Academic Writing to Learn Across the WAC Activities

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Abstract: *Among the four language skills, writing is the most important. Writingskill is a means for communicating, organizing, and demonstrating higher-order thinking. Although the importance of writing has been acknowledged, many EFL students are not competent in writing skill and this has impacted on theiracademic promotion. This study consideredWriting Across the Curriculum (WAC),procedural scaffolding and collective scaffolding writing, as an effective strategy for improving students' writing. The researchers' reliance on corpora analysis; as the favored qualitative technique;were to concentrate on correlation between procedural scaffolding and proficiency level of students in producing effective writing academic papers, being followed by the quantitive survey via questionnaire. Through quantitive survey and corpora analysis (the first paper and the last paper) the results indicate that there seems to be a positive correlation between proficiency level of students' writing and better performance in producing effective writing academic papers in the second languageby integrating WAC scaffolding more deeply into their class activities.Moreover, the findings demonstrate that WAC can be employed in the instructional design in spite of more research studies should be conducted in order to validate the usefulness of WAC for improving academic writing.*
Keywords: *Writing skill, Writing across Curriculum (WAC), Scaffolding*

I. Introduction

Studentsare faced to the lack of ability to write well-organized essay with clearly supported opinions and developing logical arguments (Newell, Beach, Smigh, &VanDerHeide, 2011; Phakiti& Li 2011). In fact, this may be due to lack of familiarity with the conventions of communicating in academic disciplines (Evans&Morrison, 2010), lack of understanding writing strategies and rhetoric in second language (Mu &Carrington, 2007; Wang &Li, 2008), especially in relation to planning, transcribing, and reviewing (Qian&Krugly-Smolska, 2008). After considering weaknesses and challenges that students encounter in writing discipline-specific subjects such as difficult to write in their own voices (Tina & Low, 2011), little experience in planning and writing extended texts (Evans &Marrison, 2010, Phakiti& Li, 2011; You & You , 2013), limited technical, discipline-specific vocabulary repertoires (Qian&Krugly-Smolska, 2008), and L1 intervening in the writing process of target language , the aim of this study is to prepare students to communicate effectively in their future professions through reading and writing in English. Student's writing and reading in academic subject can serve two important purposes: One is as tool to enhance their learning and to assess their grasp of the subject content; while the other is to prepare them more effectively for the specific writing genres of their current academic studies and their future profession (Chang et al., 2014). The former is often referred to as 'writing to learn' and the latter as 'learning to write'. The focus of this study is on 'learning to write' by emphasizing on the development of reading and discussion skills needed to enhance the quality of the student's writing. Intertwining reading and writing activities leads to the development of language and communication, problem solving, critical thinking, and creative thinking skills. It cannot be assumed that they will automatically reach the needed skills for writing academic papers, it is necessary for instructors to teach these skills (Shaver, 2007). Indeed, instruction is needed to help them to develop strategies that enable them to make connections between reading and writing (Sipple, 1989; Plata, 2008). So, intertwining structure approaches that instruct both writing and thinking in target language and ongoing write assignments as part of curriculum is necessary. There are two models for offering this kind of support: external writing skill courses and embedding the writing in discipline subjects to be taught by the subject teacher (Wingate et al., 2011). A disadvantage of the former is that the students are taught the strategies over a short period of time and out of context, and do not have enough opportunity to apply and practice them (Rhoder,2002); another is that they typically have difficulty transferring writing strategies and genre knowledge from one context to another (Russel, 2007). Biber's (1990) work on the co-occurrence of language features in different types of texts indicates that certain text types are rich in certain language features, but contain few instances of others. If a learner is to gain a useful coverage of language features, the genres that occur in the course should match the genres that learner will need to work with outside the course. They do need to be given guidance to apply the writing skills they have learned to their coursework, and this type of nurturing and challenge needs to come from those who are teaching them the discipline subjects

(Janopoulos, 1995), especially those who assess their writing within these subjects (Wingate et al., 2011). Since, teachers are the best inductor that lead students to the relevant literacy related to specific discourse community (Gee, 1990).

