

2012-2013 Annual Program Assessment Report

Please submit report to your department chair or program coordinator, the Associate Dean of your College and the assessment office by Monday, September 30, 2013. You may submit a separate report for each program which conducted assessment activities.

College: HHD

Department: Physical Therapy

Program: DPT

Assessment liaison: Witaya Mathiyakom, PT, PhD

1. Overview of Annual Assessment Project(s). Provide a brief overview of this year's assessment plan and process.

For the Academic 2012-2013, the assessment plan focuses on **SLO 1: Demonstrate comprehension of the foundational sciences of for application to the physical therapy clinical setting.** For this purpose, we selected three classes: PT 700 (Anatomy), PT 711 (Physical Therapy Management II), and PT 790 (Clinical Practice I). These three classes were selected because they reflect different aspects of students' ability to comprehend and apply the knowledge of basic science into clinical practice.

For PT 700, we were interested in identifying our students' ability to comprehend and apply their knowledge of anatomy to common neuromusculoskeletal injuries. Since this course was the first course in human anatomy (Fall 2012), it was considered a basic level of learning. We identified student's ability to comprehend & apply the knowledge by focusing on the exam scores of case scenario during the midterm and final exam.

For PT 711, the students needed to use their knowledge in anatomy, physiology, and pathology and applied it to basic patient management skills (i.e., identify patient problem, communication). We focused the assessment of this course on the students' final practical exam (Spring 2013).

Finally, for PT 790, we evaluated our students' ability to comprehend the basic knowledge and apply it to clinical practice by directly evaluate how well students performed in clinical practice (Summer 2013). The outcomes of the Clinical Performance Instrument, which is a standardized clinical performance evaluation used by all Physical Therapy education programs across the US, was used for this purpose.

2. **Assessment Buy-In.** Describe how your chair and faculty were involved in assessment related activities. Did department meetings include discussion of student learning assessment in a manner that included the department faculty as a whole?

Assessment program and activities of our PT Department are discussed formally during our bi-monthly faculty meetings. The assessment liaison works directly and collaboratively with the department chair and faculty member to plan and implement the plan. Outcomes and implications of the assessment are discussed directly with the faculty who their classes were selected for the assessment activities.

3. **Student Learning Outcome Assessment Project.** Answer items a-f for each SLO assessed this year. If you assessed an additional SLO, copy and paste items a-f below, BEFORE you answer them here, to provide additional reporting space.

3a. Which Student Learning Outcome was measured this year?

SLO 1: Demonstrate comprehension of the foundational sciences of for application to the physical therapy clinical setting.

3b. Does this learning outcome align with one or more of the university's Big 5 Competencies? (Delete any which do not apply)

- Critical Thinking
- Oral Communication
- Written Communication

3c. Does this learning outcome align with University's commitment to supporting diversity through the cultivation and exchange of a wide variety of ideas and points of view? In what ways did the assessed SLO incorporate diverse perspectives related to race, ethnic/cultural identity/cultural orientations, religion, sexual orientation, gender/gender identity, disability, socio-economic status, veteran status, national origin, age, language, and employment rank?

No

3d. What direct and/or indirect instrument(s) were used to measure this SLO?

- 1) Embedded questions were used for PT 700 (Human Anatomy)
- 2) Rubric for Practical Exam were used for PT 711 (Patient Management II)
- 3) Selected items for the Clinical Performance Instruments were used for PT 790 (Clinical Practice I)

3e. Describe the assessment design methodology: For example, was this SLO assessed longitudinally (same students at different points) or was a cross-sectional comparison used (Comparing freshmen with seniors)? If so, describe the assessment points used.

For this assessment, we evaluated the outcome of SLO 1 of our first DPT cohort at three different time points (Fall 2012, Spring 2013, and Spring 2013).

3f. Assessment Results & Analysis of this SLO: Provide a summary of how the results were analyzed and highlight findings from the collected evidence.

Analysis I – PT 700 (Human Anatomy I – Basic Science Class)

Both total test scores and scores for a case scenario at the midterm and final exams of PT 700 were used for this analysis. Additionally, item analysis was used to identify difficulty in learning with respect to students' ability to apply basic science knowledge to clinical practice.

