

**Develop Students' Awareness Toward Diabetes**  
**Through the English Primary Curriculum in UAE**

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Dissertation submitted to the British University in Dubai BUiD  
in part fulfillment of the requirements for the degree of  
Master of Education in (**English Language Teaching ELT**)

British University in Dubai BUiD  
May 2011

## **Abstract**

This dissertation aims at developing a framework that could be integrated with the UAE English Language Teaching ELT curriculum of primary education. It concentrates on the health issues existing among UAE students especially diabetes. The main reason of conducting this research is that no recent research is found in UAE that discusses the causes of diabetes among young UAE nationals. Furthermore, it is evident that the UAE English curriculum does not highlight the subject of health education especially diabetes. The research has been conducted by using both primary and secondary sources. The secondary sources used are journals, articles, magazines, newspapers, online search engines, online databases, etc. The primary sources include different tools such as observations, note taking, visual studies, interviews and surveys. The research concludes that children in UAE have adopted poor eating and lifestyle habits which increases their chances of obesity and exposes them to the risk of diabetes. Moreover, the UAE curriculum fails to provide enough health education to students thereby enabling them to lead a healthy life. By incorporating diabetes awareness into the ELT curriculum schools should therefore implement various steps aimed at improving the health awareness among students and keeping them better informed about the diabetes ailment so that they are better equipped to fight it.

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## **I. Introduction**

### **1.1 Overview**

My area of focus of this research is to develop a framework that could be integrated with the English curriculum of the primary education in the UAE. I'll concentrate on the health issues, diabetes in particular. The main reason of conducting this research is that no recent research is found in UAE that discusses the causes of diabetes among young UAE nationals. According to personal experience it was evident that the UAE English curriculum does not highlight the subject of health education in depth, diabetes in particular.

The research will present analytical data retrieved from primary second language learners through a number of investigation tools. The research will include students from grade 5 in four government primary schools. In addition, the paper will discuss the limitation of the study as well as suggested future implementations.

### **1.2 Statement of the Problem**

To study the prevalence of diabetes in the UAE and understand which lifestyle factors increase the incidence of diabetes in the UAE. To understand if the UAE curriculum provides health education to students in terms of diabetes and identify what kind of activities and learning tasks could be developed in the ELT curriculum to increase the awareness of students towards diabetes.

### **1.3 Background of the Research**

The World Health Organization reported that more than 220 million people have diabetes around the world. In 2005, it was estimated that 1.1 million people died from diabetes. Moreover "it mentions that almost half of the deaths caused due to diabetes occur in people under the age of 70 years. Among the people dying

from diabetes 55% of them are women. The World Health Organization also reports that almost 80% of diabetes deaths occur in low- and middle-income countries. The WHO projects that diabetes deaths will double between 2005 and 2030" (Diabetes, 2009).

In the modern time diabetes is quickly spreading through different sections of the population mainly children. This is because towards the end of the 20<sup>th</sup> century due to globalization and the changing lifestyle of people in the UAE there has been a dramatic increase in the rate of obesity among children and adolescents in the UAE. This has increased incidence of type 2 diabetes among UAE children. This was an uncommon occurrence a few decades ago because of better food habits and active lifestyle, however in the modern time type 2 is growing at an alarming rate among this section of the population (Department of Health & Medical Services, Dubai, 2006). This trend in the UAE is similar to the trend in western countries where a large number of children are suffering from Type 2 diabetes (Childs *et. al.*, 2005). The researchers have concluded that these countries are facing a high rate of diabetes among their population because they are highly developed in nature whereby their people are dependent on machines, gadgets and equipments which reduces their level of physical labor thereby causing them to burn fewer calories than they consume. This coupled with consumption of increased fast foods leads people to obesity and ultimately diabetes.

This ailment has therefore become an important health concern for the younger generation. In the UAE, there is a high incidence of diabetes among the young population. The International Diabetes Federation in the year 2007 has ranked UAE as the country with the second highest rate for diabetes prevalence in the world (IDF, 2007). The spread of diabetes at an alarming rate among young children has become a major cause of concern for the medical community as it would have a negative effect on the health of the future generations of the UAE. This is because this high incidence of diabetes among the younger generation would require the UAE government to spend millions of dollars for medications

and treatments in the coming future. Moreover, this high incidence of diabetes would also affect the overall productivity levels of the country's population. Furthermore, the high incidence of diabetes in the country would have a negative impact on the country's mortality rate by increasing it to a large extent. The government and the health authorities therefore need to take up this issue seriously and work towards increasing awareness about diabetes, its causes, ways of preventing it and controlling it. This would not only prevent more and more children in the UAE from this ailment but would also assist existing diabetic children in managing their diabetes effectively. It is essential for the education sector to realize their responsibility in this matter as schools are considered as the 'second home' of children due to their influence in shaping the lifestyle and personality of children.

## **1.4 The Research Questions**

The main purpose of the research is to answer the following questions:

- Does the UAE curriculum include topics about diabetes/health education?
- What are the lifestyle factors that expose children in the UAE to the risk of diabetes at a young age?
- What activities and learning tasks could be developed in the ELT curriculum to increase the awareness of students towards diabetes?

## **1. 5 The Significance of the Research**

The research is of high importance because the issue of diabetes is a major health concern for the UAE health authorities. The continuing high rate of diabetes in the country would have a negative impact on the health of the future

generations of the country. It would also have an adverse economic impact as the governments health budgets would have to be drastically increased. This is because the government will have to provide for increased medications and medical treatments for the people suffering from diabetes. Furthermore, the economic condition of the country would also be affected as the productivity levels of the people would be decreased. This is because diabetic patients would not be in a position to work at high levels of efficiency. In addition to this, this high incidence of diabetes would also affect the social welfare of the country.

The main reason of conducting this research is that no recent research is found in UAE that discusses the causes of diabetes among young UAE nationals. Moreover, it is important for the UAE health authorities to identify which lifestyle factors are responsible for the high incidence of diabetes among UAE children. This would enable them to work towards improving these lifestyle factors and reducing the high rate diabetes in the country. Furthermore, this research also aims at studying the awareness level about diabetes among the younger generation in the UAE and understanding the role of UAE curriculum in generating this awareness. The results of this research would help the UAE education sector to increase awareness about diabetes among young UAE nationals by informing them about the ways of avoiding it. It would also provide important information to children who are already suffering from this ailment so that they can adopt a healthy lifestyle and control their level of diabetes. If students could start to learn about this disease at an early age, such changes in the UAE curriculum would enable the younger generation to understand the advantages of adopting a healthy lifestyle and a balanced diet.

## **1.6 The Organization of the Research**

This research report has been organized in a logical manner which would enable readers to gain insight about the issue of diabetes and then understand its severity in the United Arab Emirates. The report has been divided into four

different chapters. The first chapter is the literature review which aims at presenting secondary information to the reader. The purpose of this section is to introduce the topic of diabetes by providing more information about the symptoms, types of diabetes, the causes and the extent of its spread both in the world and in the UAE. In addition to declaring theories that support blending health education with curriculum in order to develop awareness within students at young age. The second chapter is the methodology which aims at communicating how the overall research (both primary and secondary research) was conducted by the researcher and the methods used in doing so. This chapter includes the research design, the research approach, the methods of data collection, and the ethical issues. The third chapter is the Research Findings and Discussion section. This section aims at highlighting the findings from primary research and then discussing these findings in detail. It aims at answering the research questions posed by the researcher at the beginning of the study and the linking the research findings back to the body of knowledge. The fourth chapter is the Conclusions and Recommendations section which aims at providing a good closing to the research that also includes a suggested lesson framework for English Language Teaching to be incorporated into the government curriculum. This section consists of the reflections of the researcher after conducting the research, the recommendations provided by the researcher to solve the issue at hand and a final conclusion of the entire report. It also highlights the limitations of the research report which should be communicated to the readers and researchers who might use these findings for further analysis.

## **II. Literature Review**

The theme of diabetes was selected carefully due to many reasons; one of the reasons is that there's no actual efforts are put in developing diabetes awareness amongst children through the education system. Including diabetes theme within education system through curriculum will assist students to understand the concept of diabetes and develop their interest, attitudes and values toward the importance of having healthy life and that will occur when students are engaged in a meaningful conceptual framework. (Perego and Boyle, 2001 ).

The choice of using “Diabetes” as a theme to be taught in the government school curriculum might help in reducing the number of children facing diabetes year by year in UAE context. By providing students with new ideas and concepts on why and how diabetes occur, through setting an educational framework within the curriculum that not only emphasize on memorizing information, but rather engage the students in the whole learning process. Thus, we achieve the goal of developing diabetes awareness amongst our children which will help them in gaining a healthier lifestyle.

Therefore this literature review aims at presenting secondary information to the reader. The purpose of this section is to introduce the topic of diabetes by providing more information about the symptoms, types of diabetes, the causes and the extent of its spread both in the world and in the UAE. This section also declares how diabetes is addressed around the world. Eventually, this chapter will justify theoretically how diabetes could be combined within ELT curriculums through developing thematic framework that focuses on the theme of diabetes.

### **2.1 About Diabetes**

Our body turns the food we consume into a different form of sugar which makes it easier for the body transport this energy from one part to another. This is called

glucose which is used as a source of energy that provides our muscles and other tissues with the power needed to perform (Saudek at el, 1997). Our bodies transport glucose with the help of our blood. In order for our muscles and other tissues to absorb glucose from our blood, we need a hormone called insulin. Without insulin, our bodies cannot obtain the necessary energy from our food. Insulin is made in a large gland behind the stomach called the pancreas. This hormone is released by cells which are called beta cells" (International Diabetes Federation, n.d).

Insulin plays the role of controlling the blood glucose levels in our body. For example, when blood glucose levels increase just after we have eaten food then the insulin is released by the pancreas to regulate and lower the blood glucose level. "When a person has diabetes, either their pancreas does not produce the insulin they need, or their body cannot use its own insulin effectively. This result in people with diabetes being unable to use the glucose produced through the food they eat. This in turn causes the level of glucose in the blood to increase. This high level of glucose in the blood or 'high blood sugar' is also called hyperglycemia" (IDF, n.d).

"Diabetes is also referred to as 'Diabetes mellitus' which was first identified as a disease associated with 'sweet urine', and excessive muscle loss in the ancient world. Elevated levels of blood glucose lead to spillage of glucose into the urine, hence the term sweet urine.

Diabetes is a chronic medical condition which means that although it can be controlled, it lasts throughout the life of a person" (Mathur, 2009). Furthermore, diabetes if not properly managed the high levels of glucose in the blood can lead to serious complications in the long run like heart disease, kidney disease, nerve damage, blindness, impotence and sometimes can also cause individuals to go into coma.

## 2.2 Symptoms of Diabetes

The signs and symptoms that enable individuals to identify the disease easily are as follows:

- Diabetes is associated with an increase in the blood glucose levels which causes the spilling of glucose in the urine. This high level of glucose in the urine can result in the problem of *frequent urination* which is one of the most important symptoms of diabetes.
- The problem of frequent urination can result in dehydration in individuals causing them to *experience unusual thirst* and leading them to drink lots of water.
- “The inability of insulin to perform normally has effects on protein, fat and carbohydrate metabolism. Insulin is an anabolic hormone, that is, one that encourages storage of fat and protein. A relative or absolute insulin deficiency can eventually leads to weight loss despite an increase in appetite. In some cases it also causes the weight to increase” (Canadian Diabetes Association, n.d.).
- “Some untreated diabetes patients also complain of fatigue, nausea and vomiting.” (Betschart-Roemer, 2002).
- Patients with diabetes are prone to developing infections of the bladder, skin, and vaginal areas. This is mainly because the cuts and bruises caused in such patients usually take longer to heal than in normal patients (Betschart-Roemer, 2002).
- Fluctuations in blood glucose levels can lead to blurred vision. Extremely elevated glucose levels can lead to lethargy and coma” (Canadian Diabetes Association, n.d.).

“However, it should be noted that many individuals who have type 2 diabetes may display no symptoms” (Canadian Diabetes Association, n.d.).

## **2.3 Types of diabetes**

There are three main types of diabetes which are called as Type 1 diabetes, Type 2 diabetes and gestational diabetes. Type 2 is the most common type that grows at alarming rate among UAE children. In what follows each type will be clarified on the medical terms.

### ***Type 1 Diabetes***

"Type 1 diabetes is also called as insulin dependent diabetes mellitus (IDDM), juvenile onset diabetes or immune-mediated diabetes" (Saudek et al, 1997). This kind of diabetes is caused due to a problem in the immunity of the body whereby the immunity system starts attacking the pancreas preventing it from producing insulin in the body. In type 1 diabetes, the immune system by mistake manufactures antibodies and inflammatory cells that are directed against and cause harm to patients' body tissues (Saudek et al, 1997). The reason for this problem in the immunity system is not clearly understood by the medical practitioners. Therefore, people suffer from Type 1 diabetes because their body produces insufficient or no insulin at all (Betschart-Roemer, 2002). Type 1 diabetes can be found in people of all ages but it is most commonly found in children or young adults. People suffering from type 1 diabetes are required to take insulin injections on a daily basis which enables their body to control the levels of glucose in their blood. The failure to receive this medicine on a daily basis can also result in the death of the patient (IDF, n.d.).

### ***Type 2 Diabetes***

Type 2 diabetes is also called as "non-insulin dependent diabetes mellitus (NIDDM), or adult onset diabetes mellitus (AODM)" (Garcia, 2006). This is the most common type of diabetes among individuals. The main cause of this type of diabetes is obesity but can also be caused due to genetic reasons. In this case the patient's body either produces insulin in an insufficient quantity or does not

react properly to the insulin produced (International Diabetes Federation). Type 2 diabetes is common among older people above the age of 45 who are usually overweight. However, in the modern time many children and young adults are also getting affected by this disease mainly because of obesity, lack of physical activity and the consumption of unhealthy food. Individuals suffering from this kind of diabetes are not required to take insulin injections on a regular basis. This is because they can control their blood glucose levels by taking regular exercise, controlling their diet and oral medications (IDF, n.d.). However, if patients suffering from this disease do not take precautions and control the level of sugar in their body they can be required to take insulin medication as the number of beta cells in their body is on a decline. Furthermore, if such patients adopt a careless attitude towards their health it can result in serious complications and even death in some cases (Garnero, 2008).

### ***Gestational diabetes***

The third type of diabetes is gestational diabetes that occurs temporarily among pregnant women. "Significant hormonal changes during pregnancy can lead to blood sugar elevation in genetically predisposed individuals" (Garcia, 2006). "Gestational diabetes usually occurs during the 24th to 28th weeks of pregnancy, and, in most cases, disappears of its own accord once the baby is born" (Deep Health, n.d.). "However, 25%-50% of women with gestational diabetes run the risk of developing type 2 diabetes later in their life. This is especially in case of patients who either require insulin during pregnancy or those who continue to remain overweight even after their delivery. Patients with gestational diabetes are usually asked to undergo an oral glucose tolerance test about six weeks after giving birth to determine if their diabetes has persisted beyond the pregnancy, or if any evidence (such as impaired glucose tolerance) is present that may be a clue to the patient's future risk for developing diabetes" (Garcia, 2006)

## **2.4 Spread of Diabetes**

In the modern time diabetes is spreading at an alarming rate through different sections of the population. This has resulted in diabetes becoming one of major health concerns of the medical community. This is because the high incidence of diabetes among people requires the governments to spend millions of dollars for medications and treatments given to patients. Moreover, this high incidence of diabetes also affects the overall productivity levels of the country's population. Furthermore, the Type 2 diabetes is spreading at a high rate among children throughout the world which has put the health of the younger generations in danger.

## **2.5 Diabetes worldwide**

"The World Health Organization reports that more than 220 million people worldwide have diabetes. It also states that in the year 2005 an estimated 1.1 million people died from diabetes. Moreover, it mentions that almost half of the deaths caused due to diabetes occur in people under the age of 70 years. Among the people dying from diabetes 55% of them are women. The World Health Organization also reports that almost 80% of diabetes deaths occur in low- and middle-income countries. The WHO projects that diabetes deaths will double between 2005 and 2030" (Diabetes, 2009).

