ABSTRACT
Greater numbers of students who speak English as an additional language (EAL) are attracted to the nursing profession. However, there are differences between EAL nursing students and those for whom English is a first language. This presents several unique challenges to the nursing faculty, who need to meet the needs of these students and promote their success. The goal of this article is to comprehensively explore the different strategies that support NCLEX-style test taking which is one of the most challenging issues for EAL nursing students.

Key words: English as an additional language (EAL), English as a second language (ESL), testing, NCLEX, student success

INTRODUCTION
Student success in nursing programs is important to faculty as well as administrators. Attrition, graduation rates and National Council Licensure Exam (NCLEX) pass rates are closely monitored in nursing programs with careful consideration of factors that may have potentially influenced these rates. In particular, factors such as Scholastic Aptitude Test (SAT) scores, entrance examination scores, high school grade point average or personality variables, have received considerable attention related to programmatic success (Hopkins, 2008). Moreover, nursing course grades have been tied to NCLEX success, where higher first-time pass rates are attributed to higher grades in nursing courses (Endres, 1997; Matos, 2007; Tipton, Pulliam, Beckworth, Illich, Griffin & Tibbitt, 2008). While considerable attention has been given to these factors, little attention has been paid to the influence of language on the success of nursing students who speak English as an additional language (EAL).

Despite reports of increased EAL enrollment, respective data could be located in order to establish how many EAL students are presently enrolled into nursing schools. These students face many unique challenges related to language, culture, as well as in and out of the classroom settings (Bosher & Pharris, 2009; Davidhizar, 1998). This article will focus on teaching and learning strategies, that faculty can incorporate in order to provide support to the EAL nursing students so that they can succeed in the nursing program as well as NCLEX-style testing.
Scope of the Problem

As the United States (US) population increasingly diversifies (United States Census Bureau, 2004) there is a need for action in order to increase the diversity of healthcare professionals, including nurses (Sullivan Commission, 2008). While the profession of nursing is still largely predominated by a white female demographic, those numbers are changing, and there are greater numbers of nurses from diverse backgrounds (Health Resources and Service Administration, 2006). This change is likewise reflected in the nursing programs, which are reporting increasing numbers of students from diverse backgrounds in ever-greater numbers (NLN, 2006). Many of those students speak English as an additional language, which presents unique challenges for faculty who are primarily native English speakers. The EAL students may be foreign-born or US-born; however, they not only share the characteristic that English is not their first language, but also that their cultural and linguistic norms often differ in comparison to the dominant US culture. In particular, these students may have differing perspectives related to time, personal space, social organization, as well as communication (Davidhizar, 1998). In addition to differing cultural attitudes, language differences can be vast. These differences present challenges for the EAL nursing students both in the classroom, as well as with testing (Bosher, 2003; Bosher & Pharris, 2009; Choi, 2005; Cunningham, Stacciarini, & Towle, 2004).

REVIEW OF LITERATURE

EAL nursing students have greater difficulty in coursework, especially clinical coursework related to the high level of interactive communication (Jaili-Grenier & Chase, 1997). It has been suggested, that there is a need to develop and improve language fluency of EAL students as the English language is one that often contains multiple words that have the same meaning. Conversely, there are single words, which may have multiple meanings. This multiplicity creates difficulties for the EAL students in respect to understanding and articulation of everyday English (Malu & Figlear, 1998). Furthermore, other EAL students have reported difficulty learning colloquialisms, such as “that’s cool” in order to explain something interesting, when cool is term used in relation to temperature (Wang, Singh, Bird, & Ives, 2008). Because EAL students are concerned about peer and faculty perceptions as well as cultural norms that influence behavior, they are often reluctant to seek out the definitions of this new terminology. Nonetheless, in a recent study, the degree of English language acculturation, defined as the degree of fluency and use of everyday English, was determined to be a predictor of academic success for EAL students. Nursing students that are very linguistically acculturated, are more likely to be academically successful (Salamonson, Everett, Koch, Andrew & Davidson, 2008).