There are many studies that fall embedding the writing instruction in the discipline subjects under the title of 'WritingAcross the Curriculum' (WAC). There is a substantial amount of evidence to support writing across the curriculum, particularly from the student viewpoint. Previous research studies reviewed in Newell et al. (2011) concluded that students benefit from being given outlines or templates to scaffold the development of their arguments. Learning to write within their courses can help them to make sense of the knowledge they are acquiring and to understand it deeper (Zilora&Hermsen, 2007). In fact, WAC provides a language course by providing activities aimed at increasing the fluency with which the learners can use the language they already know, both receptively and productively.in the same line, swain (1985) argued that the language knowledge needed to comprehended language is not the same as the language knowledge needed to produce language. So, WAC pushes the learner to produce the language over a range of written discourse.

While there are compelling arguments in favor of writing across the curriculum (WAC), it should be mentioned that discipline subject teachers who are expected to implement WAC face many constrains such as the time and curriculum restraints that subject contents cannot be covered in time (Carter,2007; Palmquist, Rodrigues, Kiefer & Zimmerman, 1995; Wingate et al., 2011), students' negative reactions to do additional writing tasks (Furco& Moley,2012), illiterate teacher to teach writing strategies to students because most teachers are not native (Palmquiset et al., 1995). In spite of these constraints, we need to find ways to support faculty members to help their students as effective writers and communicators within the short amount of time available to them (Defazio et al., 2010).Thus, this project is focused mostly on developing strategies to enhance the writing of assignments in a range of genres, including proposals and reports, discussion, compare and contrast essays, summaries and personal reflections.Consequently, this study is based on the scaffolding student's reading, writing and discussion for their assignments was chosen as the main one for this research. This project is set up to

1- Providing scaffolding to improve reading, writing and discussion for their assessment tasks can improve students' skills in these three areas by consideration of learners' need;
2- Improved skills can enable students to learn better through doing the assignments and to demonstrate better what they have learned by monitoring themselves;
3- Motivation to do the scaffolding tasks in intertwined with students' motivation to achieve good grades for the assignment by providing helpful feedback.

II. Methodology

Writing-to-learn fosters critical thinking, requiring analysis and application, and other higher level thinking skills. It is writing that uses unplanned, short or informal writing tasks designed by the teacher and included throughout the lesson to help students think through key concepts and ideas. Attention is focused on ideas rather than correctness of style, grammar or spelling. It is less structured than disciplinary writing. When writing-to-demonstrate-knowledge, students show what they have learned by synthesizing information and explaining their understanding of concepts and ideas. Students write for an audience with a specific purpose. Products may apply knowledge in new ways or use academic structures for research and/or formal writing. On the other hand, discussion is used as university course in which learners use a range of relevant genres such as recounts, information reports and arguments.In addition, reading is a thinking process in which reader should use different skills in gaining the information from the text such as inferring, questioning, predicting, and drawing conclusions that provide this ability for second language learner to demonstrate higher order thinking skills in writing.The project is designed to support academic staff to develop sustainable strategies that address the students' challenges and enable them to write more academically, along with the associated skills of reading, discussion and writing. So, the formulation and conceptualization of the project objectives were based on the understanding that:

- Reading, discussion and writing activities are intertwined closely, and contribute to the formulation of ideas, as well as the development of language and communication, problem solving, critical thinking, and creative thinking skills as macro-level strategies;
- Reading, discussing and writing in English embedded in academic subjects contribute to the development of academic and professional competence;
- Not only principles and practices but also views and attitudes associated with effective reading, discussing and writing in English will be contribute to the development of academic and professional competence in students and promote independent thinking;
- Reading, discussing and writing in English should be integrated into learning, teaching and assessment through the other major courses to monitor student progress and gauge their strengths and weaknesses;

- Reading, discussing and writing in English should be encouraged, supported and practiced for both formative and summative assessment both inside and outside of class to see gaps in instruction;
- Disciplinary conventions, genres, and rhetorical resources for reading, discussing and writing in English as well as strategies for effective reading, discussing and writing in English need to be taught explicitly and systematically to students to cover multiple writing standards;
- Use of Writing Across the Curriculum (WAC), which began in the US in the early 1970s, as an effective method to improve educational practices by emphasizing on writing- to- learn for communicating through the written word.

