.7% | .7% | .0% | .0% | 31.3% |
| | neither agree nor disagree | Count | 37 | 1 | 0 | 1 | 39 |
| | | % within q7 | 94.9% | 2.6% | .0% | 2.6% | 100.0% |
| | | % within race | 25.9% | 20.0% | .0% | 100.0% | 26.0% |
| | | % of Total | 24.7% | .7% | .0% | .7% | 26.0% |
| | agree | Count | 37 | 2 | 1 | 0 | 40 |
| | | % within q7 | 92.5% | 5.0% | 2.5% | .0% | 100.0% |
| | | % within race | 25.9% | 40.0% | 100.0% | .0% | 26.7% |
| | | % of Total | 24.7% | 1.3% | .7% | .0% | 26.7% |
| | strongly agree | Count | 14 | 0 | 0 | 0 | 14 |
| | | % within q7 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 9.8% | .0% | .0% | .0% | 9.3% |
| | | % of Total | 9.3% | .0% | .0% | .0% | 9.3% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q7 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

The 0.7% of the participants who did not state their opinion with regard to this question were at their third level of study. Of those participants who strongly disagreed/disagreed that the blockage is as a result of overcrowding on campus, 19.4% were at their first level of study; 6.7% were at their second level; 7.4% were at their third level; and 4% were at their fourth level. Of those participants who neither agreed nor disagreed that the blockage is as a result of overcrowding on campus, 8.7% were at their first level of study; 8% were at their second level; 5.3% were at their third level; and 4% were at their fourth level. From those who strongly agreed/agreed, 14.7% were at their first level of study; 7.3% were at their second level; 12.6 % were at their third level; and 1.3% were at their fourth level (Table 32).

**Table 32: Question 7 by level Cross Tabulation**

| | | | level | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | |
| q7 | not stated | Count | 0 | 0 | 1 | 0 | 1 |
| | | % within q7 | .0% | .0% | 100.0% | .0% | 100.0% |
| | | % within level | .0% | .0% | 2.6% | .0% | .7% |
| | | % of Total | .0% | .0% | .7% | .0% | .7% |
| | strongly disagree | Count | 7 | 0 | 1 | 1 | 9 |
| | | % within q7 | 77.8% | .0% | 11.1% | 11.1% | 100.0% |
| | | % within level | 10.9% | .0% | 2.6% | 7.1% | 6.0% |
| | | % of Total | 4.7% | .0% | .7% | .7% | 6.0% |
| | disagree | Count | 22 | 10 | 10 | 5 | 47 |
| | | % within q7 | 46.8% | 21.3% | 21.3% | 10.6% | 100.0% |
| | | % within level | 34.4% | 30.3% | 25.6% | 35.7% | 31.3% |
| | | % of Total | 14.7% | 6.7% | 6.7% | 3.3% | 31.3% |
| | neither agree nor disagree | Count | 13 | 12 | 8 | 6 | 39 |
| | | % within q7 | 33.3% | 30.8% | 20.5% | 15.4% | 100.0% |
| | | % within level | 20.3% | 36.4% | 20.5% | 42.9% | 26.0% |
| | | % of Total | 8.7% | 8.0% | 5.3% | 4.0% | 26.0% |
| | agree | Count | 16 | 11 | 11 | 2 | 40 |
| | | % within q7 | 40.0% | 27.5% | 27.5% | 5.0% | 100.0% |
| | | % within level | 25.0% | 33.3% | 28.2% | 14.3% | 26.7% |
| | | % of Total | 10.7% | 7.3% | 7.3% | 1.3% | 26.7% |
| | strongly agree | Count | 6 | 0 | 8 | 0 | 14 |
| | | % within q7 | 42.9% | .0% | 57.1% | .0% | 100.0% |
| | | % within level | 9.4% | .0% | 20.5% | .0% | 9.3% |
| | | % of Total | 4.0% | .0% | 5.3% | .0% | 9.3% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q7 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

***Question 8: According to your own observation, which racial/cultural group is generally poor in space recognition?***

According to the results displayed in Table 33, from those participants who indicated that according to their own observation, none of the racial/cultural groups is generally poor in space recognition, 10% were Black and 0.7% were Coloured. Only 6.7% of Black participants indicated that all racial/cultural groups are generally poor in space recognition. From those who indicated that Blacks are generally poor in space recognition, 51.3% were Black and 0.7% did not state their race. From those who

indicated that Coloureds are generally poor in space recognition, 3.3% were Black and 2% were Coloured (Table 33).

**Table 33: Question 8 by race Cross Tabulation**

| | | | race | | | | |
|---|---|---|---|---|---|---|---|
| | | | Black | Coloured | not stated | Asian | Total |
| q8 | none | Count | 15 | 1 | 0 | 0 | 16 |
| | | % within q8 | 93.8% | 6.3% | .0% | .0% | 100.0% |
| | | % within race | 10.5% | 20.0% | .0% | .0% | 10.7% |
| | | % of Total | 10.0% | .7% | .0% | .0% | 10.7% |
| | Blacks | Count | 77 | 0 | 1 | 0 | 78 |
| | | % within q8 | 98.7% | .0% | 1.3% | .0% | 100.0% |
| | | % within race | 53.8% | .0% | 100.0% | .0% | 52.0% |
| | | % of Total | 51.3% | .0% | .7% | .0% | 52.0% |
| | Coloureds | Count | 5 | 3 | 0 | 0 | 8 |
| | | % within q8 | 62.5% | 37.5% | .0% | .0% | 100.0% |
| | | % within race | 3.5% | 60.0% | .0% | .0% | 5.3% |
| | | % of Total | 3.3% | 2.0% | .0% | .0% | 5.3% |
| | Indians | Count | 0 | 1 | 0 | 0 | 1 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within race | .0% | 20.0% | .0% | .0% | .7% |
| | | % of Total | .0% | .7% | .0% | .0% | .7% |
| | Whites | Count | 25 | 0 | 0 | 0 | 25 |
| | | % within q8 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 17.5% | .0% | .0% | .0% | 16.7% |
| | | % of Total | 16.7% | .0% | .0% | .0% | 16.7% |
| | all | Count | 10 | 0 | 0 | 0 | 10 |
| | | % within q8 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 7.0% | .0% | .0% | .0% | 6.7% |
| | | % of Total | 6.7% | .0% | .0% | .0% | 6.7% |
| | Blacks & Whites | Count | 6 | 0 | 0 | 0 | 6 |
| | | % within q8 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 4.2% | .0% | .0% | .0% | 4.0% |
| | | % of Total | 4.0% | .0% | .0% | .0% | 4.0% |
| | Chinese | Count | 2 | 0 | 0 | 0 | 2 |
| | | % within q8 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | 1.4% | .0% | .0% | .0% | 1.3% |
| | | % of Total | 1.3% | .0% | .0% | .0% | 1.3% |
| | disabled | Count | 1 | 0 | 0 | 0 | 1 |
| | | % within q8 | 100.0% | .0% | .0% | .0% | 100.0% |
| | | % within race | .7% | .0% | .0% | .0% | .7% |
| | | % of Total | .7% | .0% | .0% | .0% | .7% |
| | not sure | Count | 2 | 0 | 0 | 1 | 3 |
| | | % within q8 | 66.7% | .0% | .0% | 33.3% | 100.0% |
| | | % within race | 1.4% | .0% | .0% | 100.0% | 2.0% |
| | | % of Total | 1.3% | .0% | .0% | .7% | 2.0% |
| Total | | Count | 143 | 5 | 1 | 1 | 150 |
| | | % within q8 | 95.3% | 3.3% | .7% | .7% | 100.0% |
| | | % within race | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 95.3% | 3.3% | .7% | .7% | 100.0% |

Only 0.7% of Coloured participants indicated that Indians are generally poor in space recognition. About 16.7% of Black participants indicated that Whites are generally poor in space recognition. Only 4% of Black participants felt that both Black and White are generally poor in space recognition. The 1.3% of Black participants felt that the Chinese

are generally poor in space recognition; and 0.7% of Black participants felt that the disabled people are generally poor in space recognition. About 1.3% of Black participants and 0.7% of Indian participants were not sure which racial/cultural group is generally poor in space recognition (Table 33).

**Table 34: Question 8 by level Cross Tabulation**

| | | | level | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 4th | Total |
| q8 | none | Count | 6 | 3 | 5 | 2 | 16 |
| | | % within q8 | 37.5% | 18.8% | 31.3% | 12.5% | 100.0% |
| | | % within level | 9.4% | 9.1% | 12.8% | 14.3% | 10.7% |
| | | % of Total | 4.0% | 2.0% | 3.3% | 1.3% | 10.7% |
| | Blacks | Count | 37 | 18 | 14 | 9 | 78 |
| | | % within q8 | 47.4% | 23.1% | 17.9% | 11.5% | 100.0% |
| | | % within level | 57.8% | 54.5% | 35.9% | 64.3% | 52.0% |
| | | % of Total | 24.7% | 12.0% | 9.3% | 6.0% | 52.0% |
| | Coloureds | Count | 1 | 3 | 3 | 1 | 8 |
| | | % within q8 | 12.5% | 37.5% | 37.5% | 12.5% | 100.0% |
| | | % within level | 1.6% | 9.1% | 7.7% | 7.1% | 5.3% |
| | | % of Total | .7% | 2.0% | 2.0% | .7% | 5.3% |
| | Indians | Count | 0 | 1 | 0 | 0 | 1 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within level | .0% | 3.0% | .0% | .0% | .7% |
| | | % of Total | .0% | .7% | .0% | .0% | .7% |
| | Whites | Count | 12 | 4 | 9 | 0 | 25 |
| | | % within q8 | 48.0% | 16.0% | 36.0% | .0% | 100.0% |
| | | % within level | 18.8% | 12.1% | 23.1% | .0% | 16.7% |
| | | % of Total | 8.0% | 2.7% | 6.0% | .0% | 16.7% |
| | all | Count | 3 | 3 | 4 | 0 | 10 |
| | | % within q8 | 30.0% | 30.0% | 40.0% | .0% | 100.0% |
| | | % within level | 4.7% | 9.1% | 10.3% | .0% | 6.7% |
| | | % of Total | 2.0% | 2.0% | 2.7% | .0% | 6.7% |
| | Blacks & Whites | Count | 3 | 0 | 3 | 0 | 6 |
| | | % within q8 | 50.0% | .0% | 50.0% | .0% | 100.0% |
| | | % within level | 4.7% | .0% | 7.7% | .0% | 4.0% |
| | | % of Total | 2.0% | .0% | 2.0% | .0% | 4.0% |
| | Chinese | Count | 0 | 1 | 1 | 0 | 2 |
| | | % within q8 | .0% | 50.0% | 50.0% | .0% | 100.0% |
| | | % within level | .0% | 3.0% | 2.6% | .0% | 1.3% |
| | | % of Total | .0% | .7% | .7% | .0% | 1.3% |
| | disabled | Count | 0 | 0 | 0 | 1 | 1 |
| | | % within q8 | .0% | .0% | .0% | 100.0% | 100.0% |
| | | % within level | .0% | .0% | .0% | 7.1% | .7% |
| | | % of Total | .0% | .0% | .0% | .7% | .7% |
| | not sure | Count | 2 | 0 | 0 | 1 | 3 |
| | | % within q8 | 66.7% | .0% | .0% | 33.3% | 100.0% |
| | | % within level | 3.1% | .0% | .0% | 7.1% | 2.0% |
| | | % of Total | 1.3% | .0% | .0% | .7% | 2.0% |
| Total | | Count | 64 | 33 | 39 | 14 | 150 |
| | | % within q8 | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |
| | | % within level | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 42.7% | 22.0% | 26.0% | 9.3% | 100.0% |

Table 34 displays that from those participants who indicated that according to their own observation, none of the racial/cultural groups is generally poor in space recognition, 4% were at their first level; 2% were at their second level; 3.3% were at their third level; and 1.3% were at their fourth level of study. From those participants who indicated that all racial/cultural groups are generally poor in space recognition, 2% were at their first level; 2% were at their second level; and 2.7% were at their third level of study. From those who indicated that Blacks are generally poor in space recognition, 24.7% were at their first level; 12% were at their second level; 9.3% were at their third level; and 6% were at their fourth level of study. From those who indicated that Coloureds are generally poor in space recognition, 0.7% were at their first level; 2% were at their second level; 2% were at their third level; and 0.7% were at their fourth level of study (Table 34).

