The Changing Learning Needs of Saudi Student Nurses

Myra C. Britiller, PhD
Paul Reinald Garcia, PhD
Aimee M. Amponin, PhD
Al Ghad International Colleges for Applied Medical Sciences,
Dammam, Kingdom of Saudi Arabia
St. Paul University, Manila, Philippines

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Abstract

The study assessed the changing learning needs of Saudi student nurses as input to nursing curriculum. It identified the specific changing learning needs in three different domains: cognitive, affective, and psychomotor. Also, responses of faculty members to the students' changing learning needs were determined. Relationship between the changing learning needs of students and responses of faculty members proposed inputs to nursing curriculum. The study was a descriptive cross sectional and correlational survey method. The respondents were 100 student nurses and interns, and 13 nursing faculty members of Al Ghad International Colleges for Applied Medical Sciences purposely chosen based on research criteria set by the researchers. An adapted questionnaire was used and translated its content into Arabic language. Several ways were carried out to achieve content validity before it was submitted to the research committee of the colleges and respective deans for distribution approval. A total of 100 students and 13 faculty participated in the study purposely chosen based on the criteria set by the researchers. Results were analyzed through quantitative statistics. The findings revealed that Saudi student nurses' cognitive changing learning needs were focused on the application of student-learner approach in the classroom and educational field trips to different hospitals and health care settings. As to affective, Saudi student nurses' topped those needs for recreational activities to build confidence and self-esteem, stress management techniques and group activities for active participation. In terms of psychomotor, the highest changing learning needs were the availability of learning materials specific to students' needs and challenging programs outside the classroom that promotes learning. The response of faculty members based on the changing learning needs of student nurses was to attend seminars and conferences to broaden knowledge on their field of specialization to provide students with new

knowledge and skills. Psychomotor domain is significant to the changing learning needs of student nurses. The study concluded that there is a need to modify and redesign the existing nursing curriculum based on the changing learning needs of student nurses. Continuing education, training and professional development of nursing faculty members is vital to meet the changing learning needs of Saudi student nurses.

Keywords: Changing Learning Needs, Saudi Student Nurses, Nursing Curriculum

Introduction

Learning is the process to which learner takes an active part (Utanir, Ultanir & Temel, 2012). The learner recognizes and learns his weaknesses and strengths. According to Carey & Dick (2004) each learner is unique, and brings to the learning situation his or her own different learning style, knowledge set, pool of past experiences, and motivation. In individual learning, each individual gets to know how he realizes and perceives the learning process. The needs of a learner represent the gap between what the learner wants to get out of the learning experience and his or her current state of knowledge, skill, and enthusiasm (Noessel, 2003).

Learning is the most important factor in all fields of education (Alharbi, Almutairi, Alhelih, & Alshery, 2017). In nursing, assessing the needs of learners is an essential pre requisite to planning effective nursing continuing education activities. Examination of learning needs helps to facilitate purposeful and useful learning and once determined it allows educators to adapt curriculum, select relevant learning materials and to plan appropriate learning activities. Like other fields, it is important for nursing educators to recognize the most common learning preferences of nursing students. It brings improvement to their mode of teaching and selection from variety of learning styles. Also, acknowledging learning preferences serves to develop more effective curriculum design (Murphy, Gray, Straja, & Bogert, 2004).

Conversely, educators need not only consider the needs and preferences of students, specific to nurse educators is the ability to become accustomed to diversity and changes in both health care and education system. The current health care arena is changing rapidly and nurses are increasingly being challenged to adjust to these changes to be successful and to thrive in this new environment. Stress, challenge, and change have been integral to nursing since the beginning of the profession and are often accompanied by fear, frustration, pain and anxiety. Therefore, continuing educators have a vital role in continually assessing the changing learning needs of nurse professionals, helping them define needed skills or competencies, and developing strategies to assist future nurses cope.

Nursing has been an advocate of change. Allen (2010) asserted that nursing education as an evolutionary process that has experienced a metamorphosis. The transformation was revealed through different pedagogies from an apprenticeship model in the exclusive clinical setting to a holistic model in the college setting. Further, current developments in adult education and research have strongly influenced the need to revolutionize nursing education to produce graduates who can provide safe, effective care based on the individual client needs and their situations. This situation put nursing educators up to their biggest challenge as the revolution of nursing pedagogy involves a shift from the traditional conservative model of instruction where students are considered passive recipient of information to a critical model where the students at present want autonomy and empowerment from learning. Learning in nursing is constantly and continually growing, that every learner and instructor needs to catch-up to the changing learning needs.