The following shows statistics generated by the International Diabetes Federation in the year 2009 for the incidence of diabetes and Impaired glucose tolerance (IGT). IGT is a pre-diabetic condition that can eventually lead to type 2 diabetes in a few years. Table 1 shows how the incidence of diabetes in the world is at 6.6% and is expected to increase to about 7.8% in the year 2030.

Table 1 shows the incidence of diabetes and IGT in the world population

	2010	2030
Total world population (billions)	7.0	8.4
Adult population (20-79 years, billions)	4.3	5.6
<b>DIABETES AND IGT (20-79 years)</b>		
<b>Diabetes</b>		
Global prevalence (%)	6.6	7.8
Comparative prevalence (%)	6.4	7.7
Number of people with diabetes (millions)	285	438
<b>IGT</b>		
Global prevalence (%)	7.9	8.4
Comparative prevalence (%)	7.8	8.4
Number of people with IGT (millions)	344	472

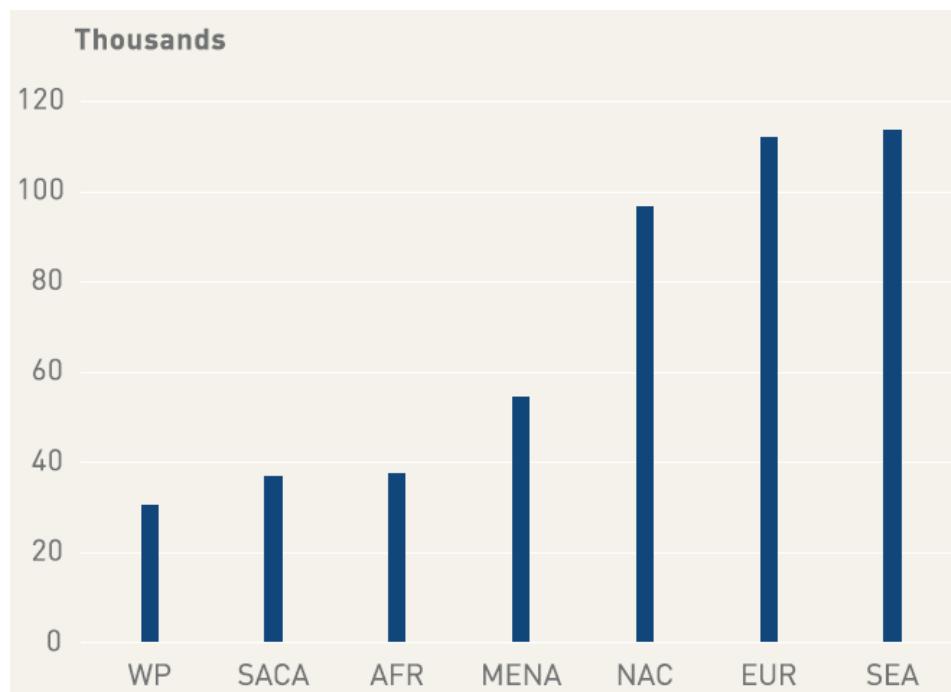
Source: *IDF Diabetes Atlas*, 4<sup>th</sup> ed., International Diabetes Federation, 2009

## 2.6 Diabetes among children in the world

“The number of children being diagnosed with diabetes especially type 2 is on an increase throughout the world. Figure 1a highlights the estimated number of prevalent cases of type 1 diabetes in children, 0-14 years, by region, 2010 in their 2009 report” (International Diabetes Federation, 2009). This figure highlights how the South East Asian region is experiencing almost the same amount of diabetes cases as in the Europe. This implies that the incidence of diabetes is increasing in the Asian countries as compared to the western regions like Europe and America. The figure (Figure A) also shows that the incidence of diabetes is less in the African region and the South American and Central American regions of the world. This is because the people in these regions are physically active whereby they burn more calories saving from the risk of diabetes and obesity.

This is also because countries in these regions are not highly developed to have advanced technologies. This requires people in these regions to depend on manual labor than machines.

Figure (A) showing the estimated number of prevalent cases of type 1 diabetes in children, 0-14 years, by region, 2010



Source: *IDF Diabetes Atlas*, 4<sup>th</sup> ed., International Diabetes Federation, 2009

Note: WP stands for Western Pacific; SACA stands for South America and Central America; AFR stands for the African Region; MENA stands for Middle East and North Africa; NAC stands for North America and Caribbean; EUR stands for European region; and SEA stands for South East Asia.

According to a research conducted by a team at the University of Bristol and, the number of the children facing diabetes increased in the last 20 years. The research also declares that children who have type 1 diabetes increased five-fold between 1985 and 2004. Suggesting that the environment in which babies are

raised in could have negative consequences for the children's future health. The exact causes of type 1 diabetes are ambiguous and unknown, however some researchers have evidence that it might be inherited, (David Rose, 2007). "The study also suggested that there was a 4.4 per cent increase each year since 1985 in the number of children in whom type 1 diabetes had been diagnosed" (David Rose, 2007).

"Orit Pinhas-Hamiel, M.D. of Sheba Medical Center in Israel and Philip Zeitler, M.D., Ph.D. of the University of Colorado reviewed articles and reports on type 2 diabetes in children and adolescents between 1978 and 2004. Although the review is limited to published data only, they found that type 2 diabetes accounts for up to 45% of new cases among adolescents. The authors cite higher percentages in areas such as New York, Taiwan, New Zealand, and Canada" (Type 2 Diabetes Is Increasing Among Children All Over The World, 2005). This is because these countries are highly developed where people are dependent on machines, gadgets and equipments which reduce their level of physical labor thereby causing them to burn fewer calories than they consume. This coupled with consumption of increased fast foods leads people to obesity and ultimately diabetes.

## **2.7 Diabetes in the UAE**

"In the UAE it is estimated that one out of five (20%) people aged 20 to 79 lives with this disease, while a similar percent of population is at risk of developing it. This year, the UAE ranked second highest worldwide for diabetes prevalence, followed by Saudi Arabia, Bahrain, and Kuwait" (Diabetes Knowledge Action, n.d) The Imperial College London Diabetes Centre (ICLDC) in Abu Dhabi declares that 19.5 percent of the UAE's population is living with diabetes in the recent time according to statistics released by the Arab Health Congress. The statistics highlights that 40 percent of people over 60 have diabetes. According to

Shamma (2008) “Diabetes mellitus constitutes the cause of 75 per cent of deaths among UAE nationals and 31 per cent among non-nationals”.

### ***Diabetes among children in the UAE***

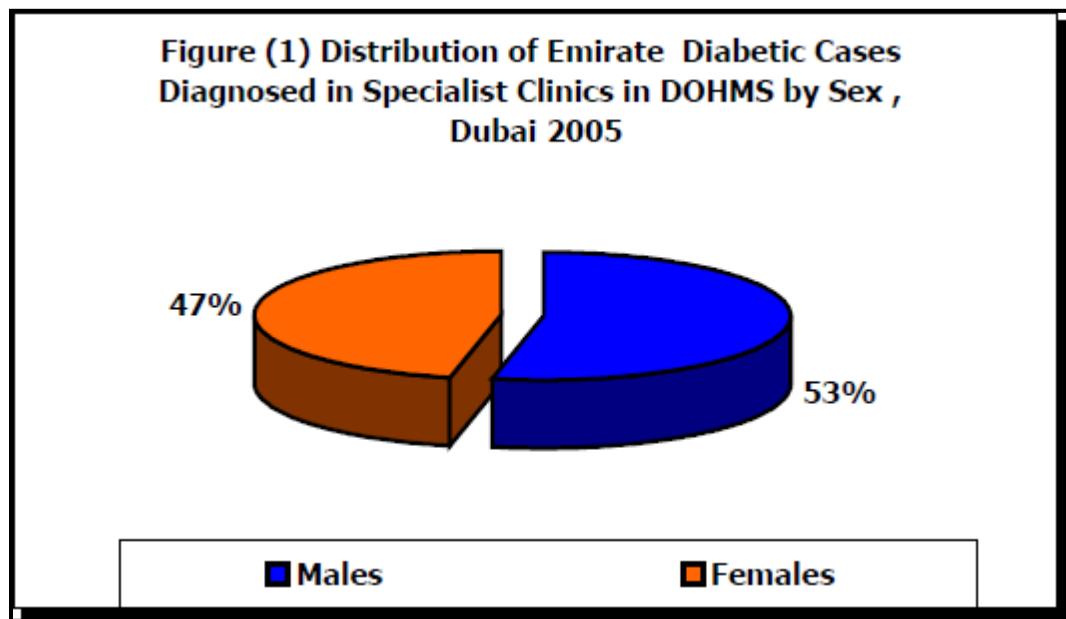
In the olden times, Type 1 diabetes was a common non-communicable disease among children and adolescents. It is still prevalent among children around the world however, towards the end of the 20<sup>th</sup> century due to globalization and the changing lifestyle of people in the UAE there has been a dramatic increase in the incidence of type 2 diabetes among children. This was an uncommon occurrence a few decades ago however in the modern time type 2 is growing at an alarming rate among this section of the population (Department of Health & Medical Services, Dubai, 2006). This is due to the increasing rate of obesity among children and adolescents in the UAE. This trend in the UAE is similar to the trend in western countries where a large number of children are suffering from Type 2 diabetes (Childs et. al., 2005).

Both genetic and lifestyle reasons increase the risk of Type 2 diabetes among children and adolescents. “Children and adolescents diagnosed with type 2 diabetes are generally between 10 and 19 years old, obese, have a strong family history for type 2 diabetes, and have insulin resistance. Generally, children and adolescents with type 2 diabetes have poor glycolic control. It is hard to detect type 2 diabetes in children because it can go undiagnosed for a long time; children may have no symptoms or mild symptoms; and because blood tests are needed for diagnosis. It is difficult to be sure it is type 2, because criteria for differentiating between types of diabetes in children are confusing; that is, children with type 2 can develop ketoacidosis; children with type 1 can be overweight; and because the overall prevalence of the disease may still be low. Diabetes mellitus is a significant cause of morbidity and mortality in UAE” (Department of Health & Medical Services, Dubai, 2006).

### **Statistics showing the incidence of diabetes among children in the UAE**

"The report by Department of Health & Medical Services (DOHMS), Dubai, UAE highlights that there were 304 persons with diabetes mellitus among the school children from the age group of 4-19 years *diagnosed by specialist clinics* in DOHMS in 2005. Out of these 229 children (75.3%) were Emirati nationals and the balance 75 children (24.7%) were expatriates.

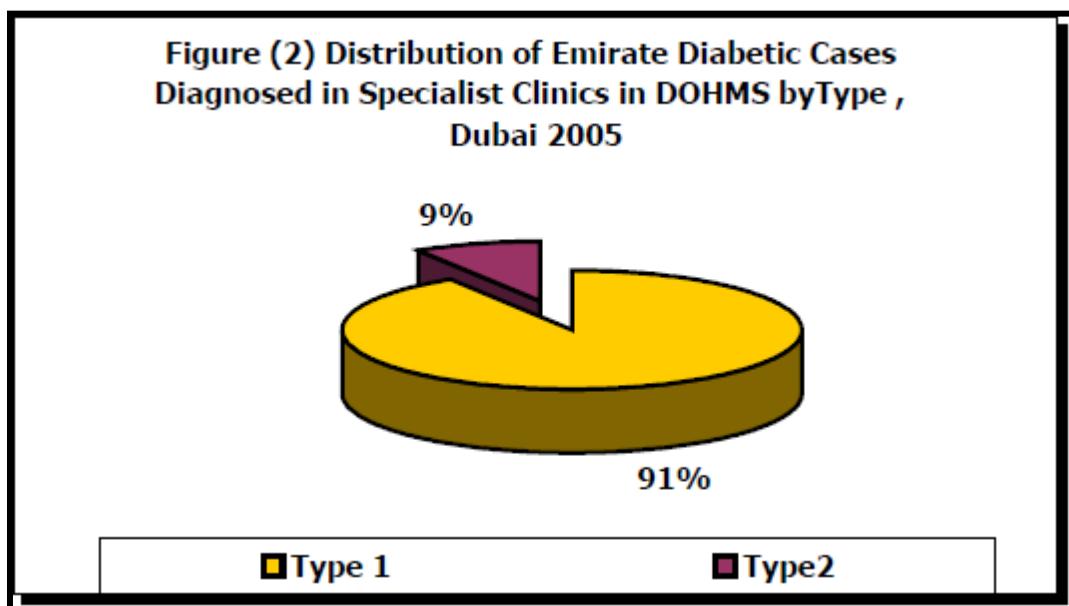
The figure given below highlights that among the Emirati children, females amounted to 46.7% of the cases and the balance 53.3% of the children were males (Figure 1)" (Department of Health & Medical Services, Dubai, 2006).



Source: Department of Health & Medical Services, Dubai, 2006

"Figure 2 shows that Type1 diabetes mellitus constituted 91.2% of diabetic cases among Emirati children and the balance 8.8% of the cases showed the incidence of Type 2 non-insulin dependent diabetes mellitus (NIDDM) among Emirati

children." (Department of Health & Medical Services, Dubai, 2006). The numbers Emirati children who was diagnosed with diabetes was also distributed according to the children's level of education. "These statistics showed that the percentage of children in kindergarten was 7.4%, 41.0% of the children were in primary schools, 21.0% of the children among preparatory and the balance 30.6% of the cases were among secondary school children. The study of the distribution of type1 diabetes mellitus by age showed that there was a peak at 11 years old which implies that the diabetes cases were highest among children of 11 years old". (Department of Health & Medical Services, Dubai, 2006)



Source: Department of Health & Medical Services, Dubai, UAE

"Among the Diabetes mellitus in Dubai about 1.9 % of all admissions were done in government hospitals in 2005. Out of these cases, about 2.6% of all admitted cases constituted children studying in schools mostly in the age group of 4-19 years in 2005. There were 18 cases in all out of which about 72.9% were Emirati nationals and the balance 27.1% consisted of expatriates. The distribution of the diabetes mellitus cases among Emirati nationals was divided into 59.3% males and 40.7% females. Even in government hospitals Type 1 diabetes cases

amounted to 93.02% of the cases. The study of the distribution of type1 diabetes mellitus by age showed that there was a peak at 11-12 years" (Department of Health & Medical Services, Dubai, 2006).

## **2.8 Reasons for the Spread of Diabetes**

In the 21<sup>st</sup> century, globalization and the inflow of western companies has resulted in tremendous growth and development experienced by the UAE economy. This has drastically changed the way people live. Globalization has also resulted in several changes in the society having a deep impact on the health of people. These changes are mainly responsible for the high and growing incidence of diabetes in the UAE especially among the younger generation. This trend has been a reason for worry for health authorities and the government in the UAE. There are several reasons for the spread of diabetes among various young children and adolescents. *Obesity* is one of the major causes of diabetes in the UAE. "The Global School-Based Student Health Survey, conducted in 2005 by the Ministry of Health and the World Health Organisation (WHO), found 11.8 per cent of 13 to 15 year olds in the UAE were obese and 21.3 per cent at risk of becoming obese" (Muslim, 2008). The inability to effectively manage and control one's weight can result in the occurrence of chronic diseases like diabetes. Fighting obesity helps people in preventing the onset of Type II diabetes among both adults and individuals. The main cause of obesity among children in the UAE is due to lack of physical activity and wrong selection of foods consumed.

The *lifestyle choices* have also changed drastically among children in the UAE. This is because more and more people in the UAE have a busy lifestyle due to which they are unable to concentrate on their health. People in the UAE are unable to engage in physical activities such as sports and other outdoor activities that would enable them to burn the excess fat, lose weight and maintain a healthy weight. This is especially the case among children as in the modern time they are mostly glued to their TV sets or video games which keeps them indoors

most of the time. Children in the UAE therefore do not indulge in a lot of physical activities. The social environment in the UAE also creates an atmosphere where maids and servants are easily available in the UAE making it unnecessary for children to get involved in household chores like buying grocery, mowing the lawn, cleaning the car at home or taking the garbage out. Moreover, children in the UAE are surrounded by technology and electronic gadgets which also reduce their physical activities. For example, children in the UAE take the lift instead of climbing the stairs. They can also sit at home and order for food and other things at home through phone rather than go outside to get it (Hanas, 2007).