The 0.7% of Coloured participants who indicated that Indians are generally poor in space recognition were at their second level of study. From those participants who indicated that Whites are generally poor in space recognition, 8% were at their first level; 2.7% were at their second level; and 6% were at their third level of study. From those participants who felt that both Black and White are generally poor in space recognition, 2% were at their first level and 2% were at their third level. From those participants who felt that the Chinese are generally poor in space recognition, 0.7% were at their second level and 0.7% were at their third level. From those participants who felt that the disabled people are generally poor in space recognition, 0.7% were at their fourth level of study. From those participants who were not sure which racial/cultural group is generally poor in space recognition, 1.3% were at their first level and 0.7% were at their fourth level of study (Table 34).

**4.2 Resume`**

This chapter outlined the participants' demographic information, results and discussion of the data collected. The discussion of the data obtained is graphically represented as well. For detailed information on statistical information, the reader is advised to refer to

Appendix 1. and Appendix 2. Data collection instrument (questionnaire) is displayed in Appendix 3. The following chapter concludes the study.

## Chapter 5: Conclusion and recommendations

### 5.1 Conclusion

Slightly more students 13.3% did not believe that the campus environment was stimulating enough as opposed to 7.3% who were convinced of the stimulation offered by the campus environment. With regard to the respect of space by students, it was interesting to note the significant results pointing towards the disrespect of space ($p<0.001$). The physical layout of the campus environment was not perceived as a contributory factor towards difficulties in finding conducive space around the two campuses. Overcrowding did not have a negative impact on space availability.

The results of the study clearly indicated the students' awareness of a problematic behaviour within the two institutions of higher learning. A conclusion can be safely made that there is a need to consider programmes to address this behaviour as arriving late at any destination can be costly. Institutions that follow term systems are more likely to suffer from such behaviours where there is little or no awareness of other people's space. The financial as well as time loss in terms of graduation and beginning to contribute economically has major implications to growth and development of the country as a whole. It should be noted with great concern that youth and young adults constitute the largest percentage of the population that is and expected to be economically active.

### 5.2 Recommendations

More studies of this nature should be conducted to safely generalize the findings. Observational studies will give more clarity with regard to cultural differences in space perception. The sample of the study should also consider the environment from which the participant come as this may explain the exposure to generally fast life. Ideally, there must be equal representation of all cultural groups found in the South African context. Standardized instruments should be considered in future studies.

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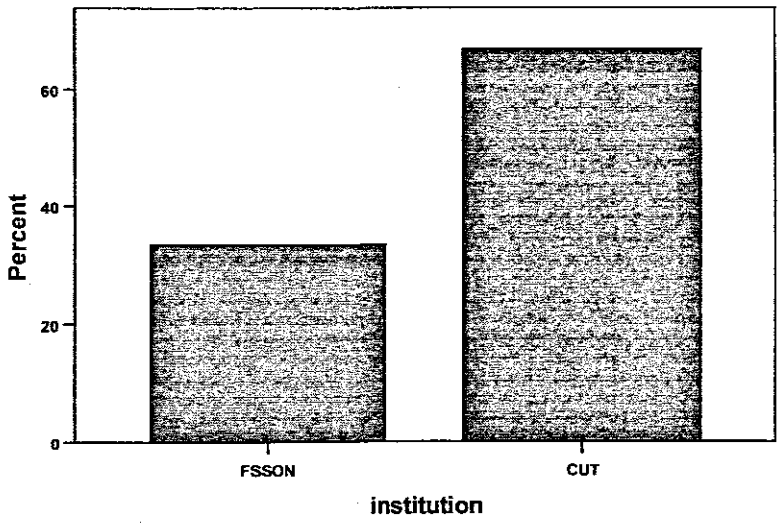
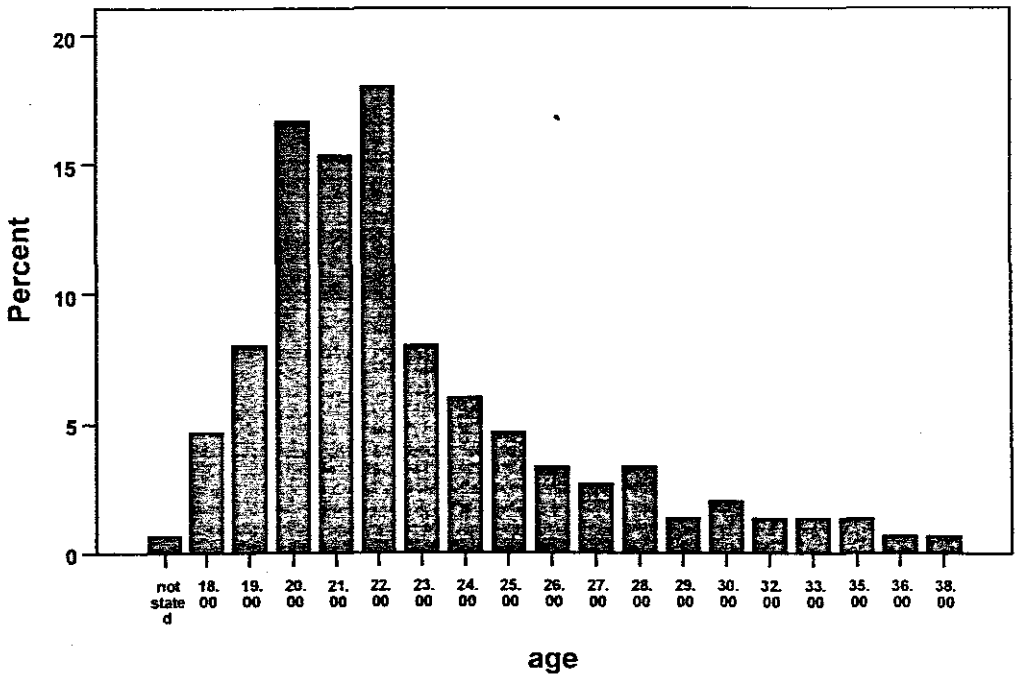
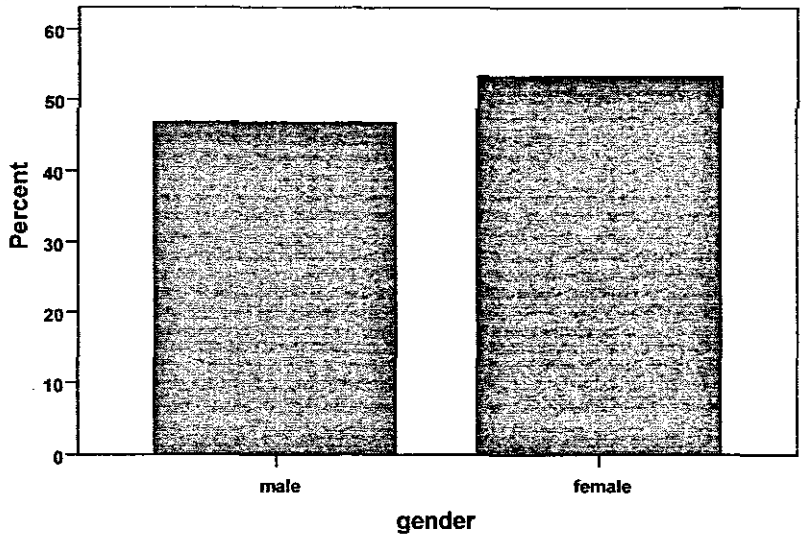
## APPENDIX 1.

## Frequency Graphs

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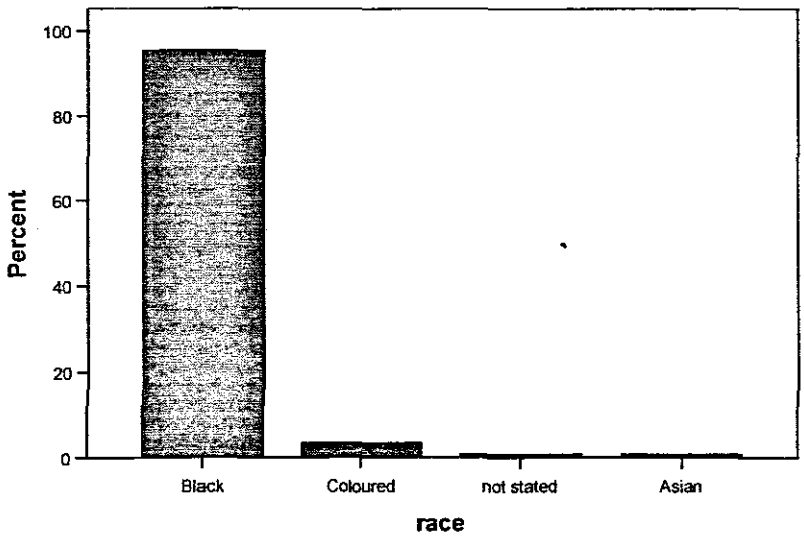
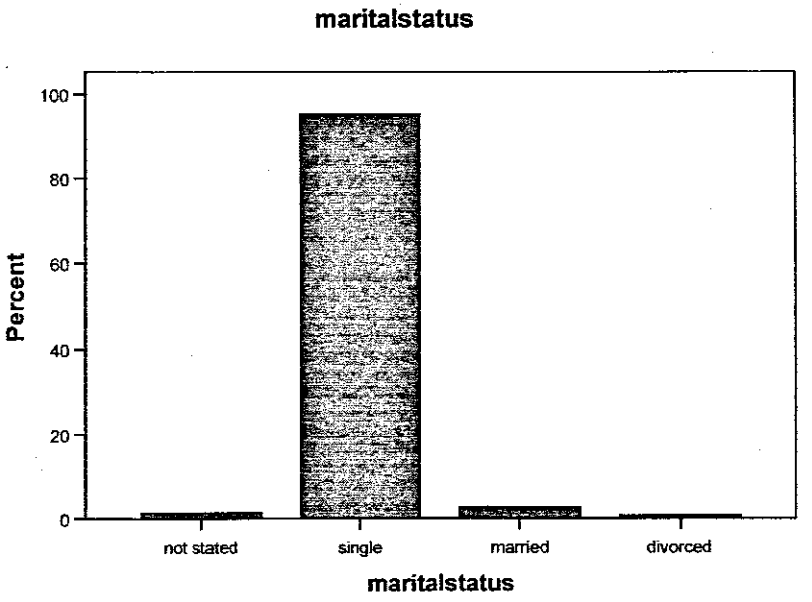
40
30
20
10
0
Percent
male
female
gender

