

Do Progression and Remediation Policies Improve NCLEX-RN Pass Rates?

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Administrators at 5 schools of nursing who implemented a progression policy based on HESI Exit Exam™ scores were interviewed regarding their NCLEX-RN pass rates before and after initiating the policy and methods used for remediation. Even though the methods used for remediation were quite different among the participating schools, data obtained from these interviews indicated that the schools' NCLEX-RN pass rates improved 9-41% within 2 years after implementing the progression policies.

In 1998 the National Council of State Boards of Nursing (NCSBN) increased the passing standard because job analysis studies indicated that beginning level nurses were being expected to practice at a higher level of competence.¹ Yet Staiger et al reported that the academic ability of those who chose nursing as a career lagged behind those who pursued non-nursing professions, and he further predicted that this trend was not likely to reverse.² Consequently, a great schism exists between what the NCSBN has identified as minimal level competence and the academic abilities of those who choose nursing. This schism is reflected in the progressively decreasing annual NCLEX-RN pass rates.

In the past 6 years, from 1994 to 2000, the annual NCLEX-RN pass rate for first-time, United States educated candidates dropped from 90.3% in 1994 to 83.8% in 2000.³ This decrease in the licensure pass rate has implications for nursing faculty for a variety of reasons, not the least of which is that the National League for Nursing Accreditation

Commission (NLNAC) and the American Association of Colleges of Nursing (AACN) as well as most states' Boards of Nurse Examiners use NCLEX pass rates as a criterion for accreditation.^{4,5}

Some schools of nursing have turned to comprehensive exams as a means of assessing students' preparedness for the NCLEX and as a benchmark for remediation. Health Education Systems, Inc. (HESI) provides one such exam. The HESI Exit Exam™ (E²) is a computerized, comprehensive exam that uses a proprietary mathematical model, the HESI Predictability Model (HPM), to compare individual students with students throughout the United States. Lauchner et al reported that the E² was 99.49% accurate in predicting NCLEX success in monitored situations and 96.42% accurate in predicting licensure failure.^{6,7} In a follow-up study using different aggregate data, Newman et al again found the E² to be highly predictive of NCLEX success and concluded that the HPM was an effective model.⁸ In the third annual validity study, Nibert and Young confirmed previous findings regarding the

predictive accuracy of the E² and further concluded that there was no significant difference in the predictive accuracy of the E² among the 3 academic years tested, 1996-1997, 1997-1998, and 1998-1999. The total RN student sample for all 3 studies was 11,439. As in the previous annual validity studies, no significant difference was found in the predictive accuracy of the E² among types of programs: ADN, BSN, and diploma programs.⁹

Instrument Description

HESI provides a variety of exams for nursing students at all stages of the nursing curriculum. The company also customizes exams for schools of nursing. When the school provides the company with the course syllabus or syllabi, an exam is designed to test the content covered in the specified course(s). All HESI exams use the HPM to compare each student's responses with all others who have previously answered the same group of test items. HESI exams are computerized and available in diskette or network versions. An item analysis is conducted for all tests that are returned for an aggregate summary analysis. The item difficulty and item discrimination (point biserial correlation coefficient) are calculated and stored with each test item.¹⁰

The E² consists of 160 test items, 10 of which are pilot items and do not count toward the student's score. Each version of the E² is developed from test banks containing questions written specifically for HESI by nurse educators and clinicians from across the United States. These writers use the model described by Morrison et al.¹¹ and Morrison and Free¹² to

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develop critical thinking test items. The E² follows the test blueprint for the NCLEX-RN developed by the NCSBN.¹³ Since HESI exams are computerized, students receive a printout of their scores on each of the subject categories tested immediately after completion of the exam. Therefore, if indicated, remediation can begin as soon as the exam is completed. Engelmann and Caputi¹⁴ described the use of the E² as a benchmark for remediation and provided a guide to assist faculty in designing individualized remediation programs based on the data obtained from the E². Included in their publication is a review of available resources that specifically address the categories scored by HESI exams.

Methodology and Definition of Terms

Administrators at 5 schools of nursing that implemented a progression and remediation policy based on E² scores were interviewed regarding NCLEX-RN pass rates before and after implementation of the policies. The administrators were also asked to describe the type of remediation program that was implemented.

