An Online Training Program Based on International Electronic Medical Journals Criteria to Develop Egyptian Physicians' Academic English Writing Skills

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Abstract:

*T*his study explores the learning experiences of 30 non-native English-speaking physicians who participated in an online training program for academic writing and publication skills which consisted of 2 monthly with 2 hours per sessions. Participants identified barriers to writing, had time to write, and completed at least one research article. Participants provided written responses to questionnaire questions about their learning experience, and at the end of the program, participants identified manuscripts submitted for publication, and completed an evaluation rubric. The result shows that this academic writing program facilitated the knowledge, and support needed skills to foster writing productivity. All participants completed at least one research article by the end of the program and 67% were able to publish their research articles in high-impact journals. It is suggested the physicians' academic writing and publication's productivity requires continued follow-up.

Introduction

Publication of research articles brings attention to scholars and their institutions. The successful publication will increase funding for the institute and ensuring scholar's progress through their discipline. Academic institutions and university frequently use the number of publication to an individual's by the websites measurement such as (H-index – g-index) as the measure of individual's academic proficiency. Scholars, who publish less or who focus on their daily works without paying attention to publications, may find themselves out of being promoted in their careers. As a results there is an intensive pressure to publish as

the new phenomena "Publish or perish" which initially created by Coolidge (1932) become a harsh reality. Moreover, there has been a rapid growth of e-journals, which extend the access to published research as well as affects on the schematic structure of RAs (research articles). English is the dominant language of most online international research databases, such as the Science Citation Index, ScienceDirect and PubMed. The importance to publish research papers in high prestige journals which are in English is the cause of the recognition of three simultaneously factors as follows recognition: (to the scholar, to the institution of higher education where she or he works or studies, and to the country in which that institution is located). Due to this importance, Faculty and graduate students are motivated, even pressured, to publish in English language journals because of the effect on institutional and national prestige. The research questions were as follows:

1. What are the required academic writing criteria of English-language research articles (RA) for Egyptian physicians to publish RA in high-impact factor E-medical journals?
2. What were participants' perceptions of the need and the usefulness of an online program to improve their paper's quality?
3. What is the impact of an online program on developing participants' knowledge about English academic writing and publication skills?
4. What is the impact of an English academic online training program based on international E-medical journals criteria in developing physicians' papers' quality were reported 3 - 6 months post-program?

1-Review of Literature and related studies:

Learning to write in the foreign language is one of the most difficult tasks which ESL (English Second Language) learners face. Writing skills is considered as a process which causes problems to ESL learners as it entails using a set of mental processes rather than only using the formal structures of the

language itself. "It requires not only lexical and syntactic knowledge of vocabulary and grammar but also the ability to generate and organize ideas and thoughts in a way that can be clearly and coherently communicated to a potential reader Quintero (2008:8).

Academic writing was not considered a process, as many scholars came to see it in the 1980's (Berlin, 1988; and Bizzell, 1986; Faigley, 1986; Johns, 1997; Silva, 1990). Nor was it perceived as a social practice that varies from one context to another, according to situation, purpose and audience, as many scholars see it nowadays (Butt, Fahey, Feez, Spinks & Yallop, 2003; Cope & Kalantzis, 1993; Knapp & Watkins, 2005; Paltridge, 2001). Rather, it was considered ''a skill of using correct syntax, spelling, punctuation to produce accurate and correct, perfect sentences, paragraphs and essays which fit prescribed patterns'' (Silva & Matsuda, 2002, p. 260).

A considerable number of researchers have demonstrated various views regarding how to teach writing in general and writing for specific purposes in particular. There has been an argument to consider the product approach and its target is to focus on the final product and generating grammatically correct texts or the process approach as its target is to pay more attention to the underlying process of writing as the best way of teaching academic writing. Badger and White (2000) suggested that the later approaches involve the practice of linguistic skills. However, due to its unawareness to the social and academic characteristics, it was criticized by several scholars Yiu (2009). As a result, the appearance of genre approach, which is a third dominant approach, has appeared specifically as a result of the communicative approach. Grami (2010, p. 30) defines it as "... focuses on writing as a process, and in some ways is an extension to product approach, but with attention being paid to how this product is shaped according to different events and different kinds of writing".