race


100
80
60
40
20
0
Percent
Black
Coloured
not stated
Asian
race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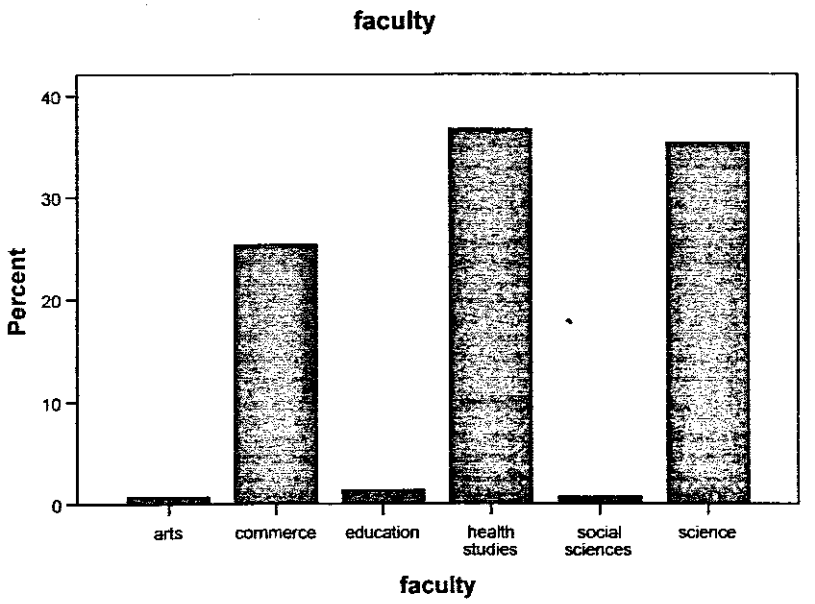
80
60
40
20
0
Percent
not stated
single
married
divorced
maritalstatus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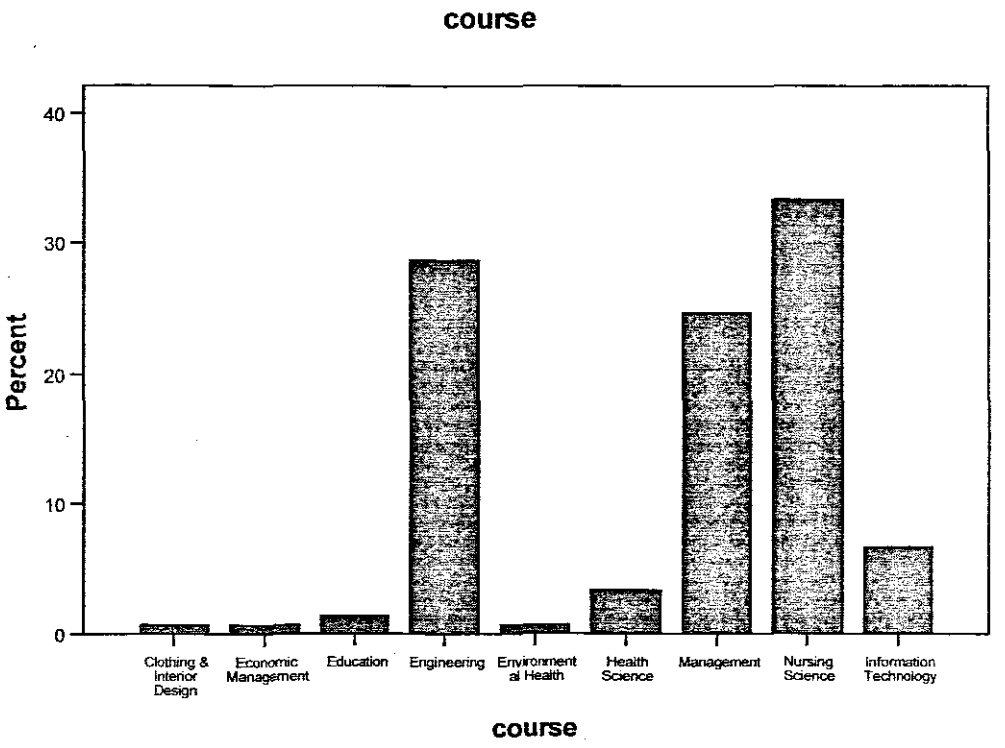
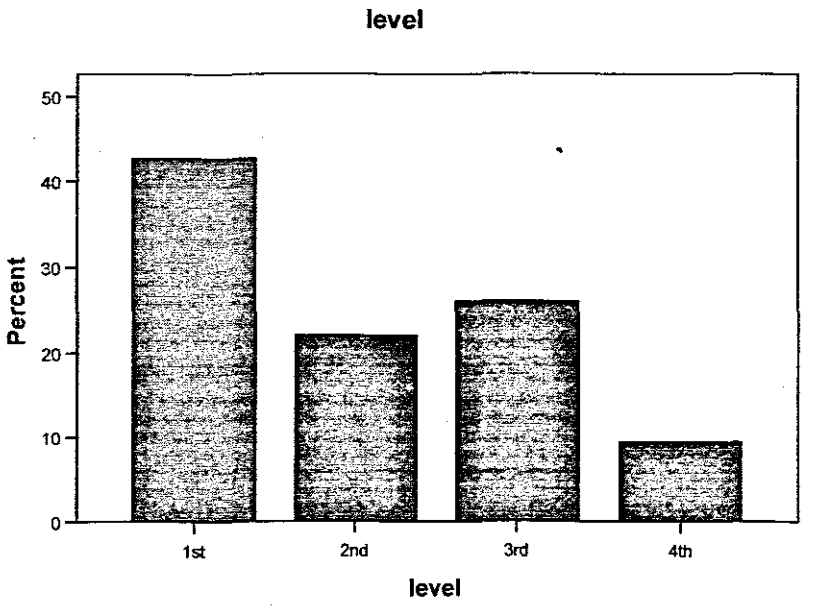
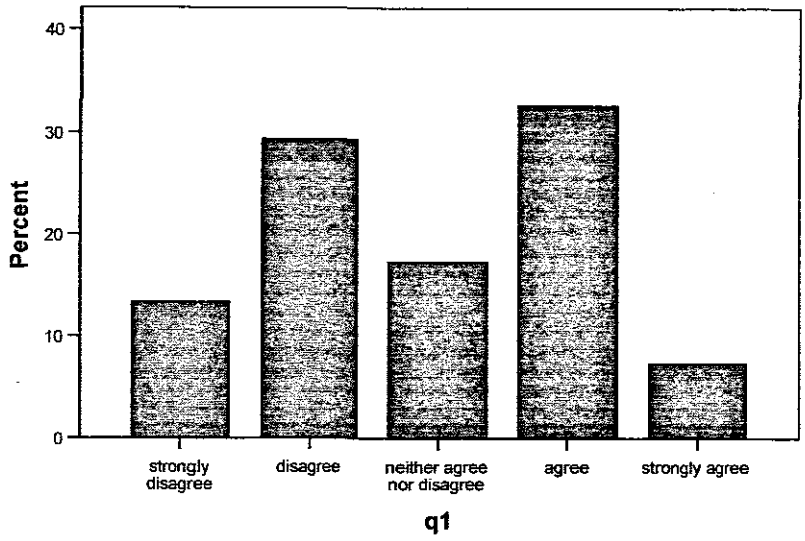
30
20
10
0
Percent
arts
commerce
education
health studies
social sciences
science
faculty

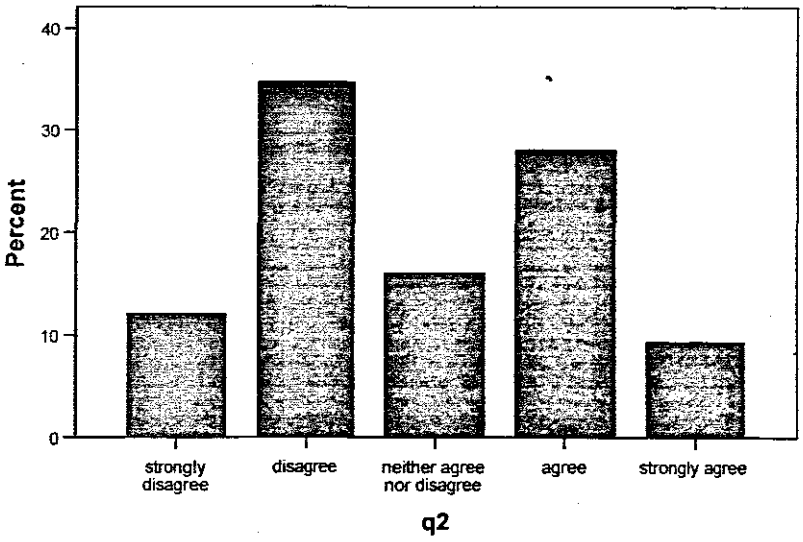

course
40
30
20
10
0
Percent
Clothing & Interior Design
Economic Management
Education
Engineering
Environmental Health
Health Science
Management
Nursing Science
Information Technology
course


level
50
40
30
20
10
0
Percent
1st
2nd
3rd
4th
level

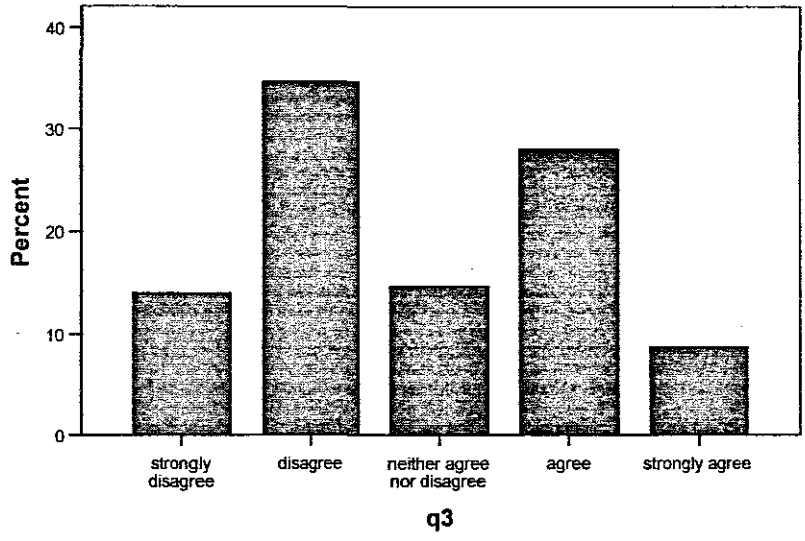
**The campus environment is stimulating enough to enhance students' awareness of space.**



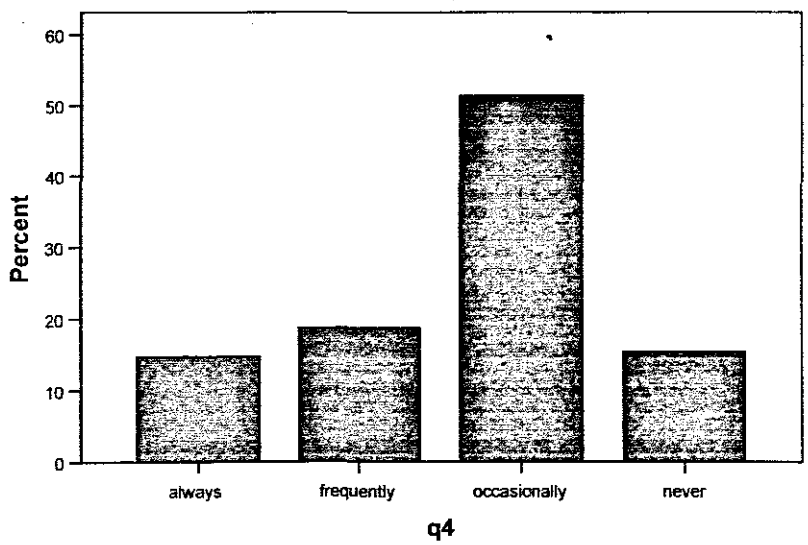

**In your opinion, students are disrespectful of other's space.**



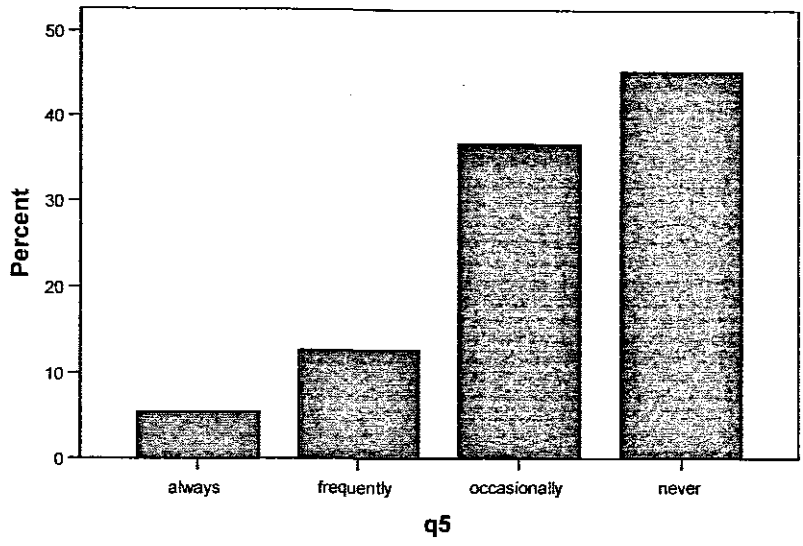
**The physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space**



