East Carolina University School of Dental Medicine

Ranking Students by Competencies

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In 2009, ECU SoDM partnered with Qualtrics (Provo, UT) to design and implement a new mechanism for quantitative assessment called XComP (eXtensible COMpetencies Platform). XComP made three basic assumptions: (1) if all topics can be tagged with meta-codes, and (2) if all different types of outcomes could be normalized based on time, then (3) student performance could be represented on a grid that directly represented competence and tracked daily.

Traditional curriculum assessment has relied on the extraction of reports from various outcomes engines and Learning Management Systems (LMS). The goal of XComP is to build the reports, by competency, in a graphic display at the beginning, then watch the changes and trends as the assessments change the data. The student data changes daily and the trends can be seen in real time.

Every exam, discussion post, and clinical procedure is tagged with two pieces of information: (1) Microcompetency Code that represents every topic in health science, and (2) Relative Educational Value Unit that relates the question or procedure to each other by time spent by the student. By “normalizing” all outcomes, student performance across all aspects of the curriculum. The goal is to easily identify where a student needs help to become “competent.” Competencies are represented in vertical columns and are aggregates of Microcompetency Codes. Student accrue points from new outcome measures and the Grid recomputes the rankings in each part of the curriculum.

All students (horizontal rows) are assessed by Competency (vertical columns). Gold represents the top performers and red represents areas for targeted supplemental instruction.
**Cumulative Competency-Based Assessment**

Dental education is “competency-based” which means that the content from all courses is supposed to build over time to end with a graduate dentist who is competent in defined areas - called “Competencies.” In essence, the individual courses are constructed to interrelate, and, therefore the assessments are designed to interrelate.

The graphic demonstrates how the 6 cognitive assessment methods combine to assess competence. Note that the six cognitive assessment modalities fall into three environments - Basic Didactic and Applied Didactic Instruments test basic and applied knowledge, Problem-Based Learning and Case-Based Learning test critical thinking skills and Quantitative and Qualitative Clinical Assessments test clinical experience.
Quantitative Assessments

• Basic Didactic Instruments
• Problem-Based Learning
• Clinical Production (by ReVU not dollars)
Quantitative Assessment

Quantitative assessment in a health science school comes from six different types of outcomes: (1) basic didactic exams, (2) applied didactic exams, (3) problem-based learning, and (4) clinical experiences. In most disciplines of higher education, students must know content, be able to use the content to solve problems, and apply the content to perform tasks. In the case of dental education, the students use their knowledge to treat patients. It is a traditional problem in health science education to equate or “weight” the different types of quantitative assessments, because all are important but are not necessarily of equal importance in determining “competence.”

Assessment of Basic Didactic Exams: Basic multiple-choice and true-false questions serve a role in quantitative assessment. The long term value of these instruments is suspect, however these exams do help monitor the students progress in encountering basic concepts. ECU SoDM teamed with Exam Master (Newark, DE) to provide online testing for the students. ECU SoDM gives weekly exams during the first year. Over the four years of the curriculum, students will encounter 5000-7000 of these questions. The points from didactic outcomes represent roughly 20% of student competence. By evaluating the individual as part of a class, specific weaknesses are easier to track.

Students encounter all of their didactic exams using their laptops in the simulation laboratory. Each question is tagged with a code to map to a competency.
Identify the structure indicated by the red pin.
(Submitted by R. Todd Watkins, Jr. DDS)

- A mental foramen
- B frontal bone
- C nasal bone
- D vomer
Assessment of Problem-Based Learning: In recent years, The Department of Education and the accreditation body for dental education has placed increasing emphasis on problem solving and critical thinking. This required ECU SoDM to find new ways to assess these educational methods. ECU SoDM places a significant importance on Problem-Based and Case-Based Learning. In 2009, ECU SoDM partnered with Yammer (San Francisco, CA) to facilitate small group discussions and to export the posts into a comma-separated values file that is graded. A grading tool was created by Qualtrics (Provo, UT) to assign Microcompetency Codes and ReVUs to each post. Each post is graded, but students only get points for “moving the ball” on a discussion. In general, one post is the equivalent to 0.1 points. It must be noted that other types of posts are important for group dynamics even if they do not score points to the Grid. The points from discussion outcomes represent 20% of student competence. A thread can be started by a student or faculty member. The discussion thread can include many interrelations between topics.

