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Bridging the Gap - On Easing the Transition from Arab Secondary to Western Third Level Learning.

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Abstract

Learning and achievement issues among Foundation Year (FY) students at the Royal College of Surgeons (RCSI) Bahrain have been responded to by the Language and Culture Unit to address the educational problems that have arisen as a direct consequence of the differences in skills students have on leaving secondary school and the skills that are required at third level institutions. The findings of the study assess the extent to which an integration of sustainable development into course objectives and learning outcomes takes place and how the content of the course responds to specific students' needs. The research consists of an in-depth quantitative and qualitative case study that evaluates the extent to which the course enables the transition from a secondary to a third level institution and teaches the students the skills required to 'survive' at a Western-type university. In support of our claim, the results from this case study will be presented and implications of more general relevance will be suggested. Our model of academic skills intervention programme can be applied to other higher education institutions where issues of transition from secondary to third level learning may be problematic.

Key Words: medical students; academic skills; EAP; higher education; transition, Bahrain

1. Introduction

Underachievement among first year university students has been of great concern to academics and policy-makers. Research has constantly found that so called 'freshmen' face significant difficulties in adapting to college environment (Cukras, 2006; Balduf, 2009; Schrader and Brown, 2008; Huerta and McMillan, 2005) which results in low academic attainment and

negative social interaction. Consequently, many universities and colleges have implemented some form of intervention to enable the students' transition from secondary to third level education. Such intervention is believed to enhance students learning by maximizing their chances of acquiring academic skills that will enable them to manage the academic workload and score high on summative and formative examination tests. Evidence suggests that students must develop an inventory of study strategies that can be employed to respond to the particular requirements of the materials and assignments involved (James, 2006; Ates and Cataloglu, 2007; Rose et al., 2008, Kennett and Reed, 2009). They should become engaged in content-based instruction (CBI) (James, 2006) which involves the integration of curriculum material and academic skills required to maintain sustainable development and life-long learning. The problem of academic underachievement seems to be particularly acute among science students who engage in 'discipline – specific' education (Crowe et al., 2008) to pursue their professional goals without realizing how challenging third-level learning might be. Research has shown that traditional teaching, which students receive in secondary schools, does not comply with university teaching and therefore, does not improve meaningful understanding of scientific concepts taught at a university (Klein, 2006; Rivard, 2000, Ruiz-Primo, 2002). That is why, more often than not, secondary students have academic skills needs which are not met by standard school pedagogies and are disadvantaged when it comes to achieving higher education outcomes.

At RCSI Bahrain, it has been assumed that such issues may become especially problematic, not only due to the differences in secondary and third-level pedagogies, but, primarily, due to the specific characteristics of the Middle Eastern and Western cultures. Dissemination of knowledge and current state of education in the Arab countries has received a lot of attention in the recent

years and, as acknowledged by the Arab Human Development Report, even though considerable improvements have taken place, 'it has been observed that the general condition of education [in those countries] is still unfavourable compared to the achievements of other countries' (AHDH, 2003,p.52). Interestingly, the curricula in most Arab countries do not seem to be different from the curricula adopted by other countries, especially when it comes to the sciences (Biology Course, 2009/2010; RCSI Foundation Year for Medicine and Physiotherapy, 2009/2010). A problem-oriented approach (Bell, 2005) has been used in the preliminary analysis of curricular documents on the human systems from the mainstream government schools in Bahrain and the same curriculum implemented in the Foundation Year at RCSI Bahrain. The literature review has indicated that, in terms of learning objectives and outcomes, the students should leave secondary school with sufficient knowledge and skills to enable them an easy start at the university. Both syllabuses promote such learning outcomes as students' ability to describe, analyse and explain the processes involved in the functioning of different human systems, recall various terms and important concepts and understand the practical applications of the scientific knowledge in their workplaces (Biology Course, 2009/2010; RCSI Foundation Year for Medicine and Physiotherapy, 2009/2010). Assessment at both institutions involves theoretical and practical examinations. This implies that such 'high-cognitive skills' (Crowe et al. 2008) as critical thinking and problem solving should have been extensively practised at school in order to ensure students' success in higher education. However, relevant literature on Arab mainstream education suggests that pedagogical practices at school encourage submission, obedience, subordination and compliance rather than critical thinking and, in many cases, knowledge is evaluated by examinations that test memorization and factual recall (AHDR, 2003; UNR, 2007). On the other hand, the curriculum run at RCSI Bahrain implements outcome focused systems