EAL students that experience difficulty in nursing coursework are more likely to report feelings of discrimination and social isolation (Sanner, Wilson & Samson, 2002). These students have concerns related to ethnocentrism, stereotyping and fear of rejection by faculty or their peers (Shakya & Horsfall, 2000; Yoder, 2001). In addition, EAL students have reported difficulty with language, particularly with the technical aspects of English such as speaking, listening and group activities (Shakya & Horsfall, 2000). Specifically, one study reported difficulties encountered by Spanish-speaking students related to the syntax of the English language (Lujan, 2008). For example, verb tense in addition to word order of adjectives and nouns is different between the English and Spanish language. This presents additional obstacles for Spanish-speaking students when reading English. Additionally, students have reported translating difficult material into their native
language and then translating back into English (Lujan, 2008). This can result in loss of context during translation, due to the fact that some words cannot be literally translated from one language into another, ultimately leading to misunderstanding of the material presented.

There has been discussion of the influence of English as an additional language in terms of passing the NCLEX (Endres, 1997; Johnston, 2001). One study reported NCLEX-RN pass rates were significantly different between students for whom English was the primary language and students for whom English was a second language (Johnston, 2001). The National Council of the State Boards of Nursing (NCSBN) collects information related to primary language, which is a voluntary self-reported and unverified item from the candidate (O’Neill, Marks & Liu, 2006). NCSBN has endeavored to answer the question, of whether or not the NCLEX is culturally and/or linguistically biased, and thus negatively affects EAL candidate pass rates. The NCSBN states that NCLEX is not designed to test English proficiency, and that a minimum “level of English proficiency [is] required to respond sensibly to NCLEX items” (O’Neill et al, 2006, p. 18). NCSBN has procedures in place to reduce bias, including pretesting of items, in addition to a panel review of potentially biased items. To that end, O’Neill et al (2006) failed to identify any biases in NCLEX and reported the issue of language competency as an influence in NCLEX pass rates of EAL test takers (O’Neill et al, 2006).

**Challenges Encountered with Testing**

Programs rely heavily on NLCEX-style examinations as a means of student evaluation. Such testing is largely conducted in the multiple-choice format, where the test questions typically include four answer options, but only one of those options is a correct one. In addition, there are also alternate item formats, such as fill-in-the-blank questions, or multiple-response questions where prioritization of items is called for or all scenarios that apply need to be selected (McDonald, 2007). These types of exams often account for a large percentage of course grades and therefore have a large impact on academic success (Bosher, 2003).

Multiple-choice course exams present difficulties for EAL students related to item bias that may be linguistic or cultural in nature. Linguistic bias refers to language content of the test item that is structurally awkward and not easily understood. Items that are linguistically biased contain information that does not contribute to the understanding of the question and has the potential to interfere with the reader’s ability to understand the question (Bosher, 2003). Some examples of items that contribute to linguistic bias are grammatical errors, answer options that are unnecessarily long and linguistically complex, wording or verb tense that is inconsistent between the stem and answer options, spelling errors, as well as gender-specific pronoun utilization (Bosher, 2003). Additionally, the use of humor is a deterrent, as this may further confuse EAL students.

The following is an example of a test question with linguistic bias embedded within it:

The nurse is providing pre-op teaching to a client. Which of the following is most accurate about pre-operative teaching?

a. pre-operative teaching is completed right before surgery
b. teach the client about coughing and deep breathing before surgery
c. teach the client about pain management, coughing and deep breathing exercises, early ambulation and what to expect after surgery
d. teaching the family because the patient will be forgetful after surgery

In this example, there are several flaws. 1. The term ‘client’ is utilized in the
Cultural bias refers to content that is not readily understood by all cultural groups. Meaning, those students that are not part of the dominant cultural group, are less likely to answer test items that have cultural bias correctly (Bosher, 2003). Specifically, examples of cultural bias include the use of colloquialisms that only students of the dominant US culture would likely understand, such as references to music, movies, or pop culture (Klisch, 2000). However, it has been argued that cultural bias should not be unequivocally eliminated from exams when that information is essential for safe, effective nursing practice (Klisch, 2000).