The discussion thread to the left was generated by the “Barracuda” Group from the Class of 2017. In each lecture, the faculty members stop and pose clinical “breakout” questions for the students to solve. Many times the students come back to a thread to add more content or to conclude a discussion. The entire educational goal of the Yammer groups is to develop skills in critical thinking and problem solving from the first day of the curriculum. Grading these discussion is important. In many small-group activities, some students can avoid participation. By grading every post of every thread, we can watch to make sure that individuals in the group do not dominate discussion or fail to participate. This is the first instance of quantitative assessment of problem-solving in the literature.
Problem-Based Learning Grading Tool

Grading student discussions is controversial. There are educators who believe that the assignment of grades to open discussions is anathema to the educational process and inherently stifles open collaboration. There is no question that there is an art to setting up small group discussion in Yammer, but the assessment of the posts has been extremely valuable. There are three distinct types of posts. (1) The Content Post adds content to the thread. These posts are tagged with a Microcompetency Code and a Relative Value. (2) The Logistics Post starts a new thread or asks a question. These posts can assign tasks. The logistics posts help with group dynamics. (3) The Other Post is used primarily to correct a posting or to give praise to another member of the group. Logistics and Other Posts are not graded, but they are counted. ECU SoDM has found that the groups that try to simply score points and are “efficient” are also the least effective groups. The best groups collaborate. The best groups learn from each other.

What would be the most likely cause of hydrocephalus involving only the lateral ventricles?

Word Count: 14

MicroComp Code

0.1 0.2 0.5 1 2 3 4 5

Hydrocephalus can develop due to increased production of CSF, blockage at one of the ventricular communication or outflow foramina, or by impaired absorption of CSF into the venous system. The result of hydrocephalus is expansion of one or more ventricles and compression of cerebral matter. Hydrocephalus in which the cerebral ventricles remain in communication with the subarachnoid space is called a communicating hydrocephalus.

Word Count: 63

MicroComp Code

02.03.05.00

0 0 0 0 0 0 0 0 0 0
Health science students become competent by performing the clinical tasks under supervision. There are two aspects of these experiences. The first is by performing adequate numbers of procedures - quantitative assessment. The second is through qualitative assessment of specific skills based on grading criteria (covered in a later section).

**Assessment of Clinical Experiences:**
Health science students are evaluated primarily for the ability to actually perform the clinical tasks in practice. ECU SoDM uses Exan axiUm (Coquitlam, BC, Canada) as the integrated patient record. Weekly performance reports are generated that represent each procedure completed by each student. All clinical procedures have been pre-tagged with Microcompetency Codes and Relative Value Units. ReVUs are calculated based on the amount of time needed to perform the clinical and laboratory components of a procedure. This is where competency assessment gets complicated. Every dental student takes the same didactic exams, but they will have very different patient care experiences. Therefore, there needs to be a set minimum of procedures completed for each area of competence. Some students will, for instance, complete more crown restorations because of their patient assignments.

The points from clinical outcomes represent roughly 60-65% of student competence. The students who complete more procedures generate more points. By tracking each discipline independently, patient assignments can be altered to provide adequate experiences for all students.

**axiUm Screen**

Every clinical procedure is associated with a ReVU and a Microcompetency Code, just like every exam question and discussion post. Clinical procedures are worth many more points than exam questions.
Qualitative Assessments

• Applied Didactic Instruments (OSCE)
• Case-Based Learning
• Qualitative Skills Assessments (Comp Exams)
Please explain what the devices are in the accompanying photograph and what the readings imply in each case.

Applied Didactic Instruments are different from basic multiple choice. The goal of these instruments is to provide a “real life” clinical scenario, and make sure that the student can use everything that they have learned to solve the problem. In this case, we want to make sure that the student can appropriately use a Nitrous Oxide delivery system. They will have been given multiple choice questions before, but we want to see if they can apply what they have learned.