based on didactic teaching via power point presentations, which promotes independence and self-initiative in taking responsibility for one's own learning. Additionally, the language of instruction in most mainstream secondary schools is Arabic. This explains the low level of English proficiency of some students (IELTS 5 – 6.5) and problems they face when they come to RCSI Bahrain where all subjects are taught through the medium of English. It has been assumed that second-language learners, who comprise the majority of students at RCSI Bahrain, might have problems with understanding the content of their lectures due to their lack of understanding the text, the speech and basic scientific words and grammatical structures. As a result, the Language and Culture Unit at RCSI Bahrain has implemented a form of intervention that aims at increasing students' academic achievement and positive social adjustment.

The RCSI Academic Skills Programme has been developed to give the students an opportunity to acquire the knowledge and skills that are necessary to succeed at a medical university and to advance their life abilities. To address cultural, educational and language issues of our students, the lecturers from the English and Culture Unit designed an intervention programme that entails explicit instruction of skills in different scientific contexts, which can be applied to EAP courses across different cultures. Based on the notions of task-based learning (Gibbs, 1981; Gauld, 1982, 2005; Patronis, 1999), they highlighted the significance of performance tasks for improving students' scientific knowledge and skills. In this way, the faculty aim at facilitating students independent learning and their capabilities of applying skills such as inquiry and problem solving to their medical studies. The researchers involved in the study believe that when learning activities incorporate tasks that aid in understanding the elements of medical science, students will acquire appropriate cognitive skills and improve their general level of English. The model presented in Figure 1 summarises the structure of our course in which each of the basic

components relates to issues concerned with medical education. All materials used in the course have been developed by the Language and Culture Unit in response to the specific academic content in the Foundation Year of Medicine at RCSI Bahrain.

Insert Figure 1 here

Figure 1: The RCSI Academic Skills Course Content

In this small case study, the authors wish to determine the effectiveness of the course in bridging the gap in skills between secondary and third-level learning and identify how widespread are the difficulties faced by our students, and which of the course content they find the most useful. It is hoped that the findings will suggest areas for further course improvement and give meaningful insights into the ways of informing EAP pedagogies that aim at cultural bridging.

In semester 1, the study skills, the writing skills and the medical terminology components of the course were taught. The medical terminology sessions were run throughout both semesters in the form of one hour sessions every week. The academic reading section was completed in semester 2.

2. Methods

An 88 -item questionnaire on the effectiveness of the RCSI Academic Skills Course was devised. The questions addressed the four sections of the course. There were 11 questions concerned with study skills (section 1), 28 questions concerned with academic writing (section 2), 30 questions concerned with academic reading (section 3) and 18 questions concerned with medical terminology (section 4). The students were asked to answer the questions according to Likert's scale (1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree) devised to evaluate the extent to which the course enables the transition from a secondary

to a third level approach to learning. The questions were based upon the content of the RCSI Academic Skills Course which was largely determined by the educational issues that have arisen due to the differences in skills students have on leaving secondary school and the skills that are required at third level learning. To ensure cross-cultural applications of the questionnaire, similar issues need to be investigated in their own contexts. All the items in the questionnaire concerned the academic content taught in Semesters 1 and 2.

The first part of the questionnaire was given to 20 foundation year medical students attending an English Language and Communication session at the beginning of Semester 2. The questions concerned the academic content taught in Semester 1. At the end of Semester 2, the students (n=17) were asked to complete the second part of the questionnaire giving their responses to the academic content taught in Semester 2. The participant group consisted of students who come from Arabic mainstream schools (Tawjihiya)[1] and whose level of English has been tested below 6.5 IELTS score. The Tawjihiya is considered as General Secondary Certificate Examination which is similar to High School Diploma. Tawjihiya is offered in both government and private schools in Bahrain and all the subjects are taught through Arabic. It is worth noting that all participants hold a GPA[2] score of 90% or above.