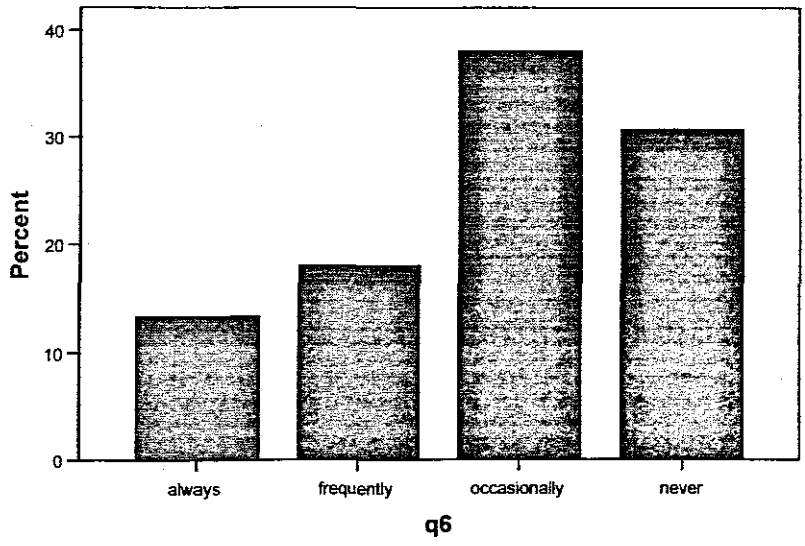

**How often do you find students blocking your way when rushing to classes?**



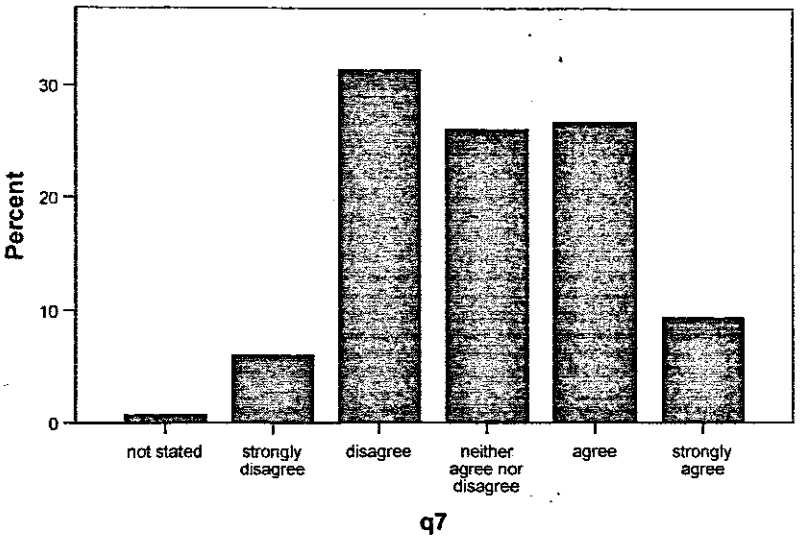
**How often are you asked by lecturers rushing to classes to give way so that they can go pass quickly?**



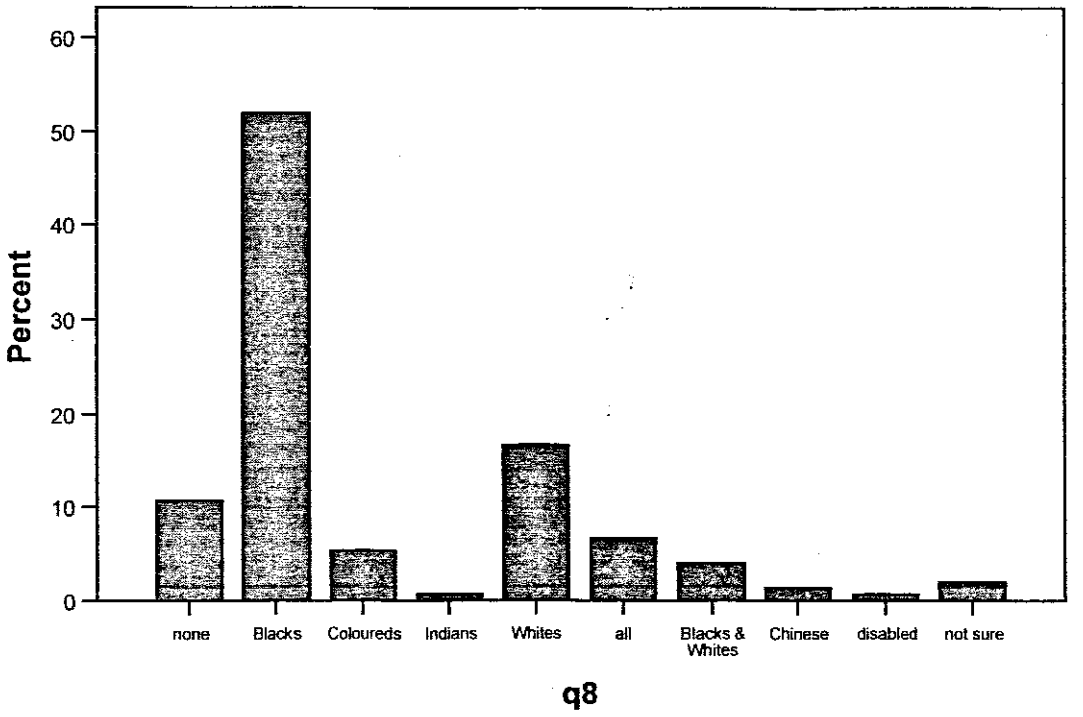

**How often are you asked by students rushing to classes to give way so that they can go pass quickly?**



**In your opinion, the blockage is as a result of overcrowding on campus**



**According to your own observation, which racial/cultural group is general poor in space recognition?**



## APPENDIX 2.

## Cross Tabulations

**q1 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q1 | strongly disagree | Count | 11 | 9 | 20 |
| | | % within q1 | 55.0% | 45.0% | 100.0% |
| | | % within gender | 15.7% | 11.3% | 13.3% |
| | | % of Total | 7.3% | 6.0% | 13.3% |
| | disagree | Count | 19 | 25 | 44 |
| | | % within q1 | 43.2% | 56.8% | 100.0% |
| | | % within gender | 27.1% | 31.3% | 29.3% |
| | | % of Total | 12.7% | 16.7% | 29.3% |
| | neither agree nor disagree | Count | 14 | 12 | 26 |
| | | % within q1 | 53.8% | 46.2% | 100.0% |
| | | % within gender | 20.0% | 15.0% | 17.3% |
| | | % of Total | 9.3% | 8.0% | 17.3% |
| | agree | Count | 24 | 25 | 49 |
| | | % within q1 | 49.0% | 51.0% | 100.0% |
| | | % within gender | 34.3% | 31.3% | 32.7% |
| | | % of Total | 16.0% | 16.7% | 32.7% |
| | strongly agree | Count | 2 | 9 | 11 |
| | | % within q1 | 18.2% | 81.8% | 100.0% |
| | | % within gender | 2.9% | 11.3% | 7.3% |
| | | % of Total | 1.3% | 6.0% | 7.3% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q1 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

**q1 * maritalstatus Crosstabulation**

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q1 | strongly disagree | Count | 1 | 18 | 1 | 0 | 20 |
| | | % within q1 | 5.0% | 90.0% | 5.0% | .0% | 100.0% |
| | | % within maritalstatus | 50.0% | 12.6% | 25.0% | .0% | 13.3% |
| | | % of Total | .7% | 12.0% | .7% | .0% | 13.3% |
| | disagree | Count | 1 | 42 | 1 | 0 | 44 |
| | | % within q1 | 2.3% | 95.5% | 2.3% | .0% | 100.0% |
| | | % within maritalstatus | 50.0% | 29.4% | 25.0% | .0% | 29.3% |
| | | % of Total | .7% | 28.0% | .7% | .0% | 29.3% |
| | neither agree nor disagree | Count | 0 | 25 | 1 | 0 | 26 |
| | | % within q1 | .0% | 96.2% | 3.8% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 17.5% | 25.0% | .0% | 17.3% |
| | | % of Total | .0% | 16.7% | .7% | .0% | 17.3% |
| | agree | Count | 0 | 48 | 0 | 1 | 49 |
| | | % within q1 | .0% | 98.0% | .0% | 2.0% | 100.0% |
| | | % within maritalstatus | .0% | 33.6% | .0% | 100.0% | 32.7% |
| | | % of Total | .0% | 32.0% | .0% | .7% | 32.7% |
| | strongly agree | Count | 0 | 10 | 1 | 0 | 11 |
| | | % within q1 | .0% | 90.9% | 9.1% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 7.0% | 25.0% | .0% | 7.3% |
| | | % of Total | .0% | 6.7% | .7% | .0% | 7.3% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q1 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

**q1 * faculty Crosstabulation**

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q1 | strongly disagree | Count | 0 | 6 | 0 | 7 | 0 | 7 | 20 |
| | | % within q1 | .0% | 30.0% | .0% | 35.0% | .0% | 35.0% | 100.0% |
| | | % within faculty | .0% | 15.8% | .0% | 12.7% | .0% | 13.2% | 13.3% |
| | | % of Total | .0% | 4.0% | .0% | 4.7% | .0% | 4.7% | 13.3% |
| | disagree | Count | 0 | 9 | 1 | 19 | 1 | 14 | 44 |
| | | % within q1 | .0% | 20.5% | 2.3% | 43.2% | 2.3% | 31.8% | 100.0% |
| | | % within faculty | .0% | 23.7% | 50.0% | 34.5% | 100.0% | 26.4% | 29.3% |
| | | % of Total | .0% | 6.0% | .7% | 12.7% | .7% | 9.3% | 29.3% |
| | neither agree nor disagree | Count | 0 | 6 | 0 | 10 | 0 | 10 | 26 |
| | | % within q1 | .0% | 23.1% | .0% | 38.5% | .0% | 38.5% | 100.0% |
| | | % within faculty | .0% | 15.8% | .0% | 18.2% | .0% | 18.9% | 17.3% |
| | | % of Total | .0% | 4.0% | .0% | 6.7% | .0% | 6.7% | 17.3% |
| | agree | Count | 1 | 15 | 1 | 11 | 0 | 21 | 49 |
| | | % within q1 | 2.0% | 30.6% | 2.0% | 22.4% | .0% | 42.9% | 100.0% |
| | | % within faculty | 100.0% | 39.5% | 50.0% | 20.0% | .0% | 39.6% | 32.7% |
| | | % of Total | .7% | 10.0% | .7% | 7.3% | .0% | 14.0% | 32.7% |
| | strongly agree | Count | 0 | 2 | 0 | 8 | 0 | 1 | 11 |
| | | % within q1 | .0% | 18.2% | .0% | 72.7% | .0% | 9.1% | 100.0% |
| | | % within faculty | .0% | 5.3% | .0% | 14.5% | .0% | 1.9% | 7.3% |
| | | % of Total | .0% | 1.3% | .0% | 5.3% | .0% | .7% | 7.3% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q1 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

**q2 * institution Crosstabulation**

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q2 | strongly disagree | Count | 9 | 9 | 18 |
| | | % within q2 | 50.0% | 50.0% | 100.0% |
| | | % within institution | 18.0% | 9.0% | 12.0% |
| | | % of Total | 6.0% | 6.0% | 12.0% |
| | disagree | Count | 15 | 37 | 52 |
| | | % within q2 | 28.8% | 71.2% | 100.0% |
| | | % within institution | 30.0% | 37.0% | 34.7% |
| | | % of Total | 10.0% | 24.7% | 34.7% |
| | neither agree nor disagree | Count | 2 | 22 | 24 |
| | | % within q2 | 8.3% | 91.7% | 100.0% |
| | | % within institution | 4.0% | 22.0% | 16.0% |
| | | % of Total | 1.3% | 14.7% | 16.0% |
| | agree | Count | 17 | 25 | 42 |
| | | % within q2 | 40.5% | 59.5% | 100.0% |
| | | % within institution | 34.0% | 25.0% | 28.0% |
| | | % of Total | 11.3% | 16.7% | 28.0% |
| | strongly agree | Count | 7 | 7 | 14 |
| | | % within q2 | 50.0% | 50.0% | 100.0% |
| | | % within institution | 14.0% | 7.0% | 9.3% |
| | | % of Total | 4.7% | 4.7% | 9.3% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q2 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q2 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q2 | strongly disagree | Count | 10 | 8 | 18 |
| | | % within q2 | 55.6% | 44.4% | 100.0% |
| | | % within gender | 14.3% | 10.0% | 12.0% |
| | | % of Total | 6.7% | 5.3% | 12.0% |
| | disagree | Count | 33 | 19 | 52 |
| | | % within q2 | 63.5% | 36.5% | 100.0% |
| | | % within gender | 47.1% | 23.8% | 34.7% |
| | | % of Total | 22.0% | 12.7% | 34.7% |
| | neither agree nor disagree | Count | 10 | 14 | 24 |
| | | % within q2 | 41.7% | 58.3% | 100.0% |
| | | % within gender | 14.3% | 17.5% | 16.0% |
| | | % of Total | 6.7% | 9.3% | 16.0% |
| | agree | Count | 13 | 29 | 42 |
| | | % within q2 | 31.0% | 69.0% | 100.0% |
| | | % within gender | 18.6% | 36.3% | 28.0% |
| | | % of Total | 8.7% | 19.3% | 28.0% |
| | strongly agree | Count | 4 | 10 | 14 |
| | | % within q2 | 28.6% | 71.4% | 100.0% |
| | | % within gender | 5.7% | 12.5% | 9.3% |
| | | % of Total | 2.7% | 6.7% | 9.3% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q2 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

