



ProdigyConnect™ for Faculty

**How to Save Time, Promote Accountability, and
Improve First-Time Board Pass Rates**

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ProdigyConnect™ for Faculty

How to Save Time, Promote Accountability, and Improve First-Time Board Pass Rates

The Origins of ProdigyConnect

A Challenge by the Department of Defense

Since 2004, Prodigy Anesthesia has sold desktop software that has helped over 20,000 students pass the board exam and become CRNAs. The problem with desktop software is that student performance data is stored in thousands of different locations, making advanced data analysis difficult, if not impossible.

In early 2015, the Department of Defense challenged us to create a system that was fully-online, centralized data storage, was secure enough to pass stringent military software regulations, and provided the ability for faculty to create customized exams, track and compare student performance, identify students at-risk for first-time failure on boards, and create re-usable plans of study.

In September of 2015, we released it as ProdigyConnect and made it available to nurse anesthesia programs throughout the country. At the time of this writing, students answer over 30,000 examination questions a day in ProdigyConnect. It has collected student performance data on over 4 million individual item responses across all NBCRNA topics and provides the statistical analysis to see where a student, class, or entire school stands in comparison to the rest of the country.

Over 75 schools currently use ProdigyConnect to administer exams, create and distribute study blueprints, and assess student performance before they take boards.

What Can It Do For Faculty?

Re-usable, Automatically-Updated Exams

The most widely used faculty component of ProdigyConnect is the ExamComposer module. The ExamComposer allows you to rapidly create exams using our library of over 3500 questions and administer them to your students through an exact replica of the Pearson Vue examination system. You can even set time limits for the exam and select a date range during which the exam is accessible.

You can choose questions using a wide range of selection methods including search criteria, specific NBCRNA categories and topics, question type (calculation, hot-spot, etc.), and even *by selecting specific chapters of a textbook*.

A primary benefit to faculty is that you no longer have to maintain a library of up-to-date questions for your exams. If you create the perfect exam from chapters of a particular textbook, and another edition of the textbook is released, we update each and every question to the new citations and alter or even replace the question entirely with one on the same topic from the same chapter of that textbook.

The screenshot displays the Prodigy Anesthesia Databank ExamComposer interface. At the top, there are navigation icons for Home, Show Me, View Exams, New Exam, Save Exam, and Faculty. Below these, the 'Select by Category and Topic' section is active, showing 'Topic: Cardiac' and 'Category: Electrocardiogram'. Buttons for 'Add Selected', 'Remove Selected', 'Add All', and 'Remove All' are visible. The 'Unnamed Exam' section shows 'Total questions selected: 7' and an 'Exam Key' button. The main area is divided into two panes: 'Prodigy Question Databank - 20 Items Located' and 'My Custom Exam'. The databank pane shows a list of questions, with one question expanded to show an ECG waveform and four multiple-choice options: A. Normal sinus rhythm (selected), B. Sinus bradycardia, C. Junctional (nodal) rhythm, and D. First-degree block. The custom exam pane shows a question: 'What are the two primary determinants of coronary perfusion pressure? (select two)'. The options are: A. Heart rate, B. Left ventricular end-diastolic pressure (selected), C. Aortic diastolic pressure (selected), and D. Aortic systolic pressure. Below this, another question is partially visible: 'Patients with a double aortic arch often prefer to lie with the neck extended because neck flexion can cause...'. The options for this question are: A. vertebral artery compression, B. hypotension, C. severe bradycardia, and D. tracheal compression (selected).

ProdigyConnect ExamComposer

Re-usable Study Blueprints

ProdigyConnect contains an entire library of study materials that match the NBCRNA Candidate Handbook. You can quickly design a course of study for your students by selecting the specific topics or categories you want them to study during each week of a 4 to 16 week long period. It even allows you to insert 'off weeks' for blueprints that cross holidays. Once a student loads your blueprint, ProdigyConnect will automatically create a summary quiz based just on the topics you selected for each week. You can monitor their weekly quiz progress remotely.

With the Blueprint Designer, you can create short study plans to match an existing syllabus for a specific course or design a comprehensive plan for board review. What's more, once you create the perfect blueprint for a course, you can save it as template so that you can re-use it next year by simply changing the starting date.

Blueprint Designer
Sort by NBCRNA Heading

1: Choose Plan Length: 15 Weeks
2: Select Start Date: 12/3/16
3: Max Weekly Questions: 100
4: Blueprint Name: NUR 650 Blueprint

5: Add study materials to your blueprint. Double-click items to add them to the active week (highlighted in green). Click a week's header bar to make it active. Double-click a study item to remove it.