The students were asked to complete the questionnaires anonymously with reference to their personal perceptions of the usefulness of the RCSI Academic Skills Course after their first year of study in the Foundation Year. All the topic areas included in the course bear a significant relevance to the students' medical studies and have been designed to facilitate students' learning at the medical school. The total number of students in the cohort was 25, however 3 of the

[1] Tawjihiya – equivalent to The General Secondary Leaving School Certificate awarded after 12 years of study.
[2] Grade Point Average – the cumulative mean from all school subjects scores.

students withdrew from the university after Semester 1. Two students were absent at the time when Semester 1 questionnaire was run, and 4 students were absent during Semester 2 evaluation. The data used in this study was collected from 90% of the group (Semester 1) and 81 % of the group (Semester 2). The results were processed by the Optical Mark Recognition (OMR)[3] scanner supported by the ABI Exam Center software [4]which uses a Kuder Richardson 20[5] reliability statistic test to measure inter-item consistency. Additionally, a chi-square reliability test was conducted for the results gained for each section of the course in each semester and the results confirmed that the pattern in the sample has not been produced by sampling error which allows us to reasonably conclude that there is a strong likelihood that the pattern would be found in the population. Finally, some qualitative data was collected through the comments students were asked to write about each section of the questionnaire.

3. Results

3.1. Questions relating to 'Study Skills'

The students were asked to respond 'strongly disagree', 'disagree', 'undecided', 'agree' and 'strongly agree', as appropriate, to each of the eleven items asking them to what extent the study skills part of the course helped them with certain third-level study issues. The items included questions about responsibility and time management issues, avoiding plagiarism and correct referencing, ways of taking notes during lectures, pre- and post- lecture preparation, as well as analysis of examination questions and critical thinking skills. Most importantly, the

[3] OMR scanner – hardware that recognizes filled- in optical marks. It processes data from surveys, tests and other office forms.

[4] ABI softwares are used in OMR scanners to report the raw results of tests (average and individual)

[5] Kuder and Richardson devised a procedure for estimating the reliability of a test. It has become the standard for estimating reliability of a test by measuring inter-item consistency.

students were also asked about the relevance of the skills taught in this section of the course to their medical studies and whether or not they learnt any of those skills at school. Graph 1 shows the percentage of the students' responses to the items in the study skills section of the questionnaire.

Insert Graph 1 here

Graph 1: The percentages of students' responses to questions in Section 1 - Academic Study Skills

On average, in Section 1 'Study Skills', 42% of students responded 'agree' and 17% of students responded 'strongly agree' to the items included in the study skills part of the questionnaire. Such results indicate that an average of 59% of students finds this section of the RCSI Academic Skills Programme useful ($x^2 = 7.57$, $df = 1$, $p \leq 0.001$). The items scoring highest were those concerned with the practical applications of the course content to other subjects in Foundation Year (70%), as well as their usefulness for students' success in a medical school (65%). Skills such as avoiding plagiarism and referencing according to the Harvard system were rated the most useful among the students, 70% and 65% respectively. The students also admitted that the course helped them to take responsibility for their own learning by responding 'agree' (60%) and 'strongly agree (5%). However, they still seem to have problems with answering examination questions as this item received 50% of negative responses (40% 'disagree', 10% 'strongly disagree'). 50% of students confirmed that they learnt the study skills included in the course at school.

3.2. Questions relating to 'Academic Writing Skills'

Here, the students were asked to indicate 'strongly disagree', 'disagree', 'undecided', 'agree' and 'strongly agree', as appropriate, to twenty-eight items asking them whether or not

they found the academic writing section of the course useful. The questions concerned issues connected with paragraph and full assignment writing, the differences between spoken, written, formal and informal language, appropriate register and style, as well as the usefulness and relevance of the section for medical students. The students were also asked whether they learnt certain writing skills at school. Graph 2 presents the percentages of students' responses to items included in the academic writing section of the questionnaire.