**q2 * maritalstatus Crosstabulation**

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q2 | strongly disagree | Count | 1 | 16 | 1 | 0 | 18 |
| | | % within q2 | 5.6% | 88.9% | 5.6% | .0% | 100.0% |
| | | % within maritalstatus | 50.0% | 11.2% | 25.0% | .0% | 12.0% |
| | | % of Total | .7% | 10.7% | .7% | .0% | 12.0% |
| | disagree | Count | 1 | 50 | 0 | 1 | 52 |
| | | % within q2 | 1.9% | 96.2% | .0% | 1.9% | 100.0% |
| | | % within maritalstatus | 50.0% | 35.0% | .0% | 100.0% | 34.7% |
| | | % of Total | .7% | 33.3% | .0% | .7% | 34.7% |
| | neither agree nor disagree | Count | 0 | 24 | 0 | 0 | 24 |
| | | % within q2 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 16.8% | .0% | .0% | 16.0% |
| | | % of Total | .0% | 16.0% | .0% | .0% | 16.0% |
| | agree | Count | 0 | 40 | 2 | 0 | 42 |
| | | % within q2 | .0% | 95.2% | 4.8% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 28.0% | 50.0% | .0% | 28.0% |
| | | % of Total | .0% | 26.7% | 1.3% | .0% | 28.0% |
| | strongly agree | Count | 0 | 13 | 1 | 0 | 14 |
| | | % within q2 | .0% | 92.9% | 7.1% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 9.1% | 25.0% | .0% | 9.3% |
| | | % of Total | .0% | 8.7% | .7% | .0% | 9.3% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q2 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

**q2 * faculty Crosstabulation**

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q2 | strongly disagree | Count | 0 | 6 | 0 | 10 | 0 | 2 | 18 |
| | | % within q2 | .0% | 33.3% | .0% | 55.6% | .0% | 11.1% | 100.0% |
| | | % within faculty | .0% | 15.8% | .0% | 18.2% | .0% | 3.8% | 12.0% |
| | | % of Total | .0% | 4.0% | .0% | 6.7% | .0% | 1.3% | 12.0% |
| | disagree | Count | 0 | 12 | 0 | 17 | 1 | 22 | 52 |
| | | % within q2 | .0% | 23.1% | .0% | 32.7% | 1.9% | 42.3% | 100.0% |
| | | % within faculty | .0% | 31.6% | .0% | 30.9% | 100.0% | 41.5% | 34.7% |
| | | % of Total | .0% | 8.0% | .0% | 11.3% | .7% | 14.7% | 34.7% |
| | neither agree nor disagree | Count | 0 | 8 | 1 | 3 | 0 | 12 | 24 |
| | | % within q2 | .0% | 33.3% | 4.2% | 12.5% | .0% | 50.0% | 100.0% |
| | | % within faculty | .0% | 21.1% | 50.0% | 5.5% | .0% | 22.6% | 16.0% |
| | | % of Total | .0% | 5.3% | .7% | 2.0% | .0% | 8.0% | 16.0% |
| | agree | Count | 1 | 9 | 1 | 18 | 0 | 13 | 42 |
| | | % within q2 | 2.4% | 21.4% | 2.4% | 42.9% | .0% | 31.0% | 100.0% |
| | | % within faculty | 100.0% | 23.7% | 50.0% | 32.7% | .0% | 24.5% | 28.0% |
| | | % of Total | .7% | 6.0% | .7% | 12.0% | .0% | 8.7% | 28.0% |
| | strongly agree | Count | 0 | 3 | 0 | 7 | 0 | 4 | 14 |
| | | % within q2 | .0% | 21.4% | .0% | 50.0% | .0% | 28.6% | 100.0% |
| | | % within faculty | .0% | 7.9% | .0% | 12.7% | .0% | 7.5% | 9.3% |
| | | % of Total | .0% | 2.0% | .0% | 4.7% | .0% | 2.7% | 9.3% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q2 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

**q3 * institution Crosstabulation**

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q3 | strongly disagree | Count | 8 | 13 | 21 |
| | | % within q3 | 38.1% | 61.9% | 100.0% |
| | | % within institution | 16.0% | 13.0% | 14.0% |
| | | % of Total | 5.3% | 8.7% | 14.0% |
| | disagree | Count | 21 | 31 | 52 |
| | | % within q3 | 40.4% | 59.6% | 100.0% |
| | | % within institution | 42.0% | 31.0% | 34.7% |
| | | % of Total | 14.0% | 20.7% | 34.7% |
| | neither agree nor disagree | Count | 3 | 19 | 22 |
| | | % within q3 | 13.6% | 86.4% | 100.0% |
| | | % within institution | 6.0% | 19.0% | 14.7% |
| | | % of Total | 2.0% | 12.7% | 14.7% |
| | agree | Count | 12 | 30 | 42 |
| | | % within q3 | 28.6% | 71.4% | 100.0% |
| | | % within institution | 24.0% | 30.0% | 28.0% |
| | | % of Total | 8.0% | 20.0% | 28.0% |
| | strongly agree | Count | 6 | 7 | 13 |
| | | % within q3 | 46.2% | 53.8% | 100.0% |
| | | % within institution | 12.0% | 7.0% | 8.7% |
| | | % of Total | 4.0% | 4.7% | 8.7% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q3 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q3 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q3 | strongly disagree | Count | 10 | 11 | 21 |
| | | % within q3 | 47.6% | 52.4% | 100.0% |
| | | % within gender | 14.3% | 13.8% | 14.0% |
| | | % of Total | 6.7% | 7.3% | 14.0% |
| | disagree | Count | 25 | 27 | 52 |
| | | % within q3 | 48.1% | 51.9% | 100.0% |
| | | % within gender | 35.7% | 33.8% | 34.7% |
| | | % of Total | 16.7% | 18.0% | 34.7% |
| | neither agree nor disagree | Count | 10 | 12 | 22 |
| | | % within q3 | 45.5% | 54.5% | 100.0% |
| | | % within gender | 14.3% | 15.0% | 14.7% |
| | | % of Total | 6.7% | 8.0% | 14.7% |
| | agree | Count | 20 | 22 | 42 |
| | | % within q3 | 47.6% | 52.4% | 100.0% |
| | | % within gender | 28.6% | 27.5% | 28.0% |
| | | % of Total | 13.3% | 14.7% | 28.0% |
| | strongly agree | Count | 5 | 8 | 13 |
| | | % within q3 | 38.5% | 61.5% | 100.0% |
| | | % within gender | 7.1% | 10.0% | 8.7% |
| | | % of Total | 3.3% | 5.3% | 8.7% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q3 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

***q3 * maritalstatus Crosstabulation***

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q3 | strongly disagree | Count | 2 | 19 | 0 | 0 | 21 |
| | | % within q3 | 9.5% | 90.5% | .0% | .0% | 100.0% |
| | | % within maritalstatus | 100.0% | 13.3% | .0% | .0% | 14.0% |
| | | % of Total | 1.3% | 12.7% | .0% | .0% | 14.0% |
| | disagree | Count | 0 | 50 | 2 | 0 | 52 |
| | | % within q3 | .0% | 96.2% | 3.8% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 35.0% | 50.0% | .0% | 34.7% |
| | | % of Total | .0% | 33.3% | 1.3% | .0% | 34.7% |
| | neither agree nor disagree | Count | 0 | 21 | 0 | 1 | 22 |
| | | % within q3 | .0% | 95.5% | .0% | 4.5% | 100.0% |
| | | % within maritalstatus | .0% | 14.7% | .0% | 100.0% | 14.7% |
| | | % of Total | .0% | 14.0% | .0% | .7% | 14.7% |
| | agree | Count | 0 | 42 | 0 | 0 | 42 |
| | | % within q3 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 29.4% | .0% | .0% | 28.0% |
| | | % of Total | .0% | 28.0% | .0% | .0% | 28.0% |
| | strongly agree | Count | 0 | 11 | 2 | 0 | 13 |
| | | % within q3 | .0% | 84.6% | 15.4% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 7.7% | 50.0% | .0% | 8.7% |
| | | % of Total | .0% | 7.3% | 1.3% | .0% | 8.7% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q3 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

**q3 * faculty Crosstabulation**

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q3 | strongly disagree | Count | 0 | 5 | 1 | 8 | 0 | 7 | 21 |
| | | % within q3 | .0% | 23.8% | 4.8% | 38.1% | .0% | 33.3% | 100.0% |
| | | % within faculty | .0% | 13.2% | 50.0% | 14.5% | .0% | 13.2% | 14.0% |
| | | % of Total | .0% | 3.3% | .7% | 5.3% | .0% | 4.7% | 14.0% |
| | disagree | Count | 1 | 10 | 0 | 24 | 1 | 16 | 52 |
| | | % within q3 | 1.9% | 19.2% | .0% | 46.2% | 1.9% | 30.8% | 100.0% |
| | | % within faculty | 100.0% | 26.3% | .0% | 43.6% | 100.0% | 30.2% | 34.7% |
| | | % of Total | .7% | 6.7% | .0% | 16.0% | .7% | 10.7% | 34.7% |
| | neither agree nor disagree | Count | 0 | 10 | 0 | 3 | 0 | 9 | 22 |
| | | % within q3 | .0% | 45.5% | .0% | 13.6% | .0% | 40.9% | 100.0% |
| | | % within faculty | .0% | 26.3% | .0% | 5.5% | .0% | 17.0% | 14.7% |
| | | % of Total | .0% | 6.7% | .0% | 2.0% | .0% | 6.0% | 14.7% |
| | agree | Count | 0 | 9 | 1 | 14 | 0 | 18 | 42 |
| | | % within q3 | .0% | 21.4% | 2.4% | 33.3% | .0% | 42.9% | 100.0% |
| | | % within faculty | .0% | 23.7% | 50.0% | 25.5% | .0% | 34.0% | 28.0% |
| | | % of Total | .0% | 6.0% | .7% | 9.3% | .0% | 12.0% | 28.0% |
| | strongly agree | Count | 0 | 4 | 0 | 6 | 0 | 3 | 13 |
| | | % within q3 | .0% | 30.8% | .0% | 46.2% | .0% | 23.1% | 100.0% |
| | | % within faculty | .0% | 10.5% | .0% | 10.9% | .0% | 5.7% | 8.7% |
| | | % of Total | .0% | 2.7% | .0% | 4.0% | .0% | 2.0% | 8.7% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q3 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

**q4 * institution Crosstabulation**

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q4 | always | Count | 10 | 12 | 22 |
| | | % within q4 | 45.5% | 54.5% | 100.0% |
| | | % within institution | 20.0% | 12.0% | 14.7% |
| | | % of Total | 6.7% | 8.0% | 14.7% |
| | frequently | Count | 5 | 23 | 28 |
| | | % within q4 | 17.9% | 82.1% | 100.0% |
| | | % within institution | 10.0% | 23.0% | 18.7% |
| | | % of Total | 3.3% | 15.3% | 18.7% |
| | occasionally | Count | 23 | 54 | 77 |
| | | % within q4 | 29.9% | 70.1% | 100.0% |
| | | % within institution | 46.0% | 54.0% | 51.3% |
| | | % of Total | 15.3% | 36.0% | 51.3% |
| | never | Count | 12 | 11 | 23 |
| | | % within q4 | 52.2% | 47.8% | 100.0% |
| | | % within institution | 24.0% | 11.0% | 15.3% |
| | | % of Total | 8.0% | 7.3% | 15.3% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q4 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q4 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q4 | always | Count | 9 | 13 | 22 |
| | | % within q4 | 40.9% | 59.1% | 100.0% |
| | | % within gender | 12.9% | 16.3% | 14.7% |
| | | % of Total | 6.0% | 8.7% | 14.7% |
| | frequently | Count | 16 | 12 | 28 |
| | | % within q4 | 57.1% | 42.9% | 100.0% |
| | | % within gender | 22.9% | 15.0% | 18.7% |
| | | % of Total | 10.7% | 8.0% | 18.7% |
| | occasionally | Count | 35 | 42 | 77 |
| | | % within q4 | 45.5% | 54.5% | 100.0% |
| | | % within gender | 50.0% | 52.5% | 51.3% |
| | | % of Total | 23.3% | 28.0% | 51.3% |
| | never | Count | 10 | 13 | 23 |
| | | % within q4 | 43.5% | 56.5% | 100.0% |
| | | % within gender | 14.3% | 16.3% | 15.3% |
| | | % of Total | 6.7% | 8.7% | 15.3% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q4 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