The following is an example of a test question with cultural bias embedded within it:

An elderly woman residing in a senior apartment complex arrives to the clinic for her annual exam. Her blood pressure is 138/92 and the nurse recommends a low sodium diet. Which of the following recommendations will the nurse suggest as part of a low sodium diet?

a. tomato soup and a tossed salad
b. baked potato and chicken breast
c. turkey burger and French fries
d. fresh fruit and consommé

There are several flaws in this example. 1. In option “a”, use of the term “tossed” to describe a salad is confusing as some students may take this term literally and not understand why a salad would be thrown. 2. In option “d”, consommé is not a commonly used term and students may not be aware this food item is a high-sodium broth.

In addition to linguistic and cultural bias, the length of time allotted for examinations presents another set of challenges for EAL students (Klisch, 2000). O’Neill et al (2006) found that EAL test-takers took longer to complete NCLEX than native English speakers. In addition, stress associated with test taking may cause EAL students to translate questions into their native language in order to improve processing (Lujan, 2008; Malu & Figlear, 2001). As a result, EAL students typically take longer to complete multiple-choice exams compared to native English speakers (Klisch, 2000). This presents particular problems for EAL students in nursing programs with rigid testing policies regarding timing of tests where they may not be able to complete an exam within the allotted time. Faculty are left with the dilemma of allowing for extra time, or forcing the EAL student to submit an incomplete exam.

Strategies to Overcome the Barriers
English Language Support Systems

Several strategies have been identified to support EAL students in the development of academic English language fluency. For example, participation in class discussions and group activities, in addition to immersion in English language activities are some strategies that could be implemented through the utilization of native English speaking peer mentors (Malu & Figlear, 2001). What's more, EAL students should be encouraged to maintain a vocabulary notebook of new words encountered, including the definitions and alternate terms (Malu & Figlear, 2001). It is recommended that a vocabulary notebook be used for unfamiliar everyday English words as well as technical words the EAL students encounter. Reviewing the vocabulary notebook daily will support the EAL student’s comprehension and expand the student’s vocabulary.

Learning strategies that incorporate
visual and kinesthetic learning are helpful for EAL students in processing information. Nursing textbooks tend to be cognitively demanding, which is challenging for EAL students due to the high level of academic language fluency required. To support the student, nursing journal articles, which tend to be shorter and more context-rich with graphics and tables, could be used to aid the EAL student’s level of understanding (Abram-Yago, Yoder, & Kataoka-Yahiro, 1999). Moreover, faculty should consider integrating other technology as means of support. The EAL student may be more likely to engage in independent learning activities with technology (Malu & Figlear, 2001). For example, individual DVDs of clinical skills have the capability of providing the EAL student a wealth of information that is available for private viewing, in addition to providing visual and auditory context-embedded learning to the student. Concept maps create visual images of content to aid with comprehension of complex material and can serve as a valuable tool to support the EAL student (Malu & Figlear, 2001). Activities that require listening and writing are some other effective strategies that could be utilized in order to support the development of academic English language fluency. This might be accomplished through role-playing activities during pre-conference and post-conferences, as well as through giving and receiving nursing report in order to support listening skills (Guhde, 2003; Malu & Figlear, 2001). Strategies that support writing activities may include journaling, where the student keeps a log of experiences, or writing nursing related notes for which the student could receive feedback from the instructor. It is best when these strategies are implemented in a developmental, non-graded format, in order to ensure that the student does not feel pressured.