The people in the UAE are highly unaware about the disadvantages of being overweight and not indulging in physical activities on a regular basis. Moreover, both children and parents are unaware that high level of obesity among children can result in diabetes even among younger children. They also have little knowledge about the several health complications that can be caused in children due to the onset of diabetes. This unawareness among parents prevents them to adopting a healthy lifestyle and nutritious diet for their children thereby protecting them from diabetes not only during their childhood but also when they grow up.

*Choice of food* consumed could be another crucial reason behind the spread of diabetes amongst UAE children. In the modern time, children in the UAE have a higher tendency to consume fast foods, oily foods, sweets and sweet carbonates which causes their weight to increase. Children in the UAE give less emphasis to fruits and vegetables as these are not as tasty as fast foods that available easily and quickly. Moreover, most of the fast food joints sell large portions of food which has resulted in the problem of overeating among children in the UAE. Furthermore, this problem is aggravated by the fact that parents in the UAE are often unable to spend a lot of time with their children (because of their work schedules and the fact that children spend a lot of time at school) due to which it makes it difficult for them watch the daily diets of their children (Hanas, 2007).

The *media* in the UAE also plays a major role in affecting the lifestyle of the people in the UAE. Children in the UAE are constantly exposed to western media

in the form of cartoons, TV shows, movies, advertisements and so on. The western media promotes fast food making it attractive for more and more children in the UAE. This has resulted in a level of consumption of fast food, sweets and soft drinks among children in the UAE. Moreover, this has also encouraged children in the UAE to adopt unhealthy eating habits such as eating while watching TV or eating irregular intervals.

The *school environment* also has a great impact on the health of children. School canteens are another medium through which children are adopting unhealthy eating habits. School canteens in the UAE sell food like ice creams, chocolates, cold drinks, burgers and so on which result in unnecessary weight gain among children. Furthermore, schools in the UAE also put increased pressure in terms of studies on children which prevent from engaging different kinds of sports activities.

## **2.9 Addressing Diabetes**

The increasing incidence of diabetes among children has raised concern worldwide among governments and health organizations. This has resulted in the formation of several diabetes related health organizations that focus on creating awareness among public about the prevention, control and treatment of diabetes. Examples of such organizations are International Diabetes Federation, World Health Organization, Canadian Diabetes Association, American Diabetes Association and so on.

### ***Addressing Diabetes in the UAE***

The Department of Health & Medical Services under the Ministry of Health has organized and funded several initiatives directing at improving awareness about diabetes among people and to promote ways of controlling and treating it.

Fighting diabetes and reducing its incidence in the UAE in the coming years has become one of the core objectives of the UAE Ministry of Health.

UAE Formal health minister Mr. Al Gatami, signed a contract in March 2009 to launch an extensive three year campaign to develop diabetes awareness among the people. "This campaign represents our commitment to the federal government strategy which promotes solid partnerships between government and private institutions to strive to better the wellbeing of our community and protect public health. The core objective of this initiative is to enhance awareness levels through education in an attempt to reduce disease incidence levels." (Morris, 2009). The campaign was considered highly important to the UAE region, since it has the second highest diabetes rate in the world. The main goals of this campaign is to reduce and manage diabetes incidence through education.

The campaign will start by targeting school children, using a concept labelled 'The Right Beginning' which will promote a healthier lifestyle within the school education system. In addition to "Regular screening, accurate filing and assessment of medical records will be given top priority in order to identify emerging risk factors in each child" (Morris, 2009).

In 2004, Mubadala Development Company conducted an agreement with the UK's Imperial College London for mutual cooperation in the fields of education, healthcare and research, (ICLDC, n.d).

After the agreement, Imperial College London Diabetes Centre was established in Abu Dhabi in 2006. The center provided the "highest level of specialized patient care from first diagnosis to the management of all the complications associated with diabetes." (ICLDC, n.d). In addition, the center will help conducting researches focusing on diabetes in the UAE. "One of the Centre's leading priorities will be to provide continuing education for health professionals and the general public" (ICLDC, n.d)

The ‘Diabetes. Knowledge. Action’ is a campaign that was organized by the Imperial College London Diabetes Centre (ICLDC) in Abu Dhabi and the Emirates Foundation. This campaign focuses on disseminating knowledge surrounding diabetes prevention, symptoms and lifestyle support activities. It also aims to help in preventing the rising cases of diabetes in the UAE. It aims at encouraging people to adopt a healthier lifestyle in order to ensure a longer life.

### ***Addressing the Younger Generation***

The government and health organizations in the UAE have also organized several initiatives in schools to target children and generate awareness among them about diabetes and the benefits of adopting a healthy lifestyle. This section aims at discussing the major events that have been conducted in the UAE for children in the past one year. However, schools in the UAE do not make any efforts on their own to increase awareness among children about diabetes and the ways in which it can be prevented.

The ‘I EAT RIGHT’ campaign is a part of the ‘Diabetes. Knowledge. Action’ campaign which targets visiting different schools and develop students’ awareness toward healthier diets. “They also teach children about how they can make small changes by choosing healthier snacks in their lunch boxes which enable them to control their weight and preventing them from getting diabetes in the future.” (ICLDC's I Eat Right, 2009). Within eight months the camping succeeded to go over 35 schools, and 4000 participants included students, teachers and parents. This campaign not only supports healthy diets but also encourages children to exercises regular through different physical activities.

“Under the global theme ‘1000 Cities, 1000 Lives’ and the sponsorship of Ambulatory Healthcare Services (AHS) SEHA, School Health Services (SHS), in cooperation with the Abu Dhabi Education Council (ADEC); conducted the Diabetes Awareness Campaign at 17 schools in Abu Dhabi City, Al Ain & Western Region. The entire campaign began in Abu Dhabi and Western Region

from April 4th 2010 till April 12th 2010 and in Al Ain from April 6th till April 8<sup>th</sup>, 2010. The activity was created to bring about awareness of Diabetes among school children.” (School Health Services, 2010)

Sharing the same objectives of the previous campaign, this campaign also aimed at rising children’s awareness to develop better and healthier lifestyle in order to prevent the spread of the diabetes among young Emirati in the emirate of Abu Dhabi.

## **2.10 Addressing Diabetes in Schools Using ELT Curriculum**

Addressing diabetes amongst government and health organizations were not enough. Collaboration between health and education authorities must occur in order to develop a coherent health education curriculum (Aggarwal, 2001). Therefore, to develop a wider awareness toward health issues the focus should be turned from accruing the illness to the understandings of health problems preventions. Including health issues in education is considered as a powerful instrument to achieve the goal of decreasing or even preventing diseases. By linking health education in the process of teaching and learning in schools, a change of young learners’ health behavior could be achieved. According to Leger (1999) “through connecting school environment and community, a greater range of factors which affect students health will have a better change being addressed than if only explored through classroom curriculum.” (Leger, 1999).

Students’ health issues could be assessed if a well designed program implemented within the curriculum as Larger (1999) indicates that “reference was often made to the role of schools as a useful setting to improve the health of young”. Through developing awareness amongst young learners we are determining the secured life of the people and the welfare of the country itself. As the idea is supported by many researchers, “the early learning goal states young children should be made aware of how surrounds them and helps them in their

everyday life and this can be started at a very early age." (Freeman & Freeman, 1998) . Accordingly, ELT young leaner curriculum learner curriculum would be a good opportunity to introduce new ideas to the primary students. Just like what happens in the class when children experience daily tasks and discussions which develop their awareness. As diabetes was indicated highly threatening among children, it is important our children be aware of the mechanisms of diabetes and have the opportunities to clarify and discuss such health issues. The main reason of choosing to develop diabetes awareness through the English language curriculum is mainly connected with the fact that the English curriculum includes many teaching and learning methodologies that would help in facilitating the students learning process. The ELT teachers who use the UAE Parade book are often familiar with those methodologies as they are declared in the teaching guide book. Unfortunately, other subjects might face difficulty in implementing effective teaching methodologies to convey the message of learning about diabetes. Another reason supporting developing diabetes theme through ELT is related to the fact that things in a new language are often memorable, and thus will reinforce learning in the first language of the learner.

### **Addressing health issues in UAE English primary curriculum**

In UAE school curriculum is often found to be narrowly convinced regarding health issues. Although diabetes among children have been recognized couple of years ago, and serious health campaign has been running officially in the current time, it fails when it comes to blending health with education. Our government schools are mostly emphasizing on filling the students with information and knowledge which s/he has to memorize, while the other learning processes are neglected. According to Aggarwal (2001) "education is a three-fold process of importing knowledge, developing skills and inculcating props interests, attitudes and values.". Thus having our students only imparting the information, produced a generation with limited attitudes and values toward health care. The development of useful skills is neglected, and there is insufficient emphasis on

developing the right health attitudes and values. Therefore, Rowling (1996) believed there should be more flexible framework provided rather than relying on a rigid type of activities and that's to avoid a curriculum that places "a bookish knowledge and rote learning makes inadequate provision for practical activities and experiences." (Aggarwal, 2001). Jakson argue (1994) that school health should shift from formal instructions to focus on generic health skills such as problem solving and media analysis.

New parade is the course book used to teach the English language in UAE government schools. Parade replaced the English for Emirates course book 8 years ago. New parade comprises nine thematic units. As we examine scope and sequence of units topic of the Parade curriculums from grade 1 to 5 (Appendix 1) we will find that the theme "health" are mentioned twice in the upper primary stage. The learning objectives placed in the unit of health are mainly targeting mainly the language with no direction to addressing a serious health issues of diabetes or any other health problem like obesity, smoking, etc (Appendix 2). Although the local needs call for developing the youth awareness toward diabetes, curriculum fails in meeting those needs. It appears there should be further objectives beside the language objectives in order to address diabetes. The learning objectives of the health topic in Parade should be more directed to be statements of changes to take place in our students, "Since the real purpose of education is to bring about significant changes in the students pattern of behavior." (Tyler as cited in Quinn, 2009). Agreed by Aggarwal (2001) who believes its crucial in order to accelerate awareness of diabetes among our students that a defined and clear educational policy is stated and included within our curriculum.

Generally, Parade book does not give the right opportunities for our learners to develop health awareness regarding diabetes. More efforts in the curriculum syllabuses need to be directed at including more about causes, symptoms, prevention, control and treatment of diabetes. It is suggested to develop the health syllabus in Parade curriculum, to have more focused activities on the topic

of diabetes. Developing a syllabus considered as the most suitable vehicle to get the message across the children.

A syllabus describes the most important elements that will be used in order to develop a framework or a course that provides the foundation for its focus and content, (Richards, 2001: White, 1988). In this case the health or diabetes syllabus should be developed as a way to reach a degree of fit between needs and the aims of the learners (as social being and as individual) and the activities which will take place in the classroom, (Nunan, 1999). In other words, developing a syllabus will help to facilitate the learner's learning process.

In order to develop diabetes awareness the syllabus need to focus on the content of diabetes. A content – based syllabus is defined as "One that is organized around themes, topics, or other units of content" (Richards, 2001). As the topic Health already included in the Parade government curriculum, the framework should include some lessons regarding theme diabetes. In order to meet the other language requirements of the curriculum the syllabus probably should not focus on the theme in isolation, however, it may combine grammatical, lexical items as well.

Many teachers may take developing such syllabus as time consuming, and do not meet the time guideline of delivering the units which is set by the ministry of education. Ignoring the fact that the developed framework of the health unit will still lead students for more development in language learning skills, by engaging them along the unit with activities that are involving and meaningful which meanwhile does emphasize on developing diabetes awareness.

### **III. Methodology**

This chapter declares the methods used when developing this research. Explaining the research design, the research approach, the methods of data collection and the ethical issues have been considered when collecting the data.

#### **3.1 Research Approach**

There are two different approaches that can be adopted to conduct research which are mainly qualitative and quantitative approach. The quantitative approach is selected in cases where the researcher needs figures and numbers to prove his point as these results enable the researcher to reach a definite conclusion and make proper recommendations. On the other hand, the qualitative approach to research enables researchers to get in-depth knowledge about a particular topic (Baker, 2003).

For the purpose of this report, the researcher used both qualitative and quantitative approaches. The tools used for qualitative research were observations and interviews and for quantitative research surveys were used for to obtain more data from the participants.

The research included 60 participants from four government primary schools in Dubai and they were labeled across the research as School A, school B, school C, and school D. All participants were selected from the upper primary level (grade 5). The majority of the respondents were males 75% as a balance of 25% were female students. An equal number of respondents were picked from each of the four schools whereby respondents from each school had an equal representation in the Study.

### **3.2 Methods of Data Collection**

Data for the report was collected through two methods: primary and secondary research. The primary research involved the collection of first-hand information (that has not been collected before) about a topic through surveys, interviews, focus groups, observations and so on. On the other hand, secondary research involved the collection of second hand information from journals, articles, magazines, internet, newspapers, etc. which represents research conducted by somebody else (Baker, 2003).

For this research, the secondary research was conducted by two methods. One of these methods is by reviewing various print media like journals, books, newspapers and magazines. The other method is by conducting online research on search engines like Google, Yahoo, etc. and online databases like Proquest, Emerald and so on.

#### ***Observations***

According to Bell, (1999) observing is being enabled to document and reflect on classroom interactions and events as they actually happen rather than what we think occur. It is a method by which an individual gathers direct data on process or behavior being studied.

In fact, observations are often preferred by many researchers because they provide them with an opportunity to collect data on a wide range of behaviors, to capture a great variety of interactions and to openly explore the evaluation topic. Although this method is concerned with being time consuming and may affect behavior of participants. It provided me with a holistic perspective on the situation being observed. Despite the drawbacks, I considered this to be an appropriate technique to use because it allowed me to learn about things I wasn't able to discuss through the interviews.

For this study, an observation was done in the four schools during the recess time to observe the contents of the canteens and the students' choice in buying from the canteen.

### ***Note Taking***

"Note Taking is a skill that you are likely to use during lectures, seminars, tutorials and perhaps even while preparing the groundwork for writing an report. Effective note taking involves making informative, brief, accurate, clear summaries, of the information you are listening to, or reading about. In order develop effective note-taking skills you need to: identify what purpose the notes will serve, be selective in what you record, and use an effective method for recording the notes" (Heffernan 2005).

For this report, notes were taken during health education classes to understand how it contributes towards creating awareness among students about healthy eating and avoiding the ailment of diabetes.

### ***Visual Studies***

The International Communication Association (2006) states that "visual studies seeks to enhance the understanding of the visual in all its forms -- moving and still images and displays in television, video and film, art and design, and print and digital media". As the main concern of this report is to develop students' awareness of diabetes through the ELT curriculum, an analysis of some visuals placed in the English curriculum course book were analyzed.

Some Visual study cases were also included through analyzing students' own drawings regarding their favorite food. "Case studies can provide very engaging, rich explorations of a project or application as it develops in a real-world setting" (Division of Research, Evaluation and Communication National Science Foundation, n.d).

## **Interviews**

Interviews provide very different data from observations. Macintryre (2000) defines interview as getting information from the respondents through face to face interaction. Interviews allow researchers to capture the perspectives of project participants (students), staff, and others associated with the project (principles, parents). In this study interviews were conducted with the students to find out the scale of their awareness about healthy/bad food. The use of interviews as a data collection method starts with a guess that the participants' perspectives are meaningful, and able to be made clear, and that their views could influence the success of the project. Another reason made me use this tool is to seek information that could not be obtained from observations.