Week 1	Week 2	Week 3	Week 4
AICD Quick Review	Airway Management Quick ...	Acromegaly Quick Review	Off Week
Blood Flow Through The H...	Controlled Hypotension Qu...	Addisons Disease Quick Re...	
Calcium Channel Blockers ...	Controlled Hypothermia Q...	Carcinoid Syndrome Quick ...	
Cardiac Action Potential	Malignant Hyperthermia Q...	Cushings Disease Quick Re...	

Week 5	Week 6	Week 7	Week 8
Chest XRay Anatomy	Anaphylaxis	ABO Compatibility	Airway Devices Quick Review
Laboratory Studies	Angioedema	Average Blood Volume	Anesthetic Delivery System...
Evoked Potentials Quick Re...	Latex Allergy Quick Review	Colloid Solutions	Bellows
Intraoperative Monitoring ...	Lupus Erythematosus Quic...	Fluid/Blood Replacement Q...	Cerebral Oximetry

Week 9	Week 10	Week 11	Week 12
FIQ2 Calculations	Autonomic Hyperreflexia Q...	Obstetric Anesthetic Techniq...	Congenital Diaphragmatic ...
Flowmeters	Autonomic Nervous Syste...	Obstetric Pharmacology Quic...	Fontanelles Worksheet
Fluid/Blood Warmers Quick...	Cerebral Palsy Quick Review	Obstetric Physiology and Path...	Hirschsprungs Disease
Forced Air Warmers Quick ...	Cerebrospinal Fluid		Pediatric Pharmacology Qu...

Week 13	Week 14	Week 15
Pharmacodynamics Quick Rev...	Burns Quick Review	ABG Interpretation
Pharmacokinetics Quick Review	Rule of Nines	Alpha-1 Antitrypsin Deficie...
	Spinal Cord Injury Quick Review	Alveolar-Arterial Oxygen G...
		ARDS Quick Review

Time-Saving Tips:
Pressing the 'A' key on your keyboard will add the contents of the entire selected folder to the active week.
Pressing the 'D' key on your keyboard will distribute the contents of the entire selected folder throughout all of the weeks in the blueprint.

Buttons: Exit to Calendar, New/Clear, Save Blueprint, Save Template, Load Template, Show Me, Preview Selected Document, Click to Create Off Week

ProdigyConnect Blueprint Designer

Twenty-Four Preformatted Board Simulations

ProdigyConnect contains twenty-four, 100-question board simulations as well as a 240-question SEE simulation based on the new NBCRNA SEE format. The exams are formatted according to the NBCRNA Candidate Handbook and contain all six NBCRNA question types (multiple choice, hotspot, image, calculation, drag-and-drop, and multiple correct response). The exam simulator is an exact replica of the Pearson Vue exam software, so the more exposure your students have to the simulations, the greater their comfort level will be when they sit down take the actual exam.

Four of the assignable exams are considered 'secure', meaning that they contain reserved questions not available to the students by any other means unless assigned by you. These function as excellent standardized tests to assign to your students to see where they stand in relation to the rest of the nation.

The other twenty, 100-question exams are available to the students to take on their own, but after an investigation into student behaviors, we learned that unless they were forced to take them, most students would not take them on their own. Faculty are now able to assign those exams to their students to ensure they get the benefit of exposure to the simulator.

The screenshot displays the ProdigyConnect Exam Simulator interface. At the top, there is a navigation bar with icons for Help, Mark, Previous, Pause, Proceed, Exhibit, Translation, Quit, Status, and Save. Below the navigation bar, the current item number is 824, the time is 00:59:28, and the question number is 3 of 46. A link to "Increase font size" is visible on the right. The question text reads: "Match the intravenous fluid with its corresponding sodium content." Below the question is a checkbox labeled "Tap instead of Drag and Drop (use if your tablet doesn't support drag and drop)". The main content area features a table with four rows. Each row has a cyan box for the answer, a cyan box for the fluid name, and a yellow box for the sodium content. A "Reset" button is located below the table.

Place answer here	D51/2NS	130 mEq/L
Place answer here	Lactated Ringer's	154 mEq/L
Place answer here	Normal Saline	77 mEq/L
Place answer here	D5W	0 mEq/L

Reset

ProdigyConnect Exam Simulator

Advanced Score Analysis

The ScoreLab is where you can analyze the results for a particular exam you have assigned to your students. From here, you can view the students' scores overall and in each NBCRNA category, compare their results to the rest of the country, view their detailed score report, and dig as deep into statistical analysis as you want.