Hyland (2003) argued that approaches to teaching writing focused on process haven't taken into account "forces outside the

individual which help guide purposes, establish relationships and ultimately shape writing. (Hyland, 2007, p. 49) mentioned genre as 'used to accomplish specific purposes, written for a particular audience and employed in a particular context'. Bhatia (2002) specified various advantages of genre-based teaching as developing linguistic and communicative competence. Firstly, in an explicit genre-based approach, learners are able to respond to new and recurring genres. Secondly, they are more likely to be aware of culture and context interpretations and applications of varied genres because genres' socio-cultural essence is highly valued. Thirdly, genre-based writing instruction allows for an overarching framework encompassing grammar, vocabulary, functions and notions, tasks, situation types and content areas. Lastly, taking account of students' needs, teachers using a genre-based approach provide resources for them to scaffold their learning and creativity.

Regarding the communication competence in the field of medical science, it is conducted according to well established communication patterns called academic genres. As Bhatia (1993-2002) states: the ultimate aim of genre theory is to offer a more dynamic explanation of the way expert users of language manipulate generic conventions to achieve a variety of goals. The concept of genre is a key term in medical communication and includes the written and spoken genres.

Burgess and Cargill (2013) explored the implementation of à combination of genre analysis and corpus linguistics to teach publication skills, in a way that helps participants gain structure in the drafting of their own research papers. This approach involves the selection of research articles by the actual program participants, a macro-level and micro-level analysis of the texts selected, an analysis of the readership to which the papers are addressed, and the writing of a first draft of a paper by the participants themselves on the basis of sentence templates or frameworks that help them avoid the risk of plagiarism.

English for Academic Purposes (EAP)

The Field of EAP is defined as teaching English to native and nonnative speakers of English with the aim to assist learners

familiarizing with and socializing in their academic communicative practices for study or research purposes (Hyland, 2006, p.2). In other words, EAP nonnative speakers are on the issue of enabling learners with different cultural backgrounds and varied language competence to successfully construct and represent knowledge in particular disciplines or fields. In the domain of EAP research, the genre-based approach has been referred to as a relatively effective method in analyzing academic discourse. Genre is defined as a set of communicative events consisting of conventionalized forms or moves which can be associated with members of particular contexts or discourse communities (Swale, 1990). Specifically, in academic written genres, research articles (RAs) have been seen as the main generic aspects in academic productivity. Therefore, much of the EAP research has focused on the generic contents and structures variation in RAs (Bhatia, 2002; Burgess, 2002; Hyland, 2007b; Samraj, 2002; Yang & Allison, 2003, 2004).

English for research publication purposes (ERPP)

Corcoran & Englander (2016) investigated English for research publication purposes (ERPP) instruction which aims to aid multilingual scholars in achieving genre-based expectations and the submission and review process. They addressed the need for a sustained program for multilingual scholars. Swales' contribution to the area of genre analysis, analyzing different section of genres, for instance, medical, business, computer etc. have been drawing special attention of the researchers to research articles (RAs) for more genres likely to be explored and investigated. Academic writing is extensively acknowledged as a key skill for students to support their educational performance at higher education level.

Academic Publication as a concept:

Publishing is way to spread academic writing available to the general public. Rej (2005) defines the word "publication" is actually used in two quite different ways. It means the process of bringing new information to the public, but it can also refer to something or other that has already been brought before to the public. That means the publication may be into main types the

original article as it is a new idea come to the light; or as the review articles which is already an idea published before but it is shown from other perspective.

Academic publishing is the subfield of publishing which distributes academic research and scholarship. Most academic work is published in academic journal article, book or thesis form. The part of academic written output that is not formally published but merely printed up or posted on the internet is often called "grey literature". Most scientific and scholarly journals, and many academic and scholarly books, though not all, are based on some form of peer review or editorial refereeing to qualify texts for publication. Peer review quality and selectivity standards vary greatly from journal to journal, publisher to publisher, and field to field.