## **Surveys**

Surveys were another tool to use in this study. Burns (1999) clarifies this tool as a form of collecting data where the same questions are asked to obtain information from a representative selection of respondents. This tool aimed to investigate students' attitude toward healthy food and exercise (Appendix 3). In addition, it aimed at understanding the level of health education available to students studying in primary schools in Dubai. In this case, the decision of using surveys had more advantages than using individual interviews. Briefly, because surveys were easier and less time consuming and it allows to gain responses of larger numbers of informants. They also insure confidently and anonymity more than interviews. It is true that bias in the result of the survey may arise as participants answers came from subjects trying to answer questions as a good person rather than the way they that reveals what they actually feel or believe. However, to decrease the bias and increase the reliability of the tool, students were asked not to write their names, so answers became more trust worthy. Identities of the students were protected when the results disclosed.

The surveys for this research were conducted both among students and teachers from four different schools. The number of students was 60 and the number of teachers interviewed was 20. The respondents for the survey were selected from Grade 5 in all the schools which implies that the age of the respondents is around 9-13 years.

### **3.3 Distribution and Collection Procedures**

The distribution and collection procedures adopted for this research were different for student surveys and teacher surveys. For the students the researcher visited four schools and carried out personally administered interviews among students to ensure a high response rate from the students and the fact that all the questionnaires were completely answered by the respondents. In this case the questionnaires were collected the same time after the respondents finished answering the survey.

In case of the surveys conducted with teachers the questionnaires (Appendix 4) were distributed among them while visiting the schools. These teachers were given a week time to complete the questionnaire. After a week the questionnaires were collected from by making personal visits to the selected schools.

### **3.4 Ethical Issues**

All research involving human subjects need consideration of ethical issues. The crucial question is "How can the research be conducted without neglecting the honesty, autonomy and self-respect of the research subjects being studied?" In order to secure the ethical issue of this study, students and the principals were sought permission for broader surveys and letters to use data gathered from the schools (Appendix 5). When conducting these tools questions of access, power, harm, deception, and confidentiality were carefully avoided. Subjects' identities

were protected so that information collected does not harm or embarrass in any way. Generally, principles would include "Maximizing good, minimizing harm, pursuing the truth and respecting persons" (Halsa, n.d).

This report aimed at guarding the privacy of the respondent by not disclosing their identity or any personal information about them. The questionnaires and interactions were developed in a way that it avoided having a negative impact on the self-esteem of the respondents. Moreover, participation in these surveys was voluntary in nature whereby none of the respondents were forced to participate in the surveys. The researcher has also ensured that no debriefing takes place during the research process whereby none of the respondents were eliminated from the research. The research ensured that it does not result in any physical or mental harm to anyone directly or indirectly related to the research process. Finally, the researcher ensured to the participants that the data presented in this report has not been misrepresented or distorted in anyway.

### **3.5 Reliability and Validity**

As Bell (2000) defines validity "it tells us whether an item measures or describes what its supposed to measure or describe". To ensure the tools validity Wolcott's and Guba's strategies (Mills 2003) were considered when developing the data tools. Wollcott's suggest talking little and listening a lot when conducting an interview. According to Mills (2003) "When conducting interviews, asking questions, or engaging children, parents and colleagues in discussions about the problem being studied ought to carefully monitor the ratio of listening to talking".

In addition, Guba's criteria was followed in order to ensure validity to some of the research data tools. As they briefly suggest practicing validity "Practice triangulation, whereby a variety of data sources and different methods are compared with one another to cross-check data." (Mills, 2003). Burns (1999) also defines triangulation as a method to gather multiple perspectives on the

situation being studied using different data tools. For instance, to collect information regarding students attitude toward healthy food in the examined schools tools such as observations and interviews were used.

Reliability is another component that the researcher needs to consider about the data retrieved from the tools. Bell explains that reliability is "the extent to which a test or procedure produces similar results under constant condition on all occasions." (2000). In fact, as a researcher of this study, I cannot ensure that the information I gained from one tool is reliable because it depends greatly on the respondents and the way I expect them to be honest with the information they provide. Indeed, that's why different tools were used for each research question to gain similar results as much as we can.

Personally, I believe survey results are sometimes suspect because of their reliance on self-report, which may not provide an accurate picture of what is happening because of the tendency, intentional or not, to try to give the "right answer". Thereby, it was helpful to increase the trustworthiness we gain from respondents by informing them before collecting the data that the main aim of these tools was to gain information not to judge them. As mentioned previously, informing respondents that their identities will be protected to increase their confidentiality with the answers they give.

## **V. Research Findings and Results and Analysis**

The research data were retrieved from the different tools. As the researchers included surveying 60 students participants and 20 teachers from four government primary schools in Dubai and they were labeled across the research as School A, school B, school C, and school D. All participants were selected from the upper primary level (grade 5). The majority of the respondents were males 75% as a balance of 25% were female students. An equal number of respondents were picked from each of the four schools whereby respondents from each school had an equal representation in the Study. Different information were also gathered during observing the break time in the four schools. Other data was also collected from some teachers in the selected schools. All data retrieved were aiming at identifying what sort of problems young leaner's have with their eating and lifestyle patterns, as we also needed to identify how school and teachers' contribute in developing diabetes awareness.

### **4.1 Indicators of Students Risky Health Habits**

The research results has revealed that students in the observed schools have adopted a number of poor eating and lifestyle habits that increases their chances of obesity and exposes them to the risk of the diabetes. As some of the questions used in the survey targeted students eating habits, many students revealed they skip their breakfast and thus lead them to eating big quantities at school break. Consequently, students become really hungry by the school break which leads them eventually to buy fast foods instead of the healthy foods from the school canteen. The statistics (Appendix 7 ) retrieved from the surveys revealed that out of the three meals in a day students would eat their lunch and dinner on time, however some of the students were likely to skip their breakfast. As the number was , it was noticed that 82% of the total students in the four schools were used to eating three meals in a day whereas the balance 18% tends to skip their breakfast.

It was also found that out of the three meals in a day children are most likely to eat fast food in the night for dinner. The results from the survey showed that only 60% among the four schools would eat homemade healthy dinner while 40% revealed they would eat fast food during dinner (Appendix 8). This could be because fast food is easily available in Dubai. Moreover, parents in Dubai also avoid cooking lengthy meals for dinner regarding their busy lifestyle. Accordingly, the fast food consumption of students causes them to become obese thereby increases their risk of having diabetes.

In addition, the survey highlighted the range of students' engagements in outdoor or physical activities like playing games with friends, buying groceries, helping with household chores, etc. The results of the survey (Appendix 9) declared that 51% of the students always engage themselves in outdoor activities, in contrast to 33% who would rarely engage in such activities. Other 15% students answered they would sometimes engage themselves in outdoor activities. The reason behind the humble contribution to the outdoor activities could be related to the increased consumption of the fast food which makes children lazy and lethargic in nature. The minimum involvement of children in outdoor activities caused them to burn fewer calories than they consume which exposes them to risk of obesity and ultimately diabetes.

The number showing the frequency of fast food consumption by the students was also interesting (Appendix 10). Students' surveys disclosed that 45% of the students consume fast food on a daily basis, 30% consume fast food once in two days, while 18% consume two times a week and 7% consume fast food once a week. It seems that our students at a young age are used to consuming fast food on a regular basis. This does not only increases the daily calories intake of children but also causes them to be lethargic which would be another fact that exposes our children to the risk of diabetes in future.

The visual studies were conducted by asking students to draw pictures of their favorite food. The results showed that majority of the students from three schools namely School B, School C and School D drew pictures of fast foods like ice

creams, donuts, French fries, candies, burgers, chips, pizza, fried chicken, and so on. However, the students from School A were drawing a mix of both healthy and fast foods in their drawings. Majority of the students from this school included healthy foods in their drawings. This shows that the students from School A are consuming both healthy foods and fast foods but are increasingly consuming fast foods.

## **4.2 School Lack of Responsibility toward Health Education**

This section highlights the results of the teacher surveys and aims at understanding the level of support and information provided by the schools and teachers in the primary schools in Dubai to prevent and address health issues like diabetes.

Respondents were selected from the four different schools. An equal number of teachers 5 were picked from each of the four schools whereby respondents from each school had an equal representation in the study. The chosen four schools were School A, School B, School C and School D.

As we're trying to get the number of schools providing health education to their students in order to understand how concerned are the schools about the health of students and whether they work towards preventing their students from potential health problems. The results (appendix 11) of the survey that among the teachers from all the 4 schools, 50% of the teachers believe that their school provides some kind of health education to the students and 50% believe that their school does not provide any kind of health education to their students. Moreover, out of all the schools, School A is the only school that has a program dedicated towards health education which shows how much the school cares about the health of its students. This also shows that the school realizes its responsibility towards the health of its students.

In order to gain a direct information from the school to understand how concerned are the schools about the health of students and whether they work towards preventing their students from the risk of diabetes. Teachers were asked if they do discuss with the students diabetes symptoms and its risk on one's life. The results from the survey (Appendix 13) show that 50% of the teachers have informed their students about the risk of diabetes and 50% have not discussed the issue of diabetes with their students in class. Accordingly, it was important to know whether those schools emphasize informing about the ways of avoiding diabetes as they've gone through talking about its risk. Generally, the results clarified that 65% of teachers have not informed their students about avoiding diabetes in anyway inside the class, while 35% have contributed to their students awareness regarding avoiding diabetes.

As the main cause of diabetes is related to the large consumption of fast food, it was crucial to find out if the selected schools have informed their students about the disadvantages of fast food. This shows if the schools are encouraging students to eat healthy and preventing them from consuming high quantities of fast food in their diet. It was quite shocking that only 40% of the teachers have informed their students about the disadvantages of fast foods and majority of the teachers (60%) have not informed their students about the disadvantages of fast foods (Appendix 14). On the other hand some teachers stated that children are likely to get attracted to fast food and it would be unrealistic to ask them to stop eating fast food altogether. Therefore, the teachers worked towards encouraging students to limit their fast food consumption to one or two times in a week. Although, health topic is mentioned twice in Parade ELT curriculum in two different grades, still many teachers haven't used that theme to promote awareness of diabetes in an effective way.

Through observing couple of science classes and health education classes conducted by the selected schools it was noticed that out of all the schools, School A is the only school that has a special subject dedicated towards health education which shows how much the school cares about the health of its

students. As the school realizes its responsibility towards the health of its students. However, the other schools believe that health education is provided to the students by teaching them about different health problems in Science subjects. This information is often not enough for the students and does not enable to understand concepts of diabetes, obesity and balanced diet.

To analyze if the schools are paying attention to the eating habits of their students and encouraging them to have a balanced diet with more fruits and vegetables. Teachers were asked if they promote for healthy diets in any way. The results (Appendix 15) from the survey show that among the teachers from all the 4 schools 50% of the teachers have informed their students about the advantages of having a balanced diet and 50% of the teachers have not informed their students about the advantages of having a balanced diet.

The participated schools were observed during the break time to collect data on how schools are paying attention to the eating habits of their students and whether they are taking the responsibility to restrict the fast food consumption of their students. Overall, the results (Appendix 16) from the survey show that among all the 4 schools 65% of the schools sell fast food in their canteen and only 35% of the schools refrain from keeping fast food in their canteens.

Also, observations revealed that the canteen of School A sold healthy food items like fruits, corn, sandwiches, fruit juices (mango/orange juice), water, jelly, chocolate caramel, and so on. The canteen of School B sold several fast food items like burgers, hot dogs, noodles, French fries, pizza, sandwiches, chocolate donuts, candies, chips, soft drinks and so on. The canteen of School C sells fast foods like chocolate bars, chips, soft drinks, biscuits, burgers and so on. However, the canteen of School D sells fast foods like soft drinks, chocolate bars, chips, and so on. The results showed that out of all the schools, School A is the only school which refrains from selling any kind of fast food in their canteens.

In order to find out the school role in involving students' in outdoor and physical activities in order to reduce the chances of becoming obese and getting diabetes.

School administrations were interviewed to find out about the different outdoor activities developed by them. As it was declared that School B does not organize any outdoor activities like zoo visits, mall visits, school cleanup campaign and so on. This is because only 20% of the teachers have agreed that they work towards increasing the physical activities of their students and the balance 80% do not consider it important to involve students in physical activities. In case of School C, the situation is somewhat similar as only 40% of the teachers work towards engaging their students in outdoor activities and the balance 60% do not concentrate on this aspect. In case of School D, the situation is same as only 40% of the teachers work towards engaging their students in outdoor activities and the balance 60% do not concentrate on this aspect. On the other hand, in case of School A, the school and the teachers make an active effort towards organizing outdoor activities on a bi-monthly basis to encourage their students to be physically active. This is because 80% of the teachers have stated that they work towards involving their students in outdoor activities and only a minority (20%) is unable to organize regular outdoor activities because of increased work pressure. Moreover, teachers' survey revealed that among the teachers from all the 4 schools only 45% of the teachers work towards involving their students in outdoor activities and the balance 55% do not focus on organizing any outdoor activities for the children.

### **4.3 Students Lack of Health Awareness**

The interviews with the students highlight that most of the students did not know about words like obesity, diabetes, balanced diet and calories. This was mainly in the case of students from School B, School C and School D. However, majority of the students from School A knew the meaning of these words. These students were also able to explain what steps they should take to live a healthy life. However, this did not stop students from consuming fast foods as majority of them consumed fast food at least once in two days or every day.

The interviews with the teachers highlighted the attitude of the schools towards the health of its students. The interviews revealed that only the management of School A and School D were concerned about the health of their students. This resulted in the emphasis on organizing increased outdoor activities, encouraging students to get involved in sports activities and teaching them about the benefits of having a balanced diet.

In summary, the analysis of the research results has revealed that students studying in Dubai schools have adopted a number of poor eating and lifestyle habits that increases their chances of obesity and exposes them to the risk of diabetes. The data retrieved from the different tools declared a weak policy toward health education and diabetes awareness in schools. It seemed like schools aren't aware of their role in promoting diabetes instead of preventing it.

## **IV. Conclusions and Recommendations**

### **5.1 Reflection**

The research results highlighted a number of poor eating and lifestyle habits among children in the UAE that increases their chances of obesity and exposes them to the risk of diabetes. However, the social environment of the country is responsible to a large extent for this increased incidence of diabetes among the younger generation in the UAE (Rose, 2007).

The analysis of the research shows that the poor eating and lifestyle habits adopted by children in the UAE are caused due to a number of factors in social environment of the country.

There is an increasing trend in Dubai for *dual income families* whereby both the spouses work outside. This causes parents in a family to become busy whereby they are unable to pay enough attention to their children and take care of their eating habits and eating schedules. This results in children eating their meals at odd timings and eating the wrong kind of food whenever they get hungry (Muslim, 2008).

The people in Dubai also have an *active social life* which results in parents (especially mothers) becoming busy even if they are working outside. This also results in parents paying less attention to the eating habits and eating schedules of their children. In such cases children are likely to consume fast foods on a frequent basis and in large quantities (Mathew, 2001).

Another factor which helped in developing unhealthy lifestyle is related to the depending on external help from house assistants. Active working and social life of parents in Dubai increases their dependence on external help from maids for taking care of the needs of their children. Therefore, under the guidance of the maids children are allowed to make the choice of their foods and tend to consume more fast foods because of its taste. The fact that these foods are easy and quick to prepare causes maids to cook them instead of healthy food items

like rice, vegetables etc (Muslim, 2008). In other cases where families weren't unable to afford maids the parents are so busy that the mothers tend to order outside food more frequently or cook fast foods as they are easy and quick to prepare. This encourages parents to allow their children to consume increased quantities of fast foods without realizing its harmful effects on calorie intake (Muslim, 2008).

The *climate* of UAE is hot whereby most of the months it is hot and humid outside. This makes it difficult for children to go outside and play especially during the months of June, July, August and September. Therefore, children prefer to remain indoors in the air conditioner and are less likely to indulge in outdoor activities. This makes children lazy and prevents them from burning more calories which ends up increasing their chances of becoming obese and having diabetes (Mathew, 2001).

In addition to the fact that UAE is technologically advanced country whereby there are a number of gadgets (like washing machine, iron, vacuum cleaner, and so on) available at the disposal of families which reduces their daily work to a large extent. Moreover, the easy ownership of cars also makes it unnecessary for children to walk long distances when going outside. This causes children to do less physical work and be relaxed in the comfort of their homes. The children in UAE therefore burn fewer calories which exposes them to the risk of obesity and diabetes.

