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The University of Toledo — College of Nursing

The University of Toledo College of Nursing required a solution to prepare students for the Next Generation NCLEX® and generate the data insights that their LMS-based testing tool lacked. With Clinical Judgment Exams (CJE) — created by NurseThink® and powered by ExamSoft's digital assessment platform — faculty have been able to prepare students for the NCLEX and gain key performance insights along the way to drive student success.

Key Findings

Implemented CJE to prep students for the Next Generation NCLEX

Improved exam reliability with secure, offline testing

Leveraged data & reporting tools to improve assessment quality

Background

The University of Toledo College of Nursing offers several pathways for students to obtain nursing degrees, including a traditional Bachelor of Science in Nursing (BSN), a flexible RN-BSN, and a Graduate-Entry Master's (GEM) program that gives students with bachelor's degrees in other fields the opportunity to begin careers in nursing.

The GEM is an accelerated program in which students complete all the requirements of a BSN and a Master of Science in Nursing (MSN) in just five

semesters. Program graduates are qualified to sit for the NCLEX-RN® exam, developed by the National Council of State Boards of Nursing (NCSBN).

In 2019, NCSBN announced the Next Generation NCLEX (NGN) — an updated exam with new question types and content to emphasize critical thinking and decision-making — slated for release in 2023.

Challenges

A key aspect of the College of Nursing's mission is to help students develop the clinical competence necessary for successful nursing careers. Assessment is an essential ingredient in preparing students for the post-graduation milestones ahead, but with the arrival of new technologies and testing formats, the College of Nursing recognized that their assessment methods were due for an update.

Preparing for the Next Generation NCLEX
After NCSBN revealed plans to launch the NGN, the College of Nursing began to reconsider its approach to NCLEX prep. Faculty required a solution geared toward the development of student learning and designed with the NGN in mind. Some faculty were administering paper-based exams, which could make the NCLEX's digital format less approachable for students.

The school learned about NurseThink — a nursing education solution founded by Dr. Tim Bristol that delivers Next Gen learning tools to promote NCLEX-readiness. With Clinical Judgment Exams (CJE), created by NurseThink and powered by ExamSoft, faculty at the College of Nursing would have access to pre-written exam content, developed by experts in assessment with insights from experienced nursing professionals.

CJE offers "Core" and "Comprehensive" solutions that include content categorized in accordance with NCLEX and QSEN focus areas. After a CJE exam is administered, faculty can release ExamSoft-created Strengths & Opportunities Reports to students that summarize their performance by each focus area and explain the rationale behind correct answers.

Motivated by the opportunity to enhance NCLEX prep in its programs and the potential to generate valuable performance insights, the College of Nursing selected CJE's Comprehensive package.

Clinical Judgment Exams Comprehensive Solution Content Areas

- Fundamentals
- Pediatrics
- Women's Health
- Community Health
- Pharmacology
- Medical Surgical
- Mental Health
- Health Assessment
- Leadership
- Nutrition
- Research
- Maternal Child
- Medical Surgical II
- Pathophysiology

Providing a More Reliable Exam Experience

Beyond ramping up test-prep efforts ahead of the NGN's release, the College of Nursing was searching for a digital assessment solution to replace the testing tool built in to its LMS. It was a tool that required a stable internet connection during exam sessions, which sometimes meant connectivity issues that caused students to lose progress on their exams. In one case, a student had to retake a final exam after an interruption to the WiFi caused their exam file to disappear completely.

With ExamSoft's complete device control, the College of Nursing could deliver secure and reliable testing to keep exam files protected — without the need for an internet connection while an exam is in session. Complete device control prevents access to any external applications or programs, and a local version of the exam file is stored on the computer, so the exam remains available even if a student's device loses power.

Faculty were drawn to the reliability that ExamSoft brings to the testing experience as well as the ability to generate more detailed performance insights than those available with their LMS-based testing tool. In July 2020, the College of Nursing made the decision to adopt ExamSoft's core platform along with CJE for NCLEX-prep.