List the topics that you would like to be considered when grading a free response question and how many points each is worth. These will be displayed in the free response grading system. Note: These will never be seen by the examinees.

- **Devices are pressure gauges.**
  - Topic: 02.03.11.02 Nitrous Oxide
  - Subject: general
  - Points: 1

- **Oxygen gauge A is showing that the tank is completely full.**
  - Topic: 02.03.11.02 Nitrous Oxide
  - Subject: general
  - Points: 1

Note that an Applied Didactic Instrument can require multiple short answers and may deal with different aspects of the curriculum. It is not enough for a dentist to recognize which pressure gauge is for Oxygen and which is for Nitrous Oxide, we want them to know how to read the percentage of both gasses, and the implication of the mixture.

Assessment of Applied Didactic Exams: Unlike basic multiple choice and true/false, ECU SoDM uses sequenced short-answer exams to evaluate each students ability to synthesize content to solve difficult clinical problems. Case scenarios are created with a series of problems that require student explanations. The faculty grade these exams using subjective quality assessment based on pre-defined “talking points.” The ECU SoDM students will encounter 100 of these exams.

Some health science schools use a variant of these instruments to perform so-called **Objective Structured Clinical Examinations (OSCE)**. These are usually timed and can involve physical stations with live patients. With 100 exams, these instruments will provide approximately 1000-2000 points for evaluation.
Assessment of Case-Based Learning:

The final qualitative assessment involves the student's ability to encounter a case, be able to apply all of the knowledge and skills needed to write a treatment plan, and to document the work in a method suitable for communication with other professionals. Using Yammer's “Notes” function, students work with other students and faculty to write case descriptions. Using a pre-determined rubric, the components of the case are assessed. As part of a portfolio, the student is asked to turn in an initial note for their patients, and then are asked to reflect on their plan when completing the patient’s active treatment. Paired with Problem-Based Learning, Case-Based Learning creates a final “product” that demonstrates the student’s ability to think clinically.

The case note to the right is an excellent example of Case-Based Learning. Notice the multiple versions of the document (with highlighted changes). Health science is a practice that merges science with critical thinking. The ability to perform clinical procedures is qualitatively assessed based on technical standards. The ability to work through a complex dental case, and to properly design a treatment plan is of equal importance to the success of a dentist.
<table>
<thead>
<tr>
<th>File</th>
<th>Grading Summary</th>
<th>Grade Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>20131016.Course1_Group2.Project3.pdf</td>
<td>View</td>
<td>View</td>
</tr>
<tr>
<td>20131017.Course4_Group5.Project3.pdf</td>
<td>View</td>
<td>View</td>
</tr>
</tbody>
</table>

**Case: 20131016.Course1_Group2.Project3.pdf**

**Yammer: Clinical Dentistry - Case 8 - Gold in Gold**

**Subjective:**
- **Name:** Harry Thompkins
- **Gender:** Male
- **CC:** Patient states pain in the lower left of his mouth. He indicates the mandibular first molar, noting pain on biting, chewing, brushing, and occasionally spontaneous pain when he’s “just sitting around doing nothing special”.
- **Past Medical History:** HTN
- **Past Dental History:** His last dental appointment was about 2 years ago for an extraction in the upper right.
- **Medications:** Lisinopril (5mg every morning)
- **Allergies:** NKDA
- **Questions for the Patient:**
  1. How long has the pain been there?
  2. Is the tooth sensitive to hot and cold and if so how long does that pain last?

**Objective:**
- **BP:** 142/84
- **Pulse:** 77 bpm
- **IOE:** Erythematous, edematous gingival tissues, mobility of 3 with depressibility in the socket. There are no fracture lines evident clinically.
- **EOE:** WNL
- **Tests:** Vitality testing (EPT, cold, percussion, and palpation) will be performed on left first mandibular molar to determine diagnosis.
- **Radiographic Findings:**
  - PA of #19 reveals a J-shaped lesion surrounding the distal root with widened PDL space. Radiolucency also present in furcation area.
Qualitative Assessment

Quality of student performance is targeted in **two different areas**: Clinical Skills Assessments and Case-Based Learning. For most health science schools, students are given quantitative evaluation for qualitative assessment. Simply put, poor quality yields fewer points. ECU SoDM does report quantitative points to the Grid for these assessments, however separate reports are kept for Skills Assessments.

