

ICT Students, Stress and Coping Strategies: English Perspective

A Case Study of Midsize Middle Eastern University

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ABSTRACT

This study evaluates the perceptions of stress among Information and Communications Technology (ICT) students and their coping strategies in dealing with English as the medium of instruction during their university studies. A semi-structured administered survey was conducted using a sample of 267 male students of a Computer Science college from a midsize Middle Eastern university. The study also used a phenomenological approach with semi-structured interviews carried out with ten students in order to clarify some of the findings of this study. Since the research topic is based on student's stress perceptions, the phenomenological analysis of transcribed student's interviews was also an appropriate tool for this study. Phenomenology enables participants to express their feelings about a particular situation or incident in their own point of view which may not be easy to express on a survey. All students who took part in this study thought that they had been stressed at one time or another due to having English as the medium of instruction without a Preparatory Year English Program (PYEP) before entering ICT courses. 62% of the students maintained that they have had episodes of stress due to the English language during their studies at one time or another. The students use different mechanisms to

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cope up with stress outside the university by engaging themselves in sports, surfing the web, meditation, hanging out with friends, sleeping or going in to isolation. The students demand interactive English language courses, more leisure time activities on campus, proper guidance in English language courses to ease their ICT course-studies, advisory services and peer counselling on campus to reduce their stress.

PAPERTYPE: Research Paper

KEYWORDS

Information Communication Technology (ICT); ICT students; English Language; Stress and Coping strategies; User Behaviour; Surveys

INTRODUCTION

The study focuses on the stress, male students encounter and their coping strategies in dealing with the sudden change of using English as the medium of instruction as opposed to Arabic. English is the leading language of Science and Technology, Education, Research and Development and a major medium of printing and publishing. English is a universal language, and is used extensively to communicate with people globally. While education at the primary/secondary levels does not value the importance of the English language, students are expected to study major subjects in English at the university level as in the case at the location of study taken in to hand.

Information Technology (I.T.) benefits are best reaped through the knowledge of the English language. It is therefore essential that knowledge of the English language is obtained in the early stages of higher education to avoid future weaknesses in the higher education system that would result in student deprivation of crucial I.T. knowledge (Ross, Niebling, & Heckert, 1999). As we enter into an

era of I.T and I.T based knowledge, the English language continues to presume an increasingly dominant role in almost all aspects of our lives. I.T knowledge and computer literacy are essentially gained through English; a lack of proficiency in the English language will obviously render the students helpless and hinder their advancement on the I.T frontier.

The English language is being taught as a second language in most of the countries in the world. The level at which this language is being introduced varies from country to country; some countries introduce it at the kindergarten level, some countries introduce it at late primary levels, and some at the middle school levels. In the Middle East, most countries introduce the English language at the middle school levels with an equal degree of importance as other courses such as, Science and Mathematics. However, students still face difficulties in reading and writing. Students tend not to give the English language sufficient emphasis, since it is difficult for them to learn a new language especially when introducing it in the late primary or middle school levels and this is why most of the secondary school graduates face difficulties coping with university studies.

University students are a group, prone to stress due to the transitional nature of college life (**Ross, Niebling, & Heckert, 1999**). Students must adjust to a new academic and social environment, maintain a high level of academic performance, and for some, manage their lives away from home for the first time. University education is therefore highly stressful, challenging and demanding. An overwhelming burden of information leaves little opportunity to relax, recreate and occasionally leads to serious sleep deprivation (**Shaikh, Kahloon, Kazmi, Khalid, Nawaz, Khan & Khan, 2004; Lee, & Graham, 2001; Firth-Cozens, 2001**).

Stress is defined as any change that a person must adapt to in

his/her ever changing environment. In particular, stress is any demand placed on the body and the body's reaction to it. This demand could be force, pressure or strain. Stress, ranges in intensity from the negative extreme of being in physical danger to the joy of completing a desired goal. Therefore, importance is laid on the need to identify coping mechanisms for such stressful events, which could determine the impact of these experiences on each individual's life (**University of Iowa, 2008**).

The amount of stress experienced may be influenced by the individual's ability to cope with stressful events and situations (**D'Zurilla, & Sheedy, 1991**). Consequently, feelings of loneliness, nervousness, sleeplessness and excessive worrying may result when stress is not dealt with effectively (**Wright, 1967**). Therefore, it is very important that stress-handling programs are available on university campuses to address the problem of student's stress. Additionally, one should understand that there are other sources of stress that also affect the performance of students on a daily basis. Therefore, before suggesting that the student's stress in this study is mainly due to the English language being used as the medium of instruction, we have to understand that there are some other sources of stress that also affect the performance of these students on a daily basis in their lives.