Getting started with Writing Across the Curriculum

The conceptual framework (WAC) of this study was derived from the Writing in Disciplines (WID) model which focuses on embedding writing instruction into the discipline's curriculum (Wingate,2012) and attributing responsibility for teaching writing to the subject lectures rather than the writing experts(Wingate et al., 2011). The focus of the WID model is rhetorical, based on the idea of introducing students to the discourse communities of their disciplines (Cater et al., 2007)through integrating the writing and the knowing in the discipline (Cater,2007). So, the WAC model draws on the theories of cognitive apprenticeship, with view to socializing the students as the new members of the discipline (Blakeslee, 2007; Cater et al., 2007). The teacher as the 'master' takes responsibility for supporting the students, the 'apprentices' to develop the right tools of thinking and organizing their ideas to enable, they write to them to build up to eventual mastery level (Cater et al., 2007).As Cater (2007) assumed that in the WID model ' students do not learn to write the discourses of the disciplines simply to master those discourses; rather, they write to learn, in addition to the subject matter of the discipline, the way of knowing and doing that define the discipline'.

Writing Across the Curriculum is demonstrated in these shapes:

- Journal Writing: Journal writing, as an informal place for students to summarize their thoughts and think about class content, is a great way to create confident writers by letting them write freely
- Think-Pair-Share: invite a pair of students to discuss a topic after a lecture or presentation by organizing and writing their thoughts.
- Quick-Writes: Quick-writes are great ways to improve students 'critical thinking skills by asking them to express coherent thoughts in a short time.
- Self-Assessments: Teachers can get valuable insight into how students are learning and what can do help them even more by involving students in writing to uncover how they think through writing process.
- Real World Writing: Writing regularly, in all subject areas with different kinds or *genres* for different audiences especially in math, social studies, and science is going to be crucial. Helping to think and write in genres to become more fluent and more flexible writers is necessary.
- Note Taking: note taking as a writing exercise asks students to summarize what they read or listen.
- Research Projects: The goal of research projects is ask students to research a topic in their discipline to write research-based arguments.

Procedural

The first stage was to establish a working group of academic members from Department of English language from medical university to explore how they could best integrate the writing scaffolding into existing lecture or tutorial medical content and teaching and learning activities and to help them in the instructional design of scaffolding activities appropriate for their particular disciplines. This project's focus was to guide the English teachers to design activities, tasks and assessments that would support them to meet their responsibilities without creating unrealistic burdens on them. The ultimate goal was to establish a recursive model of writing instruction (Rutz& Lauer-Glebov, 2005) in which students continually revisit the skills of thinking, seeing, reading, analyzing and arguing through writing in their discipline (Bean, 2007).The second step was to select a group of EFL medical science students (N=43),including 29 (67%) male and 14 (33%) female students. All participants were regarded as being advance level students; their proficiency level in English was determined by the diagnostic placement test administered before they participated in WAC scaffolding activities in two consecutive semesters for identify the teachers' and students' needs with regard to reading, writing, discussion in academic genres in their subject discipline. The third and fourth steps constituted the activity development, in which potentially suitable activities were identified by the project team, given to the teachers to select their preferences, and refined to meet individual members' needs by analyzing their first written paper in semester 1. The fifth step was to pilot implementation and evaluation of these activities in which a questionnaire completed by students to find out the extent to which they believed they had continued to improve their writing skills from introduction of WAC in semester 1 to the end of semester 2.

III. Result and Discussion

The following summarizes the analyses of the first and the last written papers done by students who were given the WAC scaffolding activities developed for their discipline during the first semester and the second semester. Indeed, evaluations of WAC development activities and the amount of participation in those activities will provide feedback about the effectiveness of those activities.Since the purpose of the analysis was to get an overall picture of the difficulties the students said they had with preparing for and writing their assignments during the WAC implementation period. It appears their greatest challenge was in elaborating on the problem under investigation and highlighting statement of investigation purpose, but even this was only expressed as a difficulty by 12 of the 43 students interviewed.