IMRAD as the standard format of academic scientific journals

The research articles of observational or experimental are usually divided into the following sections: Introduction, Methods, Results, and Discussion "IMRAD" structure. Long articles may need subheadings within some sections (especially Results and Discussion) to clarify their content. Other types of articles probably need to be formatted differently such as case reports, reviews, and editorials.

The IMRAD format has been adopted by a great number of academic journals since the first half of the 20th century. The IMRAD structure has come to dominate academic writing in the sciences, most notably in experimental biomedicine. Although the IMRAD structure originates in the empirical sciences, it now also regularly appears in academic journals across different disciplines. Many scientific journals prefer use the IMRAD acronym especially in their instructions to their authors, recommending the use of the four terms as main headings.

It is also recommended in the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" issued by the International Committee of Medical Journal Editors (previously called the Vancouver guidelines) and in the 6th edition of the

publication manual of the American Psychological Association (APA style). The APA publication manual is widely used by journals in the social, educational and behavioral sciences. The IMRAD structure has proved successful because it facilitates literature review, allowing readers to navigate articles more quickly to locate material relevant to their purpose. The IMRAD structure effectively supports a reordering that eliminates unnecessary detail, and allows the reader to assess a well-ordered and simple presentation of the relevant and significant information. It allows the most relevant information to be presented clearly and logically to the readership, by summarizing the research process in an ideal sequence and without unnecessary detail.

Types of articles published in Electronic journals

Articles tend to be schematic in the structure and often vague to anyone except for researchers in the field and advanced students. In some subjects this is unavoidable given the nature of the content. Usually, strict rules of scientific writing are imposed by the editors; however, these rules may vary from journal to journal, especially between journals from different publishers. Articles are usually either original articles reporting completely new results or reviews of current literature. There are also scientific publications that bridge the gap between articles and books by publishing thematic volumes of chapters from different authors.

Original article consists of four main stages of the study, which correspond to the four main sections of the manuscript: generation of the hypothesis (Introduction), planning of the study design to test the hypothesis (Methods), analysis of the data obtained by testing (Results), and interpretation of the results of the analysis (Discussion). This type of paper is the most important as it provides new information based on original research. Original Articles should consist of the following headings: structured abstract, introduction, methods, results and discussion (IMRAD).

Review article is a type of paper in which does not introduce new information but it highlights important points that have been previously reported in the literature. A large number of relevant references are expected. Reviews should consist of the following headings: unstructured abstract, introduction and subheadings. Reviews are usually invited by the editor (hence, are also known as Invited Reviews). Thus, the review paper is designed to summarize, analyze, evaluate, or synthesize information that has already been published (research reports in primary journals).

Case Report: is à description of à single case with unique features. A case report is a detailed report of the symptoms, signs, diagnosis, treatment, and follow-up of an individual patient. Case Reports should consist of the following headings: short unstructured or no abstract, brief introduction, case report and discussion. There is often a prescribed limit to the number of figures and references, and sometimes, also the authorship. Although a number of medical journals publish case reports, it is not preferred by the high-impact journals as it does not raise their citation and it is just one of the causes of the decrease of the impact factor of the journal.

Commentary Editorial may take several forms a short review or critique of original articles accepted for publication in the same issue of the journal, a brief description of a subject that does not conclude a full review. The number and types of editorials vary according to the editorial policy. Editorials are invited by the editor or written by the editor.

Letter to the Editor is a type of paper in which written by authors of previously published articles comment "Commentary Editorial" and they are usually invited to make a written response (Author's Reply to Letter). Letter to the editor letters to the editor of an academic journal are usually open post-publication reviews of a paper, often critical of some aspect of the original paper. The authors of the original paper sometimes respond to these with a letter of their own. These comments should be objective and constructive.