The dynamic relationship between the person and the environment is stress perception and the reaction is especially magnified in university students. The problems and situations encountered by university students may differ from those faced by their non-student peers (**Hirsch, & Ellis, 1996**). The environment in which university students live is quite different. While everyone is facing stress of some sort or another at work, home, grocery stores, on the street or anywhere, students face a different kind of stress with the

continuous evaluation that they are subjected to, such as weekly and monthly tests and projects, which is not often seen by non-students (**Wright, 1964**). The pressure to earn good grades and to earn a degree is very high (**Hirsch, & Ellis, 1996**). Earning high grades is not the only source of stress for university students. Other potential sources of stress include excessive homework, unclear assignments, and uncomfortable classrooms (**Kohn, & Frazer, 1986**). In addition, to academic requirements, relations with faculty members and time pressures may also be sources of stress (**Sgan-Cohen, & Lowental, 1988**). Relationships with family and friends, eating and sleeping habits, and loneliness may affect some students adversely (**Wright, 1967**).

The evaluation of stress sources in university students is an area that researchers have been investigating. In a study carried out by **Towbes and Cohen (1996)**, the frequency of chronic stress on the lives of college students was carried out. The study found that items such as interpersonal conflicts, self-esteem problems and finance problems which persist for a period of time results in stress. It also showed that the first-year students tend to have more stress than other students. In contrast, Babar et al., studied stress and coping strategies in a Pakistani Medical School (**as cited in Shaikh, Kahloon, Kazmi, Khalid, Nawaz, Khan & Khan, 2004**) and found that more than 90% of the students have been stressed at one time or another during their studies. It also showed that senior students in their final year of studies tend to feel more stressed than others. The students dealt with the stressors by using some coping mechanisms such as sports, music, hanging out with friends, sleeping or going into isolation.

The studies in (**Shaikh, Kahloon, Kazmi, Khalid, Nawaz, Khan & Khan, 2004**) and **Towbes and Cohen (1996)** initially appear to imply a contradiction. However, this is not the case, since

different factors such as environment, culture or other stressors result in different observations, as is also the case in other studies that concentrate on specific groups. Evidently, the factors investigated or surveyed for each group vary and result with different observations.

Amran, Hassan & Say (2006) conducted survey to determine if the Cohort 3 students of the B. Ed. Foundation Course in Institute Perguruan Bahasa-Bahasa Anterabangs (IPBA), have adopted appropriate strategies to cope with stress. The results indicated that *“accepting responsibility”* and *“positive reappraisals”* were the two most predominant factors for both the problem-focused and emotion-focused stress coping mechanisms.

The research work conducted by the College of Health Sciences for females in Abha, Saudi Arabia by **Ghazali, Al-Wabel & Farghaly (1998)** used a descriptive approach to carry out the study. With the help of teachers in secondary schools, physicians and nurses in health units and Primary Health Care (PHC) centres, the study indicated that 50% of school teachers and 66.03% of physicians and nurses were good at picking up signs of mental distress. The school health units and PHC centres identified family problems as predictor of mental disorders. The study recommended that the role of these services be expanded to develop skills in dealing with common mental problems.

A cross-sectional study for secondary school boys was conducted in Abha to determine the prevalence rates and severity of three disorders namely: depression, anxiety and stress among Saudi adolescent boys. The results indicated that out of 1,723 male students recruited for this study, 59.4% had at least one of the three disorders, 40.7% had at least two and 22.6% had all the three. Moreover, more than one third of the participants (38.2%) had depression, while 48.9% had anxiety and 35.5% suffered from stress. Depression,

anxiety and stress were found to be significantly correlated (**Al-Gelban, 2007**). The study concluded that there is an urgent need to pay more attention to the mental health of adolescent secondary school boys in Saudi Arabia.

A related study that deals with stress in the work place studied the sources of stress related to work among the Ministry of Health (MOH) hospital staff working in Riyadh, Saudi Arabia (**Al-Omar, 2003**). Using multiple regression analysis, the study indicated that insufficient technical facilities, absence of appreciation, long working hours, and short breaks were significant to explain the variance in the level of work-stress among hospital staff. The results also revealed that Saudi participants showed significantly higher level of work-stress than non-Saudis. Occurrence of health problems, changing the hospital, changing the job, quitting the medical practice, and undesired relationship with coworkers were found to be correlated with work-stress.

This study investigates the stress among students due to the use of the English language as a medium of instruction with other related stressors. The following sections of this paper present the methodology and subjects used in this study, the results and observations, and the conclusions and recommendations.

METHODOLOGY AND SUBJECTS

A semi-structured administered survey was conducted using a sample of 267 students of a Computer Science College from a midsize Middle Eastern University to discover the prevalence of stress in ICT students. A pilot survey was carried out on nine students and two interviews were conducted in the initial phase. The students were asked to comment on the clarity of the survey. After an in-depth literature review, a semi-structured questionnaire was designed as a

tool for data collection. The type of questions were mainly True/False, multiple choice or short answer questions. The students were encouraged to give any comments they feel are relevant to the study. Participant students were assisted through the survey, as to overcome the difficulties encountered to complete the questionnaire drafted in English for students whom had not previously taken PYEP. This survey study was also supported by a phenomenological approach with semi-structured interviews carried out with ten students in order to consolidate some of the findings that were observed from the surveys. The results and observations are discussed in details in the next section.