Table. 1: Most commonly expressed difficulties

Difficulties	No. of students(N=43)
Elaborating on the problem under investigation and highlighting statement of investigation purpose	12
Expressing ideas	6
Summarizing and paraphrasing	6
Vocabulary and genre	7
Finding enough evidence to support ideas	3
Summarizes previous investigations to inform the reader of the state of current research	5
Reading journal articles	9
Some classmates translate from their L1 to L2	3
How to write introduction	3
Identifies relations, contradictions, gaps, and inconsistencies in the literature	2
Connecting ideas	2
Getting started with assignment	1
Suggest the next step(s) in solving the problem	5
Using correct referencing style	1

The other problem about which they gave more expanded answer was that of reading journal articles. Students' comments indicate that effective scaffolding on reading, especially on reading journal articles, are necessary because all types of paper cite any relevant literature. So, a part of paper should annotate or critique the literature in a particular subject area based on reading journal articles.Another important factor is vocabulary knowledge. Vocabularies are the basic building blocks of language, units of meaning from which larger structures such=h as sentences, paragraphs, and whole texts are formed (Nunan, 1991). According to Nation (2001) quoted in Nassaji (2001) breath of vocabulary knowledge means the quantity or number of words learners know at a particular level of language proficiency. So, vocabulary knowledge is a sub-skill that has improved less than other skills of language learning in second language learner.There were a few students who expressed the belief that certain aspects of WAC activities were unnecessary because they had already acquired these skills sufficiently, either in their secondary schooling or through the academic subjects they had taken at university. Table 2 indicated five skills areas in which small numbers of medical science students considered themselves to be competent already, the most commonly mentioned being plagiarism (9 students) and summarizing/paraphrasing information from the internet (6 students).

Table 2: skills students claimed to have acquired sufficiently

skills	No. of students (N=43)
Avoiding plagiarism	9
Summarizing/paraphrasing information from the internet	6
Citations	3
Expressing for academic writing	4
Presentation skills	5

As mentioned earlier, there was a group of students (N=43) who participated in WAC scaffolding activities in two consecutive semesters. A questionnaire completed by students to find out the extent to which they believed they had continued to improve their writing skills from introduction of WAC in semester 1 to the end of semester 2by opening a window into their mind. Table 3 shows that their mean responses on a 5-point scale, where 5 represents 'I have continued to work and improving this' and 1 represents 'I give up and went back to my old way'.

Table 3: students' response to questionnaire about sustained writing habits

Writing habit	Mean	% rating 4 or 5	%rating 1 or 2

1.	Getting started with young writing	3.22	28.2	4.4
2.	Understanding what plagiarism is	4.04	58.2	0
3.	Rewriting someone else's ideas in your own words	3.39	30.4	4.4
4.	Finding the most useful documents to refer to	3.35	34.8	26.1
5.	Reading/understanding the documents	3.26	30.4	17.4
6.	Locating relevant information in documents	3.26	30.4	8.7
7.	Writing an answer that gives relevant information	3.04	26.1	21.7
8.	Critical thinking/critical evaluation	3.09	26.1	17.4
9.	Use of language style	3.26	39.1	13.0
10.	Use of writing style	2.91	21.7	21.7
11.	Structuring/ organizing your thoughts	2.43	22.9	26.1
12.	Correct grammar	3.32	32.8	16.8
13.	Correct punctuation	31.3	30.4	17.4
14.	Correct spelling	3.26	43.5	17.4
15.	Making your writing flow	3.35	43.5	8.7
16.	Writing notes	3.86	47.8	4.4
17.	Converting notes into paragraph form	3.30	34.8	8.7
18.	Providing citations to support your ideas	3.35	30.4	17.4
19.	Understanding what the assignment question is asking for	3.26	39.1	13.2
20.	Reading articles	3.30	34.8	8.7