***q4 * maritalstatus Crosstabulation***

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q4 | always | Count | 0 | 20 | 2 | 0 | 22 |
| | | % within q4 | .0% | 90.9% | 9.1% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 14.0% | 50.0% | .0% | 14.7% |
| | | % of Total | .0% | 13.3% | 1.3% | .0% | 14.7% |
| | frequently | Count | 0 | 26 | 1 | 1 | 28 |
| | | % within q4 | .0% | 92.9% | 3.6% | 3.6% | 100.0% |
| | | % within maritalstatus | .0% | 18.2% | 25.0% | 100.0% | 18.7% |
| | | % of Total | .0% | 17.3% | .7% | .7% | 18.7% |
| | occasionally | Count | 2 | 74 | 1 | 0 | 77 |
| | | % within q4 | 2.6% | 96.1% | 1.3% | .0% | 100.0% |
| | | % within maritalstatus | 100.0% | 51.7% | 25.0% | .0% | 51.3% |
| | | % of Total | 1.3% | 49.3% | .7% | .0% | 51.3% |
| | never | Count | 0 | 23 | 0 | 0 | 23 |
| | | % within q4 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 16.1% | .0% | .0% | 15.3% |
| | | % of Total | .0% | 15.3% | .0% | .0% | 15.3% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q4 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

***q4 * faculty Crosstabulation***

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q4 | always | Count | 0 | 3 | 0 | 10 | 0 | 9 | 22 |
| | | % within q4 | .0% | 13.6% | .0% | 45.5% | .0% | 40.9% | 100.0% |
| | | % within faculty | .0% | 7.9% | .0% | 18.2% | .0% | 17.0% | 14.7% |
| | | % of Total | .0% | 2.0% | .0% | 6.7% | .0% | 6.0% | 14.7% |
| | frequently | Count | 0 | 7 | 2 | 6 | 0 | 13 | 28 |
| | | % within q4 | .0% | 25.0% | 7.1% | 21.4% | .0% | 46.4% | 100.0% |
| | | % within faculty | .0% | 18.4% | 100.0% | 10.9% | .0% | 24.5% | 18.7% |
| | | % of Total | .0% | 4.7% | 1.3% | 4.0% | .0% | 8.7% | 18.7% |
| | occasionally | Count | 1 | 20 | 0 | 26 | 1 | 29 | 77 |
| | | % within q4 | 1.3% | 26.0% | .0% | 33.8% | 1.3% | 37.7% | 100.0% |
| | | % within faculty | 100.0% | 52.6% | .0% | 47.3% | 100.0% | 54.7% | 51.3% |
| | | % of Total | .7% | 13.3% | .0% | 17.3% | .7% | 19.3% | 51.3% |
| | never | Count | 0 | 8 | 0 | 13 | 0 | 2 | 23 |
| | | % within q4 | .0% | 34.8% | .0% | 56.5% | .0% | 8.7% | 100.0% |
| | | % within faculty | .0% | 21.1% | .0% | 23.6% | .0% | 3.8% | 15.3% |
| | | % of Total | .0% | 5.3% | .0% | 8.7% | .0% | 1.3% | 15.3% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q4 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

***q5 * institution Crosstabulation***

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q5 | always | Count | 4 | 4 | 8 |
| | | % within q5 | 50.0% | 50.0% | 100.0% |
| | | % within institution | 8.0% | 4.0% | 5.3% |
| | | % of Total | 2.7% | 2.7% | 5.3% |
| | frequently | Count | 4 | 15 | 19 |
| | | % within q5 | 21.1% | 78.9% | 100.0% |
| | | % within institution | 8.0% | 15.0% | 12.7% |
| | | % of Total | 2.7% | 10.0% | 12.7% |
| | occasionally | Count | 18 | 37 | 55 |
| | | % within q5 | 32.7% | 67.3% | 100.0% |
| | | % within institution | 36.0% | 37.0% | 36.7% |
| | | % of Total | 12.0% | 24.7% | 36.7% |
| | never | Count | 24 | 44 | 68 |
| | | % within q5 | 35.3% | 64.7% | 100.0% |
| | | % within institution | 48.0% | 44.0% | 45.3% |
| | | % of Total | 16.0% | 29.3% | 45.3% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q5 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q5 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q5 | always | Count | 6 | 2 | 8 |
| | | % within q5 | 75.0% | 25.0% | 100.0% |
| | | % within gender | 8.6% | 2.5% | 5.3% |
| | | % of Total | 4.0% | 1.3% | 5.3% |
| | frequently | Count | 9 | 10 | 19 |
| | | % within q5 | 47.4% | 52.6% | 100.0% |
| | | % within gender | 12.9% | 12.5% | 12.7% |
| | | % of Total | 6.0% | 6.7% | 12.7% |
| | occasionally | Count | 27 | 28 | 55 |
| | | % within q5 | 49.1% | 50.9% | 100.0% |
| | | % within gender | 38.6% | 35.0% | 36.7% |
| | | % of Total | 18.0% | 18.7% | 36.7% |
| | never | Count | 28 | 40 | 68 |
| | | % within q5 | 41.2% | 58.8% | 100.0% |
| | | % within gender | 40.0% | 50.0% | 45.3% |
| | | % of Total | 18.7% | 26.7% | 45.3% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q5 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

**q5 * maritalstatus Crosstabulation**

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q5 | always | Count | 0 | 7 | 1 | 0 | 8 |
| | | % within q5 | .0% | 87.5% | 12.5% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 4.9% | 25.0% | .0% | 5.3% |
| | | % of Total | .0% | 4.7% | .7% | .0% | 5.3% |
| | frequently | Count | 0 | 19 | 0 | 0 | 19 |
| | | % within q5 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 13.3% | .0% | .0% | 12.7% |
| | | % of Total | .0% | 12.7% | .0% | .0% | 12.7% |
| | occasionally | Count | 2 | 52 | 0 | 1 | 55 |
| | | % within q5 | 3.6% | 94.5% | .0% | 1.8% | 100.0% |
| | | % within maritalstatus | 100.0% | 36.4% | .0% | 100.0% | 36.7% |
| | | % of Total | 1.3% | 34.7% | .0% | .7% | 36.7% |
| | never | Count | 0 | 65 | 3 | 0 | 68 |
| | | % within q5 | .0% | 95.6% | 4.4% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 45.5% | 75.0% | .0% | 45.3% |
| | | % of Total | .0% | 43.3% | 2.0% | .0% | 45.3% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q5 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

***q5 * faculty Crosstabulation***

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q5 | always | Count | 0 | 2 | 0 | 4 | 0 | 2 | 8 |
| | | % within q5 | .0% | 25.0% | .0% | 50.0% | .0% | 25.0% | 100.0% |
| | | % within faculty | .0% | 5.3% | .0% | 7.3% | .0% | 3.8% | 5.3% |
| | | % of Total | .0% | 1.3% | .0% | 2.7% | .0% | 1.3% | 5.3% |
| | frequently | Count | 0 | 7 | 1 | 5 | 0 | 6 | 19 |
| | | % within q5 | .0% | 36.8% | 5.3% | 26.3% | .0% | 31.6% | 100.0% |
| | | % within faculty | .0% | 18.4% | 50.0% | 9.1% | .0% | 11.3% | 12.7% |
| | | % of Total | .0% | 4.7% | .7% | 3.3% | .0% | 4.0% | 12.7% |
| | occasionally | Count | 1 | 10 | 1 | 18 | 1 | 24 | 55 |
| | | % within q5 | 1.8% | 18.2% | 1.8% | 32.7% | 1.8% | 43.6% | 100.0% |
| | | % within faculty | 100.0% | 26.3% | 50.0% | 32.7% | 100.0% | 45.3% | 36.7% |
| | | % of Total | .7% | 6.7% | .7% | 12.0% | .7% | 16.0% | 36.7% |
| | never | Count | 0 | 19 | 0 | 28 | 0 | 21 | 68 |
| | | % within q5 | .0% | 27.9% | .0% | 41.2% | .0% | 30.9% | 100.0% |
| | | % within faculty | .0% | 50.0% | .0% | 50.9% | .0% | 39.6% | 45.3% |
| | | % of Total | .0% | 12.7% | .0% | 18.7% | .0% | 14.0% | 45.3% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q5 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

**q6 * institution Crosstabulation**

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q6 | always | Count | 8 | 12 | 20 |
| | | % within q6 | 40.0% | 60.0% | 100.0% |
| | | % within institution | 16.0% | 12.0% | 13.3% |
| | | % of Total | 5.3% | 8.0% | 13.3% |
| | frequently | Count | 3 | 24 | 27 |
| | | % within q6 | 11.1% | 88.9% | 100.0% |
| | | % within institution | 6.0% | 24.0% | 18.0% |
| | | % of Total | 2.0% | 16.0% | 18.0% |
| | occasionally | Count | 15 | 42 | 57 |
| | | % within q6 | 26.3% | 73.7% | 100.0% |
| | | % within institution | 30.0% | 42.0% | 38.0% |
| | | % of Total | 10.0% | 28.0% | 38.0% |
| | never | Count | 24 | 22 | 46 |
| | | % within q6 | 52.2% | 47.8% | 100.0% |
| | | % within institution | 48.0% | 22.0% | 30.7% |
| | | % of Total | 16.0% | 14.7% | 30.7% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q6 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q6 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q6 | always | Count | 10 | 10 | 20 |
| | | % within q6 | 50.0% | 50.0% | 100.0% |
| | | % within gender | 14.3% | 12.5% | 13.3% |
| | | % of Total | 6.7% | 6.7% | 13.3% |
| | frequently | Count | 19 | 8 | 27 |
| | | % within q6 | 70.4% | 29.6% | 100.0% |
| | | % within gender | 27.1% | 10.0% | 18.0% |
| | | % of Total | 12.7% | 5.3% | 18.0% |
| | occasionally | Count | 26 | 31 | 57 |
| | | % within q6 | 45.6% | 54.4% | 100.0% |
| | | % within gender | 37.1% | 38.8% | 38.0% |
| | | % of Total | 17.3% | 20.7% | 38.0% |
| | never | Count | 15 | 31 | 46 |
| | | % within q6 | 32.6% | 67.4% | 100.0% |
| | | % within gender | 21.4% | 38.8% | 30.7% |
| | | % of Total | 10.0% | 20.7% | 30.7% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q6 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

**q6 * maritalstatus Crosstabulation**

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q6 | always | Count | 0 | 19 | 1 | 0 | 20 |
| | | % within q6 | .0% | 95.0% | 5.0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 13.3% | 25.0% | .0% | 13.3% |
| | | % of Total | .0% | 12.7% | .7% | .0% | 13.3% |
| | frequently | Count | 0 | 27 | 0 | 0 | 27 |
| | | % within q6 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 18.9% | .0% | .0% | 18.0% |
| | | % of Total | .0% | 18.0% | .0% | .0% | 18.0% |
| | occasionally | Count | 2 | 53 | 1 | 1 | 57 |
| | | % within q6 | 3.5% | 93.0% | 1.8% | 1.8% | 100.0% |
| | | % within maritalstatus | 100.0% | 37.1% | 25.0% | 100.0% | 38.0% |
| | | % of Total | 1.3% | 35.3% | .7% | .7% | 38.0% |
| | never | Count | 0 | 44 | 2 | 0 | 46 |
| | | % within q6 | .0% | 95.7% | 4.3% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 30.8% | 50.0% | .0% | 30.7% |
| | | % of Total | .0% | 29.3% | 1.3% | .0% | 30.7% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q6 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