The ScoreLab calculates a complete range of statistics for each exam including: mean, mode, range, variance, standard deviation, percentile ranking, interquartile range, semiquartile range, z-score, t-score, difficulty index, discrimination index, point biserial, even-odd and top-bottom reliability analysis, average time answering the different question types, and missed question distribution by category and topic.

The screenshot displays the ProdigyConnect ScoreLab interface. At the top, there is a navigation menu with icons for Home, Study Plans, My Review, Library, Lecture Hall, Exam Results, Faculty, and Logout. The user is identified as Peter Stallo at Prodigy University.

The main section is titled "Show Exams Where Exam Name is Like" and contains a table of exams:

ID#	Exam Date	Exam Name	Exam Description	Assigned By
3645	2/27/2015	Airway Mgmt Pop Quiz	Airway Quiz	pstallo@prodigy.edu
3621	2/24/2015	Secure Comprehensive Exam #3 (100 Questions)	Mandatory Exam Class of 2015	pstallo@prodigy.edu
3620	2/20/2015	Secure Comprehensive Exam #2 (100 Questions)	Mandatory Exam Class of 2016	pstallo@prodigy.edu
3539	2/10/2015	Secure Comprehensive Exam #1 (100 Questions)	Mandatory Exam Class of 2015	pstallo@prodigy.edu

Below this table, there is a section for "Click a row below to view a detailed exam report for a particular student" with an "Excel Export" button. It shows a list of students with columns for ID#, Posted, Last Name, First Name, Email, Version, Total Score, Basic Sci., Basic Prin., Adv. Prin., and Equip.

At the bottom, there are several data visualization and summary sections:

- Compare cohort with:** ALL STUDENTS (nationally). A bar chart shows "Equipment" scores for "Your cohort" (61) and "ALL STUDENTS" (15,755).
- Median-Mode-Range Your Examinees (n=15):** A table showing statistics for Total Score, Basic Sciences, Basic Principles, Advanced Principles, and Equipment.
- NEGATIVE OUTLIERS: LOWEST 20% OF EXAMINEES IN THIS COHORT:** A table listing students like Gargus, Jim; Lee, Philip; and Eastep, Mary with their scores in various categories.
- Average Time Spent Answering Questions:** A bar chart comparing "Your cohort" and "ALL STUDENTS" across question types: Overall, Mult. Choice, Mult. Correct, Image, Calculation, Hotspot, and Drag-Drop.

ProdigyConnect ScoreLab

Anonymous Comparison of Your Classes and School

The Faculty Dashboard allows you to view the overall performance of your school, selected classes, and even your entire program. You can quickly evaluate how your students compare based on NBCRNA category and question type, evaluate their time management, and compare your school to over 75 other schools based on class size, program design, and first-time pass rate. You can even see a prioritized list of topics recommended for your class to study based on their cumulative performance.

The dashboard includes a navigation bar with icons for Home, Calendar, ScoreLab, Composer, Quizzes, Show Me, and Logout. The main content area is divided into several sections:

- Overall Scores by NBCRNA Heading:** A bar chart comparing 'Your students' (yellow) and 'Rest of nation' (purple) across categories: Total, Basic Sci, Basic Ptn, Adv Ptn, and Equip.
- Students by Inverse Order of Performance:** A table listing students with their average scores and number of questions.
- Upcoming Events:** A table listing events with dates and assigned faculty.
- Overall Scores by Class Size:** A bar chart comparing 'Your students' and 'Rest of nation' across class size ranges: 0-15, 16-25, 26-35, 36-50, and 50+.
- Overall Scores by Program Design:** A bar chart comparing 'Your students' and 'Rest of nation' across program designs: Two-Phase, Integrated, Hybrid, and Unknown.
- School Exam Performance By 1st Time Pass Rate:** A line chart showing the percentage of students who passed on the first attempt, comparing 'Your students' and 'Rest of nation' across pass rate ranges: <70%, 70-79%, 80-89%, 90-94%, 95-99%, and 100%.
- % of Questions Missed by Question Type:** A line chart showing the percentage of questions missed by 'Your students' and 'Rest of nation' across question types: MULT, MCR, IMG, CALC, HOT, and DRAG.
- Average Time in Seconds by Question Type:** A bar chart showing the average time spent on questions by 'Your students' and 'Rest of nation' across question types: MULT, MCR, IMG, CALC, HOT, and DRAG.
- Poorest Performing Topics by Percentage:** A list of topics with their corresponding performance percentages.