> "With ExamSoft, my students will not have to worry about their internet connection being dropped in the middle of an exam, so I was really happy about that."

Dr. Holly Myers
Instructor in the GEM program

Adoption

The ExamSoft rollout at the College of Nursing came just after the arrival of the COVID-19 pandemic and the subsequent pivot to remote learning. With faculty busy managing this sudden transition, ExamSoft usage wasn't widespread at first.

But Dr. Holly Myers, an instructor in the GEM program, was among the faculty who decided to dive in with ExamSoft, delivering online instruction for the first time. Dr. Myers knew that using the software would enrich her courses, so she set time before the semester to train, laying the groundwork to deliver all class quizzes and exams using Examplify, the student testing application. In August 2020 — the beginning of the summer semester — Dr. Myers launched ExamSoft in her courses and never looked back.

A growing number of faculty have since joined Dr. Myers in using ExamSoft; the number of courses using the software in the BSN program increased from seven in spring 2021 to 11 in fall 2021.

CJE Start Up

That same August, Dr. Myers began to introduce her students to CJE content using NurseThink's build-your-own question bank feature, which allows faculty to add pre-developed questions to assessments they author in the ExamSoft portal. Including these items allowed Dr. Myers to enhance her own exams while also preparing students to take the benchmarked assessments included in CJE's Comprehensive package.

Dr. Myers was the first faculty member in the GEM program to use CJE in the fall 2020 semester, delivering the Open Check assessment to her students virtually. The following semester, Dr. Myers delivered CJE's Benchmark I assessment and has continued to use CJE content in her courses every semester since.

In spring 2021, BSN program faculty started delivering CJE assessments in their courses, as well, and CJE usage in the BSN program is on the ascent.

Results

Though the College of Nursing discovered ExamSoft via NurseThink's Clinical Judgment Exams, faculty have experienced the distinct benefits of ExamSoft and its category-driven data and reporting tools. Adopting CJE has also helped faculty to make significant strides in promoting student readiness for the NCLEX.

Data-Informed Insights with ExamSoft

As an early adopter of ExamSoft, Dr. Myers has been among the first faculty at the College of Nursing to realize the positive impacts of the assessment software in her courses. One key benefit is the ability to make data-informed decisions with ExamSoft's in-depth performance insights.

> **"When I started training, I thought, 'Wow, we can get all of these analytics and data from ExamSoft!'"**
>
> Dr. Holly Myers, Instructor in the GEM program

For instance, easy-to-use psychometric analytics allow Dr. Myers to determine how a course is performing on a given exam. Psychometrics like point biserial, as well as difficulty and discrimination indexes, provide insight into item quality and overall exam efficacy. With these measurements, Dr. Myers can decide whether she should remove certain questions or revise multiple-choice item distractors for future exams.

Using longitudinal reporting tools, Dr. Myers has been able to identify course-wide opportunities for improvement and decide whether to revisit this content in her instruction or ramp up content coverage in future courses.

ExamSoft has also helped Dr. Myers to deliver more targeted remediation in post-exam review. Datapoints for each exam session reveal important details about student performance, like whether a student is running out of time during an exam session or choosing an incorrect answer after first selecting the correct one. These insights have allowed Dr. Myers to provide necessary accommodations for certain students and encourage students to have more confidence in their initial answers.

Category tagging is another helpful feature to ensure well-rounded assessments and proper coverage of programmatic subject areas. As an accelerated program, the GEM program is required to cover both bachelor's- and master's-level nursing essentials in its courses. With category tagging, Dr. Myers is able link her exam items to each of these competencies and demonstrate that her assessments are aligned with the subjects covered in her class activities and lectures.

Using Category Tagging to Inform Maternal-Child Classroom Research

- One of Dr. Myers' goals is to explore the effectiveness of empathy-building exercises in her Maternal-Child course using ExamSoft's category-tagging feature.