The role of the Technical Editor

Grange (2004) many authors have either never gained the necessary writing skills, or through pressure of work, carelessness or other factors (perhaps having English as a second language), submit a far from perfect product to the journal Editor. A recent survey of papers submitted to the "British Journal of Urology" showed that only about 5% met a set of simple criteria requested in the 'Instructions to Authors'. The role of the technical editor is to rectify the errors and omissions that authors made in their manuscripts, and to provide the journal production team with a suitable paper for publication. The first task is to ensure that all the elements of the paper are present:

- Author/affiliation details complete; e-mail address provided.
- Running title (author and short title).
- Does the title make sense? There should be no abbreviations (unless defined and the term used more than once) or commercial names.
- Is the abstract short enough and styled correctly? Any abbreviations in the abstract should be defined but terms should be in full if used only once.
- Are suitable keywords provided?
- The main body of the text should have the required sections (Introduction, Methods, etc.).

There will be mistakes after technical editor edit the paper and therefore in the proofs. It is very important that the author reads the proofs carefully; the content of the final published version is (largely) the responsibility of the author and any errors in it can only be corrected by published 'Errata', usually lost in the back of a following issue. If the initial paper submitted by the author is prepared carefully and with due regard to the journal's instructions, the final printed version should be almost the same.

2- Methodology

This study adopted the quasi-experimental design to investigate the impact of using an academic writing online program based on the high-impact journals criteria in order to develop physicians' abilities of writing research articles for the purposes of publication. One group of the physicians was selected as participants. The group of thirty physicians was the experimental group and the control group and received pre-program questionnaire, the proposed experimental treatment which was based on the high- impact journals criteria of writing a research articles, pre-post Test (21 items), post-program questionnaire, and scientific writing manuscript evaluation rubric. This study evaluates the success of Egyptian physicians, in terms of the quality of their publication productivity given by at least one written papers. Pre and post questionnaire distributed by e-mail and facebook group to investigate the effect of the online program on the physicians' writing scientific papers in English and Scientific Writing Manuscript Evaluation Rubric distributed by e-mail and facebook group to predict their scientific writing proficiency.

2.1. Participants

Participants of the study 30 master's and doctoral physicians in Urology (10 participants) – Nephrology (9 participants) – Radiology (6 participants) – Pathology (4 participants) – Anesthesia (1 participants) were selected from a total group of (136 physicians). The researcher collected information about their knowledge of English and the ways in which they will write their articles to be submitted to periodicals published in English. Participants were informed about the purpose of the study, and the procedure of the data collection. They were reassured that their responses would be kept strictly confidential, and that they would only be used for research purposes.

2.2. Procedures

The following procedures have been carried out by the researcher to conduct the experimental treatment: the

introductory session, the researcher introduced the four modules with each sessions and a brief explanation on "How to Publish a Scientific Paper"; she provided data about what they are going to do through the program; from the beginning till the end. They were provided with the online handouts that contain the necessary information about the training program. There are two suggested books mentioned in the program and uploaded online on the website and available for them by the facebook group to be read as assignments and to enhance the participants' awareness of academic writing and publication skills.

In the first module on "Principles of effective Academic writing", the first session, start with an introduction of the effective writing; the second session, examples of what not to do followed by a short quiz to assure the understanding; the third session, Overview of principles of effective writing; the forth and the fifth paraphrasing and tricks on Cut the clutter followed by quizzes; the six session, more Practice on cutting clutter followed by assignment consisted of (16 questions).

The second module on "Academic Writing Basics", consist of 15 sessions based on the mechanics of writing on the sentence level and paragraph level followed by quizzes and 3 assignment to confirm fostering the rules of academic writing. The third module "The structure of original manuscript" explains the pattern of IMRAD structure of the original research articles and also followed by quizzes. The forth module "Publishing and Peer-review Process", consisted of two parts The Submission Process and the Peer Review Process; each part give a full detail of the technicalities of submitting a research article and at last how to deal with editor, reviewers, and technical-editor.

At the end of the program the same pre-test is post-test to measure the participants' performance toward the program. After that a post- questionnaire was given to participants in order to collect their perception about the usefulness of the program and its impact on their continuous self learning. The rubric evaluation was given to each participant and allowed to return it back after one month of the end of the program. The

researcher follow-up with the participant from 3 to 6 months as this is the time of a manuscript cycle in academic journals. To confirm their research papers acceptance.