The children in UAE also have several options for indoor entertainment at their disposal like TV, video games, computer games and so on. This causes children to do less physical work and be relaxed in the comfort of their homes. Thus may lead to burn fewer calories which exposes our children to the risk of obesity and diabetes.

The general level of health awareness is low in UAE among both parents and children. This is because the media and schools do not work together functionally towards improving the level of health awareness among both parents and

children. Therefore, children and parents are unaware of the negative effects of consuming large quantities of fast food and soft drinks. They also do not work towards explaining their children the advantages of having a balanced diet. This increased fast food consumption of students causes them to become obese thereby increasing their risk of having diabetes (Danowski, 1979). Both the parents and children are not aware of the risk of diabetes and how it can be avoided by adopting a healthy lifestyle. This causes children to eat all sorts of fast foods and not indulge in enough physical activities which causes them to be overweight and increases their risk of having diabetes (Morris, 2009).

The fact that our country now consists of several fast food companies that have opened their outlets in every look and corner of the cities. This makes fast food easily accessible to the children. Moreover, most of these fast food companies work towards targeting children which increases their popularity among children thereby causing children consume fast food more frequently (Morris, 2009).

The research calls for the development of awareness through ELT curriculum particularly, as the reason could be related that UAE is largely exposed to western media through movies, television, newspapers and the internet. The western media works towards popularizing fast food among children without mentioning its negative effects on the health of children. This causes children to increasingly get influenced by western media icons and adopt fast foods without realizing its negative effects on calorie intake. Our schools do not work towards providing proper health education to the younger learners which would enable students to understand the importance of a healthy lifestyle. Students therefore are unaware of the negative effects of having fast foods, the importance of having a balanced diet and the advantages of being involved in outdoor or sports activities on a regular basis. There are few schools like Zayed Bin Sultan School that have made health education a compulsory subject within the school curriculum.

Unlike many other schools I have observed in previous teaching years, They are encouraging students to consume fast foods by firstly not informing them about

the potential dangers of consuming large quantities of fast foods on a regular basis. Secondly, the schools themselves are selling different kinds of fast foods in their canteens which encourage students to eat more fast foods on a regular basis (Muslim, 2008).

Another fact that contributes on scaling up the number of diabetes within our youth that many government schools do not involve students in both outdoor and sports activities. This is because schools do not organize a large number of outdoor activities as part of their routine. Mainly, selected students who are already have been chosen to present the school in some sport competitions and they are often involved in outdoor activities. They do not make it mandatory for students to get involved in at least one sports activity to keep them physically active. There are few schools like Zayed Bin Sultan School makes it compulsory for all the students to participate in at least one sports activity.

Only few government schools have succeeded in developing their own health educational program which will help in developing awareness amongst young learners. From observing different government schools in the past 7 years, I believe that school health has difficulty directing health programs within the curriculum, which declare clear health outcomes at the end of the program. Although both health and education ministries agreed on the importance of school health, our health ministry seems working in isolation regarding the health problems, especially when it comes to the problems arise “diabetes”.

Legger (1999) suggests that framework should have the goal of “changing health behavior by promoting individual’s own health practices in nutrition to behavior that involved advocacy by developing awareness, empowerment by developing knowledge and skills to make positive health choices, and support by fostering social norms and systems response to the health needs.” For instance, the English curriculum of the government school at the primary stage, places health education by only emphasizing on teaching vocabulary with the absenteeism of the three directions mentioned previously (advocacy, empowerment, support). Unfortunately, there is a little integration in health themes.

The schools can introduce a subject on health education which would provide them basic information about several chronic diseases. There should be more focus on diabetes and highlight the seriousness of the issue in the UAE. This subject should focus on providing information to students about the causes of diabetes and how it can be prevented by adopting a healthy lifestyle and right eating habits. The subject should also aim at targeting children who are already suffering from diabetes to inform them about how diabetes can be controlled and treated in the right way (McGlynn, 2000).

The English curriculum should ensure that students are exposed to terms related to diabetes such as balanced diet, nutritious food, fatty foods, carbohydrates, glucose levels and so on. This would enable them to understand the subject clearly and would enhance their interest in the topic thereby resulting in students discussing these topics amongst their friends and family. This is because lack of knowledge on certain terms gives students the impression that this is a complicated issue which is difficult for them to understand whereby they end up ignoring the topic and avoid getting involved in discussions related to the topic. In addition, there should be more emphasis in the curriculum on having students to adopt the right eating behavior and make the right lifestyle choices. This can be done by including eating and lifestyle tips in the health topics of Parade curriculum. Overall, the school curriculum can enable students to adopt the right attitude towards their health which would enable them to prevent diabetes in the long run by maintaining a healthy weight (Danowski, 1979).

## **5.2 An ELT Teaching Framework**

Through an effective framework we can also teach students about the dangers of diabetes and how it can be prevented through hidden messages such as stories, pictures, anecdotes, information about famous personalities and so on. The stories used by students to learn new vocabulary or practice their reading skills should include health topics. The teachers can also encourage the use of

pictures that show children eating healthy food rather than consuming fast food. Teachers can also inform students about famous personalities who work hard to maintain a healthy weight by adopting the right eating habits and making the right lifestyle choices (Rimm and Eric, 2004).

In the developed framework (see appendix 17 ), is more to be defined as topic based syllabus. However, different language elements were included as its very important this syllabus is connected to the other syllabus in the Parade Grade 4 ELT curriculum. Indeed, it combines grammatical, lexical and task based items as well. Many activities and tasks were included to ensure students get to understand diabetes, its symptoms, ways of avoiding it. As mentioned in previous sections that framework should have the goal of “changing health behavior by promoting individual’s own health practices in nutrition to behavior that involved advocacy by developing awareness, empowerment by developing knowledge and skills to make positive health choices, and support by fostering social norms and systems response to the health needs.” (Leger, 1999).

Other different teaching strategies were listed in the developed framework in order to provide the young learners with the appropriate ways to acquire and learn the language besides the concept of developing their knowledge toward diabetes. Some of teaching methodologies used within the framework discussions, stories, group activities, and guest speakers.

Through the developed framework students could be exposed to different information about the dangers of diabetes and how it can be prevented through hidden messages in the story included. The *story* could also be used to introduce the new vocabulary like junk food, healthy food, balanced diet, etc. Class discussion is one of the most effective strategies used when developing the syllabus. As the children discuss the ideas within groups or with their peers, they are facilitated in choosing and focusing their topic. *Guest speaker* methodology was also included in the framework to give students the chance to ask others for real information giving them the opportunity to make real conversation with people outside the classroom. Consequently students become more willing to

talk and more enthusiastic about their lesson and absolutely that will increase the amount of students involvement in the developing awareness process.

### **5.3 Limitations**

This study did not give focus on both Type 1 and Type 2 diabetes whereby it emphasizes more on Type 2 diabetes rather than Type 1. The study mainly focuses on understanding the causes, solutions and prevention for Type 2 diabetes as this type is the most common one amongst UAE children. In addition, not a lot has been written specifically about covering health issues in the young learner curriculum, so this made researching the subject quite difficult.

Moreover, the sample size chosen for this project is very small which are only 60 students and 20 teachers. This sample size is relatively small to make concrete conclusions about all the children studying in the UAE. Another important factor is that this study has only been conducted on Emirati children from a certain age group. This would make it difficult for the researchers and the reviewers of this study to make any conclusions about the lifestyle of children in the UAE. However, this study has enabled the researcher to identify the main issues and causes that could reduce the incidence of diabetes among children in the UAE. Furthermore, it has been realized that further research needs to be conducted among children from various nationalities and age groups to understand the reasons for the high incidence of diabetes in the UAE.

### **5.4 Recommendations**

In conclusion, the research conducted among schools in the UAE has provided great insight into the lifestyle and social factors that expose children in the UAE to the risk of diabetes at a very young age. These factors are unavoidable to a

large extent. However, the effect of these factors can be minimized by increasing the awareness of both children and parents about diabetes and the ways of avoiding it through developing a specific framework within the ELT curriculum that targets the issue. The lack of awareness is one of the major reasons for rising rates of diabetes cases in the country. However, proper health education provided by the schools in the UAE could help the government raise awareness among both children and parents. This is because the school curriculum is both an important tool and a medium through which the government and medical authorities could generate awareness among young children about the risk of diabetes. By discussing health issues in both the L1 and the L2, the message is reinforced.

The researcher has therefore recommended the solutions to be implemented by the UAE schools in order to reduce the incidence of diabetes among children and help those that are already suffering from the ailment. Through working towards providing health counseling for overweight and diabetic children to both the parents and the children. This would enable obese children to be aware of the risks of diabetes. These students would be able to control their weight by adopting the right eating and lifestyle habits thereby preventing them from the risk of suffering from the ailment in the future (Morris, 2009). There should be more collaboration between school and home. The schools in the UAE and parents together should work towards encouraging children to minimize their fast food consumption. This can be done in two ways: one by educating the children. The second method is by selling healthy foods instead of fast foods in their canteen (Morris, 2009). The schools in the UAE should work towards informing students and their parents about diabetes and the ways in which it can be avoided by the students. This would encourage students to adopt healthy lifestyle and eating habits thereby preventing them from the risk of diabetes (Muslim, 2008). The schools in the UAE along with the parents should work towards encouraging students to eat at regular intervals of time as this will reduce their food cravings and prevent them consuming fast food (Muslim, 2008).

Most importantly, the schools in the UAE should work towards providing health education as a compulsory subject to all its students in both L1 and L2. This would enable students understand the importance of a healthy lifestyle, the negative effects of having fast foods, the importance of having a balanced diet and the advantages of being involved in outdoor or sports activities on a regular basis.

## **5.5 Conclusion**

Therefore, it can be concluded that the children in UAE have adopted poor eating and lifestyle habits that increases their chances of obesity and exposes them to the risk of diabetes. This is mainly due to the increased level of globalization and advancement in the country. The younger generation in the UAE has therefore become highly dependent on machines, gadgets and equipments which has reduced their level of physical labor thereby causing them to burn fewer calories than they consume (Shammaa, 2008). Moreover, globalization has exposed the UAE to a number of international brands from all industries. This has also attracted the attention of the global fast food industry towards UAE causing a number of fast food companies to open their outlets in the UAE. The children in the UAE are therefore exposed to a large variety of fast foods causing them to increasingly consume high calorie non-nutritious food in large quantities. This increased consumption of fast foods among children in the UAE leads them to obesity and ultimately diabetes.

The UAE curriculum fails to provide enough health education to students in order to enable them to lead a healthy life. The curriculum objectives are mainly focusing on teaching themes. Although the health theme is mentioned in later stage grade 4 and 5, however the unit is very shallow and mainly focus on vocabulary and language structure (Appendix 18). By including health education in ELT curriculum, as suggested in the developed framework (Appendix 17), it would help to educated both children and parents. The UAE government and health authorities should therefore work towards increasing the awareness of both children and parents about diabetes and the ways of avoiding it by providing them with proper health education. This lack of awareness is one of the major reasons for rising rates of diabetes cases in the country. However, proper health education provided by the schools in the UAE could help the government raise awareness among both children and parents. This is because the school

curriculum is both an important tool and a medium through which the government and medical authorities could generate awareness among young children about the risk of diabetes. With the help of proper health education the schools in UAE can help students in changing their lifestyle and eating habits in a way that would ensure they have healthy life in the coming future. The change in the lifestyle and eating habits of children is the only long term solution that should be adopted by health authorities as it ensures effective prevention from the ailment of diabetes (Mathur, 2009).

The schools should therefore work towards implementing the above recommendations as this would enable them to improve the health awareness among students and keep them better informed about the diabetes ailment so that they are better equipped to fight it.

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# **APPENDICES**

# **Appendix 1**

**Scope and Sequence for Parade Themes**  
**Ministry of Education**  
**English Language**

Periods	themes	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Semester 1	1	School	School	School	Daily activities	Oneself and one's family
	2	Family members and rooms in a house	Family members	Outdoor activities	Family	Daily and weekend activities
	3	Parts of the body	Parts of the body	Home and family	Places to live	Food
Semester 2	4	Clothing	Clothing	Buildings and places	Animals and habitats	Your health
	5	Toys	Rooms and furniture	Workers and vehicles	Weather and clothes	Dinosaurs
	6	Community helpers and their vehicles	Animals	Daily routines	The senses	Then and Now
Semester 3	7	Play ground equipment and activities	Parties	Food and drink	Meals and food	Holiday and future plans
	8	Pets and zoo animals	Toys	Animals and actions	Healthful habits	Hobbies and sports
	9	Parties and food	Outdoors activities	Months and parties	Entertainment (T.V and movies)	Puppet shows

# **Appendix 2**

# **Appendix3**

### **Survey for studying about Diabetes**

This Survey aims at identifying which lifestyle factors are prevalent among school students that could expose them to the risk of diabetes in the future. This survey is conducted for academic purposes and the results of this survey will only be revealed to the relevant academic authorities.

#### **Respondent Information:**

Q1) Gender:  Male  Female

Q2) Class: \_\_\_\_\_

Q3) Age: \_\_\_\_\_

Q4) Name of your school: \_\_\_\_\_

Q5) Do you have breakfast every day? (Please put in a tick in the box that matches your answer)

Always	Sometimes	Rarely

Q6) What do you usually have for breakfast? \_\_\_\_\_

Q7) Do you have lunch every day? (Please put in a tick in the box that matches your answer)

Always	Sometimes	Rarely

Q8) What do you usually have for lunch? \_\_\_\_\_

Q9) Do you have dinner every day? (Please put in a tick in the box that matches your answer)

Always	Sometimes	Rarely

Q10) What do you usually have for dinner? \_\_\_\_\_

Q11) Do you buy food from the canteen? (Please put in a tick in the box that matches your answer)

Always	Sometimes	Rarely

Q12) What do you usually buy from the canteen? \_\_\_\_\_

Q13) Following is a list of words; please tick the words for which you know the meaning?

- Obesity
- Diabetes
- Fast food
- Balanced Diet
- Nutritious Food
- Calories

Q14) At home do you play or do any outdoor activities? (Please put in a tick in the box that matches your answer)

Always	Sometimes	Rarely

Q15) What is favorite sport/activity at school? \_\_\_\_\_

Q16) How often does your school conduct medical check-ups for you?

- Once in a month
- Once in three months
- Once in four months
- Once in six months
- Once in a year
- Others, please specify \_\_\_\_\_

Q17) How often do you consume fast food like chips, burgers, French fries, chocolates, ice creams, pizza, soft drinks (Coca Cola, Pepsi, etc.) and so on?

- Everyday
- Once in two days
- Two times a week
- Once a week
- Once in two weeks
- Once in three weeks
- Once in a month
- Others, please specify \_\_\_\_\_

Q18) Do you prefer going outside and playing with friends OR staying at home and getting involved in indoor activities like playing video games, watching TV, etc.? Give reasons for your answer \_\_\_\_\_

Thank you for sparing your time and effort for completing this survey.

# **Appendix 4**

### **Questionnaire for studying about Diabetes**

This questionnaire aims at identifying which activities are conducted by schools/English language teachers in the UAE to increase awareness among students about the risk of diabetes.

This questionnaire is conducted for academic purposes and the results of this survey will only be revealed to the relevant academic authorities.

#### **Respondent Information:**

Q19) Gender:       Male       Female

Q20) Which Grade you are teaching:       grade 4       grade 5      others: -----

Q21) Does your school provide health education to students informing them about how to lead a healthy life?

Yes       No

Q22) Does your school work towards informing students about the risk of diabetes and how they can avoid it?

Yes       No

Q23) Does your curriculum provide health education to students?

Yes       No

Does your curriculum work toward informing students about the risk of diabetes and how they can avoid it?

Yes       No

Q24) Do you provide activities to your students related to health issues – diabetes in particular?