- In this course, Dr. Myers designs classroom activities, or "interventions," to develop students' skills in empathy toward their patient population.

- Before each intervention, students answer a set of empathy-related questions, and students answer another set of questions post-intervention.

- Using category tagging, Dr. Myers plans to observe whether the answers to post-intervention questions are answered correctly at a higher rate than pre-intervention questions.

- This comparative analysis will help Dr. Myers to determine if her interventions are working as intended and if any fine-tuning is necessary.

Clinical Judgment Exams for NCLEX-Prep

Transitioning to CJE in the College of Nursing has given students the opportunity to develop essential skills for taking the NGN. The testing tool available through the school's LMS has a limited selection of item types, so it had been challenging for faculty to create exams that replicate NCLEX questions.

The variety of item types available within the ExamSoft portal allows faculty to create questions from scratch that mirror items on the NGN. Faculty can also add item-level attachments, like mock patient photos or health charts, and create hot spot items that prompt students to select areas of an image in response to a question.

> ## "We're ahead of the game on the NCLEX Next Gen because we have ExamSoft."
>
> **Dr. Holly Myers,** Instructor in the GEM program

The benchmarked assessments available through CJE allow faculty to begin preparing students for the kind of comprehensive content coverage typical of the NCLEX. ExamSoft's category-based reporting reveals how programmatic, course-wide, and individual student performance measure up to a national average of nursing students taking the same exam.

If students are underperforming against that national cohort, Strengths & Opportunities Reports reveal the content areas where individual student performance is the strongest as well as the content areas students may need to revisit.

CJE's build-your-own question bank feature allows faculty to incorporate NCLEX-style questions into their regular exams to familiarize students with the NGN testing experience — a technique Dr. Myers has been using since August 2020. Feedback from Dr. Myers' students has been positive overall, though because CJE material is more wide-ranging than typical course exams, students can find the exams challenging at first. But as students adjust to a more comprehensive test, the better prepared they are for the NGN.

ExamSoft for NCLEX Prep

NGN Item Type	ExamSoft Item Type
Bowtie	Fill in the Blank with Table and Drop-Down Option
Cloze (Drop-Down)	Fill in the Blank with Drop-Down Option
Enhanced Hot Spot (Highlighting)	Hot Spot
Extended Drag and Drop	Drag and Drop
Extended Multiple Response	Multiple Choice
Grouped Multiple Response	Drag and Drop
Matrix/Grid	Fill in the Blank with Table and Drop-Down Option

Next Steps

As more faculty in the College of Nursing become accustomed to classroom learning in the COVID-19 era, they can begin to reap the benefits of ExamSoft's data-driven platform and valuable content through CJE to increase NCLEX passage rates. Dr. Myers has used her extensive experience using the software to become an advocate of ExamSoft and CJE at the College of Nursing, and she has been working to share the benefits and her insights with fellow faculty in the GEM and BSN programs.

Now that other faculty are beginning to use ExamSoft for CJE, Dr. Myers has been able to share helpful advice, best practices, and troubleshooting tips to ensure a successful exam experience for faculty and students.

Dr. Myers' next project is to create templates for question types that appear on the NCLEX and make these templates available in the ExamSoft portal for faculty to use as they create their own exams. This collaborative spirit is driving innovation in assessment at the College of Nursing and helping students gain the clinical competence necessary for successful careers as nursing professionals.

> "[ExamSoft] has been so helpful for me, and it's been helpful for my students, so I'm willing to put in the extra effort to help other faculty use it."
>
> Dr. Holly Myers
> Instructor in the GEM program

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ExamSoft is the digital assessment platform that helps institutions achieve higher levels of course, program, and student success. With an intuitive testing application, ExamSoft makes it simple to create, administer, and grade exams, and generate detailed performance reports from the results — all to provide educators with a complete and accurate view of student learning.

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