3. Results

The participants in this study provided a unique perspective of their experiences in graduate-level program. These experiences can be divided into two major categories: benefits and challenges of the online program, a written research article as a primary outcome of the targeted program.

A) Benefits and challenges of the online program

Table (1) indicates that the mean score of the experimental group in the post Academic Writing and Publication Skills knowledge Test of the content and structure of a research paper in the following (Abstract, Title Page, Introduction, Materials & Methods, Results, Discussion, Conclusion, Reference, Tables and Figures, Cover Letter, Format and writing, and Plagiarism sections) are higher than the pre-test. The table illustrates that estimated t value (19.47) is high and statistically significant at 0.01 level for the previous sections.

Table 1: Comparing the Mean Score of the Experimental Group on the Pre and Post Academic Writing and Publication Skills knowledge Test

Test	N	Pre-Test		Post-Test		T	Df	Sig.
		Mean	SD	Mean	SD			
Academic writing and publication skills test score	30	9.87	2.68	19.47	1.196	18.38	29	<0.01

The computed effect size d of implementing online training program to teach physicians academic writing and publication skills presented in table (2).

Table 2: d value and its Corresponding Effect Size of the Treatment in Relation to the academic writing and publication Test

	Mean	SD	t	d	Sig. (2-tailed)	Effect size
Posttest - Pretest	9.60	2.86	18.38	3.36	<0.01	Large

Results in table (4.3) indicate that the effect of the online training program was large (d = 3.36) on promoting physicians' academic writing and publication skills. These results can be attributed to the effect of the high-impact electronic journals' criteria based sessions which the experimental group physicians underwent during the treatment.

Table 3: Results of the pre-post questionnaire in regard of the academic writing skills

	N	Pre-questionnaire		Post-questionnaire		T	d	Effect size	sig
		Mean	SD	Mean	SD				
Writing concisely	30	2.30	0.95	3.73	0.45	8.1	1.47	Large	<0.01
Writing clearly	30	2.03	0.32	3.87	0.34	21.7	3.98	Large	<0.01
Using the active voice	30	2.30	0.53	3.73	0.45	12.5	2.29	Large	<0.01
Writing with verbs	30	2.40	0.62	3.90	0.30	13.0	2.38	Large	<0.01
The writing process	30	2.17	0.69	3.87	0.34	11.7	2.14	Large	<0.01
The format of an original manuscript	30	2.20	0.48	3.63	0.49	11.5	2.11	Large	<0.01
The peer review process	30	2.27	0.52	3.37	0.76	7.1	1.30	Large	<0.01
Scientific writing issues, such as plagiarism	30	2.13	0.43	3.57	0.62	11.5	2.11	Large	<0.01
"You can learn new things, but you can't really change your basic writing talent."	30	6.30	0.59	2.13	0.77	25.0	4.65	Large	<0.01
"No matter how much writing ability you have, you can always change it quite a bit."	30	5.60	0.62	6.50	0.50	6.4	1.26	Large	<0.01

Table (3) points to the fact that the academic writing skills improved significantly (t-value is significant at 0.01 levels) and large effect size is reported. This indicates that there was a statistical significance difference between the mean score of the pre and post questionnaire administration of the experimental group in favor of the post administration as a result of implementing the online training program.

A descriptive analysis was used to measure the participants' opinions, satisfactions, evaluations, perceptions and beliefs on implementing the online training program by estimating the frequencies and percentage of their responses.