- **Results 1:** Our results demonstrated that all students in the first DPT cohort passed both midterm and final exam based upon the test scores on each exam. When the total test scores were used to classify students into Pass (75-82%), Good (82-93%), and Excellent (>93%), all students performed at the level of good and above. The number of students who performed at the excellent level was 24 (77%) and 20 (65%) at midterm and final exam, respectively.
- **Results 2:** To identify students' ability to apply the knowledge to clinical practice, test scores from the case scenario portion were analyzed (**Appendix A, Figure 1**). At midterm, the majority of the students performed at the level of Good (14 of 31, 45%) and Excellent (14 of 31, 45%), and only 3 of 31 (10%) students performed at the level of Pass. At final exam, only one student (3%)

performed at the level of Pass, seven (23%) and 23 (74%) at Good and Excellent level, respectively. These results indicated that students' ability to comprehend and apply anatomy knowledge to clinical practice improve from midterm to final exam.

- **Results 3:** Item analysis of the case scenario of the midterm exam was used to identify the difficulty of students who performed at the Pass and Good Level (**Appendix A, Figure 2**). Larger percentages of students who performed at the Pass level incorrectly answered the questions related to the case scenario that involved learning that the level of comprehension and analysis. These results underlie the needs to provide students with more opportunity and/or means to improve their level of learning in order to apply their basic science into clinical practice.

Analysis II – PT 711 Physical Therapy Management II (Clinical Science Class)

For PT 711, the scores of the final practical exam related to patient management were analyzed. In this practical exam, four criteria (Identifies Patient Management Issues, Selects Appropriate Procedure for Patient, Apply Procedure to Patient, Communication with Patient) identified by the course professor as important characteristics of students' ability to comprehend the knowledge gained in basic science of anatomy, physiology, and pathology and apply it to clinical case study were used (**Appendix A, Figure 3.**).

- **Results 4:** The results indicated that for all criteria, all students (N=31) passed all four criteria with the mean score of 92% and standard deviation of 5.44. The majority of the students were able to perform at the good-excellent level. Three students performed at the pass level and none of the student failed the exam. The students who performed at the Pass level in this class were not the same students who performed at the Pass level in PT 700. These results indicated that students' learning in the area of applying basic knowledge can be modulated throughout the program.
- **Result 5:** The results of criteria 4: Communication with Patient demonstrated that all students performed at the level of good to excellent level in this category. Per the rubric used for this criterion, the results indicated that the student were able to use minimum jargon (ability to translate scientific terminologies to simple, layman terms) and clearly communicate with the patient prior to and during treatment.

Analysis III – Clinical Practice I (PT 790)

For PT 790, CPI data of items pertaining behaviors related to SLO 1 were collected during Summer 2013. Two data points were collected: midterm and final evaluation. Descriptive statistics were used to compare of our data to the benchmarks created at the

American Physical Therapy Association (APTA). These benchmarks are specific for each clinical experience level. For this analysis, the benchmark for first internship was used (range 0-4 indicating beginner to intermediate level).

For this analysis, four (clinical reasoning, screening, examination, and evaluation) of 18 items from CPI were selected due to their ability to reflect our students' ability to comprehend the basic knowledge and apply it to real patients in clinical setting. For example, the clinical reasoning construct is describe as the ability to apply current knowledge, theory, clinical judgment, and the patient's value and perspective in patient management.

- **Results 6:** The CPI results in the area of clinical reasoning, screening, examination, and evaluation demonstrated that at midterm, majority of the students (70-80%) met the range of benchmarks (beginner to intermediate level) set by the American Physical Therapy Association (APTA). At final, 50-60% of the students performed within the range of benchmarks of beginner to intermediate level and 40-50% were above the benchmarks (Appendix A, Figure 4-7). Detailed analysis indicated that the median improvement for each criterion was one level for clinical reasoning, screening, evaluation and 2 levels for examination. These results suggest that our students were able to comprehend and apply basic knowledge in clinical practice.

3g. Use of Assessment Results of this SLO: Describe how assessment results were used to improve student learning. Were assessment results from previous years or from this year used to make program changes in this reporting year? (Possible changes include: changes to course content/topics covered, changes to course sequence, additions/deletions of courses in program, changes in pedagogy, changes to student advisement, changes to student support services, revisions to program SLOs, new or revised assessment instruments, other academic programmatic changes, and changes to the assessment plan.)