**Skills Assessments**: Students perform approximately 1000 surgical procedures in simulation and in clinic over the four years of dental school. ECU SoDM has identified 40 simulated and 35 clinical procedures that require a detailed quality assessment. ECU SoDM has partnered with Qualtrics (Provo, UT) to create a series of iPad Qualitative Assessment Forms where students can evaluate their own performance and where faculty can independently assess the student work.

Performing surgery is a skill that requires practice and constant formative evaluation. Every procedure has a list of criteria that can be assessed individually. The iPad form allows the student to grade their own performance and to make comments on the nuances of their skills. These are very complex tasks that are judged to fractions of millimeters. The ability for the student to see their mistakes is more important to their improvement as simple pass/fail. The student performs a self-assessment, then sends the form to the faculty for their evaluation.

The first faculty member evaluates the student without seeing the student assessment, then a second faculty member does the same. The form looks at all three evaluations to (1) determine pass/fail, (2) look for significant differences between the faculty assessments, and (3) look for significant differences between student and faculty assessment. While a grade is calculated, it is as important to correct student perception of their own progress.
Skills Assessment Grading iPad Form

Each exercise allows for student self-assessment and two faculty evaluators. Comments allow students to evaluate specific areas for improvement. These forms are used for both simulation and live-patient assessments.
Grids

- Automatic Rankings for
  - Didactic Performance
  - Case-Based Performance
  - Clinical Performance
  - Overall Performance
## Didactic Performance Grid

**Program:** ECU Dental  | **Cohort:** 2015

![Table](image)

**Curriculum**

|        | 13 | 1 | 11 | 9 | 18 | 6 | 19 | 2 | 14 | 25 | 20 | 7 | 6 | 9 | 43 |
|--------|----|---|----|---|----|---|----|---|----|----|----|---|---|---|---|---|
| Student High | 63421779 | 3285.0 | 132.0 | 4.0 | 111.0 | 105.0 | 195.0 | 196.0 | 55.0 | 5.0 | 33.0 | 207.0 | 447.0 | 153.0 | 290.0 | 158.0 | 259.0 | 209.0 | 80.0 | 67.0 | 60.0 | 86.0 | 81.0 | 15.0 | 48.0 | 24.0 | 46.0 | 110.0 | 37.0 | 85.0 | 41.0 | 40.0 |
| Average   | 3003.2 | 129.2 | 3.6 | 101.9 | 86.2 | 170.3 | 172.0 | 50.7 | 4.7 | 28.5 | 184.1 | 400.0 | 137.1 | 266.7 | 142.0 | 245.5 | 192.9 | 68.2 | 60.2 | 54.4 | 85.3 | 78.9 | 18.4 | 45.6 | 19.7 | 43.3 | 100.3 | 34.0 | 84.8 | 39.3 | 34.4 |
| Student Low | 2640.0 | 168.0 | 1.0 | 81.0 | 55.0 | 138.0 | 146.0 | 44.0 | 3.0 | 22.0 | 146.0 | 328.0 | 166.0 | 220.0 | 112.0 | 205.0 | 165.0 | 56.0 | 50.0 | 46.0 | 76.0 | 69.0 | 15.0 | 33.0 | 12.0 | 35.0 | 86.0 | 28.0 | 74.0 | 34.0 | 26.0 |
| Gold Cutoff | 2640.0 | 135.2 | 5.1 | 112.7 | 99.6 | 194.1 | 189.6 | 56.2 | 5.6 | 32.7 | 292.7 | 449.0 | 153.9 | 295.6 | 158.7 | 267.3 | 209.3 | 77.9 | 67.0 | 59.6 | 91.9 | 84.2 | 21.0 | 51.5 | 23.5 | 48.9 | 109.0 | 37.9 | 91.9 | 43.9 | 39.8 |
| Purple Cutoff | 2640.0 | 101.2 | 3.8 | 86.2 | 78.8 | 147.0 | 147.0 | 44.2 | 3.8 | 25.5 | 156.8 | 336.0 | 116.2 | 221.2 | 121.5 | 204.0 | 157.5 | 62.2 | 51.8 | 45.8 | 70.5 | 64.5 | 16.8 | 39.0 | 18.0 | 37.5 | 82.5 | 28.2 | 68.8 | 33.8 | 32.2 |