Insert Graph 2 here

Graph 2: The percentages of students' responses to questions in Section 2 - Academic Writing

The results in Section 2 'Academic Writing Skills' indicated that, on average, 68% of students find the academic writing skills course useful ($x^2 = 15.97$, df = 1, $p \leq 0.001$). Only 18% of the students are not satisfied with the course and as little as 7% of them marked their responses as 'strongly disagree. As many as 70% of students admitted that they will use the academic writing skills in their medical studies and that the course helped them to improve their own writing. 80% of them confirmed that they learnt how to write different types of assignments by attending the course. 55% of students will use the academic writing skills to facilitate their learning in other subjects in Foundation Year. The positive responses to all the items in this section were significantly higher than the negative ones (all above 55%) and even the item about writing an application letter, which scored the least number of positive responses (50%), was still viewed more positively than negatively (the total number of negative responses was 40%) . Interestingly, the item about the transformation of Arabic writing skills into English writing skills received equal numbers of positive and negative responses (45%). 15% percent of students strongly disagreed and 30 % of them disagreed that the transition takes place, although 35% of the same

students agreed and 10% of them strongly agreed that the course helps them to transfer the skills from one language to another. 10% of students was undecided about this item. Additionally, the items about writing different types of assignments and differentiating between spoken and written, as well as formal and informal language, writing a topic and a concluding sentence received negative responses as low as 10%, which included 0% of 'strongly disagree' answers. The item about describing a linear process scored 0% of 'strongly disagree' and only 5% of 'disagree' and the item about describing a cyclical process scored only 5% in both categories. 75% of the students confirmed that they had learned the academic writing skills included in the RCSI course at school. Most importantly, only 5% of students strongly disagreed that they will use the academic writing skills in their medical studies and 0% of them disagreed.

3.3. Questions relating to 'Academic Reading Skills'

In Section 3, the students were required to indicate their attitudes towards academic reading sessions by marking 'strongly disagree', 'disagree', 'undecided', 'agree' or 'strongly agree' on a thirty – item questionnaire. The questions were related to particular reading techniques included in the course, such as skimming, scanning, differentiating between facts and opinions, summarizing the main ideas, reading visual information, guessing unknown words, predicting the content of a text and working with a paragraph and its elements. They were also asked to indicate if they had learnt these techniques at school and what effect they have had on their medical studies. The percentages of students' responses to the academic reading section of the questionnaire are presented in the graph below.

Insert Graph 3 here

Graph 3: The percentages of students' responses to questions in Section 3 – Academic Reading

In section 3 ‘Academic Reading Skills’, the general usefulness of the course was rated 69% (x^2 = 19, df = 1, $p \leq 0.001$). Only 17.5% of students are dissatisfied with the course, but at the same time 0% of them state that they had learnt academic reading skills at school. Furthermore, 59% of students agreed that the RCSI academic reading skills course helped them with other subjects in the Foundation Year. 64% of students also declared that they will use the academic reading skills in their medical studies. 16 responses were rated useful by scoring over 70 percent of positive answers each, with the highest scores for the items concerning decoding reference words in the text (89%), guessing unknown vocabulary from context (88%) and by identifying appropriate word classes (83%), as well as increasing the students’ reading speed (83%). Interestingly, the question about the correct use of reference words has not only been rated the highest, but also no negative responses were recorded (0%). The similar pattern can be noticed with other highly rated questions, where students seem to be clear about how they feel about those particular items of the course (guessing unknown vocabulary from context was marked 0% ‘strongly disagree’ and 0% ‘undecided’, identifying appropriate word classes was given 0% ‘strongly disagree’, and increasing students’ reading speed was marked 0% ‘undecided’. Only 14 responses in this section were rated below 70% in terms of their usefulness, with the lowest score of 47% for the question relating to identifying the chronological order of a text.

3.4. Questions relating to ‘Medical Terminology’

The students were finally asked to respond ‘strongly disagree’, ‘disagree’, ‘undecided’, ‘agree’ and ‘strongly agree’ to eighteen items about medical terminology connected with human systems. Most of the questions addressed issues of students increased understanding of certain lectures on human systems, whether or not they learnt medical terminology in Arabic or/ and in English at school and whether or not this section of the academic study skills programme helped

them with their medical studies. Graph 4 shows the percentages of the students responding to these items (NB: first question received only 19 responses).