The assessment results for PT 700 (Anatomy) and PT 711 were discussed with the professors who taught and will be teaching the course next semester. They appreciated the fact case studies and practical exam provide an important means to improve higher level of learning toward clinical application. Therefore, case studies will be utilized more often during class and examinations.

4. Assessment of Previous Changes: Present documentation that demonstrates how the previous changes in the program resulted in improved student learning.

N/A

5. Changes to SLOs? Please attach an updated course alignment matrix if any changes were made. (Refer to the Curriculum Alignment Matrix Template, http://www.csun.edu/assessment/forms_guides.html.)

N/A

6. Assessment Plan: Evaluate the effectiveness of your 5 year assessment plan. How well did it inform and guide your assessment work this academic year? What process is used to develop/update the 5 year assessment plan? Please attach an updated 5 year assessment plan for 2013-2018. (Refer to Five Year Planning Template, plan B or C, http://www.csun.edu/assessment/forms_guides.html.)

Appendix B

7. Has someone in your program completed, submitted or published a manuscript which uses or describes assessment activities in your program? Please provide citation or discuss.

N/A

8. Other information, assessment or reflective activities or processes not captured above.

Appendix A:

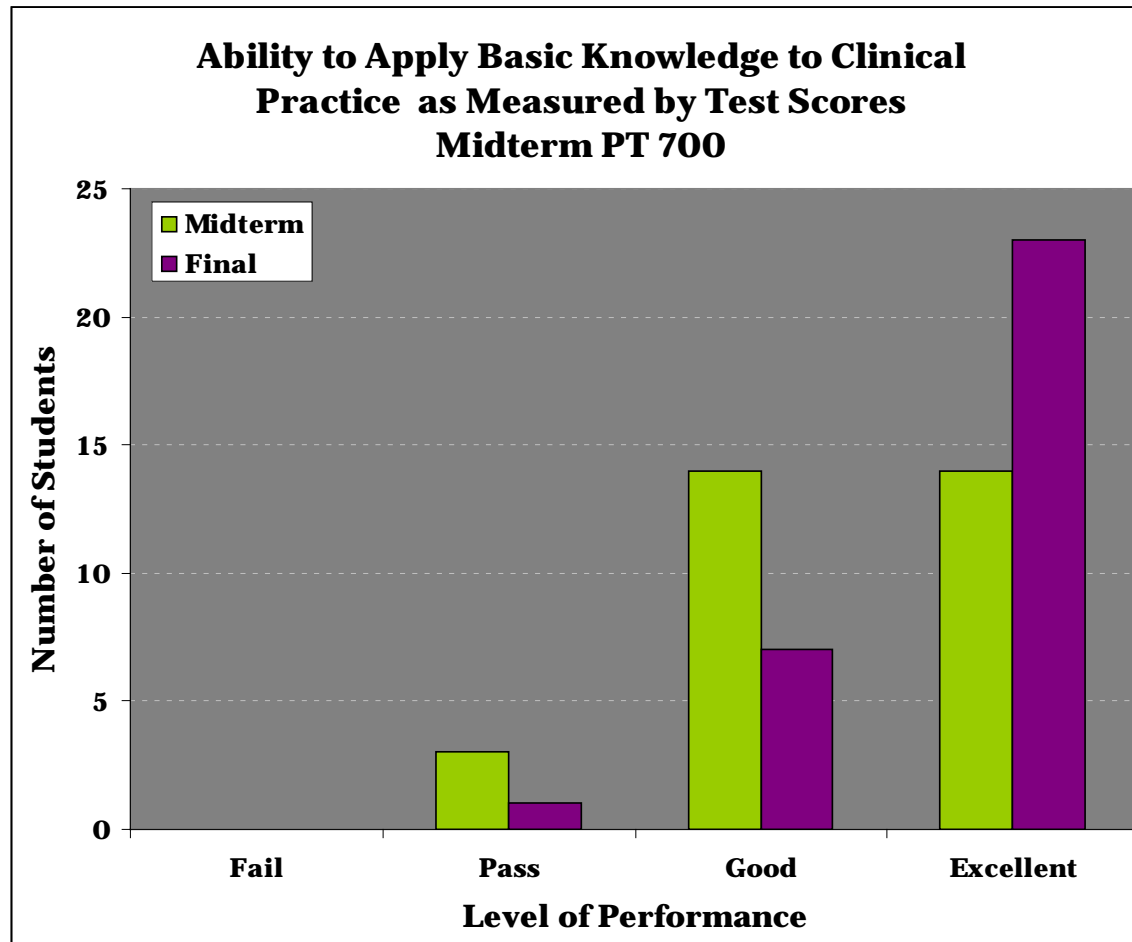


Figure 1. The number of students who performed at different level in the case scenario at midterm and final exam in PT 700 (Human Anatomy I). A relatively larger number of students who performed at excellent level at final indicated that our students' ability to comprehend and apply the knowledge in case scenario was improved from midterm to final exam.