**Columns:**
- 01: Undergraduate Sciences
- 02: Quantitative Methods
- 03: Basic Genetics and Embryology
- 04: Human Immunology
- 05: Basics of Human Pathology (incl. Microbiology)
- 06: Basic of Pharmacology
- 07: Multimodal Processes
- 08: Inorganic Processes
- 09: Mucosal/Surgical System(s)
- 10: Nervous System(s)
- 12: Cardiovascular System (Blood and Lymphatics)
- 13: Respiratory System
- 14: Digestive System (Oral Detail)
- 15: Digestive System (Non-Oral)
- 16: Renal and Urinary System
- 17: Reproductive System(s)
- 18: Patient Considerations
- 20: Oral Cancer Prevention Strategies
- 21: Oral Preoperative Practice
- 22: Pain and Anxiety Management
- 23: Periodontology
- 24: Restorative Dentistry
- 25: Occlusal and Orthodontic Therapies
- 26: Oral and Maxillofacial Surgical Treatment

**Click and drag to navigate, shift-click for cell information.**
# Case-Based Performance Grid

![Table of Competencies](image)

| Curriculum | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| Student High | 2680.3 | 2587.5 | 2578.5 | 2580.3 | 2582.2 | 2584.9 | 2587.5 | 2590.2 | 2593.0 | 2595.8 | 2598.5 | 2601.2 | 2603.9 | 2606.6 | 2609.3 | 2612.0 | 2614.8 | 2617.5 | 2620.2 | 2622.9 | 2625.6 | 2628.3 | 2631.0 | 2633.7 | 2636.4 | 2639.1 | 2641.8 |
| Average | 2183.0 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 | 2082.7 |
| Student Low | 1701.8 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 |
| Gold Cutoff | 1701.8 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 |
| Purple Cutoff | 1701.8 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 | 1601.5 |
Clínica Performance Grid
## Overall Performance Grid