**q6 * faculty Crosstabulation**

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q6 | always | Count | 0 | 5 | 1 | 8 | 0 | 6 | 20 |
| | | % within q6 | .0% | 25.0% | 5.0% | 40.0% | .0% | 30.0% | 100.0% |
| | | % within faculty | .0% | 13.2% | 50.0% | 14.5% | .0% | 11.3% | 13.3% |
| | | % of Total | .0% | 3.3% | .7% | 5.3% | .0% | 4.0% | 13.3% |
| | frequently | Count | 0 | 9 | 0 | 4 | 0 | 14 | 27 |
| | | % within q6 | .0% | 33.3% | .0% | 14.8% | .0% | 51.9% | 100.0% |
| | | % within faculty | .0% | 23.7% | .0% | 7.3% | .0% | 26.4% | 18.0% |
| | | % of Total | .0% | 6.0% | .0% | 2.7% | .0% | 9.3% | 18.0% |
| | occasionally | Count | 1 | 13 | 1 | 16 | 1 | 25 | 57 |
| | | % within q6 | 1.8% | 22.8% | 1.8% | 28.1% | 1.8% | 43.9% | 100.0% |
| | | % within faculty | 100.0% | 34.2% | 50.0% | 29.1% | 100.0% | 47.2% | 38.0% |
| | | % of Total | .7% | 8.7% | .7% | 10.7% | .7% | 16.7% | 38.0% |
| | never | Count | 0 | 11 | 0 | 27 | 0 | 8 | 46 |
| | | % within q6 | .0% | 23.9% | .0% | 58.7% | .0% | 17.4% | 100.0% |
| | | % within faculty | .0% | 28.9% | .0% | 49.1% | .0% | 15.1% | 30.7% |
| | | % of Total | .0% | 7.3% | .0% | 18.0% | .0% | 5.3% | 30.7% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q6 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

**q7 * institution Crosstabulation**

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q7 | not stated | Count | 1 | 0 | 1 |
| | | % within q7 | 100.0% | .0% | 100.0% |
| | | % within institution | 2.0% | .0% | .7% |
| | | % of Total | .7% | .0% | .7% |
| | strongly disagree | Count | 7 | 2 | 9 |
| | | % within q7 | 77.8% | 22.2% | 100.0% |
| | | % within institution | 14.0% | 2.0% | 6.0% |
| | | % of Total | 4.7% | 1.3% | 6.0% |
| | disagree | Count | 17 | 30 | 47 |
| | | % within q7 | 36.2% | 63.8% | 100.0% |
| | | % within institution | 34.0% | 30.0% | 31.3% |
| | | % of Total | 11.3% | 20.0% | 31.3% |
| | neither agree nor disagree | Count | 10 | 29 | 39 |
| | | % within q7 | 25.6% | 74.4% | 100.0% |
| | | % within institution | 20.0% | 29.0% | 26.0% |
| | | % of Total | 6.7% | 19.3% | 26.0% |
| | agree | Count | 11 | 29 | 40 |
| | | % within q7 | 27.5% | 72.5% | 100.0% |
| | | % within institution | 22.0% | 29.0% | 26.7% |
| | | % of Total | 7.3% | 19.3% | 26.7% |
| | strongly agree | Count | 4 | 10 | 14 |
| | | % within q7 | 28.6% | 71.4% | 100.0% |
| | | % within institution | 8.0% | 10.0% | 9.3% |
| | | % of Total | 2.7% | 6.7% | 9.3% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q7 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q7 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q7 | not stated | Count | 0 | 1 | 1 |
| | | % within q7 | .0% | 100.0% | 100.0% |
| | | % within gender | .0% | 1.3% | .7% |
| | | % of Total | .0% | .7% | .7% |
| | strongly disagree | Count | 3 | 6 | 9 |
| | | % within q7 | 33.3% | 66.7% | 100.0% |
| | | % within gender | 4.3% | 7.5% | 6.0% |
| | | % of Total | 2.0% | 4.0% | 6.0% |
| | disagree | Count | 19 | 28 | 47 |
| | | % within q7 | 40.4% | 59.6% | 100.0% |
| | | % within gender | 27.1% | 35.0% | 31.3% |
| | | % of Total | 12.7% | 18.7% | 31.3% |
| | neither agree nor disagree | Count | 21 | 18 | 39 |
| | | % within q7 | 53.8% | 46.2% | 100.0% |
| | | % within gender | 30.0% | 22.5% | 26.0% |
| | | % of Total | 14.0% | 12.0% | 26.0% |
| | agree | Count | 20 | 20 | 40 |
| | | % within q7 | 50.0% | 50.0% | 100.0% |
| | | % within gender | 28.6% | 25.0% | 26.7% |
| | | % of Total | 13.3% | 13.3% | 26.7% |
| | strongly agree | Count | 7 | 7 | 14 |
| | | % within q7 | 50.0% | 50.0% | 100.0% |
| | | % within gender | 10.0% | 8.8% | 9.3% |
| | | % of Total | 4.7% | 4.7% | 9.3% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q7 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

**q7 * maritalstatus Crosstabulation**

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q7 | not stated | Count | 0 | 1 | 0 | 0 | 1 |
| | | % within q7 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | .7% | .0% | .0% | .7% |
| | | % of Total | .0% | .7% | .0% | .0% | .7% |
| | strongly disagree | Count | 0 | 9 | 0 | 0 | 9 |
| | | % within q7 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 6.3% | .0% | .0% | 6.0% |
| | | % of Total | .0% | 6.0% | .0% | .0% | 6.0% |
| | disagree | Count | 0 | 45 | 2 | 0 | 47 |
| | | % within q7 | .0% | 95.7% | 4.3% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 31.5% | 50.0% | .0% | 31.3% |
| | | % of Total | .0% | 30.0% | 1.3% | .0% | 31.3% |
| | neither agree nor disagree | Count | 1 | 37 | 0 | 1 | 39 |
| | | % within q7 | 2.6% | 94.9% | .0% | 2.6% | 100.0% |
| | | % within maritalstatus | 50.0% | 25.9% | .0% | 100.0% | 26.0% |
| | | % of Total | .7% | 24.7% | .0% | .7% | 26.0% |
| | agree | Count | 1 | 37 | 2 | 0 | 40 |
| | | % within q7 | 2.5% | 92.5% | 5.0% | .0% | 100.0% |
| | | % within maritalstatus | 50.0% | 25.9% | 50.0% | .0% | 26.7% |
| | | % of Total | .7% | 24.7% | 1.3% | .0% | 26.7% |
| | strongly agree | Count | 0 | 14 | 0 | 0 | 14 |
| | | % within q7 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 9.8% | .0% | .0% | 9.3% |
| | | % of Total | .0% | 9.3% | .0% | .0% | 9.3% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q7 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

**q7 * faculty Crosstabulation**

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q7 | not stated | Count | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| | | % within q7 | .0% | .0% | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within faculty | .0% | .0% | .0% | 1.8% | .0% | .0% | .7% |
| | | % of Total | .0% | .0% | .0% | .7% | .0% | .0% | .7% |
| | strongly disagree | Count | 0 | 1 | 0 | 7 | 0 | 1 | 9 |
| | | % within q7 | .0% | 11.1% | .0% | 77.8% | .0% | 11.1% | 100.0% |
| | | % within faculty | .0% | 2.6% | .0% | 12.7% | .0% | 1.9% | 6.0% |
| | | % of Total | .0% | .7% | .0% | 4.7% | .0% | .7% | 6.0% |
| | disagree | Count | 1 | 14 | 0 | 18 | 0 | 14 | 47 |
| | | % within q7 | 2.1% | 29.8% | .0% | 38.3% | .0% | 29.8% | 100.0% |
| | | % within faculty | 100.0% | 36.8% | .0% | 32.7% | .0% | 26.4% | 31.3% |
| | | % of Total | .7% | 9.3% | .0% | 12.0% | .0% | 9.3% | 31.3% |
| | neither agree nor disagree | Count | 0 | 12 | 1 | 11 | 0 | 15 | 39 |
| | | % within q7 | .0% | 30.8% | 2.6% | 28.2% | .0% | 38.5% | 100.0% |
| | | % within faculty | .0% | 31.6% | 50.0% | 20.0% | .0% | 28.3% | 26.0% |
| | | % of Total | .0% | 8.0% | .7% | 7.3% | .0% | 10.0% | 26.0% |
| | agree | Count | 0 | 6 | 0 | 14 | 1 | 19 | 40 |
| | | % within q7 | .0% | 15.0% | .0% | 35.0% | 2.5% | 47.5% | 100.0% |
| | | % within faculty | .0% | 15.8% | .0% | 25.5% | 100.0% | 35.8% | 26.7% |
| | | % of Total | .0% | 4.0% | .0% | 9.3% | .7% | 12.7% | 26.7% |
| | strongly agree | Count | 0 | 5 | 1 | 4 | 0 | 4 | 14 |
| | | % within q7 | .0% | 35.7% | 7.1% | 28.6% | .0% | 28.6% | 100.0% |
| | | % within faculty | .0% | 13.2% | 50.0% | 7.3% | .0% | 7.5% | 9.3% |
| | | % of Total | .0% | 3.3% | .7% | 2.7% | .0% | 2.7% | 9.3% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q7 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

**q8 * institution Crosstabulation**

| | | | institution | | |
|---|---|---|---|---|---|
| | | | FSSON | CUT | Total |
| q8 | none | Count | 5 | 11 | 16 |
| | | % within q8 | 31.3% | 68.8% | 100.0% |
| | | % within institution | 10.0% | 11.0% | 10.7% |
| | | % of Total | 3.3% | 7.3% | 10.7% |
| | Blacks | Count | 26 | 52 | 78 |
| | | % within q8 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 52.0% | 52.0% | 52.0% |
| | | % of Total | 17.3% | 34.7% | 52.0% |
| | Coloureds | Count | 5 | 3 | 8 |
| | | % within q8 | 62.5% | 37.5% | 100.0% |
| | | % within institution | 10.0% | 3.0% | 5.3% |
| | | % of Total | 3.3% | 2.0% | 5.3% |
| | Indians | Count | 1 | 0 | 1 |
| | | % within q8 | 100.0% | .0% | 100.0% |
| | | % within institution | 2.0% | .0% | .7% |
| | | % of Total | .7% | .0% | .7% |
| | Whites | Count | 8 | 17 | 25 |
| | | % within q8 | 32.0% | 68.0% | 100.0% |
| | | % within institution | 16.0% | 17.0% | 16.7% |
| | | % of Total | 5.3% | 11.3% | 16.7% |
| | all | Count | 2 | 8 | 10 |
| | | % within q8 | 20.0% | 80.0% | 100.0% |
| | | % within institution | 4.0% | 8.0% | 6.7% |
| | | % of Total | 1.3% | 5.3% | 6.7% |
| | Blacks & Whites | Count | 2 | 4 | 6 |
| | | % within q8 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 4.0% | 4.0% | 4.0% |
| | | % of Total | 1.3% | 2.7% | 4.0% |
| | Chinese | Count | 1 | 1 | 2 |
| | | % within q8 | 50.0% | 50.0% | 100.0% |
| | | % within institution | 2.0% | 1.0% | 1.3% |
| | | % of Total | .7% | .7% | 1.3% |
| | disabled | Count | 0 | 1 | 1 |
| | | % within q8 | .0% | 100.0% | 100.0% |
| | | % within institution | .0% | 1.0% | .7% |
| | | % of Total | .0% | .7% | .7% |
| | not sure | Count | 0 | 3 | 3 |
| | | % within q8 | .0% | 100.0% | 100.0% |
| | | % within institution | .0% | 3.0% | 2.0% |
| | | % of Total | .0% | 2.0% | 2.0% |
| Total | | Count | 50 | 100 | 150 |
| | | % within q8 | 33.3% | 66.7% | 100.0% |
| | | % within institution | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.3% | 66.7% | 100.0% |