In Saudi Arabia, nursing education had experienced these changes since it started. The nursing education in the Kingdom was considered as a young profession struggling to meet the needs of a growing population and the demands of health care (Tumulty, 2001). To add more, health care in Saudi Arabia is developing fast with multiple governmental and independent service providers and is faced with chronic shortage of nurses, accompanied by high rates of turnover (Almalki, FitzGerald & Clark, 2011). Economic growth has impacted upon health needs through population and health behavior change (Aldossary, While & Barriball, 2008). Because of these changes, the status of nursing in Saudi Arabia should be enhanced in order to make it a worthwhile career (Almalki et al, 2011). Literatures revealed the importance of understanding student nurses' learning needs to address this issue (Alharbi et al,2017; Hallin ,2014; Fleming,2011; Rassol & Rawaf, 2007).

Al Ghad International Colleges for Applied Medical Sciences recognizes the significance of achieving its goals by understanding the needs of their students. The college is new in the field of nursing education but has been striving to attain highly in producing nurses who are equipped with the critical knowledge, skills and attitudes in providing nursing care. This study is an initial activity for student learning assessment and a strong basis for modification of the nursing curriculum of the college. Equally, it intends to contribute essential inputs in redesigning the existing curriculum of nursing schools in Saudi Arabia.

This study intends to assess the changing learning needs of Saudi student nurses as input to nursing curriculum. To address this purpose, the following objectives were formulated:

1. To identify the specific changing learning needs of Saudi student nurses in three different domains: cognitive, affective, and psychomotor.
2. To determine the responses of faculty members to the students' changing learning needs.
3. To determine the relationship between the changing learning needs of students and responses of faculty members.
4. To propose inputs to nursing curriculum.

Methods

The study was a descriptive cross sectional and correlational survey method. The participants of the study were one hundred (100) student nurses and interns and thirteen (13) faculty members. These participants are from Dammam and Tabuk campuses of Al Ghad International Colleges for Applied Medical Sciences. These campuses were chosen as the locale of the study since it has the highest number of nursing enrollees as compared to other campuses of Al Ghad. As to the students, level eight (8) and interns were selected because they have completed foremost nursing courses in each academic level, and have the main experience in the conduct of field trainings.

The target participants were 100% or a total of one hundred fifty one (151) level 8 students and interns and nineteen (19) faculty members. However, only 100 students and 13 faculty members participated in the study. The reasons for this distribution were (1) leaves and absences of level 8 students during the distribution of questionnaires; (2) absences of interns during their review classes; (3) incomplete/ unfinished responses to the questionnaires; (4) some interns were not able to answer electronically; (5) faculty members were currently on vacation leaves.

An adapted self-completion questionnaire was the primary tool utilized to gather relevant data for the study. The tool was initially used in the study of Cantos, Alday, Alog, Asi & Calacal (2015). The researchers obtained permission from the authors, respected their recommendations regarding its use, and agreed to cite their study as the original source.

Adapting an existing questionnaire enabled the researchers to compare the present study with other studies. The questionnaire ensured that the researchers assessed the changing learning needs of student nurses in terms of cognitive, affective and psychomotor domains. The questionnaire are composed of closed items from which a participant is asked to select on a 4-point Likert scale with responses varying from 1 (strongly disagree) to 4 (strongly agree). There were two (2) sets of questionnaire prepared for the participants. The first questionnaire was intended to answer the first objective of the study and was answered by student nurses and interns while the second

questionnaire addressed the responses of the faculty members to the changing learning needs of student nurses.

There were no major modifications performed to the original questionnaire. However, since it is to be used with participants of different cultures and language than for whom it was originally developed, the researchers translated the content of the questionnaire into Arabic language. The researchers carried out several ways to achieve equivalence in the concepts measured and the items tapping these concepts. To ensure accuracy of data gathered from student participants, the questionnaire was translated in Arabic language by the head of English department of Al Ghad. The head of English department is a professor of both Arabic and English Language of the college. Furthermore, the researchers asked several professors to validate the translation of the questionnaire. Some suggestions such as to simplify some words were included in the translated questionnaire. The final translated tool was forwarded to the head of nursing department of Dammam and Tabuk campuses and to the respective Vice Deans for approval. Only the questionnaire for students was translated to Arabic language.