Yes       No

Q25) What kind of food is sold in the canteen of your school? Does this include fast foods?

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Q26) Does your school make it mandatory for all students to indulge in outdoor activities?

Yes                     No

Q27) Does your school make it mandatory for all students to participate in sport/activity at school?

Yes                     No

Q28) How often does your school conduct medical check-ups for you?

- Once in a month
- Once in three months
- Once in four months
- Once in six months
- Once in a year
- Others, please specify \_\_\_\_\_

Q29) Do you inform your students about the negative effects of having fast food?

Yes                     No

Q30) Do you inform your students about the benefits of having a balanced diet?

Yes                     No

Thank you for sparing your time and effort for completing this questionnaire

# **Appendix 5**

I'm seeking your permission to conduct my research at your school to fulfill the requirements of the Master of Education studies at the British University in Dubai (BUID).

The research will focus on developing a framework that could be integrated with the English curriculum of the primary education in the UAE in order to develop students' health awareness about diabetes.

The main reason of our visit is to investigate students' health habits through observation and surveying 20 students of grade five.

I will ensure that all the information will only be used for research purposes. I will also guarantee the participants' anonymity as none will be mentioned nor will the school name or students. I will be pleased to share the result of my study with you.

Thank you

Kholoud Al Mulla

يسعدني ان اتوجه الى مدرستكم لمنحي الاذن لاقامة دراسة البحث الخاصة بدراسات الماجستير التابعة للجامعة البريطانية في دبي (BUID) .

تتضمن الدراسة تطوير منهج دراسي يدمج مع منهج اللغة الانجليزية يهتم بتعزيز وتطويروعي الصحي لدى اطفال المرحلة التاسيسية في دولة الامارات بما يخص مرض السكري.

والغرض الرئيسي من زيارتنا لمدرستكم هو التحقيق في السلوكيات الصحية الممارسة من قبل الاطفال. ونود فقط حل اسئلة هذا البحث من خلال المشاهدة والملاحظة واكمال الاستبيان الذي يهدف طالب من الصف الخامس.

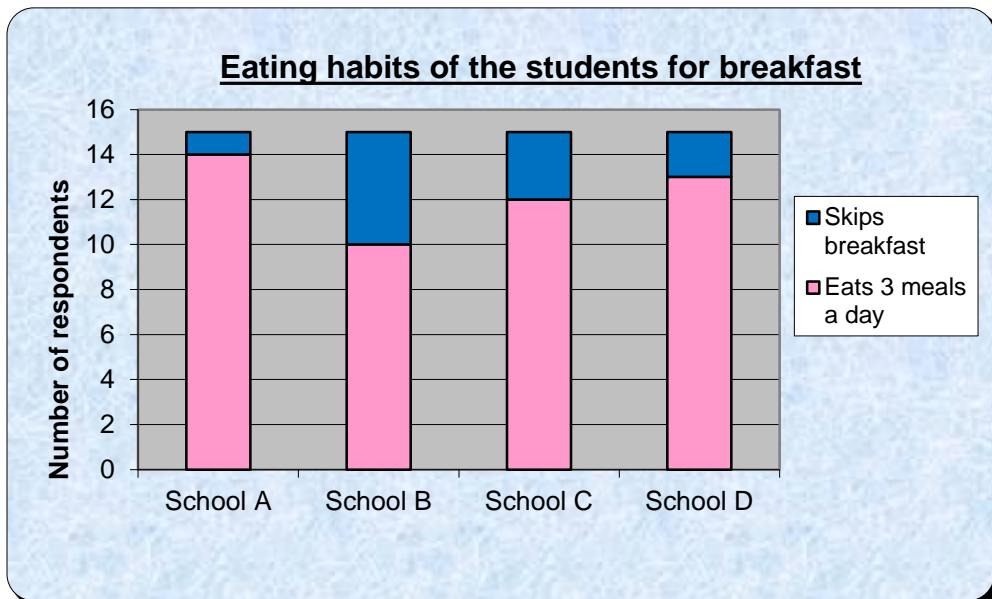
نحيطكم علما بان هذه المعلومات سستخدم لغرض التقييم للدراسة فقط. وسوف تعالج هذه المعلومات بسرية تامة دون ذكر اي اسم ساهم في الدراسة بما فيها اسم المدرسة ، أو الطالب. سأكون سعيدة لمناقشة نتائج هذه الدراسة معكم عند الانتهاء من هذه الدراسة. وأشكركم على حسن تعاونكم.

خلود الملا

# **Appendix 6**

# **Appendix 7**

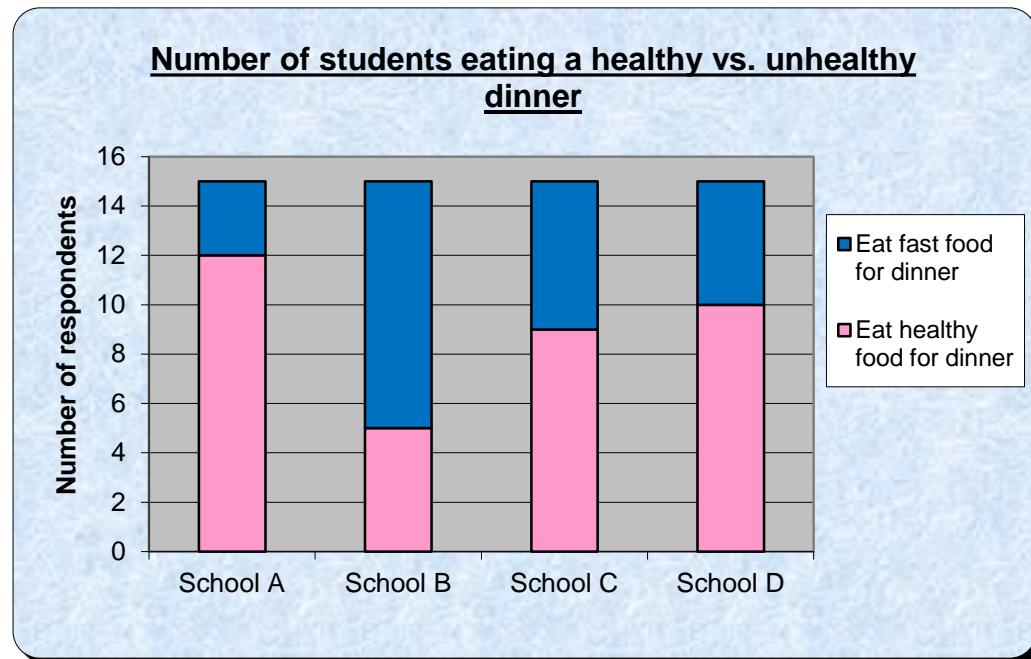
Graph 1 – shows the eating habits of the students for breakfast



The graph highlights the eating habits of the students while dividing them according to their school. The research shows that out of the three meals in a day all the students surveyed eat their lunch and dinner on time however some of the students are likely to skip their breakfast. The results of the survey show that in School B, not all the students are used to having all the three meals in a day. This is because 66.7% of the total students have all the three meals in a day whereas the balance 33.3% tends to skip their breakfast. However, in School C, the situation is somewhat better as majority of the students (80%) have all the three meals in a day whereas the balance 20% of the students usually skips their breakfast. In the next school, School D, 86.7% of the total students have all the three meals in a day whereas the balance 13.3% tends to skip their breakfast. Finally, the students in School A are less likely to skip their breakfast because 93.3% of the students in this school eat all the three meals in a day and the balance 6.7% of the students has the tendency to skip their breakfast. Overall, the results show that among the students from all the 4 schools 81.7% of the students are used to eating three meals in a day whereas the balance 18.3% tends to skip their breakfast. Out of these students the ones from School A and School D are less likely to skip their breakfast.

# **Appendix 8**

Graph 2 – shows the number of students eating a healthy vs. unhealthy dinner



The results of the survey show that students of School B are more likely to eat fast food for dinner as 66.7% of the students eat fast food whereas only 33.3% eat healthy food for dinner. However, in School C, the situation is somewhat better as majority of the students (60%) eat healthy food for dinner and the balance 40% of the students eat fast food for dinner. In the next school, School D, 66.7% of the students eat healthy food for dinner and only 33.3% eat fast food for dinner. Finally, in School A the students are more health conscious as 80% of the students eat healthy foods like rice, vegetables, etc. for dinner and only 20% eat fast foods like burgers, French fries etc. Overall, the results from the survey show that among the students from all the 4 schools only 60% eat healthy food for dinner and the balance 40% are eating fast food during dinner. Moreover, out of all the schools the students from School A are used to eating healthy food during dinner.

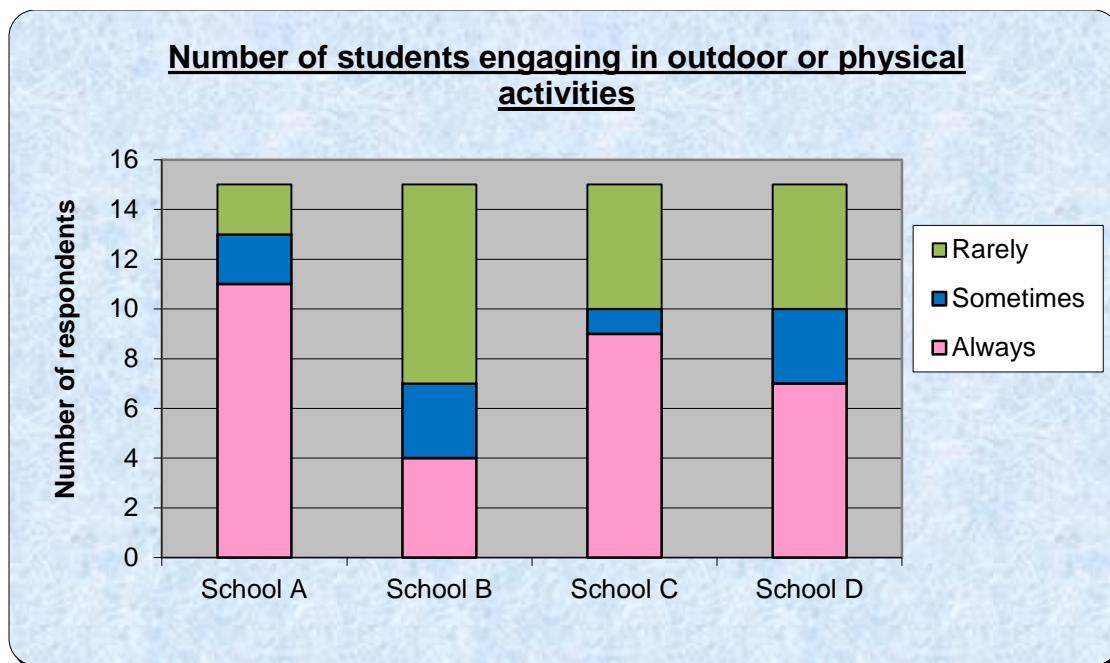
# **Appendix 9**

Graph 3 – shows the number of students engaging in outdoor or physical activities

The results of the survey show that in School B, only 26.7% of the students always engage in outdoor activities after school hours, 20% sometimes get involved and the balance 53.3% of them prefer to sit at home. However, in School D, the students are more active as 46.7% of the students always engage in outdoor activities, 20% sometimes engage and the balance 33.3% of them prefer to sit at home. In the case of School C, the situation is somewhat better. This is because 60% of the students always engage in outdoor activities, 6.7% sometimes get engaged and the balance 33.3% rarely gets out of their homes.

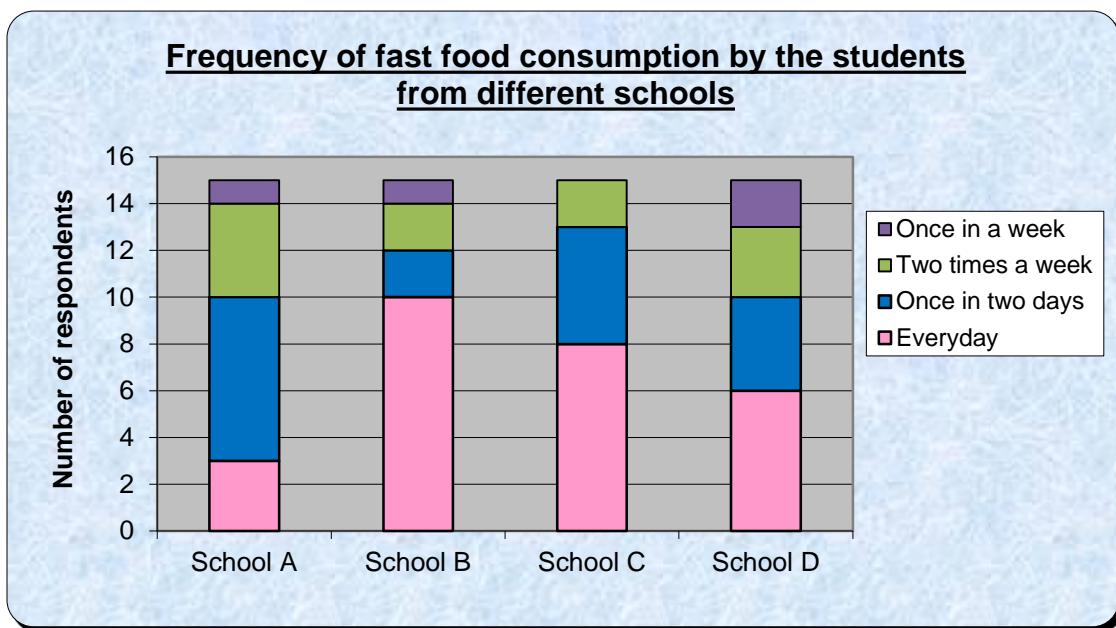
On the other hand, the students from School A are more active in nature. This is because 73.3% of the students always engage in outdoor activities, 13.3% sometimes get engaged and only 13.3% prefer to sit at home after school.

Moreover, out of all the schools, the students from School A are more active in nature as they frequently get involved in outdoor activities. This could also be because of their healthy eating habits as increased fast food consumption makes children lethargic in nature.



# **Appendix 10**

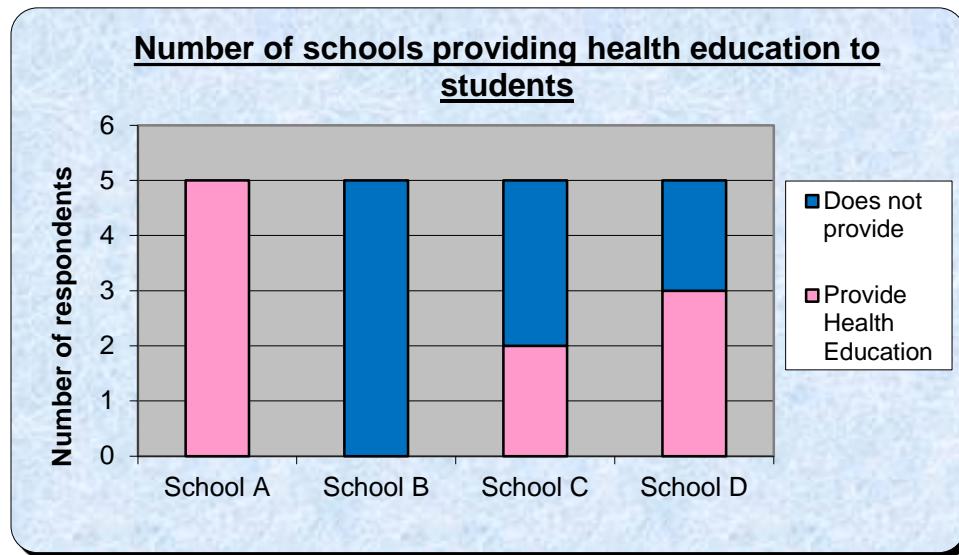
Graph 4 – shows the frequency of fast food consumption by the students from different schools



The graph shows the frequency of fast food consumption by the students from different schools. The results of the survey show that in School B, students are used to consuming fast food on a regular basis. This is because 66.7% of the students consume fast food on a daily basis, 13.3% consume once in two days, 13.3% two times in a week and 6.7% consume fast food once in a week. In the case of School C, the consumption patterns of fast food among children are quite similar. This is because 53.3% of the students consume fast food on a daily basis, 33.3% consume once in two days, 13.3% two times in a week and none of the students consume fast food once in a week. In School D, the fast food consumption among students is somewhat lower. This is because 40% of the students consume fast food on a daily basis, 26.7% consume once in two days, 20% two times in a week and 13.3% consume fast food once in a week. On the other hand, the students from School A rank low on fast food consumption. This is because 46.7% of the students consume fast food once in two days, 26.7% consume two times in a week, 20% consume on a daily basis and 6.7% of the students consume fast food once in a week. Overall, the results from the survey show that among the students from all the 4 schools 45% of the students consume fast food on a daily basis, 30% consume fast food once in two days, 18.3% consume two times a week and 6.7% consume fast food once in a week. Moreover, out of all the schools, the students from School A are low consumers of fast food. This could also be because the school informs students about the dangers of consuming excess fast food and works towards changing their habits by not selling fast food in their canteen.