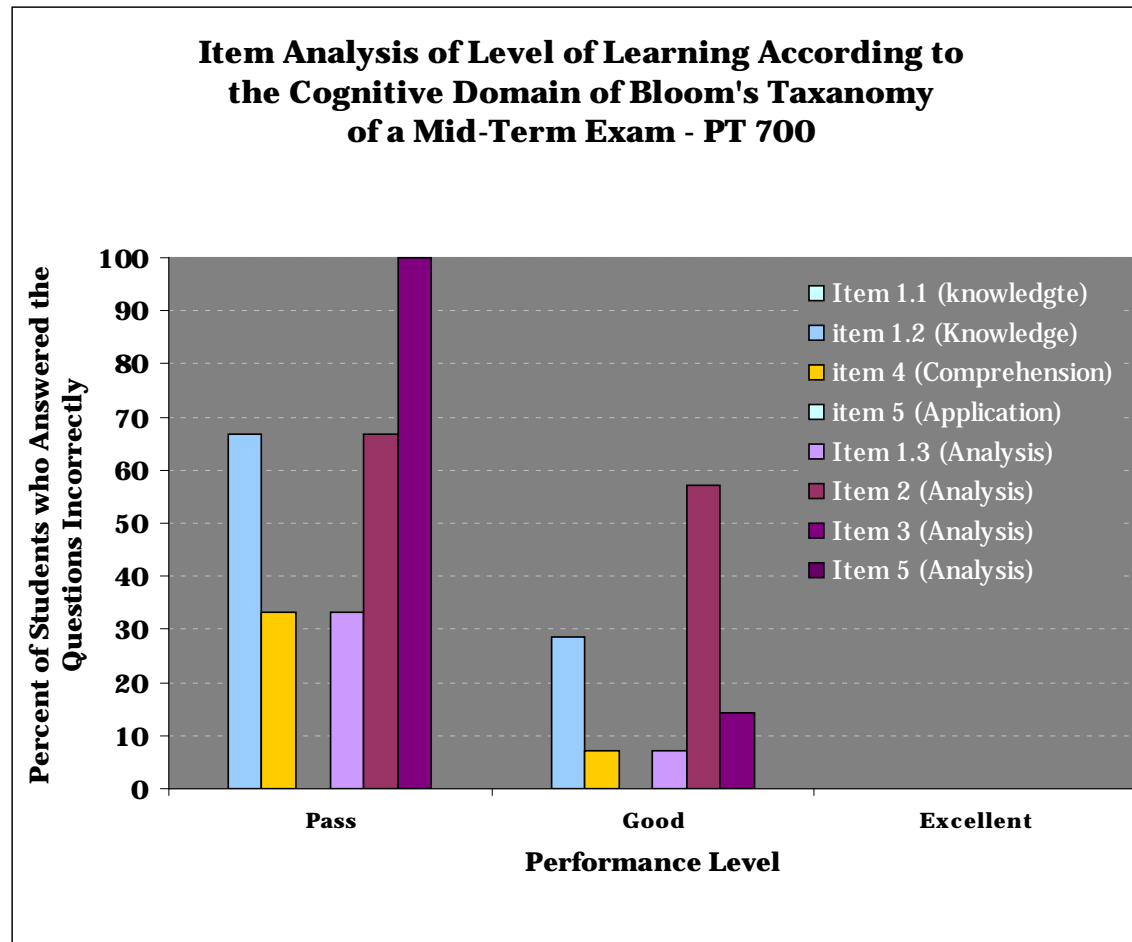


Figure 2. Item analysis of Case Scenario question related to application of human anatomy to neuromusculoskeletal injury. Students in the Good level performed better than students in the pass level in many levels of learning, particularly at the level of comprehension and analysis.