The questionnaires were distributed personally and electronically to the participants and 66% retrieval rate was achieved. Confidentiality of data obtained was ensured. Quantitative statistics were the main tools used to analyze the data.

Results And Discussion

The Changing Learning Needs of Saudi Student Nurses in terms Cognitive, Affective and Psychomotor Domains

Table 1. The Changing Learning Needs of Saudi Student Nurses

Domains	Top Changing Learning Needs	Mean
Cognitive	Application of student – learner approach in the classroom. التطبيق العملي لأسلوب الطالب - المتعلم في الصف	**3.11**
Affective	Recreational activities that will build confidence and self-esteem to the students. إقامة النشاطات الترفيهية التي تبني الثقة والثقة بالنفس للطلاب	**3.13**
Psychomotor	Availability of learning materials that would fit to the needs of student nurses. توفر مواد التعلم التي تناسب احتياجات طلاب التمريض	**3.29**

Revealed by Table 1, Saudi student nurses' changing learning needs are the application of student-learner approach in the classroom, recreational activities that will build confidence and self-esteem, and availability of learning materials that would fit their needs.

Students enlisted a student-learner approach in the classroom as their top priority need under the cognitive domain. This aspect is well known and identified by most of the recent literatures. Student- learner approach or Student-Centered Instruction (SCI) as defined by Collins & O'Brien (2003) is an instructional approach in which students influence the content, activities, materials and pace of learning. This learning model places the student or learner in the center of the learning process. Based on the findings, today's students are independent learners. They claimed that they want to be an active participant in learning and the classroom should be a meaningful learning environment for them to practice and develop their skills. Allen & Tanner (2005) identified learners as those seeking new information and active in learning. These students organize information in a way that is meaningful and take chances to explain to others. Student nurses of Al Ghad are these kinds of learners and perceived the needs to be treated as co-creators in the learning process. If given consistent opportunities like open-ended problems, simulations and role playing activities, students can think creatively and critically. These findings highly support that the traditional lecture model commonly used by faculty members are not anymore effective for today's students. In the past, several studies indicated the traditional model as efficient in disseminating large body of content required from science courses such as nursing however, series of influential articles attested that one-way learning process led to passive and superficial learning (Bansford, Brown, & Cocking, 2000); lack of motivation, confidence and enthusiasm (Weimer, 2002) and lack of professional skills (National Research Council [NCR], 2007). Also, the traditional didactic lecture alone is not well suited to student exploration of scientific concepts or development of critical thinking skills (Haak, HilleRisLambers, Pitre, & Freeman, 2011). Equally, recent literatures stressed the need for changes in approaches to undergraduate science education in ways that promote problem solving and critical thinking for a diversity of students (NCR, 2007; Handelsman, 2007). This point out the need for nursing faculty members of Al Ghad to use approaches that include techniques as substituting to lecture-discussions and engage more on activities focused on the students. Further, the finding requires faculty members to examine classroom methodologies included in their course specifications and to develop strategies that will create learning more student-centered. Bell (2010) stated that student-centered learning is the basis of the curriculum. For the curriculum to succeed, faculty members have to make changes on how they teach their students.

Nursing students also mentioned the need for review of past discussions through the use of LCD and movie clips for reinforcement and power point presentations, film viewing, and video presentation of the topic discussion. In nursing, video presentations were observed to explain and demonstrate ideas and concepts regarding the topics easier (Harrison, 2003). For example, videos show correct procedures for basic skills before students attempt to perform these procedures for themselves aiding in retaining skills. The use of video presentation to enhance students' learning is highly effective (Mendoza, Caranto & David, 2015). Also, similar with other studies, the findings affirm the importance of the use of technology in the learning process. The use of technology in nursing school is viewed as a vital and important complement to hands-on clinical experiences, and has created many opportunities to develop new strategies in nursing education (Merill, 2015). As expected, the students selected use of movie clips, videos and power points presentations as one of their highest needs since student nurses of today may be referred to as Generation Y, Net Generation, or the Millennial Generation and grew up in a media rich informational environment. In addition, Alharbi et al (2017) revealed that Saudi student nurses were mostly visual learners. Previous studies (Alumran, 2008; Litzinger, Ha Lee, Wise, & Felder, 2005) confirmed that visual learning was most preferred learning style among science students. Using variety of visual aids allows student nurses to review past lessons and learn more about the topic. Saba in 2001 posited the need to develop and maintain technology competence for all nursing faculty as Axley (2008) explained that today's nursing faculty are expected to use media in their teaching. With this in regard, there is a need to incorporate technology and visual learning methodologies in teaching student nurses in Al Ghad. Nursing faculty members are required to utilize technology not only in the classroom but also in laboratory and clinical settings. This area can be challenging since most qualified nursing faculty have less computer knowledge (Axley, 2008).