Insert Graph 4 here

Graph 4: The percentages of students' responses to questions in Section 4 – Medical Terminology

In the last section 'Medical Terminology', 71% of students implied the usefulness of the medical terminology sessions by marking 'agree' (40%) and 'strongly agree' (31%) to the items concerned with this part of the RCSI programme ($x^2 = 26$, df = 1, $p \leq 0.001$). The items scoring the highest here were those concerned with the relevance of medical terminology to the lectures on Human Systems. 90% of students were satisfied with the medical terms connected with the skin, to such extent that none of them answered 'strongly disagree' or 'disagree' to this question. Other questions included terminology about the musculo-skeletal system and the gastrointestinal tract with items scoring 35% 'strongly agree', 45% 'agree', 15% 'undecided', 5% 'disagree' and 0% 'strongly disagree' and 20% 'strongly agree', 50% 'agree', 20% 'undecided', 10% 'disagree' and 0% 'strongly disagree' respectively. Very high responses were also collected from the questions about understanding medical terminology by identifying correct roots, prefixes and suffixes. The responses to these questions ranged between 70% - 85% positive answers which confirm the usefulness and practical applications of such course content to medical students. Very interesting responses were collected from those items that asked the students in what language they learnt medical terminology at school. It is worth noting that two separate questions were asked here, the first one asked the students whether they learned medical terms in English, the other one whether they learned it in Arabic. 45% of the students stated that they learnt medical terms in English, however 60% of them stated they learnt them in Arabic. Respectively, 10% and 5% of the students were undecided. 10% of the students were also undecided about

whether or not the course helped them to transfer their medical vocabulary from Arabic into English, whereas, at the same time, 55% of them stated that it actually did.

3.5. Average Results

The average results (in percentages) from the four components of the RCSI Academic Skills Course are presented in the graph below:

Insert Graph 5 here

Graph 5: The percentages of students' responses to the four components of the RCSI Academic Skills Course

3.6. The Combined Responses

Referring to the overall aim of the study, the piechart below presents the combined average results (in percentages) of students' responses evaluating the effectiveness of the RCSI Academic Skills Programme in enabling their transition from secondary to third level learning.

Insert Pie chart 1 here

Pie chart 1: The combined percentages of students' responses to all components of the course

3.7. Qualitative Data

Some additional qualitative data has also been collected to throw some light on the issues concerned with students' learning in the Foundation Year of medicine. The questionnaire consisted of three sections at the end of which additional questions were asked to collect comments concerning each of the components of the course. Overall, 15 comments were collected which were later analysed in terms of information that would suggest further research.

The comments presented below were identified as indicative of the students' previous and current learning experience.

Section 1 of the questionnaire consisted of the comments concerned with the study skills component of the programme. There were two responses in this section that highlighted the students' general adaptation to English speaking learning environment.

> *Student 1: Most importantly, the course taught me how to speak fluently and communicate effectively.*

> *Student 2: What we need from this course is to help us explain ourselves in English and help us to solve the examination questions.*

In section 2, the academic writing, the comments expressed (1) the students' concerns about the insufficient time spent on each task and (2) the differences between the RCSI writing course and the writing course at school.

> *Student 1: We need to spend more than one hour on some of the topics. Some of them are very important or more difficult than the others and require more attention.*

> *Student 3: The academic writing course was really helpful and surprisingly, it was completely different to the one we had at school. I used to make many grammatical and spelling mistakes, but after the course, I improved.*

Section 3, the academic reading included comments about (1) the types of tests used in the course and (2) the positive effects of the course on students' reading abilities.

Student 1: I think that students need to read more in class, not only medical essays but also stories

Student 2: It improved our reading capabilities

Finally, all comments collected in section 4 of the questionnaire expressed the students' satisfaction with the content and teaching methods used in medical terminology classes.

Student 1: I think using games or puzzles connected with medical terminology is really helpful.

Student 2: It is a very useful course; it helped me in improving my English and in understanding the new vocabulary.

Student 3: It was the most useful part of the course; it helped me a lot with my lectures.

Student 5: Honestly, the medical terminology was the best and the most useful part of the ELC. One thing I suggest to do is to inform other students when terminology classes take place so that they can put it in their calendars.

Student 6: I think that it is very helpful and that all students should take it as a subject

Student 7: We need more English Courses

Student 8: It was very helpful and beneficial.

One comment in this section drew our particular attention as the students pointed to the differences in scientific vocabulary learnt at school and scientific vocabulary learnt in the RCSI academic course.

Student 9: The course has nothing to do with Arabic words.