It can be seen that students' mean rating for their perceptions of whether they were continuing to work at improving their writing skills at macro level were slightly above average, with the highest being for 'understanding what plagiarism is' (4.04), ' providing citations to support ideas' (3.86) and 'structuring/organizing your thought' (2.87). This encouraging, since these were three of the main foci of the WAC activities. It is also encouraging to see that relatively high percentage of students rated these items 4 or 5 (58.2, 47.8%, 43.5 %, and 39.1% respectively), suggesting that they perceived themselves to have continued to improve; and that no students had given up themselves to have continued to improve; and that no students had given up and gone back to their old ways in relation to plagiarism and only 4.4 % in relation to the other two of these items.On the other hand, micro level aspect of academic paper writing that were given less emphasis in the WAC activities, such as grammar, punctuation and spelling were rated lower (2.43-3.32), fewer students said that they had continued to work at these (22.9%-32.8%) and more said they had given up and reverted to their old ways(16.8%-26.1%). This is not to suggest that these skills are unimportant, but only to emphasize that these students' attitudes appear to be more positive towards the aspects of writing that were addressed specially in the WAC activities of this phase. A further question in the survey asked the students to comment on our observation, from analyzing their essays that they seemed to have developed a better idea of identifying key issues by the time they submitted the second essay, 65.2% of the respondents agreed that they also perceived this to be the case.In sum, the teachers and students generally agreed that it is important to have WAC-type activities in discipline subjects, particularly when students need to break old habits developed from memorizing and recall in their secondary schooling and other learning experiences and develop new skills associate with higher-level thinking. From both teacher and student interviews came the observation that improvements to student writing cannot take place in isolation. The students' comments, along with analyzes of their work samples, made it clear that they benefited more from the activities when they were done in class, in the context of the assignments, and with the input and feedback from their teachers. The participating teachers have all recognized the importance of this and have plans to embed the WAC scaffolding more deeply into their class activities in the future.

IV. Conclusion

The researcher's reliance on corpora analysis especially by analyzing the first and the last written papers as reliable performance done by students who were given the WAC scaffolding activities developed for their discipline during the first semester and the second semester and via online questionnaire as think- aloud protocol has had the main role in conducting the research to unveil mental activity of the students through writing disclosed that significant differences such as cognitive, linguistic, discourse, genre and target audience observation exist between the first and the second language writing system.This documented corpora analysis helps the researcher to practically show every challenging problem, that many EFL Learners are confronted with in their writing academic papers, which include elaborating on the problem under investigation and highlighting statement of investigation purpose , reading journal articles , vocabulary knowledge, inability to relate their thoughts to the main idea and noted facts. These problematic issues are very rampant among EFL writes because of lack of mastery to write argumentative essay. In fact, theweaknesses in this area could be returned to the loss of EFL Writer's' knowledge about genre: coherent argument and rhetorical organization, which would be significantly improved through WAC scaffolding activities.
So, the Writing Across the Curriculum (WAC) program has major objectives:

- The WAC program provides writing classes in subject through curriculum courses;
- Student and teachers of academic subjects as focus groups about WAC classes
- Linking effective reading, discussion and writing to the achievement of subject learning outcomes;
- Providing a set of methods and strategies for effective writing in English for specific academic subjects;
- Providing a set of methods and strategies for effective reading and discussion that support writing; and
- Collecting evidence about the appropriateness of these strategies in relation to the assessment of academic subject learning outcomes and program learning outcomes.

The WAC program will be looking for these outcomes:
- Improved EFL Learner writing
- Writing used as means of inquiry
- EFL learner introduced to disciplinary aspects of writing
- WAC requirements being met academic writing
- Effective teachers of academic subjects' development

Further, the project aimed to explore ways in which WAC practices can become sustainable and promoted, not only at institutional but also regional and international levels. It is hoped that outcomes of this project will have significance for the practice of university teachers, particularly in the Asian context where students are writing in English which is not their first language, as it will provide a framework for teachers to take responsibility for the development of sustainable writing skills within their discipline contexts.

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