A progression policy was defined as a school policy that withheld graduation or permission to take the licensing exam until the student had obtained a designated score on the E². The school set the minimum E² score at which students would be permitted to

progress. Though some participating schools administered other HESI exams (specialty and custom exams), it was beyond the scope of this study to investigate the relationship between additional testing and NCLEX success. Remediation was defined as any type of additional study used by the students in preparation for retesting with the second or third version of the E².

Findings and Conclusions

NCLEX-RN Pass Rates

Two of the 5 schools had 2 different types of programs; therefore, data were obtained on 7 different programs at 5 schools of nursing. Findings indicated that NCLEX-RN pass rates improved in the 7 programs by 9–41% and ranged from 88–97% within 2 years after implementation of the progression and remediation policy. NCLEX-RN pass rates provided nominal data in that scores are reported as pass or fail only. Therefore, a chi square test of significance was used to analyze individual programs' pass rates before and after implementation of the progression policy. Findings indicated that NCLEX-RN pass rates increased significantly in 6 of the 7 programs after a progression policy was implemented, 5 at the $P = .001$ level of significance and 1 at the $P = .05$ level of significance (Table 1). All 7 programs were examined together using a *t*-test for related samples, and the NCLEX-RN

pass rates were determined to be significantly higher ($P = .002$) after implementing a progression policy.

Remediation

Administrators were also asked what type of remediation was used with the students. Their responses indicated that there was little similarity in remediation programs. Faculty at one school simply told the students to study using the E² printout of student scores as a means of identifying which subject areas needed additional study. At another school, the associate dean met with the students to encourage and support them and to answer any questions they had about content. Faculty at one school met in the computer lab and assisted students in reviewing test items provided in various computer programs. Since one school's E² scores indicated that their students were particularly weak in a certain clinical area, faculty met with students to re-teach the content. Faculty at another school required students to complete certain assignments related to subject categories identified by the E² as deficient. All schools reported that students often did not avail themselves of the resources provided.

Discussion of Findings

Though the licensing exam measures only minimal level competence, there is no doubt that NCLEX-RN pass rates

Table 1. Participating Schools' NCLEX-RN Pass Rates Before and After Implementation of a Progression Policy Based on E² Scores

School	Program Type	Pass Rate Before Implementation of E ² Progression Policy	Pass Rate After Implementation of E ² Progression Policy	% Increase
1	ADN	78%	97%	19% ($P = .001$)*
2	ADN	52%	88%	36% ($P = .001$)*
3	ADN	72%	94%	22% ($P = .001$)*
4	BSN	54%	95%	41% ($P = .001$)*
	BSN 2 nd Degree Program	83%	92%	9% (Not significant)*
5	BSN Generic Program	63%	97%	34% ($P = .001$)*
	BSN	80%	92%	12% ($P = .05$)*

*A chi-square test of significance was used to analyze differences in pass rates before and after implementation of a progression policy.

are viewed by nursing faculties, administrators, and students as measure of a nursing program's worth. Though unknown factors could have been responsible for these improved pass rates, the findings of this study appear to indicate that implementing a progression policy based on E² scores was an effective method of increasing NCLEX-RN pass rates. The fact that there was no consistency in the type of remediation provided is likely an indication that progression alone was significant enough to motivate students to study so that eventually they reached a level of preparation that enabled them to pass the licensing exam. It is likely that students found the resources they needed to meet their particular learning style as well as their personal schedules. Therefore, faculties might consider the use of computer-assisted instruction, which meets most learning styles and can be implemented at almost all hours of the day.¹⁴

Prior to implementing a progression policy, due diligence should be conducted. Approval of the schools' legal counsel should be sought, and the policy should be written and published in the school's catalog or handbook. The policy should provide the power needed to implement such a policy, but it should not restrict the school to one particular test or a designated score. The following is an example of such a policy:

Students will be required to take nationally-normed tests throughout the curriculum and to make a satisfactory

score on such tests. In the last semester/quarter of the curriculum, students will be required to take a comprehensive exam and to make a satisfactory score on such an exam prior to graduation/taking the licensing exam.

Implementation of a progression policy based on E² scores was no easy task for the schools that participated in this study. However, based on the outcomes these schools achieved, implementation of the policies proved to be a worthwhile effort. There is no doubt that nursing faculties are being called upon to provide remediation services, and a benchmark that pinpoints student's subject content weaknesses is an invaluable asset in designing individualized remediation programs. The E² provided a benchmark for schools to improve NCLEX-RN pass rates.

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