4. Discussion

The analysis of the results and the comments to each section of the questionnaire suggest that perhaps some further qualitative enquiry would document and interpret as fully as possible the totality of issues connected with the transition from secondary to third level learning of Tawjihiya students. Concrete categories and highly specified systems of coding, like those used in quantitative research, can easily overlook those occurrences that may be much more important and consequential to the outcomes of the research (Leininger, 1985). Adopting a structured

approach and devising forms of recording data enabled us to derive worthwhile information from the students' experiences with the course and confirmed our initial hypothesis about bridging the gap. However, more attitudinal aspects of students' perceptions and experiences with the course would have remained undiscovered, had the additional comments not been asked. For instance, comment 1 in the academic writing section revealed some more about how the students feel about the time lime and the content planning of the course. Comment 2 in the same section suggested some more feedback and student – tutor time. A study on difficulties with essay writing conducted by Hartley & Chesworth (2000) suggested that the greatest source of students' problems with writing stems from their unwillingness to discuss their work with tutors. It is possible, then, that the students do not discuss their work with their tutors and do not ask for appropriate clarification. To find out why, additional evidence is required. Additional data would also be necessary for the exact analysis of comment 3, where a student points out to the differences between the writing course at school and the writing course at the university. This appears to be contradictory to what has been evident in our quantitative data which stated that 75% of the students learnt the skills included in the writing section of the course at school. Performing further research could reveal what exactly the differences are and lead us towards the answers that would suggest ways of bridging the gap. Despite this, an average of 68% of students still finds the writing course useful.

Some more useful answers could also be sought by qualitative investigation of issues that arose in the analysis of the results from sections 2 and 4 of our questionnaire, particularly the ones concerned with the transformation of both writing skills and medical terminology from Arabic into English. Surprisingly, 10 % of students answered 'undecided' in each section to this item. In the medical terminology section, such a result seems to be a direct consequence of the

questions asking the students whether they learnt medical terminology in English or Arabic at school. An interesting disparity between the percentages of the responses to those questions can be noticed, which in turn suggests that the students could learn the medical terms in both languages. Some of the biology books used by Tawjihiya students include the terms in Arabic and English, where the main instruction is in Arabic and only equivalents of some terms are printed in English (Biology Course, 2009/2010). Moreover, students who attended private schools where Tawjihiya curriculum is implemented would have learnt the terminology in English (Nelson Advanced Science, 2003). Finally, as reflected in comment 9 in the medical terminology section, the fact that the medical terminology course 'has nothing to do' with Arabic words may be linked to the fact that the terms that were studied at school are completely different to those studied in the course. Similar conclusions could be drawn about the writing and reading programmes where students can be confused about the amount of information that can be transferred from one language into another due to the differences and/or similarities in the syllabus content, language of instruction and rules about reading and writing. Again, further investigation is needed. Finally, comments 1and 2 in section 1, comment 3 in section 2 and comment 2 in section 4 proved the effectiveness of improving students general English which highlights the importance of content- based education and task-based teaching of English mentioned in the introduction to this paper.

The final results from the piechart suggest that the students find the RCSI intervention programme relevant to their academic needs. 66% of students' responses clearly suggest that the Academic Skills programme assists them in enhancing their study and language skills, which in turn facilitates their success in a discipline-specific environment and ensures life-long learning for medical students. In each area of difficulty, the majority of students admitted that the course

enables them to overcome the difficulties medical students may face in the Foundation Year (James, 2006; Ates and Cataloglu, 2007; Rose et al., 2008, Kennett and Reed, 2009). The results clearly suggest that those items that are strictly concerned with what is required from the students in a medical school were rated the highest. The curriculum analysis suggests that the knowledge of basic medical terms connected with the human systems and the ability to express themselves in certain types of written assignments and in a certain way ensure the students' academic success (Cukras, 2006). In this way the notions of sustainable development are implemented into the RCSI curriculum and strong implications are made for those who deal with cultural bridging and aim at easing the transition from secondary to third level learning in bilingual societies. With a growing number of Western-type tertiary institutions in Bahrain and across GCC (Bahgat, 1999), such implications might be vital. Taking into consideration the current problem-based curriculum design of the major medical schools in the region (Hamdy, 2008), where the knowledge of the English language and learner's independence might not be essential for successful communication, the authors conclude that new legislation should be introduced to benefit those students who want to study in a Western environment. However, the analysis of the results does not take into consideration the effect of the variations in the responses collected from students. A qualitative study could shed some light on the issues concerned with the students' decision to answer 'agree', rather than 'strongly agree' or 'disagree' rather than 'strongly disagree'. Instead of claiming that everyone is the same and trying to fit everybody into 'disagree' and 'strongly disagree' category, a single case example of the phenomena should be studied in depth (Neill, 2006). In reference to our enquiry, such qualitative analysis would clarify why 45% of students agree that the RCSI programme is useful and only 21% strongly agree, and vice versa, why 13% of them disagree and only 8% strongly disagree. Similarly, even