Table 4: Participants' opinions, satisfactions, evaluations, perceptions and beliefs on the online training program

Post-course		N	%	Min	Max	Mean	Std. Deviation
How good or bad was your overall experience with the program?	Mostly Good	4	13.3	5	7	6.23	0.67
	Very Good	15	50				
	Extremely Good	11	36				
How easy or difficult was the program?	Somewhat Easy	6	20	5	7	6.10	0.71
	Very Easy	15	50				
	Extremely Easy	9	30				
How likely or unlikely are you to take another program with the same format?	Somewhat Likely	2	6.7	5	7	6.43	0.62
	Very Likely	13	43.3				
	Extremely Likely	15	50				
How satisfied or dissatisfied are you with the amount you learnt in the program?	Somewhat Satisfied	3	10	5	7	6.43	0.67
	Somewhat very Satisfied	11	36.7				
	Extremely Satisfied	16	53.3				
How likely are you to proceed with the topic further after having taken this program?	Probably proceed	10	33.3	4	5	4.67	0.47
	Definitely proceed	20	66.6				
How helpful were each of the following resources or activities for learning the program topics							
physicians interactions using other communication tools (e.g., google website, Facebook)	Mostly helpful	8	26.7	3	4	3.73	0.45
	Very helpful	22	73.3				
Revising papers	Mostly helpful	17	56.7	3	4	3.43	0.50
	Very helpful	13	43.3				
Quizzes	A little helpful	5	16.7	2	4	3.20	0.71
	Mostly helpful	14	46.7				
	Very helpful	11	36.7				
Downloadable materials	Mostly helpful	3	10	3	4	3.90	0.30
	Very helpful	27	90				
physicians interactions on discussion board	A little helpful	9	30	2	4	3.13	0.86
	Mostly helpful	8	26.7				
	Very helpful	13	43.3				
Early homework reading assignments	A little helpful	5	16.7	2	4	3.53	0.77
	Mostly helpful	4	13.3				
	Very helpful	21	70				
Writing papers	Mostly helpful	9	30	3	4	3.70	0.46
	Very helpful	21	70				
Assessing papers written by evaluation rubric	Mostly helpful	3	10	3	4	3.90	0.30
	Very helpful	27	90	3	4	3.90	0.30

Table (4) points the responses of participants that after program completion and they believed that the program improved their writing, made it easier to begin a manuscript, and helped them to get published. It is clear that the treatment had a great effect in the twelve domains of writing original research articles of academic writing and publication skills.

B) A written research article as a primary outcome of the targeted program.

A t-test for the experimental group was used for comparing the difference mean score of the number of submitted research articles for publication before and after implementing the training program.

Table 5: Comparing number of submitted papers for publication before and after implementing the training program

	Before-treatment		After-treatment		T	Sig.
	Mean	SD	Mean	SD		
Number of submitted papers for publication	0.00	0.00	0.67	0.48	7.6	<0.01

Table (5) points that the mean score of the number of the written research articles submitted for publication by the experimental group on the post implementation of the online training program are higher than the pre implementation of the online training program. The table illustrates that the estimated t-value (7.6) is significant at 0.01 level. This indicates that there is a statistically significant difference between the mean score of the number of the written research articles submitted for publication before and after implementing the online training program. 67% of the participated physicians published their papers in high-impact journals. That 20 participant out of the 30 participant of the experimental groups published their research articles in high-impact journal ranging between (0.2 – 5.0) as reported by SCImago Journal Rank (SJR indicator). It was evident that the effect size of the online program on physicians' submitted papers for publication was large (d = 1.39), indicating

that program based on the high-impact medical journals' criteria had helped physicians' promote the quality of their submitted papers for publication.

A descriptive analysis was used to measure the quality of written research articles of 30 participants by estimating the frequencies and percentage of their evaluation rubric scores. The participants scores as follows 10% of physicians scored ≥260 (out of 300), 30% of physicians scored ≥270 (out of 300), 46.67% of physicians scored ≥280 (out of 300), and 13.33% of physicians scored ≥290 (out of 300), it was noticed that the 67% participants who already published their research articles had got score that above 270/300. That shows the higher score the participants got, the more that their submitted research articles will be accepted for publication.

Discussion of the results:

Results revealed that, there is a statistically significant difference between the mean score of the before and after the treatment program in favor of the after applying the designed training program and also indicate an obvious improvement in the experimental group physicians' knowledge and performance in writing research articles as an effect of applying of the online training program based on the criteria of high-impact journals. The improvement appeared on the content and structure of the original research article written by Egyptian physicians. In addition to that, there was marked improvement with the number of published research articles in high-impact journals. This improvement can be due to administrating the proposed treatment which was based on using an online training program based on the criteria of high-impact journals as those improved physicians' knowledge and performance of writing and submitting research articles for publication.