### Curriculum

| Student # | Points | 00 - Undergraduate Sciences | 01 - Quantitative Methods | 02 - Basic Genetics and Embryology | 03 - Cell Biology and Metabolism | 04 - Human Immunity | 05 - Basics of Human Pathology (incl. Microbiology) | 06 - Basics of Pharmacology | 07 - Multisystem Processes | 08 - Musculoskeletal System | 09 - Nervous System(s) | 10 - Endocrine System(s) | 11 - Cardiovascular System (Blood and Lymphatics) | 12 - Digestive System (Oral Detail) | 13 - Digestive System (Non-Oral) | 14 - Reproductive System | 15 - Oral and Maxillofacial System | 16 - Patient Considerations | 17 - Practitioner Considerations | 18 - Interprofessional Practice | 19 - Drug Therapy Practice | 20 - Oral Disease Prevention Strategies | 21 - Patient Assessment | 22 - Pain and Anxiety Management | 23 - Periodontology | 24 - Occlusal and Orthodontic Therapies (Fixed and Removable) | 25 - Prosthodontics | 26 - Endodontics | 27 - Oral and Maxillofacial Surgical Therapies |
|-----------|--------|----------------------------|--------------------------|----------------------------------|---------------------------------|-------------------|-------------------------------------------------|-----------------------------|--------------------------|-----------------------------|------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1         | 11877466 | 6371.0                      | 165.8                    | 6.6                             | 148.2                          | 111.1                  | 328.5                                           | 230.7                       | 67.2                      | 169                        | 90.5                    | 262.5                     | 729.5                        | 295.3                        | 759.6                        | 286.5                        | 345.1                        | 445.5                        | 138.8                        | 140.7                        | 109.2                        | 135.2                        | 496.8                        | 40.4                        | 449.0                        | 31.4                        | 65.8                        | 135.5                        | 39.1                        | 315.7                        | 52.1                        | 68.4                        |
| 2         | 72952351 | 6361.9                      | 172.7                    | 14.1                            | 128.6                          | 118.1                  | 314.8                                           | 225.1                       | 73.4                      | 16.8                        | 60.2                    | 286.4                     | 824.3                        | 226.2                        | 744.6                        | 258.6                        | 410.2                        | 445.1                        | 158.4                        | 154.4                        | 112.9                        | 153.2                        | 433.7                        | 31.4                        | 413.2                        | 45.0                        | 49.0                        | 217.0                        | 45.2                        | 103.5                        | 55.9                        | 119.4                        |
| 3         | 41458032 | 6217.1                      | 153.9                    | 8.8                             | 162.2                          | 132.0                  | 340.7                                           | 276.8                       | 84.2                      | 20.3                        | 84.0                    | 285.7                     | 829.7                        | 311.2                        | 767.9                        | 277.9                        | 350.1                        | 482.4                        | 147.5                        | 138.7                        | 99.8                         | 171.6                        | 328.6                        | 31.0                        | 379.0                        | 32.0                        | 63.2                        | 141.9                        | 37.3                        | 103.0                        | 45.7                        | 49.7                        |
| 4         | 8038951 | 6089.0                      | 163.9                    | 7.6                             | 145.4                          | 138.2                  | 353.6                                           | 255.3                       | 83.0                      | 14.9                        | 53.0                    | 308.2                     | 778.4                        | 292.7                        | 775.9                        | 301.8                        | 386.5                        | 475.3                        | 156.9                        | 138.7                        | 81.8                         | 133.8                        | 268.8                        | 20.0                        | 397.1                        | 26.9                        | 51.7                        | 134.9                        | 39.9                        | 69.4                        | 49.5                        | 64.4                        |
| 5         | 55645110 | 6069.2                      | 157.4                    | 14.1                            | 134.0                          | 117.4                  | 324.6                                           | 257.2                       | 70.1                      | 19.2                        | 52.4                    | 287.5                     | 775.2                        | 294.9                        | 739.5                        | 281.3                        | 347.1                        | 470.5                        | 163.9                        | 135.6                        | 94.3                         | 156.2                        | 358.5                        | 33.8                        | 395.1                        | 28.7                        | 60.0                        | 142.9                        | 46.4                        | 109.0                        | 56.2                        | 75.1                        |
| 6         | 77388223 | 6039.0                      | 162.9                    | 6.8                             | 155.2                          | 114.3                  | 314.4                                           | 278.2                       | 86.4                      | 24.3                        | 57.7                    | 277.3                     | 798.1                        | 290.4                        | 713.1                        | 271.9                        | 342.2                        | 430.2                        | 134.1                        | 141.4                        | 92.5                         | 176.6                        | 371.8                        | 29.2                        | 370.2                        | 33.9                        | 62.2                        | 147.4                        | 43.7                        | 98.6                        | 42.5                        | 75.8                        |
| 7         | 63421779 | 6022.3                      | 152.7                    | 17.4                            | 142.3                          | 126.0                  | 337.1                                           | 302.2                       | 78.6                      | 16.1                        | 60.5                    | 294.6                     | 771.6                        | 296.4                        | 730.7                        | 293.7                        | 341.0                        | 442.2                        | 155.3                        | 145.6                        | 87.8                         | 155.0                        | 349.3                        | 20.8                        | 330.4                        | 29.9                        | 61.1                        | 133.4                        | 38.4                        | 90.2                        | 53.6                        | 79.1                        |
True Picture

• Our goal is to provide a true picture of each student’s strengths and weaknesses.
• The best didactic student is not always the best clinician.
• The best clinical performer is not always the best resident.
• XComP is built to track all relevant performance factors.