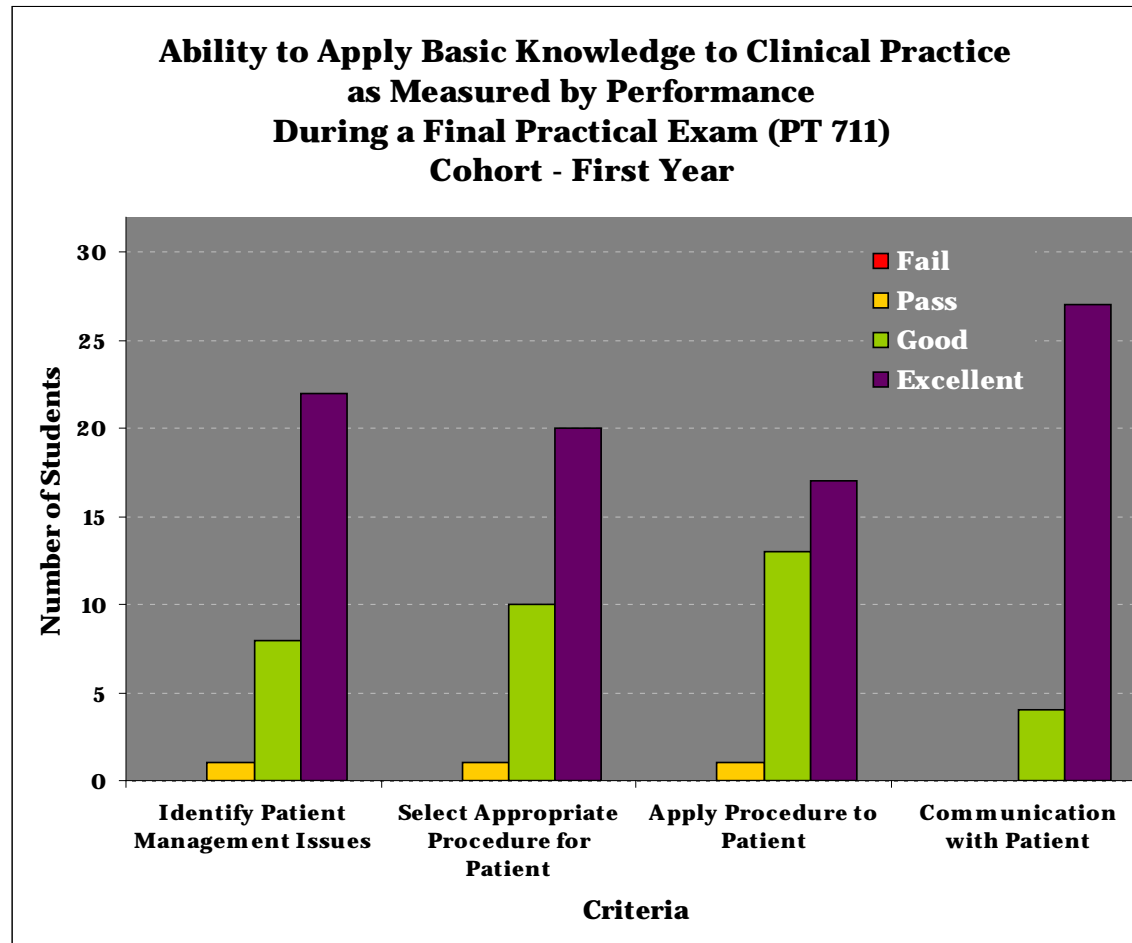


Figure 3. Students' performance during a final practical exam in Physical Therapy Management II (PT 711). Performance of students in the class reflected students' ability to comprehend and apply basic science knowledge of Anatomy, Physiology, and Pathology in conjunction with clinical science of patient management skills to clinical practices. Note that majority of the students performed at the Good and Excellent.