Concerning the academic witting and publication skills, physicians implemented those skills to deal with high-impact journals or to be specific the editors, reviewers, and technical editors of those journal: the physicians' wrote their research articles depend on the IMRAD structure. The treatment gave

physicians a clear vision about the steps, procedures of writing and submitting a paper and in the same times it was based on self-learning of how to conduct a research and communicate with the laypersons. This result with that learning will not stop on this program because of the need of continuity of academic writing and publication education.

The results of the study are consistent with the results of the studies dealt with the importance of teaching the standards of academic English and biomedical publication though programs or workshops will effect greatly in facilitate the knowledge, skills, support need to foster writing productivity, and building a fundamental career in academic medicine as showed by: (Cameron, et al, 2009, 2011, 2013, 2015; Eastwood, Derish and Berger, 2000; Pololi, et al, 2004). While studies presented by Cargill and O'Connor (2006, 2012, and 2013) who established a curriculum model for developing academic writing skills reported that these students achieved high level of satisfaction achieved high levels of satisfaction and increased confidence in submitting papers for international journals. Cunha, et al (2014) argued that even knowledge of English was not the key factor for the publication success of the graduate students. They shed light on that h-index of the advisor and third-party language editing assistance as important factors of publication success.

Findings

The study accomplishes its target by using online program to teach the academic writing skills as well as the scholarly publication skills to Egyptian physicians. Participants of this study believed that they acquired the required skills to publish an original research articles as 67% of them already published their research articles in prestigious journals and most of them expressed that the applied program improved their academic writing and publication skills, made it easier to conduct a manuscript, deal with the layperson (Editors, reviewers and technical Editor), and helped them to get their articles published.

Findings of this study make it clear that the training program was effective and contributed in promoting physicians'

academic writing and publication skills of research articles submitted for publication.

Conclusion:

After conducting the study and having a real interaction with the experimental group, some conclusion was shaped:

- It can be concluded that, online programs to develop academic writing skills in general and the Egyptian physicians in particular.
- The online training program has significantly contributed in the increase of papers published and the quality of the papers as well.
- Following the standard IMRAD structures and the criteria required by the high impact factor journals has substantially helped the participant researchers get their academic papers published.
- The online training program suggest in this study has been favorably evaluated by the participants.

To conclude, results of the recent study suggest that a carefully designed academic writing and publication skills curriculum can be effective way in improving researchers' ability to write and raise their chances to publish English-language research articles regardless of their linguistic background or career stage. As the pressure to "Publish or perish" phenomena increases and the high number of nonnative speakers who must publish in English; an effective training in academic writing and publication skills represents a valuable investment for the career development.

Recommendations:

In the light of the findings in the study some recommendations must be raised for educators to do further studies:

- There should be a new strategies and methods to fit the needs analysis of students especially in the target of academic writing and conducting research.

- The integration between linguistics style as required part of academic writing and the study design of a research article should exist in the universities and colleges as an essential part of the development of knowledge and communication skills in general.
- Academic writing and publication skills should be considered by university professors to be included when developing non-native English speakers preparation programs
- Academic Writing based on the genre approach should be included in teaching practicum program at different disciplines.
- Academic scholars and professors should be provided with full training courses on Academic writing and publication.
- An academic writing training program series is one effective method that departments of faculty of medicine may use to facilitate the writing productivity and publication.
- Using the internet in teaching and learning should be considered, and be part of the requirements of the education reform policy as publishing is done with Electronic journals.

Suggestions for Further Research:

The following are recommended to be considered for further research:

- Using the research article as a model for teaching Academic writing provides opportunities for development of genre awareness and adoption of new literacy practices
- The Effectiveness of a Suggested Program in Developing Students 'skills to Avoid Plagiarism During Scientific Writing
- The Effect of Using Workshop Approach on Developing Basic Academic Writing Skills of Prospective Teachers.
- Academic English Genres; Tool for Fostering Academic and Professional Communication.

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