Additionally, educational field trips to different hospitals and health care settings were identified by student nurses as relevant to their changing learning needs. Literatures indicated that field trips are important in students' learning. It is a shared social experience that provides opportunity for students to encounter and explore novel things in an authentic setting (Knutson, 2016). Similarly, importance of field trips in learning of student nurses was revealed by the findings of this study. The finding proves the need of student nurses to expand their knowledge in a natural setting and develop their professional skills beyond the borders of the classroom. Exposure of students to new experiences can increase interest and engagement to topics (Kisiel, 2005; Bonderup Dohn, 2011) and can be recalled long after the visit (Salmi, 2003). For student nurses of Al Ghad, field trips are worthy activities that provide them avenues to meet others and socialize with friends which are particularly

important for female Saudi students. Dewitt & Storksdieck (2008) recognized that learning outcomes from field trips can range from cognitive to affective outcomes. Affectively, field trips promote more positive feelings (Nadelson & Jordan, 2012). Thus, field trips are strategies that can be included in the teaching plan of nursing courses as this strategy could target both domains.

Least classified needs under this domain were symposiums that would discuss recent topics on nursing with participation from the audience and pretest and post test that would assess their knowledge. Evidently, the findings verify that the current student nurses are no longer interested in classroom-bound and usual activities as previously discussed. According to NCR (1996) a quality curriculum extends beyond the wall of the classrooms. In the same way, innovation and technology promotes advanced learning strategies and teaching methods which provides learning opportunities in nursing training (Rassool et al, 2007).

In terms of affective domain, student nurses identified recreational activities that will build confidence and self-esteem as their highest learning need. Recreational activities are forms of extracurricular activities in academic settings that serve the same goals and functions required and elective courses in the curriculum. These activities provide experiences that are outside the formal courses of the study and allow students to apply the knowledge that they have learned in the classroom (Lunnenburg, 2010). The finding relates with the results under the cognitive domain, alike with the outcomes of field trips such activities have positive effects to student nurses. Massoni (2011) explained that recreational activities positively affect behavior, grades, school completion and the students' social aspect. Students who participate in recreational activities especially sports have reduced behavior problems and lead to higher self-esteem as well as enhanced status among peers (Brown, 2000). The finding implies the need of student nurses to develop holistically as a learner.

Student nurses also indicated the need for stress management techniques. Numerous evidences revealed that nursing training is very stressful (Abasimi, Atindanbila, Mahamah, & Gai, 2015; Atindanbila & Bayem, 2011; Seyefatemi, Tafreshi & Hagani, 2007). Student nurses have to go through a large amount of preparatory work before their clinical work, travel long distances to clinical sites and use highly technical equipment. Likewise, these students perform procedures that could cause harm to patients which increase their fears in making mistakes and losses their confidence. Specific to Saudi student nurses, Aedh, Elfaki, & Mohamed (2015) found out the most common stressors are lack of professional knowledge and skills and course assignments and workload. To add more, married students, which is mostly the case in Al Ghad, reported significantly higher academic stressors. These stressors were also presented by Eswi et al (2013) as to cause lack of

sleep and too many responsibilities. Moreover in Al Ghad, several studies of students attested nursing courses to contribute significantly to their level of stress. Al Zamil (2017) uncovered other focus to nurse educators and recommended them to find out sources of stress of nursing students. Strategies to assist student nurses in managing stressors should be a part of college's programs and curricula.

Youth organization to enhance sense of belongingness and companionship was the last need under the affective domain. It was perceived low by student nurses because of support and attachment from peers and family members. Aedh et al (2015) explained that Saudi student nurses have less stress with peers and daily life. Further, Fass and Tubman (2002) revealed that support and attachment has an important role in adjustment and social transition. Strong attachment was found to influence college students' sense of self and promoted higher self-esteem.