Modification of Test Items

Modifying test items can be challenging for faculty however, faculty need to carefully evaluate each question. Examining questions is necessary in order to determine if it contains any elements of test-wise flaws, irrelevant difficulty of the stem or options, and/or linguistic bias or cultural bias (Bosher, 2003). Single or multiple flaws may exist within a single question, with each flaw contributing to the EAL student’s difficulties in understanding the question. It is also helpful to have exams peer-reviewed to identify faults that may not be evident to the item writer (McDonald, 2007).

Test-wise flaws include grammatical errors such as mixing plural and singular forms; use of absolute terms such as “always” and “never”; repetitive word use in the stem and option leading the student to a correct or incorrect answer; or a single option that is overly long or short compared to others (Bosher, 2003). Each item needs to be carefully screened to verify it is free of grammatical errors; avoid the use of absolute terms; reword the option to avoid leading the student in a particular direction; reword options so that they are all comparable in length (Bosher, 2003).

Faculty writing test items need to ensure the clarity of the stem and each option. Additionally, faculty need to write the stem in the form of a question, rather than a completion format in order to avoid having to retain additional information while processing each option as well as avoid lengthy stems or options. It is ideal to bold or italicize key words such as “best” and “first”, phrase the stem in a positive manner whenever possible and avoid the use of double negatives, such as a negative stem statement with negative options, to improve item clarity (Bosher, 2003). Options need to be reviewed for grammar and wording in order to ensure that wording is consistent. Furthermore, it is important to keep key terms in the stem of the question and avoid repeated use in each option. In addition, it is best to use terms in a consistent manner and
avoid imprecise words such as “rarely” or “occasionally”, present numerical data in a consistent manner using a numbers format, and list options in a logical order, such as shorter options first and longer options last (Bosher, 2003). See Table 1.

Additional linguistic bias can occur in test items. Question that ask “what”, “which”, and “why” for example become more complex when these words are situated toward the end of the stem as opposed to the beginning of the stem. Clarity is improved when these “questioning” words begin the stem rather than end the stem. Terms such as “would” or “may” can be difficult because such words imply a need for permission. These terms can present interpretation difficulties for EAL students because there are cultures that strongly emphasize the need for permission before acting (Davidhizar, 1998). Avoidance of such terms is preferred, with the use of direct forms of the verbs such as “will” to replace these terms. Avoid cultural bias through careful consideration of the words used in the stem and options of each question. It is best to make no humorous references, or references to pop culture, movies, literature, or music (Bosher, 2003). Rather, stay focused on information that is readily understandable to all students.

**Nursing Exam Policies**

Given the fact that EAL students typically require additional time to complete exams, one strategy is to provide additional time for testing (Klisch, 2000). Early on in the nursing program, EAL students consider the option of having additional time, such as time and a half or double time allotted to complete an exam. As students progress, the additional time should be reduced so that as they approach their final year, students are testing within the same time frame as their native English speaking peers (Klisch, 2000; Malu & Figlear, 2001). Consideration should be given to permitting beginning EAL nursing students a bilingual dictionary to use during examinations (Malu & Figlear, 2001). A bilingual dictionary will aid the EAL student with everyday English words encountered on the exam with which the student may be unfamiliar.

**Faculty Development**

EAL students have cited faculty support as being an important contributor to their success (Gilchrist & Rectors, 2007; Klisch, 2000; Shakya & Horsfall, 2000). Learning student names and the correct pronunciations of student names is a simple, yet effective strategy in working with EAL students as it demonstrates an open and caring attitude on the part of faculty (Klisch, 2000). Additionally, faculty development workshops may be helpful to provide supplementary education and training related to cultural diversity. Faculty that are sensitive to cultural diversity recognize student needs and develop strategies to support those diverse needs.