**q8 * gender Crosstabulation**

| | | | gender | | |
|---|---|---|---|---|---|
| | | | male | female | Total |
| q8 | none | Count | 9 | 7 | 16 |
| | | % within q8 | 56.3% | 43.8% | 100.0% |
| | | % within gender | 12.9% | 8.8% | 10.7% |
| | | % of Total | 6.0% | 4.7% | 10.7% |
| | Blacks | Count | 36 | 42 | 78 |
| | | % within q8 | 46.2% | 53.8% | 100.0% |
| | | % within gender | 51.4% | 52.5% | 52.0% |
| | | % of Total | 24.0% | 28.0% | 52.0% |
| | Coloureds | Count | 5 | 3 | 8 |
| | | % within q8 | 62.5% | 37.5% | 100.0% |
| | | % within gender | 7.1% | 3.8% | 5.3% |
| | | % of Total | 3.3% | 2.0% | 5.3% |
| | Indians | Count | 0 | 1 | 1 |
| | | % within q8 | .0% | 100.0% | 100.0% |
| | | % within gender | .0% | 1.3% | .7% |
| | | % of Total | .0% | .7% | .7% |
| | Whites | Count | 9 | 16 | 25 |
| | | % within q8 | 36.0% | 64.0% | 100.0% |
| | | % within gender | 12.9% | 20.0% | 16.7% |
| | | % of Total | 6.0% | 10.7% | 16.7% |
| | all | Count | 4 | 6 | 10 |
| | | % within q8 | 40.0% | 60.0% | 100.0% |
| | | % within gender | 5.7% | 7.5% | 6.7% |
| | | % of Total | 2.7% | 4.0% | 6.7% |
| | Blacks & Whites | Count | 2 | 4 | 6 |
| | | % within q8 | 33.3% | 66.7% | 100.0% |
| | | % within gender | 2.9% | 5.0% | 4.0% |
| | | % of Total | 1.3% | 2.7% | 4.0% |
| | Chinese | Count | 2 | 0 | 2 |
| | | % within q8 | 100.0% | .0% | 100.0% |
| | | % within gender | 2.9% | .0% | 1.3% |
| | | % of Total | 1.3% | .0% | 1.3% |
| | disabled | Count | 1 | 0 | 1 |
| | | % within q8 | 100.0% | .0% | 100.0% |
| | | % within gender | 1.4% | .0% | .7% |
| | | % of Total | .7% | .0% | .7% |
| | not sure | Count | 2 | 1 | 3 |
| | | % within q8 | 66.7% | 33.3% | 100.0% |
| | | % within gender | 2.9% | 1.3% | 2.0% |
| | | % of Total | 1.3% | .7% | 2.0% |
| Total | | Count | 70 | 80 | 150 |
| | | % within q8 | 46.7% | 53.3% | 100.0% |
| | | % within gender | 100.0% | 100.0% | 100.0% |
| | | % of Total | 46.7% | 53.3% | 100.0% |

**q8 * maritalstatus Crosstabulation**

| | | | maritalstatus | | | | |
|---|---|---|---|---|---|---|---|
| | | | not stated | single | married | divorced | Total |
| q8 | none | Count | 0 | 14 | 2 | 0 | 16 |
| | | % within q8 | .0% | 87.5% | 12.5% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 9.8% | 50.0% | .0% | 10.7% |
| | | % of Total | .0% | 9.3% | 1.3% | .0% | 10.7% |
| | Blacks | Count | 0 | 78 | 0 | 0 | 78 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 54.5% | .0% | .0% | 52.0% |
| | | % of Total | .0% | 52.0% | .0% | .0% | 52.0% |
| | Coloureds | Count | 0 | 8 | 0 | 0 | 8 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 5.6% | .0% | .0% | 5.3% |
| | | % of Total | .0% | 5.3% | .0% | .0% | 5.3% |
| | Indians | Count | 0 | 0 | 1 | 0 | 1 |
| | | % within q8 | .0% | .0% | 100.0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | .0% | 25.0% | .0% | .7% |
| | | % of Total | .0% | .0% | .7% | .0% | .7% |
| | Whites | Count | 2 | 22 | 0 | 1 | 25 |
| | | % within q8 | 8.0% | 88.0% | .0% | 4.0% | 100.0% |
| | | % within maritalstatus | 100.0% | 15.4% | .0% | 100.0% | 16.7% |
| | | % of Total | 1.3% | 14.7% | .0% | .7% | 16.7% |
| | all | Count | 0 | 9 | 1 | 0 | 10 |
| | | % within q8 | .0% | 90.0% | 10.0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 6.3% | 25.0% | .0% | 6.7% |
| | | % of Total | .0% | 6.0% | .7% | .0% | 6.7% |
| | Blacks & Whites | Count | 0 | 6 | 0 | 0 | 6 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 4.2% | .0% | .0% | 4.0% |
| | | % of Total | .0% | 4.0% | .0% | .0% | 4.0% |
| | Chinese | Count | 0 | 2 | 0 | 0 | 2 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 1.4% | .0% | .0% | 1.3% |
| | | % of Total | .0% | 1.3% | .0% | .0% | 1.3% |
| | disabled | Count | 0 | 1 | 0 | 0 | 1 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | .7% | .0% | .0% | .7% |
| | | % of Total | .0% | .7% | .0% | .0% | .7% |
| | not sure | Count | 0 | 3 | 0 | 0 | 3 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within maritalstatus | .0% | 2.1% | .0% | .0% | 2.0% |
| | | % of Total | .0% | 2.0% | .0% | .0% | 2.0% |
| Total | | Count | 2 | 143 | 4 | 1 | 150 |
| | | % within q8 | 1.3% | 95.3% | 2.7% | .7% | 100.0% |
| | | % within maritalstatus | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 1.3% | 95.3% | 2.7% | .7% | 100.0% |

**q8 * faculty Crosstabulation**

| | | | faculty | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | arts | commerce | education | health studies | social sciences | science | Total |
| q8 | none | Count | 0 | 5 | 1 | 5 | 0 | 5 | 16 |
| | | % within q8 | .0% | 31.3% | 6.3% | 31.3% | .0% | 31.3% | 100.0% |
| | | % within faculty | .0% | 13.2% | 50.0% | 9.1% | .0% | 9.4% | 10.7% |
| | | % of Total | .0% | 3.3% | .7% | 3.3% | .0% | 3.3% | 10.7% |
| | Blacks | Count | 0 | 19 | 0 | 28 | 1 | 30 | 78 |
| | | % within q8 | .0% | 24.4% | .0% | 35.9% | 1.3% | 38.5% | 100.0% |
| | | % within faculty | .0% | 50.0% | .0% | 50.9% | 100.0% | 56.6% | 52.0% |
| | | % of Total | .0% | 12.7% | .0% | 18.7% | .7% | 20.0% | 52.0% |
| | Coloureds | Count | 0 | 1 | 1 | 5 | 0 | 1 | 8 |
| | | % within q8 | .0% | 12.5% | 12.5% | 62.5% | .0% | 12.5% | 100.0% |
| | | % within faculty | .0% | 2.6% | 50.0% | 9.1% | .0% | 1.9% | 5.3% |
| | | % of Total | .0% | .7% | .7% | 3.3% | .0% | .7% | 5.3% |
| | Indians | Count | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| | | % within q8 | .0% | .0% | .0% | 100.0% | .0% | .0% | 100.0% |
| | | % within faculty | .0% | .0% | .0% | 1.8% | .0% | .0% | .7% |
| | | % of Total | .0% | .0% | .0% | .7% | .0% | .0% | .7% |
| | Whites | Count | 0 | 7 | 0 | 11 | 0 | 7 | 25 |
| | | % within q8 | .0% | 28.0% | .0% | 44.0% | .0% | 28.0% | 100.0% |
| | | % within faculty | .0% | 18.4% | .0% | 20.0% | .0% | 13.2% | 16.7% |
| | | % of Total | .0% | 4.7% | .0% | 7.3% | .0% | 4.7% | 16.7% |
| | all | Count | 0 | 2 | 0 | 2 | 0 | 6 | 10 |
| | | % within q8 | .0% | 20.0% | .0% | 20.0% | .0% | 60.0% | 100.0% |
| | | % within faculty | .0% | 5.3% | .0% | 3.6% | .0% | 11.3% | 6.7% |
| | | % of Total | .0% | 1.3% | .0% | 1.3% | .0% | 4.0% | 6.7% |
| | Blacks & Whites | Count | 0 | 1 | 0 | 2 | 0 | 3 | 6 |
| | | % within q8 | .0% | 16.7% | .0% | 33.3% | .0% | 50.0% | 100.0% |
| | | % within faculty | .0% | 2.6% | .0% | 3.6% | .0% | 5.7% | 4.0% |
| | | % of Total | .0% | .7% | .0% | 1.3% | .0% | 2.0% | 4.0% |
| | Chinese | Count | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| | | % within q8 | .0% | 50.0% | .0% | 50.0% | .0% | .0% | 100.0% |
| | | % within faculty | .0% | 2.6% | .0% | 1.8% | .0% | .0% | 1.3% |
| | | % of Total | .0% | .7% | .0% | .7% | .0% | .0% | 1.3% |
| | disabled | Count | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| | | % within q8 | .0% | 100.0% | .0% | .0% | .0% | .0% | 100.0% |
| | | % within faculty | .0% | 2.6% | .0% | .0% | .0% | .0% | .7% |
| | | % of Total | .0% | .7% | .0% | .0% | .0% | .0% | .7% |
| | not sure | Count | 1 | 1 | 0 | 0 | 0 | 1 | 3 |
| | | % within q8 | 33.3% | 33.3% | .0% | .0% | .0% | 33.3% | 100.0% |
| | | % within faculty | 100.0% | 2.6% | .0% | .0% | .0% | 1.9% | 2.0% |
| | | % of Total | .7% | .7% | .0% | .0% | .0% | .7% | 2.0% |
| Total | | Count | 1 | 38 | 2 | 55 | 1 | 53 | 150 |
| | | % within q8 | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |
| | | % within faculty | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | .7% | 25.3% | 1.3% | 36.7% | .7% | 35.3% | 100.0% |

## One Way Analysis of Variance

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| q1 | Between Groups | 1.288 | 1 | 1.288 | .888 | .348 |
| | Within Groups | 214.586 | 148 | 1.450 | | |
| | Total | 215.873 | 149 | | | |
| q2 | Between Groups | 14.919 | 1 | 14.919 | 10.775 | .001 |
| | Within Groups | 204.921 | 148 | 1.385 | | |
| | Total | 219.840 | 149 | | | |
| q3 | Between Groups | .220 | 1 | .220 | .145 | .704 |
| | Within Groups | 225.273 | 148 | 1.522 | | |
| | Total | 225.493 | 149 | | | |
| q4 | Between Groups | .034 | 1 | .034 | .041 | .839 |
| | Within Groups | 122.959 | 148 | .831 | | |
| | Total | 122.993 | 149 | | | |
| q5 | Between Groups | 1.890 | 1 | 1.890 | 2.546 | .113 |
| | Within Groups | 109.850 | 148 | .742 | | |
| | Total | 111.740 | 149 | | | |
| q6 | Between Groups | 5.401 | 1 | 5.401 | 5.526 | .020 |
| | Within Groups | 144.659 | 148 | .977 | | |
| | Total | 150.060 | 149 | | | |
| q7 | Between Groups | 2.170 | 1 | 2.170 | 1.728 | .191 |
| | Within Groups | 185.830 | 148 | 1.256 | | |
| | Total | 188.000 | 149 | | | |
| q8 | Between Groups | .001 | 1 | .001 | .000 | .989 |
| | Within Groups | 846.559 | 148 | 5.720 | | |
| | Total | 846.560 | 149 | | | |

**APPENDIX 3.**

***Questionnaire***

**Students' perception of space**

**Please supply information requested below. You are further requested to respond to all questions by placing a cross in the spaces provided.**

**0 = strongly disagree 1 = disagree 2 = neither agree nor disagree 3 = agree**

**4 = strongly agree**

**Name of institution:** _____

**Age:** /_____/ Gender: /_____/ Race: /_____/

**Marital status:** /_____/

**Faculty:** /_____/

**Level of study:** /_____/

1. The campus environment is stimulating enough to enhance students' awareness of space.

| 0 Strongly disagree | 1Disagree | 2 Neither agree nor disagree | 3 Agree | 4 Strongly agree |
|---|---|---|---|---|
| | | | | |

2. In your opinion, students are disrespectful of other's space.

| 0 Strongly disagree | 1Disagree | 2 Neither agree nor disagree | 3 Agree | 4 Strongly agree |
|---|---|---|---|---|
| | | | | |

3. The physical setting of the campus is structured in such a way that it is often difficult to walk around without interfering with other people's space.

| 0 Strongly disagree | 1Disagree | 2 Neither agree nor disagree | 3 Agree | 4 Strongly agree |
|---|---|---|---|---|
| | | | | |

4. How often do you find students blocking your way when you rushing to classes?

| Always | Frequently | Occasionally | Never |
|---|---|---|---|

5. How often are you asked by lecturers rushing to classes to give way so that they can go pass quickly?

| Always | Frequently | Occasionally | Never |
|---|---|---|---|

6. How often are you asked by students rushing to classes to give way so that they can go pass quickly?

| Always | Frequently | Occasionally | Never |
|---|---|---|---|

7. In your opinion, the blockage is as a result of overcrowding on campus.

| 0 Strongly disagree | 1Disagree | 2 Neither agree nor disagree | 3 Agree | 4 Strongly agree |
|---|---|---|---|---|

8. According to your own observation, which racial/cultural group is generally poor in space recognition?_____