though 50% of students stated that they learnt the study skills included in the course at school, and nearly half of them admitted that they learnt the medical terminology either in Arabic or English, an in-depth individualized approach would answer the questions why they still need help and support with those issues. This would be particularly useful in analyzing issues concerned with the writing section of the questionnaire, where the figures were 75% for the question which asked if the students learnt the skills included in this section at school but, at the same time, 68% stated that they found the course useful. Numbers and statistical data that confirmed our assumptions have been collected; however immersion in details and specifics of the data would allow us to explore the issues behind those assumptions even more. (Vrasidas, 2001). Therefore, further investigation is needed into specific curriculum objectives and learning outcomes because, even though the preliminary analysis has suggested that the general objectives of the Tawjihiya education program and the RCSI learning objectives seem to be very similar, the results of our study tend to suggest the opposite (investigation in progress). An investigation of the assessment methods would be worthwhile to assess to what extent the students are required to think at higher cognitive levels (Crowe, 2008). In order to solve the controversies about the writing skills, an additional study of the literacy secondary syllabus and writing for specific purposes would be essential. Finally, the differences between private and government Tawjihiya students, as well as the levels of achievement between female and male, native and non-native English students would be worth looking into to determine if there are any causative relationships between those factors and newcoming students' academic success (Johnson, 2006; Cohen et al. 2000; Hartley and Chesworth, 2000; Kathy, 2000) . Most importantly, the students' identity should be revealed in order to obtain results that would indicate if the students who learned the RCSI Academic Skills Programme achieved higher

scores than the comparison group of students who did not take part in the programme. It should be noted that the students' identity on the questionnaire was kept anonymous in order to achieve more objective data when conducting the evaluation of the course (Burton and Brundrett, 2008).

5. Concluding Remarks

It has been argued through a quantitative study that the RCSI Academic Skills Course bridges the gap between Arab mainstream secondary education and a Western-type third level learning. We acknowledge that this is by no means an important finding which suggests educational implications for both, secondary and third level institutions who wish to implement the notions of sustainable development into their educational programmes. The methods used in our study could be applied to different educational contexts and the findings could suggest implications for improvements in EAP pedagogy worldwide. This involves summarizing the issues about students' underachievement, revisiting the curricula and discussing effective strategies that would facilitate students' learning in introductory university years. Certain assumptions about the source of students' problems were posed and our opinions were similar in that the students lack appropriate metacognitive and study skills in order to take responsibility for their own learning. Additionally, it was agreed that, according to international standards for admissions of overseas students, their low English language proficiency hinders the students from performing at higher-educational levels, especially in such a discipline-specific environment like medical school. According to Nordell (2009), despite the fact that many colleges and universities offer remedial courses, issues connected with the transition from secondary education to third-level learning are not responded to. The differential shock between

the skills required in high school and the skills required at university becomes the source of students' struggle to pass certain examinations (Crowe et al. 2008). It was assumed that this would be especially evident in the Arab world, where the environmental and cultural differences between Tawjihiya and Western students are remarkable and where the educational systems differ notably (AHDR, 2003). The results from our educational enquiry have shown that the RCSI Academic Skills course responds well to specific students' needs and that such intervention programmes can polish students' study and language abilities, not only in the region but also outside GCC. In terms of the present study, however, a further qualitative study is now needed to try to seek the explanations for the discrepancies in our quantitative results before proceeding further.

Word Count: 6,122

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Figure Captions:

Figure 1: The RCSI Academic Skills Course Content

Graph 1: The percentages of students' responses to questions in Section 1 - Academic Study Skills

Graph 2: The percentages of students' responses to questions in Section 2 - Academic Writing

Graph 3: The percentages of students' responses to questions in Section 3 – Academic Reading

Graph 4: The percentages of students' responses to questions in Section 4 – Medical Terminology

Graph 5: The percentages of students' responses to the four components of the RCSI Academic Skills Course

Pie chart 1: The combined percentages of students' responses to all components of the course