# **Appendix 11**

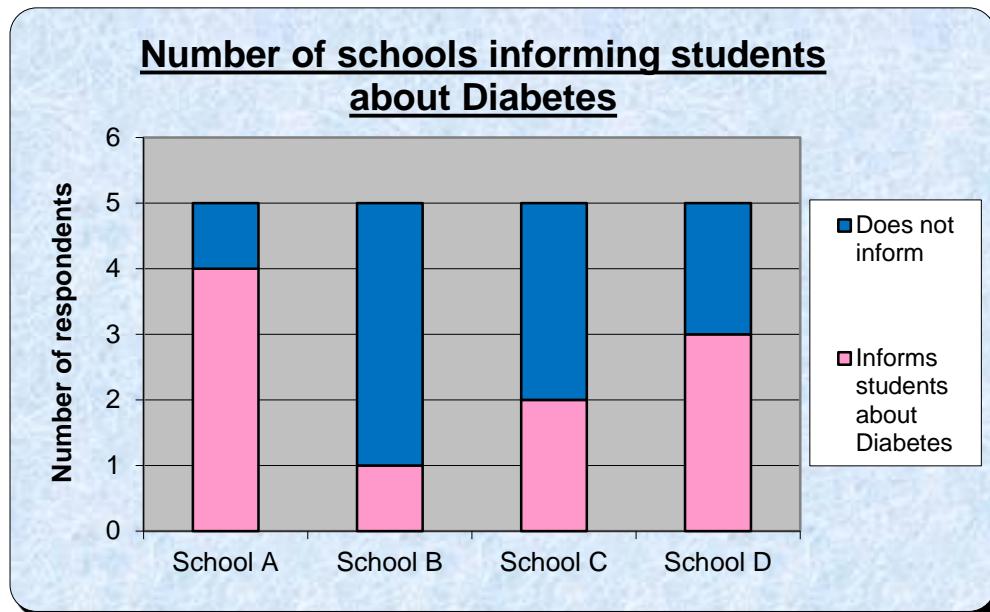
Graph 5 – shows the number of schools providing health education to students



The graph shows the number of schools providing health education to their students. This shows how concerned are the schools about the health of students and whether they work towards preventing their students from potential health problems. The results of the survey show that School B does not provide health education to its students. This is because 100% of the teachers have agreed that the school does not provide health education to its students in any form. In case of School C, the situation is somewhat better as 40% of the teachers agree that the school provides health education to students in some form by informing them about balanced diet and diseases through mini lectures by the school nurses and 60% of the teachers believe that the school does not provide any kind of health education to its students. In case of School D, 60% of the teachers believe that health education is provided to the students by teaching them about different health problems in Science subjects and 40% of the teachers believe that health education is not provided by the school. On the other hand, 100% of the teachers in School A believe that health education is provided to the students as the school has a special subject dedicated towards this which is mandatory for all students to attend. Overall, the results from the survey show that among the teachers from all the 4 schools 50% of the teachers believe that their school provides some kind of health education to the students and 50% believe that their school does not provide any kind of health education to their students. Moreover, out of all the schools, School A is the only school that has a program dedicated towards health education which shows how much the school cares about the health of its students. This also shows that the school realizes its responsibility towards the health of its students.

# **Appendix 12**

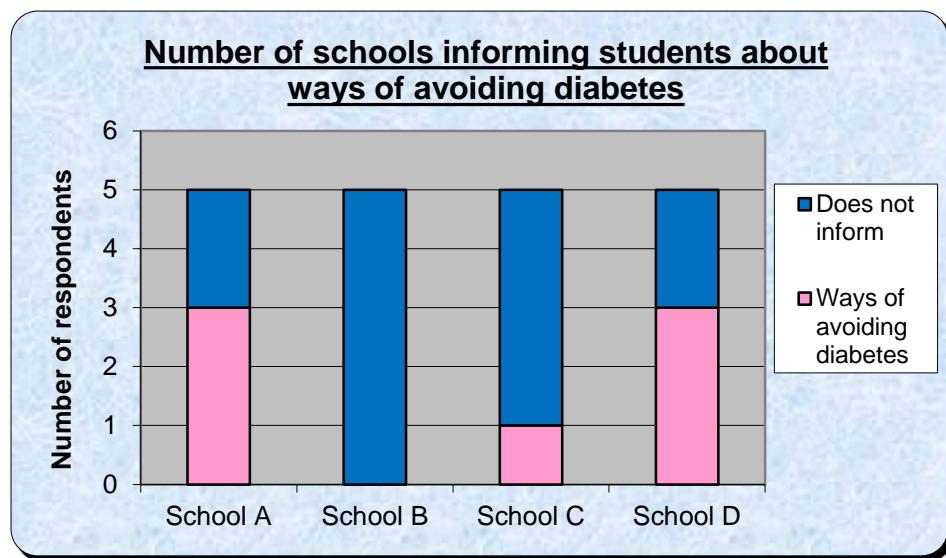
Graph 6 – shows the number of schools informing students about diabetes



The graph shows the number of schools informing students about diabetes. This shows how concerned are the schools about the health of students and whether they work towards preventing their students from the risk of diabetes. The results of the survey show that School B is not dedicated towards informing its students about the risk of diabetes. This is because only 20% of the teachers have agreed that they inform their students about the risk of diabetes and the balance 80% have stated that they have never informed their students about the risk of diabetes. In case of School C, the situation is somewhat similar as only 40% of the teachers have agreed that they have informed their students about diabetes and the balance 60% have stated that they have never discussed the topic of diabetes with their students. In School D, the situation is somewhat better as 60% of the teachers have agreed that they have informed their students about diabetes and the balance 40% have stated that they have never discussed the topic of diabetes with their students. On the other hand, in case of School A, the students are well informed about the risk of diabetes. This is because 80% of the teachers have stated that they have informed their students about the risk of diabetes and the balance 20% have stated that they have never informed their students about the risk of diabetes. Out of all the schools, School A is the only school where majority of the teachers have informed the students about the risk of diabetes. The teachers also stated that the school does a special counseling session for overweight children to prevent them much earlier from the risk of having diabetes in the future.

# **Appendix 13**

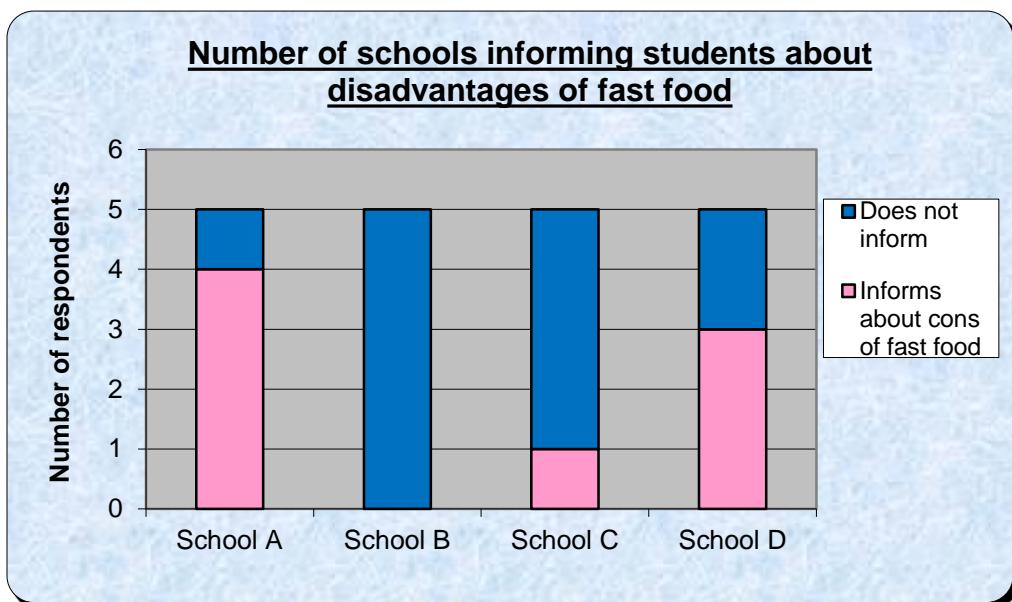
Graph 7 – shows the number of schools that have informed students about ways of avoiding diabetes



The graph shows the number of schools that have informed their students about ways of avoiding diabetes. This shows if the schools are encouraging students to have a healthy and active lifestyle by encouraging them to eat healthy food and frequently engage in outdoor or sports activities. The results of the survey show that School B is not dedicated towards informing its students about ways of avoiding diabetes. This is because 100% of the teachers have agreed that they have never informed their students about ways of avoiding diabetes. In case of School C, 80% of the teachers have stated that they have never informed their students about ways of avoiding diabetes and the balance 20% have agreed that they have informed their students about ways of avoiding diabetes. In case of School D, the situation is a lot better. This is because 60% of the teachers have stated that they have spoken about diabetes in class and informed their students about ways of avoiding it and the balance 40% have agreed that they have never informed their students about the risk of diabetes. In case of School A, the students are informed about the ways of avoiding diabetes as 60% of the teachers have stated that they have informed their students about the ways of avoiding diabetes and the balance 40% have stated that they have never informed their students about the ways of avoiding diabetes.

# **Appendix 14**

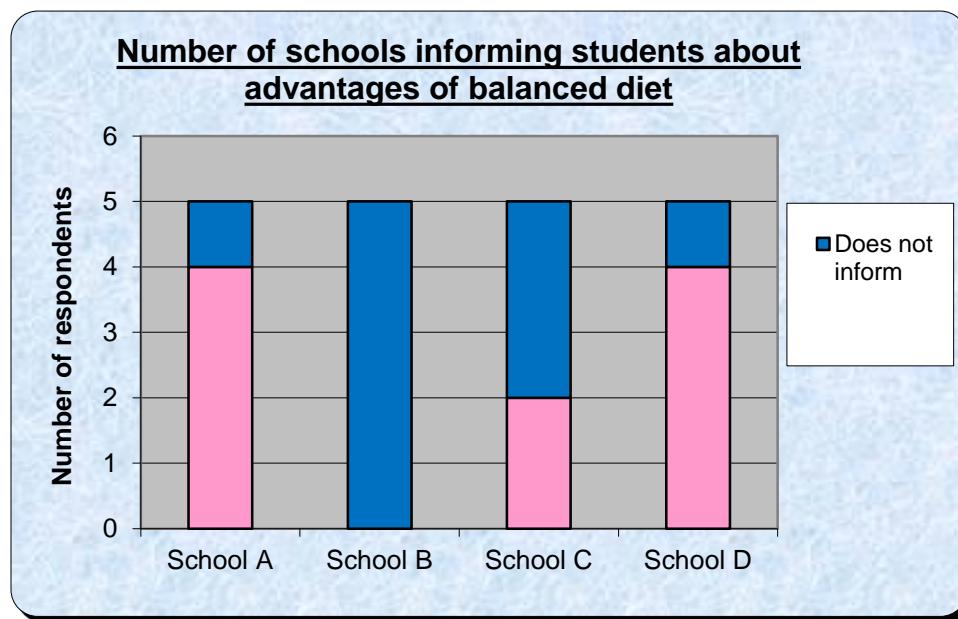
Graph 8 – shows the number of schools that have informed students about the disadvantages of fast food



The following shows the number of schools that have informed their students about the disadvantages of fast food. This shows if the schools are encouraging students to eat healthy and preventing them from consuming high quantities of fast food in their diet. The results of the survey show that School B is not concerned about the health of its students. This is because 100% of the teachers have agreed that they have never informed their students about the disadvantages of consuming fast foods. In case of School C, the situation is similar as only 20% of the teachers have stated that they have informed their students about the disadvantages of consuming fast foods and the balance 80% have never spoken to their students about the negative effects of consuming fast foods. In case of School D, the situation is somewhat better. This is because 60% of the teachers in this school have spoken to their students and explained about the negative effects of fast food and the balance 40% of them have never discussed this issue with their students. On the other hand, in case of School A, the students are well informed about the negative effects of consuming excess fast food. This is because 80% of the teachers have stated that they have informed their students about the disadvantages of eating fast foods and the balance 20% of them have never discussed this issue with their students.

# **Appendix 15**

Graph 9 – shows the number of schools that have informed students about the advantages of having a balanced diet

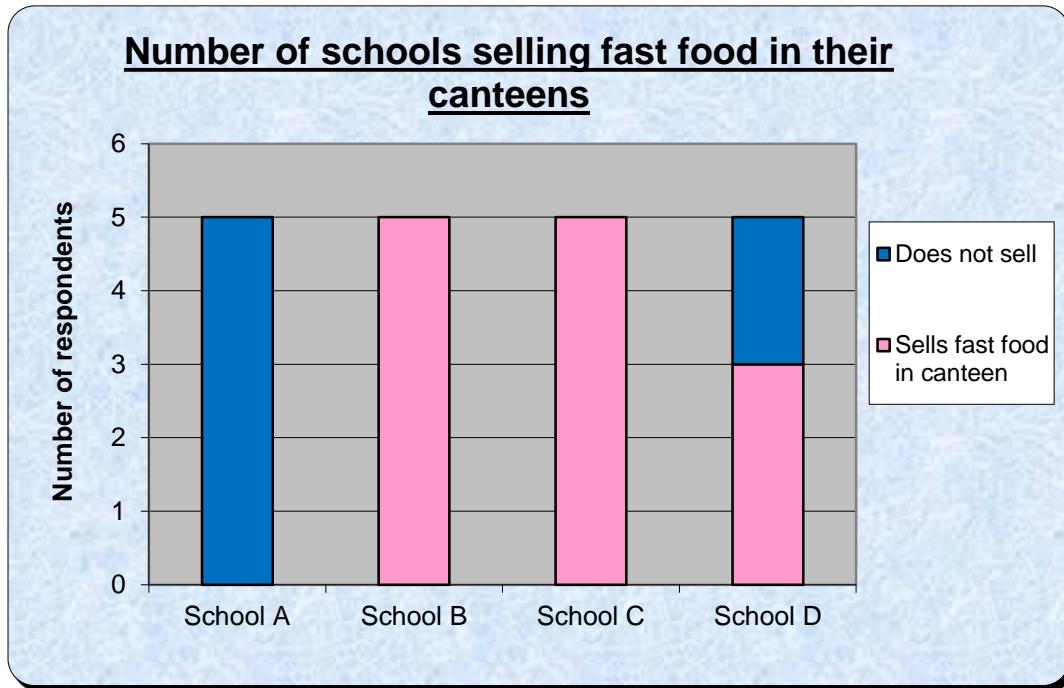


The graph shows the number of schools that have informed their students about the advantages of having a balanced diet. This shows if the schools are paying attention to the eating habits of their students and encouraging them to have a balanced diet with more fruits and vegetables. The results of the survey show that School B is not concerned about the health of its students. This is because 100% of the teachers have agreed that they have never informed their students about the advantages of having a balanced diet. In case of School C, the situation is similar because only 40% of the teachers have spoken to their students about the benefits of having a balanced diet and a large majority of the teachers (60%) have never bothered to talk to their students on this topic.