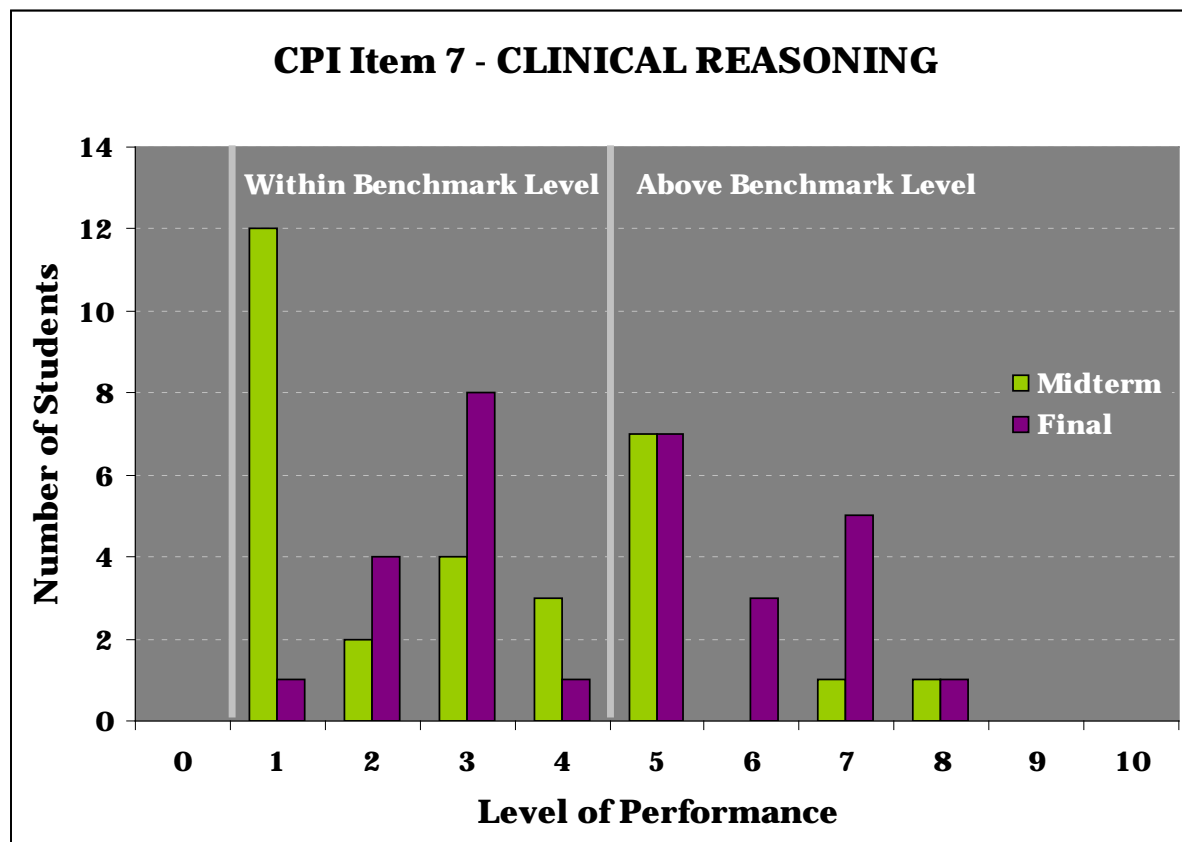


Figure 4. Students' performance in Clinical Reasoning Construct of CPI at midterm and final evaluation at their first clinical internship. At midterm, majority (70%) of students was within the benchmark set by APTA. However, at final 50% of the student performed at the level above the benchmark.