Viewing Options: Change Classes Analyzed, Refresh

Faculty Tip: Click a student's name in the Inverse Order of Performance list to view details on all of their study activity.

ProdigyConnect Faculty Dashboard

Identification of 'At-Risk' Students

The Faculty Dashboard also presents a list of your students based on their exam performance, with the most at-risk students at the top. This allows you to rapidly see the average score for your students as well as the total number of exams they have taken. Clicking on a student's name in the list will allow you to drill-down into every exam activity they have attempted. [The ability to gauge a student's overall performance helps you identify students who are likely to fail boards before they affect your schools first-time pass rate.](#)



ProdigyConnect Faculty Dashboard Student Detail

Automated Remediation for Individuals or Entire Classes

The entire ProdigyConnect database is structured using the NBCRNA Candidate Handbook as a guideline. In addition, every single exam question is linked directly to one of the NBCRNA topics in the library of study materials in ProdigyConnect. This degree of organization allows ProdigyConnect a great degree of capability in analyzing student performance and automatically recommending a remediation plan specifically designed for the board exam.

As students take exams in ProdigyConnect, a system in the background constantly monitors their performance in every NBCRNA topic to which they are exposed. It combines that data with a table containing the general odds that each topic will appear on the actual board exam. [These calculations allow ProdigyConnect to recommend a list of study materials for each student prioritized by the likelihood that they will see a question on that specific topic on the exam AND miss it.](#)

You can utilize this ranking system to create a remediation blueprint for an individual student or even for an entire class based on their average performance. Like other blueprints created in the Blueprint Designer, you can set the study period from 4 to 16 weeks, assign material to each week, and the system will automatically generate weekly quizzes so that you can follow their progress. A shortcut key can distribute the materials evenly across the study period enabling you to create a completely customized, performance-based remediation plan for an individual student in less than 60 seconds.

The screenshot shows the 'Remediation Wizard' interface. At the top, it says 'Remediation Wizard' and provides a brief description: 'This wizard will step you through choosing the options to create a remediation blueprint from 4-16 weeks long for an individual student or entire class based on statistical analysis of their performance and the chances that each topic will appear on boards.' The wizard is divided into three steps:

- Step 1: Is this remediation plan for a class or an individual?** This step has two radio button options: 'Individual Student' (which is selected) and 'Entire Class'.
- Step 2: Select the individual needing remediation from the list below** This step features a scrollable list of names: Anders, Hank; Blankenship, Mary; Carrol, Lisa (highlighted in blue); Carter, Regina; and Callow, Evan.
- Step 3: Choose the maximum # topics and sensitivity level (for entire classes)** This step includes two dropdown menus: 'Max # of Topics' set to 25 and 'Sensitivity Level' set to Medium.

Below the steps is a section titled 'Study Materials Prioritized On Performance and Exam Relevance' with a scrollable list of topics: Antacids Quick Review; Brachial Plexus Anatomy; Spine Landmarks; Myocardial Infarction Quick Review; and Abdominal Assessment Quick Review. At the bottom of the wizard are 'Cancel' and 'Proceed' buttons.

ProdigyConnect Remediation Wizard

The ProdigyConnect Study Library

What Does It Contain?

ProdigyConnect contains a comprehensive set of study materials to prepare students for boards. We implement a wide variety of methods to present data in the easiest-to-digest manner for the particular concept. Simple facts and memorable data is contained in over 4500 flashcard-style questions called QuickReview. More complex topics requiring deeper explanation and diagrams are presented in over 150 articles. Anatomy diagrams are represented with both printable worksheets and interactive drag-and-drop modules. Concepts that require substantial explanation and practice, such as calculations or ECG interpretation are presented in workbooks to guide students in a stepwise fashion while providing plenty of practice problems to ensure they master the material. The most visually demanding topics such as nerve blocks and biochemical processes are presented using 3D animated lectures.

Accessing the Program

How Do Students and Faculty Access It?

ProdigyConnect is completely online and accessible from any computer or tablet. There is no software to download and are no updates to perform. Students can access ProdigyConnect via their smartphone to read articles, study their assigned blueprints, and even play anesthesia trivia for prizes.

Pricing

How Much Does it Cost?

ProdigyConnect normally costs \$449.99 per student for 40 months of access. If it is a mandatory requirement for the nurse anesthesia program then the price per student is 30% off (\$314.99) and up to 8 faculty members at the institution are provided access free of charge.

Demos and Training

How Can I Get More Information?

For free faculty training sessions, a demo, or answers to any of your questions, contact Peter Stallo at pstallo@prodigyanaesthesia.com.