In case of School D, the situation is somewhat better as majority of the teachers (80%) have informed their students about the health benefits of having a balanced diet and the remaining 20% have not spoken to their students about this issue. In case of School A, the students are taught about the positive effects of having a balanced diet and how it affects their overall health in the long run. This is because 80% of the teachers have stated that they have informed their students about the advantages of having a balanced diet and the remaining 20% have not spoken to their students about this issue. Overall, the results from the survey show that among the teachers from all the 4 schools 50% of the teachers have informed their students about the advantages of having a balanced diet and 50% of the teachers have not informed their students about the advantages of having a balanced diet. Moreover, out of all the schools, School A and School C are the only schools where all the teachers have taken the responsibility of informing their students about the positive effects of having a balanced diet.

# **Appendix 16**

Graph 10 – shows the number of schools selling fast food in their canteens



The graph shows the number of schools that sell fast food in their canteens. This shows if the schools are paying attention to the eating habits of their students and whether they are taking the responsibility to restrict the fast food consumption of their students. The results of the survey show that School B has not taken any responsibility for the physical wellbeing of their students. This is because 100% of the teachers have agreed that the school canteen sells fast food like burgers, hotdog, French fries, pizza, candies, chips, soft drinks and so on. In case of School C, the situation is the same because 100% of the teachers have agreed that the school canteen sells fast foods like chocolate bars, soft drinks, biscuits, burgers and so on. In case of School D, 60% of the teachers agree to the statement that the school sells fast food like soft drinks, chocolate bars, chips, and so on. However, 40% of the teachers believe that these foods do not constitute fast food and can be consumed by children. On the other hand, in case of School A, the school canteen does sell any kinds of fast foods and sells different kinds of healthy food. This is because 100% of the teachers have stated that the school canteen does not sell any kind of fast food to the students.

# **Appendix 17**

**The Developed Framework for Health Topic of Parade Curriculum**

**Grade 5**

Unit Plan: Health

Number of lessons: 14

Level: grade 5

Lesson	Process	Summary	Details	Skill	Goals
1	Engage	<p><b><u>Unit introduction (Healthy Habit)</u></b></p> <ul style="list-style-type: none"> <li>• Group discussion</li> <li>• Show and tell</li> <li>• Do/do not things – whole class discussion</li> </ul>	<p>Give each group pictures worksheet and have them talk in groups about the pictures.</p> <p>Each group present their pictures and talk about it, and may define healthy and unhealthy habits</p> <p>Have Ss classify in a table do/do not things on the board after the show and tell.</p> <p>Ask Ss about habits they do/don't to keep them healthy</p>	S & L    S  R	<b>describe healthful habits</b>  <b>talk about illness</b>

2 & 3	<b>Building Knowledge</b>  Connected lessons	<p><b><u>Describing healthy habits:</u></b></p> <ul style="list-style-type: none"> <li>• Morning Discussion</li> <li>• Song "this is the way"</li> </ul>	<p>Have Ss tell about their health habits – tell about things they do/don't do to stay healthy and happy, you might use pictures to elicit Ss language</p> <p>- Ask Ss first how they usually exercise, wash hands, eat, drink, take a bath, etc. then ask them how they feel after they do exercise etc.</p> <p>- Then have Ss sing what they've said. Use poster/pictures to help Ss to sing.</p> <p>- play audio and let Ss sing with the tape</p> <p>Have Ss read sentences on the board and classify them to do/don't boxes.</p>	S & L        S, L, R	<p><b>Learn to classify good/bad habits</b></p> <p><b>discuss health rules</b></p>
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		<ul style="list-style-type: none"> <li>• Do / Don't do – modeling activity</li> <li>• WB p.62 (3)</li> <li>• Play Tic-Tac talk</li> <li>• H.W: worksheet</li> </ul> <p>Give Ss instruction and model before they play the game with a friend.</p>	<p>Put the rules under <i>do</i> and <i>don't</i></p> <p>Ss cut out the Xs and Os on page 107, tell about one of the pictures and put an X or O on the picture (e.g.: don't eat too much candy), S who gets three Xs or Os in a row wins.</p>	R & S  R & W  S & L  W	
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4	<b>Building Knowledge</b>	<p><b><u>Structure (did/didn't):</u></b></p> <ul style="list-style-type: none"> <li>• Morning discussion</li> <li>• Ask and answer</li> <li>• Did you eat...? Survey           <ul style="list-style-type: none"> <li>- Model</li> </ul> </li> </ul>	<p>Ask your Ss about the food they ate yesterday- you can use the very hungry caterpillar story to prompt questions:</p> <ul style="list-style-type: none"> <li>- what did you eat yesterday?</li> <li>- did you eat ... ?etc</li> <li>- did the caterpillar eat healthy/unhealthy food/did he eat...?etc</li> </ul> <p>Have Ss ask each other while they still sitting on the carpet.</p>	S & L    R   S	<p><b>Ask and answer yes/no questions in simple past tense</b></p> <p><b>Use did in yes/no questions</b></p> <p><b>Use did/didn't in short answers</b></p>
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		<ul style="list-style-type: none"> <li>- Practice – PB 74 (5)</li> <li>- Presentation</li> </ul>	<p>forms.</p> <p>- ask each in pairs.</p> <p>- gather Ss and have them speak about the information they got about their friends in the survey.</p>	S,L,W  R	
5 & 6	<b>Building Knowledge</b> Connected lesson	<u>Structure (simple past):</u> <ul style="list-style-type: none"> <li>• Morning Discussion</li> </ul>	<p>Talk to Ss, make conversation on good/bad healthy habits they did yesterday. Things they ate/drunk yesterday.</p> <p>Show Ss the Caterpillar story and ask them to remember some of the things caterpillar did and what things</p>	S & L	<b>Use irregular simple past tense forms ate/drank</b>

		<ul style="list-style-type: none"> <li>• Mr. Caterpillar's Letter</li>   <li>• LEA – reply the letter</li>   <li>• Presentation</li> </ul>	<p>they think were bad/good habits. etc</p> <p>Tell the Ss the very hungry caterpillar has sent a letter for them and ask them if they would like to read it together.</p> <p>Open the letter and read aloud to the Ss. Display the letter on the board, and ask Ss to think of what they can do for him. (send back a letter-advising)</p> <p>Ss work in groups to write a letter for Mr. Caterpillar telling him about the good health habits he should follow.</p> <p>Have Ss present their letters and read it to the other</p>	R  W  R	<b>Read and reply a letter</b>
7	<b>Building Knowledge</b>	<u><b>About Diabetes - introduction:</b></u> <ul style="list-style-type: none"> <li>• Re-tell story “very hungry caterpillar”</li> </ul>	T asks students to retell the events of the hungry caterpillar, use the cards	S	<b>Discuss right food /consequences of food consumption</b>

		<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Watch a video: Learn about diabetes – A walk with Tim and Lindsey</li> <li>• Worksheet</li> </ul>	<p>to show the food caterpillar ate.</p> <p>Discuss with the students the consequences of the caterpillar behavior regarding food consumption and lack of exercise</p> <p>Before watching the video discuss with the Ss the possible disease caterpillar may get</p> <p>Ss watch the clip and reflect on what they hear.</p> <p>Ask Ss to watch again and complete the missing information in the worksheet</p>	<p>S</p> <p>L</p> <p>W</p>	<b>Learn about diabetes</b>
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8	Building Knowledge	<p><b><u>Guest Speaker (school clinic nurse) – Diabetes prevention</u></b></p> <ul style="list-style-type: none"> <li>• Morning discussion</li> <li>• Guest Speaker program</li> </ul>	<p>Tell Ss about the guest they expecting today and prepare any question to ask at the end of Ms. Tayba's talk.</p> <p>- worksheet</p> <p>- discussion:</p> <p>Discuss the worksheet with the Ss</p> <p>Importance of being healthy</p> <p>Discuss symptoms of diabetes/ prevention</p> <p>Share pictures</p> <p>Share some tips</p> <p>- health pack: each Ss get one of the health pack which includes health rules booklet, healthy fruits</p> <p>after the guest leaves, ask Ss to</p>	S & L	<p><b>Increase Ss awareness about “diabetes”</b></p> <p><b>Talk about what one should do to avoid diabetes</b></p>
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9	<b>Basic Knowledge</b>	<p><b><u>Accidents and Safety:</u></b></p> <ul style="list-style-type: none"> <li>• Video clip “Seat belt ad”</li> <li>• Discussion</li> <li>• Group discussion</li> <li>• Write a letter</li> </ul>	<p>T shows the clip and have students guess the topic of the day</p> <p>Discuss with the Ss the sequence of the clip, what they have observed in the video.</p> <p>Discuss with the students statistics:</p> <ul style="list-style-type: none"> <li>- number of accidents in UAE</li> <li>- number of deaths because of accidents.</li> <li>- reasons of deaths in car accidents</li> <li>- how to prevent/Ss give advice</li> </ul> <p>T show a clip reveals what happens when people drive without buckling up the seat belt, the group discuss together what happens and share ideas with others.</p> <p>Discuss with the students how would they tell their family members about being safe in the car. Show a model of a letter, and have students work in group</p>	L    S & L    S	<p><b>Talk about accidents and safety</b></p> <p><b>Give advice</b></p>
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to write a message.

Students read aloud their letters. Finally T can ask the students to publish the letter so everyone in the group can send it back to their family.

S, W

R

10	<b>Transformation</b>	<p><u>Story Time: A Healthy Girl</u></p> <ul style="list-style-type: none"> <li>• Morning discussion</li> <li>• story introduction B.B: discussion:</li> <li>• Listening:</li> <li>• Read aloud</li> <li>• WB P.104</li> </ul>	<p>prediction find out difficult words Ss will listen to a native speaker reading the story – tape:</p> <ol style="list-style-type: none"> <li>1. <i>What does Mai-lan like?</i></li> <li>2. <i>what does she do as a healthy girl?</i></li> <li>3. <i>what did she eat/drink yesterday?</i></li> <li>4. <i>what did she do yesterday?</i></li> </ol> <p>T reads and Ss follow from B.B Ss will read in groups using little books - draw - tell about Mai –Lin - tell about you</p>	S & L  L  R	<p><b>Discuss healthy lifestyle</b></p>
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11	Transformation	<p><b><u>Reading for specific information: A Healthy Girl :</u></b></p> <ul style="list-style-type: none"> <li>• Story Retelling</li> <li>• Pairs Reading</li> <li>• Reading for Information</li> <li>• Pairs Reading &amp; Worksheet:</li> </ul>	<p>Review with the Ss the plots of the story by asking them questions:</p> <p>What was the story about?</p> <p>What happened to ...? Etc</p> <p>Use the B.B as a model to show how to read to find specific information. Ask Ss to find out information from the text as you ask:</p> <ul style="list-style-type: none"> <li>- Where is Mai-Lan from?</li> <li>- Where does she live?</li> <li>- What is her favorite food?</li> <li>Etc.</li> </ul> <p>Ss read in pairs to find answers for the questions in the worksheet.</p>	S R & L S, R R, W	<b>Read for specific information</b>
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12	Transformation	<p><b><u>Writing “My Health”:</u></b></p> <ul style="list-style-type: none"> <li>• Show and tell</li> <li>• Discussion</li> <li>• Make a booklet “My Health”</li> <li>• Presentation</li> </ul>	<p>Ss show the letter they have written for their families in the previous periods “safety in cars”</p> <p>Discuss with the students what makes them healthy. What things they should/ shouldn’t do to make them healthy. Use flashcards/ pictures</p> <p>T reads aloud the story to demonstrate the process of writing using conjunctions.</p> <p>Model with the Ss how to make the booklet to start off writing their own with the title “My Health” Ss write story using all the conjunctions learned in previous lessons.</p> <p>Ss read aloud their own stories and display them in the book sections.</p>	S    W  R	<p><b>Use modals <i>should</i> and <i>shouldn’t</i></b></p> <p><b>Write extended sentences using conjunctions</b></p>
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12	<b>Transformation</b>	<p><b><u>Frequency of Habits:</u></b></p> <ul style="list-style-type: none"> <li>• Discussion</li> <li>• PB p.75 (8,9)</li> </ul>	<p>Ask and answer:</p> <ul style="list-style-type: none"> <li>- How often do you...?</li> <li>- When do you usually..?</li> <li>- How long do you?</li> <li>- What time do you...?etc</li> </ul> <p>- draw the times you go to bed and get up. Tell a friend</p> <p>- Work with a friend. Compare answers.</p>	S & L	<b>Tell about the frequency of habits</b>
13	<b>Transformation</b>	<p><b><u>Guest Speaker: First Aid:</u></b></p> <ul style="list-style-type: none"> <li>• Introducing</li> <li>• Practices</li> </ul>	<p>Introduce the guest speaker to the students and tell them they are here today to give them tips in First Aid:</p> <ul style="list-style-type: none"> <li>- shocking situation</li> <li>- fainting</li> </ul>	S & L	<b>Practice what one should do when one is sick/ facing a health problem</b>

		<ul style="list-style-type: none"> <li>• Write a report</li> </ul>	<ul style="list-style-type: none"> <li>- broken leg/arm</li> <li>- dawning</li> </ul> <p>Ss write a report of what they've learned today</p>	W	
14	<b>Reflection</b>	<u><b>Make a display:</b></u> <ul style="list-style-type: none"> <li>• Discussion</li> <li>• Group presentation</li> <li>• making the display</li> </ul>	<p>Discuss with the group what they know about diabetes/and how they can inform others about it. Ask groups to work together in order to make a display to inform others about diabetes.</p> <p>Ask each group to present their work to others and speak about it.</p> <p>Students start making the display around the school.</p>	S & L    Integrated: S, L, R & W	<b>Have Ss help in developing diabetes awareness around the school</b>

# **Appendix 18**

**Time Guideline for Teaching Parade 5**  
**(Parade Curriculum)**

Time Line	Unit	Communication Objectives	Language Objectives(structures)	Cognitive Skills	Other intelligence Combined	Vocabulary
February (02.2011)	Four (Your Health)	<ul style="list-style-type: none"> <li>• talk about illnesses</li> <li>• talk about accidents and safety</li> <li>• give advice</li> <li>• talk about what one should do when on is sick</li> <li>• talk about what one should and shouldn't do to stay healthy</li> <li>• talk and write about past events</li> <li>• act out short conversations</li> <li>• discuss consequences of actions</li> <li>• play a game</li> <li>• follow directions</li> </ul>	<ul style="list-style-type: none"> <li>• use modals <i>should</i> and <i>shouldn't</i></li> <li>• use flexible pronounce (<i>himself, herself, myself, yourself</i>)</li> <li>• use irregular past tense verbs</li> <li>• write extended sentences using conjunctions (and, when, because, but)</li> <li>• write a conversation through comic story</li> </ul>	<ul style="list-style-type: none"> <li>• to learn how to:</li> <li>• formulate generalizations (heath rules and advice)</li> <li>• read fast using sight words</li> <li>• search for information using internet</li> <li>• read fluently using sight words (set 3)</li> <li>• search for information using school library, internet, dictionary</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Art</u>: make a booklet and illustrate it</li> <li>• <u>Literature</u>: read and interpret poems, rhymes, and proverbs</li> <li>• <u>Health</u>: practice what one should do when one is sick (health problems and activities)</li> <li>• <u>Computer skills</u>: publish final draft using Microsoft word</li> </ul>	<p><u>Verbs</u></p> <p>Break/broke, brush, cut/cut, eat/ate, fall/fell, feel/felt, hit/hit, hurt/hurt/ ride/rode, take care of, tell, wash</p> <p><u>Nouns</u></p> <p>broken leg, cold, earache, fever, headache, sore throat, stomachache, toothache, accident, ambulance, dentist, doctor, exercise, fruit, helmet, pie, rule, sweets, should, shouldn't</p> <p><u>Pronouns</u>: himself, herself, myself, yourself</p> <p><u>Questions</u>: what's the matter?</p> <p><u>Adjectives</u>:</p>