Overall, Saudi student nurses perceived strategies under the psychomotor domain as their changing learning needs. On the top was the availability of learning materials that would fit to their needs. Student nurses perceived learning materials to supplement their learning especially with steps and rationale of nursing procedures and demonstration of nursing skills. With the learning materials on hand, student nurses can review skills which require more practice and mastery. Hainsworth & Keyes (2016) defined instructional materials as mechanisms that transmit information and are intended to supplement teaching and the role of the teacher. Specifically in nursing, instructional materials provide nurse educators with tools to deliver education messages creatively, clearly, accurately and in a timely fashion. Al Ghad provides good and adequate learning resources for students, however the findings imply differently. There could be a gap as to the materials utilized by faculty members in their teaching particularly in laboratory and clinical areas where nursing skills are learned. Student nurses clearly emphasized the learning materials to fit their needs. This study identified earlier in the discussion that student nurses are visual learners, they want to be active and independent in learning, and strategies appropriate for them require the use of technology and multimedia. Hence, multimedia resources are more appropriate for these students to use. Printed materials which are primarily used by faculty members should aid as secondary and supplementary resources only if multimedia resources are not effective to deliver certain topics or concepts. Everett & Wright (2012) declared multimedia resources to engage students and enhance learning experiences. It can be used to introduce and develop essential nursing skills. Previous investigations asserted instructional multimedia to provide greater flexibility and encourage independent self management of learning (Kelly, Lyng, McGrath, & Cannon, 2009; Gibbins, Meddalona, Yamada & Stevens, 2007; Kenny, 2002). As well,

instructional multimedia may help instructors address a range of diverse student needs including increasing time and addressing multiple learning preferences (Smith, Jones, Cavanaugh, Venn, & Wilson, 2006).

Also under psychomotor domain, student nurses indicated challenging program or activities outside classroom as their changing learning needs. The finding greatly affirms the relationship between cognitive, affective and psychomotor domains. Challenging programs outside the classroom as to field trips and recreational activities were previously discussed as results to cognitive and affective needs respectively.

Worthy to note, student nurses documented subject matter that relates to other professions as less important need. Relating subject matter to other professions or courses allows student nurses to collaborate and appreciate the work of other professionals in their practice. The finding contradicts with previous evidences which revealed the meaning of interprofessional education in health care (McDonald et al, 2010; Freeth & Reeves, 2004; Curran, 2004). Further, literatures supported that when health care professionals collaborate, a positive and rewarding environment is fostered. In order to achieve this, Curran (2004) suggested to nursing faculty to focus attention on interprofessional education in undergraduate programs. As an educational priority for the development of nursing curricula, relating subject matter with other health care professions and disciplines will support a more integrated approach to preparing nursing students for interprofessional practice.

Responses of Faculty Members to the Changing Learning Needs of Saudi Student Nurses

In order to meet the changing learning needs of Saudi student nurses, faculty members perceived the need to attend seminars, symposiums and conferences to broaden knowledge on their field of specialization. Continuing education and training are recognized by faculty members as a great vehicle to meet the identified needs of students. Continuing education in nursing is necessary because of an unprecedented growth in professional knowledge, rapid changes in healthcare system and the consequent changes in nurses' roles (Brunt, 2003; Lundgren & Houseman, 2002). Findings of the study reveal focus areas to match the learning needs of students to the teaching strategies of faculty members. These areas should be the basis of continuous training and development of nursing faculty of Al Ghad.

Succeeding responses of faculty members are similar to the perceived needs of student nurses. Faculty members stated the use of modern equipment, learning materials, opportunities for learning and counseling to reduce stress which were likewise included by the students. The findings imply that faculty members are aware and have thorough understanding of the needs of students but may have experienced considerable barriers to implement relevant

teaching strategies to address the changing learning needs of students. For example, majority of nursing faculty members still utilize the traditional didactic approach and use limited technology and multimedia resources. Lack of trainings to appropriate teaching strategies to meet the changing learning needs of today's students could be the key factor. As previously discussed, nursing faculty are required to use technology in teaching as well as in laboratory and clinical teaching but unable to do so because of less computer knowledge. Cederbaum & Klusaritz (2009) stated that clinical teachers were worried about their theoretical basis of their own practice. The challenge is whether or not they are up to date with knowledge and if they have the ability to teach and model clinical skills. According to Axley (2008) there is a critical need to bridge the gap between the educators and the learners. To cite more, Eta et al (2011) in their study, identified lack of opportunities to update knowledge and skills and not being prepared for clinical teaching as major challenges of clinical nurse educators. The findings support other studies of the critical importance of continuing education and training in nursing education. The findings also assert to intensify staff development programs of nursing schools. Programs to prepare faculty to gain the requisite knowledge and experience must be developed.