RESULTS AND DISCUSSION

The response rate of the survey conducted on the students was 89% (267 out of 300). It was noticed that the students who filled the questionnaire in English or in both Arabic/English had serious problems in writing good structured sentences and had demonstrated very poor communication skills. The mean age of respondents was 21 years with a range of 20-25 years. The students entering the college had very good or excellent Grade Point Average (GPA) in secondary school. The minimum GPA reported was 84% with more than 80% of these students scoring above 90%. This shows that the college recruits students with high qualifications. All students have an equal right to free university education and all students are supported financially with a monthly government allowance with the condition that the students maintain a GPA above 2.0 from 5.0 (D grade). The students surveyed were in their third and fourth year of undergraduate studies, with majors in Computer Science or Information Systems at the College of Computer Science and Engineering. The participant students had never taken the PYEP

before starting their ICT courses.

The introduction of the preparatory year was conducted in the fall of 2006 for the new students who completed secondary school. The students in the third year of university missed this opportunity. Other Saudi universities, such as King Saud University have used English as a medium of instruction for over 20 years and its PYEP is a unique opportunity for students to improve their English language skills alongside other key skills, such as Mathematics and ICT courses, which are also being taught in English (King Saud University, 2008).

While comparing the GPA's of married students to those of unmarried students the study found that married students had higher GPAs than unmarried students. Table 1 shows that 74% of married students obtained a GPA of C or above compared to 56 % for single students. Additionally, it was noticed that there was a significant number of students who did not provide their GPA in the surveys conducted. It may be concluded that these students obtained low GPAs and therefore abstained from providing this information.

Table 1
Percentages of some variables surveyed in the study

Variables	Percentage
Stressed due to English Language	62
Not sure if Stressed due to English Language	7
No. of married students	9
Stressed married students	13
No. of out of town students	17
High school average > 90	81
High school average less than 90 and greater than 84	19
GPA of 3.0 / 5.0 or above - unmarried students	57
GPA of 3 or above - Married students	74
If counselling available students will go for advise (yes)	38
If counselling available students will not go for advise (No)	16
If counselling available students are not sure if they will you go for advise (Not sure)	46

The percentage of stressed students due to the English language was reported to be 62% and 7% of them were not sure if they were stressed or not. All married students are in the 4th year of their studies and seem to be less stressed than single students. It was observed that about 13% of married students are stressed. It was found that married students tend to concentrate more on their studies because their lives are more stable and they consider their future more seriously. On the other hand, singles waste more time with their friends and spend more time outside their homes. Singles also have more responsibilities due to cultural circumstances that the families depend more on them in running errands and helping in most of the things outside the home. This is a stressor that most single students face since they feel that it is a duty that they have to support their families in these circumstances.

All students agreed that the university lacks counseling services to help students cope with their stress problems and when students were asked whether they would go for counseling if the service was available, 46 % of students were not sure if they would go for counseling. This large percentage shows that students may be stressed, but are unable to express and cope with their stress and therefore hide it. The university case under study also lacks a recreational building where students can enjoy sports and spend some time with their classmates during free hours.

The various stress coping strategies practiced by the ICT students are listed in **Table 2** below. According to the percentages, the coping strategies identified include; discussing with friends (80%), watching TV (80%), meditation (Prayer) (70%), surfing the Internet

(65%), discussing with family (60%), playing sports (53%), discussing with teachers (45%), playing computer games (33%), sleeping longer (31%), smoking (20%), complaining to management (15%), and going into isolation (9%).

Table 2
Percentage of various stress coping strategies surveyed in the study

Coping Stress Strategies	Percentage
Discuss with family	60
Discuss with teachers	45
Discuss with friends	80
Complain to management	15
Sleep longer	31
Play Sports	53
Computer games	33
Go into isolation	9
Smoke	20
Watch TV	80
Surf the Internet	65
Meditation (Prayer)	70

It is important to note that this data was collected at the end of the fall semester just two weeks before the final exams, at a time in which students are more stressed and busy finalizing their assignments and projects, studying, and making plans for their holidays before the next semester starts. These reasons could have

contributed to the increase in the number of students reporting stress. In addition to the various coping strategies mentioned in Table 2, reading, online chatting, music, and studying were also mentioned. Students living away from home reported additional stressors that include homesickness, financial problems and traveling every weekend between the university and home.

