Teaching of Pharmacy in Saudi Arabia: Relevance of English and Digital Pedagogy

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ABSTRACT

Background: Medical education has always been of great importance for a nation. Teaching of pharmacy and related disciplines pose great problems at most of the colleges due to different pedagogic and linguistic reasons.

Objectives: To explore the issues related to teaching of pharmacy and specific English, to investigate into the relevance of technology integration as blended learning strategy, and to explore feasibility of appropriate teaching material.

Methods: The research design of the study was determined as per the qualitative nature of the study. A questionnaire for pharmacy students was adapted, modified and used as the primary source of data collection. Teacher and students samples were selected from King Abdulaziz University, Jeddah-Saudi Arabia.

Results: English as a language of instruction was found as one of the problems that adversely affect the learning of pharmacy related subjects. Pharmacy books were found difficult. The study also revealed that technology integration can be useful.

Conclusion: English language is the medium of instruction for higher education in general and medical/para-medical education in particular. Knowledge of English as the medium becomes more crucial when the target learners do not use it as a lingua franca. Therefore, a suitable English curriculum, a blend of appropriate content, technology integration and digital pedagogy may yield far better results in the given situation. There is an urgent need to include ESP in the curriculum.

Keywords: Pharmacy Teaching, Blended Learning, Strategy, Teaching Material

BACKGROUND

Medical education in general and pharmacy teaching in particular can't be overlooked for many reasons. Health education has always been of great importance for education, globalization, technology and over all development. The Saudi Vision -2030 has already endorsed the idea of quality Education and English language to attain in order to combat with the global requirement in all spheres of life including education in general and professional education in particular. In addition, English language is perhaps the most crucial factor because specific terms are difficult to understand especially due to Latin and Greek roots.

Keeping the importance of pharmacy and pedagogy in view, the present paper focuses on the following aspects: 1. relevance of teaching English for pharmacy and related subjects, 2. effectiveness of teaching pharmacy using English (an international and medical language), and 3. teaching both English and Pharmacy together to facilitate each other. If we consider the third factor more important, the need for a sound knowledge of English becomes paramount. Therefore, a need of change is felt in the curriculum, textbooks, pedagogy and technology integration.

Relevance of Digital Pedagogy: Digital pedagogy (DP) is not exactly and only related to the use of digital technologies (blended learning/ e-learning), rather about approaching and utilizing those tools in the given pedagogical perspective. The need of blended learning becomes more acute when students are from different backgrounds, and teachers are not able to achieve the target through traditional mode of teaching. For example, infographics can be designed for better delivery and understanding of the content.

Blend of the content (health subject): Content selection is of great importance. Therefore, health related teaching materials should be used for medical and health sciences. Here is an example:
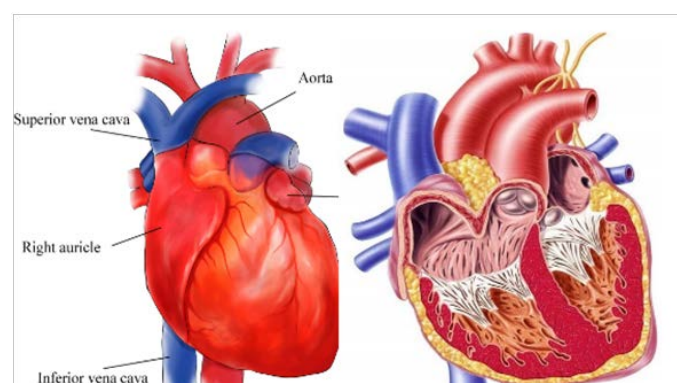

Figure1: Heart: external and internal

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Heart is a muscular organ. It is hollow from inside. It pumps blood. The circulation takes place through the circulatory system which also involves rhythmic contraction and dilation. In a human vertebrate, there may be up to four chambers having two atria and two ventricles... (Figure 1)'.

Using the text like the above, a teacher can teach both general English and specific English (English for Pharmacy). For general English, the focus lies on grammar such as parts of speech and their multiple contextual uses or derivation patterns such as 'circulate', 'circulation', 'circulatory' or 'contract', 'contraction', 'contracted'. Similarly, 'contraction' and 'dilation' can better be taught by playing video(s) for better understanding. In addition, there is a need that both the teachers explain that 'vertebrates' is plural of 'vertebrate' which can be defined as 'an animal having spinal cords'.

LITERATURE REVIEW

Literature review of the present research includes three dimensions: importance of pharmacy and issues related to teaching/learning, teaching of ESP, and blend of technology for effective teaching.