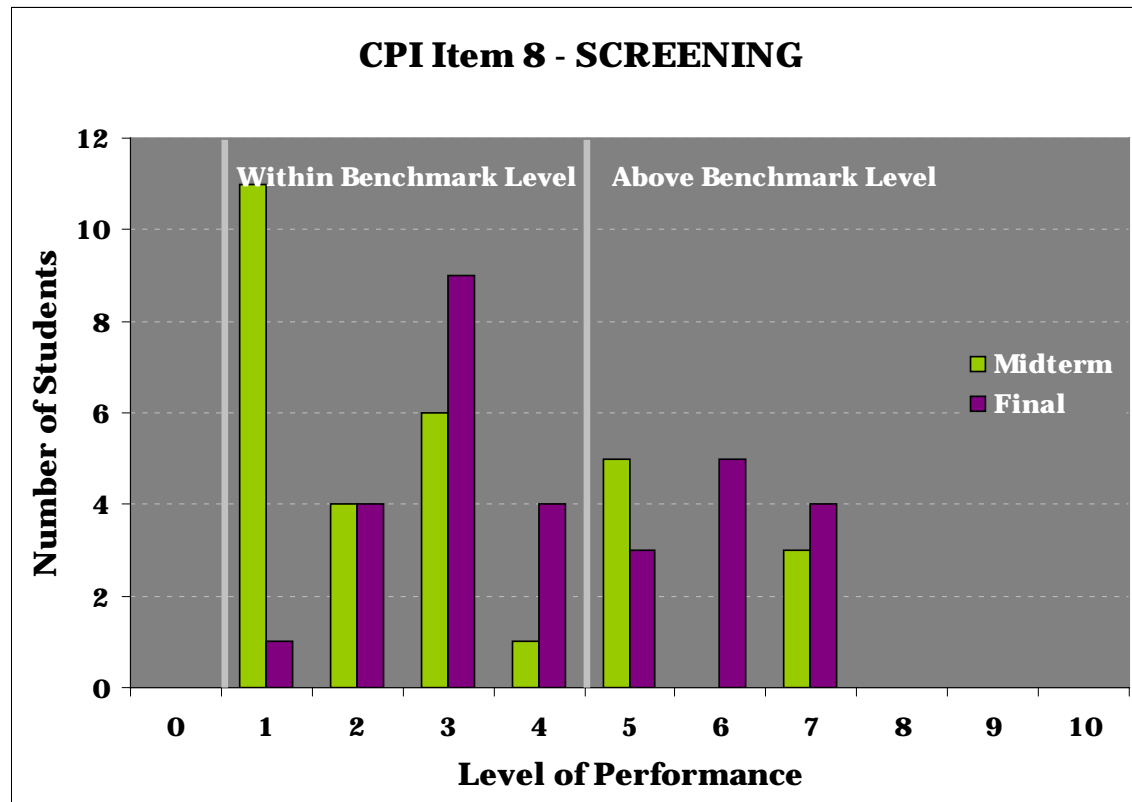


Figure 5. Students' performance in the Screening Construct of CPI at midterm and final evaluation at their first clinical internship. At midterm, majority (73%) of students was within the benchmark set by APTA. However, at final, only 60% of the students performed within the benchmark level and 40% performed at the level above the benchmark.