Relationship of the Changing Learning Needs of Saudi Student Nurses and Response of Faculty Members to the Students' Changing Learning Needs

There is a significant relationship between the changing learning needs covered under psychomotor domains and the responses of faculty members. As suggested by the finding, the hub of the changing learning needs of student nurses is the development of clinical skills. Student nurses gave high regard to the needs to develop their skills in providing nursing care, allow them to perform nursing procedures and to employ critical thinking under clinical situations. De young (2003) explained that new nursing graduates were unprepared for their clinical duties, and resulted in re-engagement with the importance of psychomotor skills. Clinical skills have shown to improve the quality of care provided to patients when care providers are competent (Mwale et al, 2016). What's more, as indicated by the results, student nurses perceived that once their psychomotor needs are convened cognitive and affective domains will follow. Affirmed by previous literatures, learning psychomotor skills is multidimensional and comprised of affective and cognitive components (Billings & Halstead, 2005; Nehring & Lashley, 2004). On the part of nursing faculty, meeting the changing learning needs of student nurses can be achieved once strategies to strengthen clinical teaching are developed. The center of clinical teaching strategies is to enhance student nurses' skills in providing effective care. Mwale et al (2016) supported the need of nurses and

tutors to update their knowledge and clinical teaching skills to adequately guide students and prepare them before clinical placement.

Inputs to Nursing Curriculum

Nursing students need a stronger curriculum and nursing needs a better continuing profession development system (Makin, 2011). Table 2 presents the inputs of the study to the nursing curriculum of Al Ghad International Colleges for Applied Medical Sciences:

Table 2. Inputs to Nursing Curriculum of Al Ghad International Colleges for Applied Medical Sciences

Inputs	Strategies
Shift from Traditional Didactic Model to Student-Centered Instruction	Substitute lecture discussions strategy to learner-centered activities such as open-ended problem solving, simulations, role playing and the like.
	Consider outcomes-based approach instruction.
Use of Technology and Multimedia Resources	Complement learning of visual learners by means of visual modalities like movie clips, video presentations, film viewing, pictorials, and illustrations.
	Develop clinical and nursing skills with supplementary multimedia materials.
	Train nursing faculty in the development of other learning materials like workbooks and manuals.
Include Social Learning Activities to the Teaching Plan	Balance the domains of learning by providing social enhancement programs like field trips, recreational and stress management activities.
Strengthen Psychomotor Skills through Effective Clinical Instruction	Conduct student assessment strategies to assess students' preparedness before clinical placement.
	Equip clinical educators with the knowledge and skills in clinical teaching by sending them to periodic professional training and development.

Conclusions

The psychomotor domain is regarded as the topmost learning needs of student nurses. Teaching strategies employed by faculty members should concurred with the students learning needs. There is a need to modify and redesign the existing nursing curriculum of Al Ghad International Colleges for Applied Medical Sciences based on the changing learning needs of student nurses. Inputs offered to enhance nursing curriculum of Al Ghad and to nursing schools in Saudi Arabia were to shift from traditional didactic model of teaching to student-centered instruction, to use technology and multimedia resources, include social learning activities, and strengthen psychomotor skills through effective clinical instruction. As well, continuing education, training and professional development of nursing faculty members is vital to meet the changing learning needs of Saudi student nurses.

Recommendations

The evidences provided by this study should be the basis of Al Ghad College to enrich their current nursing curriculum and can be considered by other nursing schools in Saudi Arabia. The inputs of the study to the curriculum should be incorporated to the Bachelor of Science in Nursing (BSN) degree program. Teaching approaches, classroom modalities and learning activities identified to significantly affect learning and meet the changing learning needs of the students should be included in the course specifications, teaching plan and training program of the college. Also, periodic review of the curriculum should be conducted by stakeholders. Al Ghad College should recognize the importance and give opportunities for stakeholders to participate in the improvement of the curriculum. Continuing training and professional development on areas such as student-centered and outcomes-based learning, use of technology, development and use of multimedia resources, application of social learning activities and enhancement of clinical teaching should be conducted. Finally, Student Assessment Programs of the college that will determine the learning preferences and needs of students should be intensified through relevant researches and further studies.

The present study has several potential limitations. First, the study was conducted in one college alone and utilized a small sample size which limits generalization of findings. Second, inputs are specific to Al Ghad College but may not be applicable to other Saudi nursing schools. Hence, future studies with larger sample size and an array of geographical locations are recommended.

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