It is clearly seen that the approach of the majority of students tend to cope with stress mainly by watching TV (Satellite) and talking to friends (peers) followed by meditating, surfing the Internet, discussing with family members, playing sports and discussing with teachers. On the other hand, the least frequent reported coping mechanisms are complaining to management (15%) and going into isolation (9%). When comparing our study to the work done by **Shaikh, Kahloon, Kazmi, Khalid, Nawaz, Khan & Khan (2004)**, some of the coping mechanisms reported by the students in this study were evidently. For example, playing sports, hanging-out with friends, sleeping and going into isolation were common coping mechanisms. The rate of using each coping strategy is different in the two studies, which proves that different stressors along with other factors, such as culture or environment could have resulted in different rates. The studies also show that similar mechanisms are used by students in similar academic environments.

Another interesting result which could be associated with the English language stressor is the increase of the number of students bunking classes. It is reported that between 25% and 40% of the students have missed 25% or more classes during the semester. This shows that many of the students may not understand the lectures and may also feel discouraged and/or may have lost the interest in studying due to the issue of English language as a medium of instruction.

The phenomenological approach with the personal interviews conducted in this study supported the findings explained above. The students acknowledged that they have played a role in the problem, as well as the management for not planning for the gradual transition from teaching completely in Arabic to teaching in English. They also blamed some of the faculty members who do not understand their situation and do not try to help them by reducing the amount of work they give during the course. This phenomenological approach also confirmed that very few students practiced "*confrontive-coping*" strategies, such as discussing their problems with the management. However, a very high percentage (75%) expressed their feelings on the university student forum which is accessible for everyone on the Internet. The students can anonymously speak out without being afraid of anything and can address their concerns to the university or college management. The study also showed that less students revert to "*self-controlling*" mechanisms, this is by avoiding stress through sleeping longer, eating, going into isolation, smoking or using drugs, as shown in **Table 2**.

From the interviews conducted, the students were encouraging an interactive and friendly relationships between them and the faculty as a stress coping mechanism. The faculty interaction is a positive concept which helps students improve their study habits, manage time wisely, learn positive self-talk and how to relax (Shaikh, Kahloon, Kazmi, Khalid, Nawaz, Khan & Khan, 2004). Students also suggested an orientation or open house meeting where they could get all the information regarding their programs of study and explanations to the rules and guidelines of the university.

Seeking social support and guidance as a coping stress strategy was clearly seen from the results of this survey, where 80% of the students discuss their problems with family and friends. A very few

took control of the problem by trying to improve themselves and taking English courses outside the university. This self-controlling strategy helped very few students in dealing with the English deficiency problem, but was not an option for many others because of their financial circumstances.

Evidently, if the English Language was introduced as a subject in a much earlier stage of their schooling, the students would not have suffered in their higher education studies. The continuing importance of English in the increasingly global world makes this language element vital to be introduced in a PYEP to help students start their university studies in a better way. The sudden transition in using English as a medium of instruction for the students of the College of Computer Science and Engineering in all levels of study without providing a PYEP or even accommodating an English pilot program for those who are in their higher levels of study caused a disruption to the students academic performance and raised their stress level as it was seen from the results. From the interviews conducted students who are in their third year suggested an extensive summer course to improve their English skills before progressing to the fourth year.

CONCLUSION

This study represents a first step in understanding the student's stress due to the sudden transition of using English language as a medium of instruction as opposed to Arabic. The study confirms that the use of English as a medium of instruction contributed significantly to the increase of stress levels in ICT students and other stressors were consequently reported as a result of this stressor.

The stressors in this study had significant influence on students. It was suggested favourably that the university management should provide counselling services to deal with such

stressors. Stress management workshops are also needed to educate the university community with the different aspects of stress with emphasis that such workshops should be incorporated at the freshman level to help the students understand stress and how to cope with it at an earlier stage in their studies.

The study concludes that students should be offered more opportunities for recreational time activities, such as event celebrations and excursion tours. Physical activities, sports and socialization are indispensable for individual growth to foster personal development. The university should speed up the construction of a recreational sports building and include sports and arts as part of optional curriculum subjects.

The young student population has always been vulnerable to stressful life conditions, especially in pursuit of higher professional education in a highly competitive environment. Students are the future generations. Regular monitoring of stress levels in student's lives at different stages of their studies is vital and should be addressed by the university administration.

RECOMMENDATIONS

It is recommended that the university should provide students with counseling services. Stress management techniques (such as meditation, support groups, games, and on campus Internet access) and time management techniques should be offered to the students to equip them with ways to cope with stress during their years of studies. '*Stress management*' and '*time management*' taught along with first and second year curricula may assist students in dealing with stress due to heavy study loads. As proposed by the third year students in this survey, an extensive summer course could improve their English skills before progressing to the fourth year. This shows the

seriousness of the students in their studies and future and would encourage students to perform better in their final year of university studies.

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