Yoder’s study of teaching patterns of nurse educators of ethnically diverse students identified five major themes of effective nurse educators (Yoder, 2001). First is the faculty’s incorporation of the student’s own cultural knowledge. Attention is drawn to the student’s own perceptions of a concept while relating that concept to the dominant US views with a comparing and contrasting viewpoint. No attempts are made to negate the student’s personal views, only to broaden the student’s understandings. Second is the preservation of cultural identity through the incorporation of the student’s own ethnic identity into classroom or clinical experiences. One example is the use of the primary language in the community health clinic to teach a client about a new medication. Third is the provision of successful ethnic role models, which may be members of the faculty, graduates of the program, or nurses in the community. Fourth is the facilitation and negotiation of barriers students may encounter. Students need a faculty advisor or counselor to provide
support and advocate for the student when barriers are encountered. For example, if a student faces prejudice from a peer, role-playing may be a helpful approach for the student to cope with the issue in an effective manner. Last is advocating for system change (Yoder, 2001). Faculty are in a position to be able to advocate for policy changes, develop support groups, and serve as liaisons to college and community groups that can effect change that will support the culturally diverse student. Table two summarizes these strategies.

Future Research

There is little information regarding EAL student experiences in nursing school and how that experience influences their program progression and retention. Testing is one issue that has been discussed, however issues affecting progression and retention are multifactorial. It would be helpful to determine if the issues EAL students face related to progression and retention are similar or dissimilar to students for whom English is a first language. Such information would be able to provide data to develop student support programs targeted toward EAL students to improve retention and graduation rates. In addition, it would be helpful to gather more information related to EAL students’ performance on NCLEX exams so that nursing programs could provide support strategies to enhance student success.

SUMMARY

EAL nursing students face numerous challenges in the academic environment, particularly related to multiple-choice testing. These challenges influence the EAL students’ academic career as well as their sense of personal self-worth. As the need for ethnically diverse nurses grow, it is imperative that faculty support EAL nursing students so that they can be successful. Faculty support includes writing exams that support rather than hinder the EAL students’ success and embracing cultural differences that can enhance the learning of students and faculty alike. While this article offers several strategies to support EAL students, there has been relatively little research conducted in this student population. This article should serve as a call to action for nurse educators to conduct additional research related to EAL students if nurse educators are to be successful in adding to the diversity on

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Table 1: Examples of Test-Flaws

- Information missing in the stem that is found in one or more of the options.
- Wording that is redundant in each option.
- The lead-in is in a completion format rather than a question format which requires the student hold the stem in short-term memory (open versus closed stem).
- The stem is unnecessarily wordy or confusing.
- Best answer wording does not stand out.
- Use of negative and double negative phrasing.
- Options that are grammatically inconsistent with the stem.
- Repetitious wording carried through from the stem into the options.
- Inconsistent or imprecise wording between the stem and options.
- Options that appear illogical compared to the stem.
- Numeric data that is not presented in a consistent manner.
- Options that are not listed in a logical, orderly manner.
Challenges | Strategies
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Limited familiarity with everyday English | • Native English-speaking peer mentor  
• Utilize a vocabulary notebook  
• Journaling activities  
• Group discussions  
• Role-playing activities

Academic language demands | • Incorporate nursing journal articles  
• Make use of concept maps  
• Integrate visual learning techniques (DVDs, simulators, etc)

Exam time | • Increase exam time to 1 ½ to 2 times usual exam time for beginning students  
• Permit bilingual dictionary during exam

Linguistic bias | • Ensure test items are grammatically correct  
• Limit the stem to information necessary to answer the question  
• Be precise with word choices  
• Avoid redundancies in language  
• Highlight key words  
• Avoid double negative statements  
• Keep all options of similar length  
• Present numerical data in Arabic numbers  
• Use questioning words at the beginning of the statement rather than the end of the statement

Cultural bias | • Avoid use of colloquialisms  
• Avoid use of humor or references to pop culture  
• Avoid use of gender specific pronouns

| Table 2: Test-taking Strategies for Success

the nation’s nursing workforce.

REFERENCES