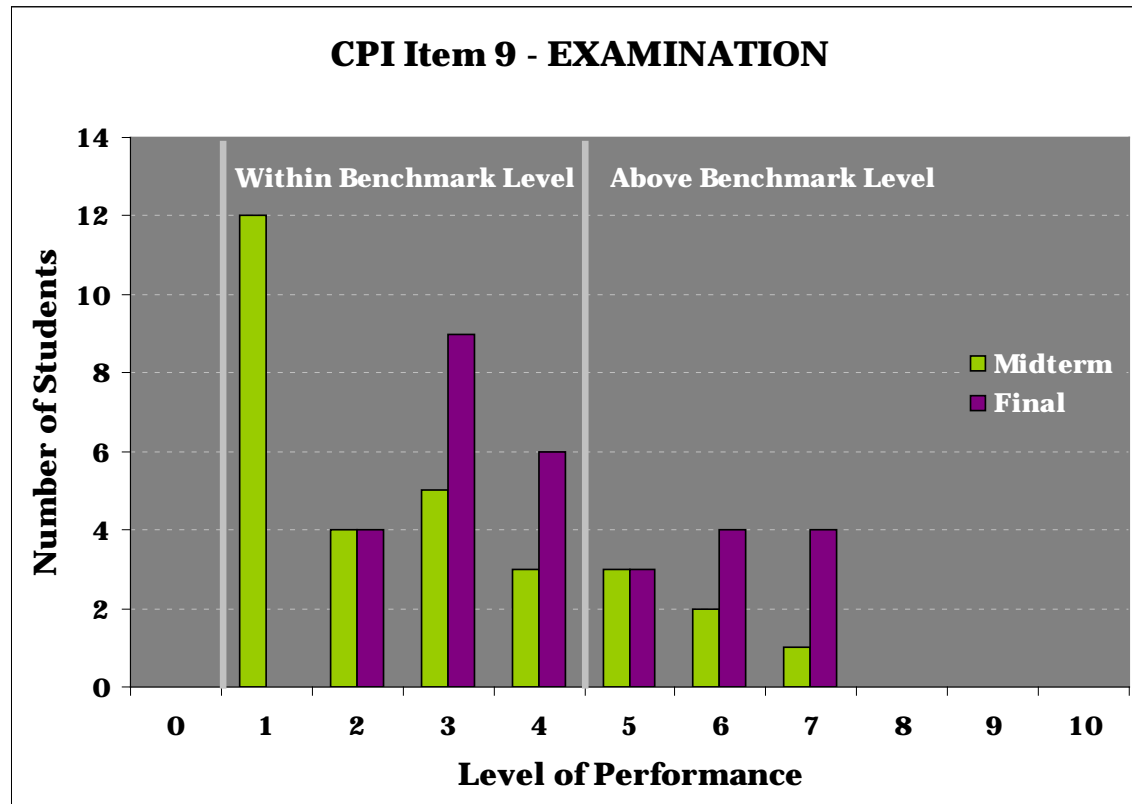


Figure 6. Students' performance in the Examination Construct of CPI at midterm and final evaluation at their first clinical internship. At midterm, majority (80%) of students was within the benchmark set by APTA. However, at final, only 63% of the students performed within the benchmark level and 37% performed at the level above the benchmark.

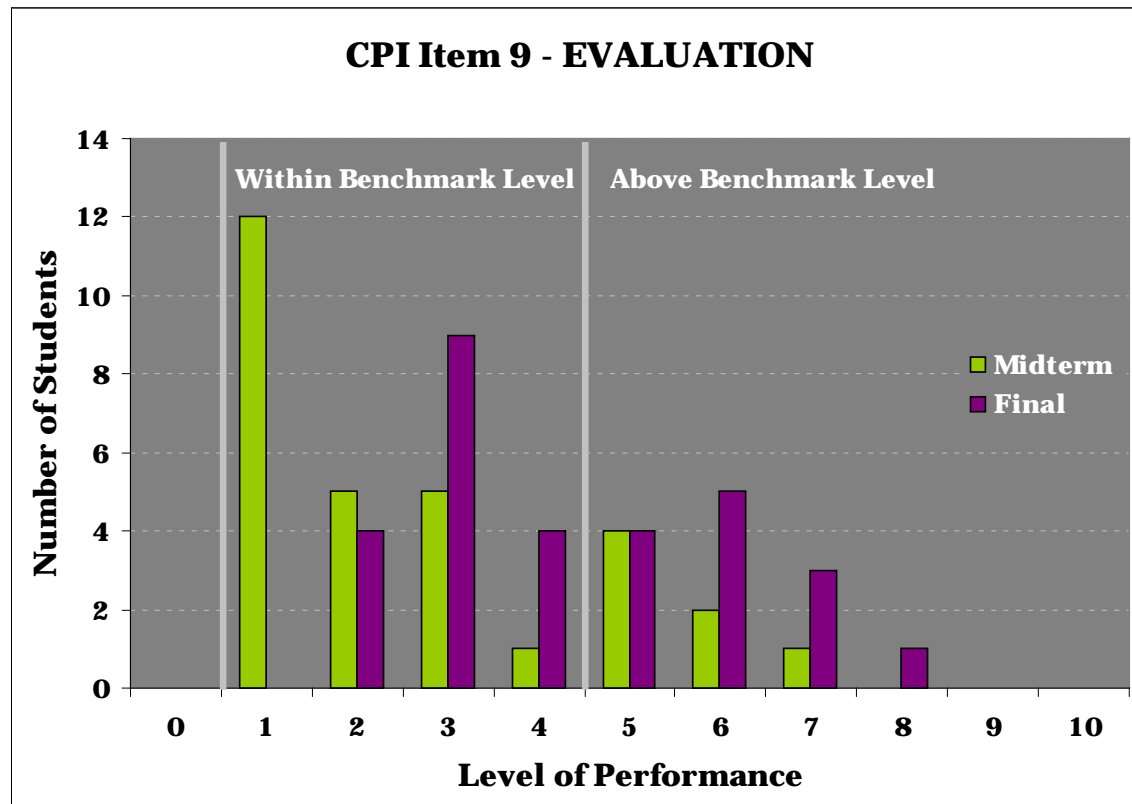


Figure 7. Students' performance in the Evaluation Construct of CPI at midterm and final evaluation at their first clinical internship. At midterm, majority (77%) of students was within the benchmark set by APTA. However, at final, only 57% of the students performed within the benchmark level and 43% performed at the level above the benchmark.