Following studies were considered highly relevant in the present context: importance of ESP in general[1] in the field of pharmacology and pharmacy as part of health care system[2], importance of assessment of knowledge of medical terms[3], the ESP curriculum and vocabulary[4], ineffective ESP courses[5], difficulties faced by the participants due to the borrowings from Greek and Latin[6,7], computer-based simulation learning (CSL) on pharmacy students[8]. In addition, authors[9] validated online learning in pharmacy education while others[9]. A Saudi researcher[10] studied learners' interest in online learning methods, particularly in certain courses at KKU, Saudi Arabia. English for medical purposes has not only been inevitable in a country like Saudi Arabia but also in Pakistan[11]. made it clear that English is imperative in the academic situation of Pakistan as it is library language for medical courses, language of teaching, examination and even research. In addition, it was contended that the academic need of Medical English is crucial these days because teaching medical English should be entirely different from the traditional approach of teaching general English[12]. Medical students may fail to gather specific medical knowledge and skills due to inappropriate curriculum of medical English.

METHODS

The objectives of the present study were to explore the issues related to teaching of pharmacy and ESP, to investigate into the relevance of technology integration as blended learning strategy, and to find relevance and feasibility of appropriate teaching material.
Sample

1. Thirty-nine students from Faculty of Pharmacy at a government university at Jeddah, Saudi Arabia (agreed for participation in data collection through the 'questionnaire') 2. Four teachers of pharmacy and 3. ESP teachers of the same university were interviewed. Questionnaire as a tool of data collection.

A questionnaire for students was adapted[13] modified and used for data collection.

Descriptive analysis of the students' questionnaire:

Based on the above data in table, analysis has been categorized theme-wise, and corresponding questionnaire items:

1- Difficulties related: books and language: Item-1&2
2- Teaching/learning related: Items-5, 6&10
3- Technology related: Items-11& 15
4- Training related: Items-12 & 14

Analysis of data from the interviews with Pharmacy teachers: Just a summary is being hereby presented based on the questions asked: Good English language background is an essential reason of facing problems in learning of pharmacy related subjects. Pharmacy books are not very difficult in themselves, but bit hard for the target learners due to specific terminologies and borrowing from languages like Greek and Latin. A contextualized and need based curriculum was recommended by most responded. There is a need of technology integration for pharmacy students as well. Some electronic facilities were not utilized to make teaching more effective.

ESP teachers/English teachers' context: Based on the responses it can be concluded that English is extremely important for learning medical or para-medical subjects. English language proficiency is not

Table 1: Responses of the students with regards to the questionnaire items

	Questionnaire for students: N= 39			
	Agree =AG	Undecided=UD	Disagree=DA	
S.No.	**STATEMENTS**	**AG**	**UD**	**DA**
1	English language is very difficult to understand.	21(53.8%)	3(7.6%)	15(38.4)
2	Books are in English and very difficult.	27(69.2%)	4(10.2)	8(20.5%)
3	Most teachers use white boards.	32(82%)	3(7.6%)	4(10.2)
4	Teachers use PPTs and online materials.	19(48.7%)	6(15.3%)	14(35.8)
5	We learn general English only.	33(84.6%	3(7.6%)	3(7.6%)
6	There are no medical/health terminology lectures/classes.	35(89.7%	2(5.1%)	2(5.1%)
7	Teachers use translation in the class.	23(82%)	3(7.6%)	13(3.3%)
8	Some teachers use Videos sometimes.	26(66.6%)	4(10.2)	9(23%)
9	Teachers use websites to explain terms and concepts.	12(30.7%)	7(17.9%)	20(51.2%)
10	We use 'blackboard' (online platform) for teaching and other tasks.	2(5.1%)	5(12.8%)	32(82%)
11	My department/centre is well equipped with technology.	33(84.6%)	4(10.2%)	2(5.1%)
12	I need training to use 'blackboard' provided by the KAU.	31(79.4%)	6(15.3%)	2(5.1%)
13	The access of blackboard has been given by the university.	29(74.3%)	5(12.8%)	2(5.1%)
14	The teachers or management have already trained us in blackboard and other softwares.	5(12.8%)	11(28%)	23(58.9%)
15	Most teachers assign tasks on blackboard.	4(10.2%)	9(23%)	26(66.6%)
	Any other feedback?			

quite adequate. ESP should be taught at faculty of pharmacy. All the learners and teachers need to integrate technology for better access and practice. Facilities like the 'blackboard' should be well utilized.

Overall Results and Implementations: It was found that English could be one of the problems that adversely affect the learning of pharmacy related subjects. The study also revealed that technology integration can further support the learners. In addition, it was concluded that the target learners enjoyed available e-resources and their appropriate integration in an English/specific English class. Teachers' utilization of e-resources and technology integration lead to more effective interaction between the teachers and learners.

The course outline shows that ESP is currently not being taught at the faculty of pharmacy of KAU. (https://www.kau.edu.sa/files/0/KauGuides/Faculty%20of%20Pharmacy.PDF)
The findings can be implemented in the curriculum design in general and ESP in particular. The methodology of teaching should incorporate sophisticated blend of the two: traditional and modern approaches including blending of technology.

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