

eBook

Professional to **Professor**

A working guide for practitioners shifting to academia



Introduction

No matter the profession, leaders, managers, and senior team members spend a significant amount of time teaching. On the most basic level, they train new employees on processes and company-specific guidelines. For example, you might teach a new coworker how to use company software programs or how to adhere to a specific writing style for client emails. We teach new graduates entering the workforce the ins and outs of the profession beyond what they've learned in school. For example, an experienced copywriter might explain that a certain grammar rule doesn't apply in advertising. We also teach experienced professionals who may be new to their specific roles. An accountant with years of experience may not be familiar with the tax laws that apply to a different business sector, for example.

After years of experience, and often working in an unofficial teaching role, talented professionals may decide to take their knowledge to the classroom to prepare the next generation of experts in their field. Unfortunately, practical experience and knowledge aren't always enough to prepare you for a professor role — unless, of course, your educational background is in teaching. For the rest of us, there's still a lot to learn.

What Is Pedagogy?

Though definitions vary, pedagogy is how we teach. Theories and methods also vary, depending on the subject matter, the makeup of the students, time and material constraints, location, and much more. For example, students in a business writing class might create a newsletter for a local business — this would be heuristic pedagogy, or learning by doing without direct supervision. A philosophy professor might lead a class discussion by asking questions that require critical thinking. Pedagogy is the relationship between how a professor teaches and how students learn.





Given the variety of available pedagogical approaches, it's important for professors to know when one method isn't working so they can switch to another. Not only does the instructor need to be familiar with many pedagogical strategies, they also need the data that supports an argument for making a change. With carefully designed assessments — both formative and summative — educators can examine results to see where the class as a whole struggled and make adjustments accordingly.

Different Instructional Methods

There are two broad categories of pedagogical strategy: Student-centered learning and teacher-centered learning. Here are a few of examples of each.

- **Direct Instruction**

When we think of school, we most likely picture an instructor at the head of the class and students diligently taking notes. This teacher-centered approach is direct instruction. According to Teach.com, "Taken to its most extreme interpretation, teachers are the main authority figure in a teacher-centered instruction model. Students are 'empty vessels' who passively receive knowledge from their teachers through lectures and direct instruction, with an end goal of positive results from testing and assessment" [1]. While this is probably the most common approach, it's not always the best.



- **Flipped Classrooms**

In a flipped classroom, students watch pre-recorded lectures or other informative videos on their own time and work on assignments in class. This strategy gives students the opportunity to ask questions while they work, instead of after a lecture when they don't yet know what problems they might face.

While this method focuses more on students, the instructor still chooses what students learn, how they learn it, and how to assess their knowledge.

- **Cooperative Learning**

Encouraging students to work together, this strategy allows students to share different points of view. Divided into small groups, students work together to achieve a learning goal or complete a task. Each student is responsible for the success of their team members. According to TeachHUB, cooperative learning, also known as the "Jigsaw Method," can build self-confidence as students gain communication, problem-solving, and critical thinking skills [2].

- **Kinesthetic Learning**

This strategy, sometimes referred to as *hands-on learning* or *tactile learning*, gives students the opportunity to interact with the material, rather than passively absorb it. For example, students in a science class might participate in a dissection or chemistry experiment. This teaching method is critical in the medical field.

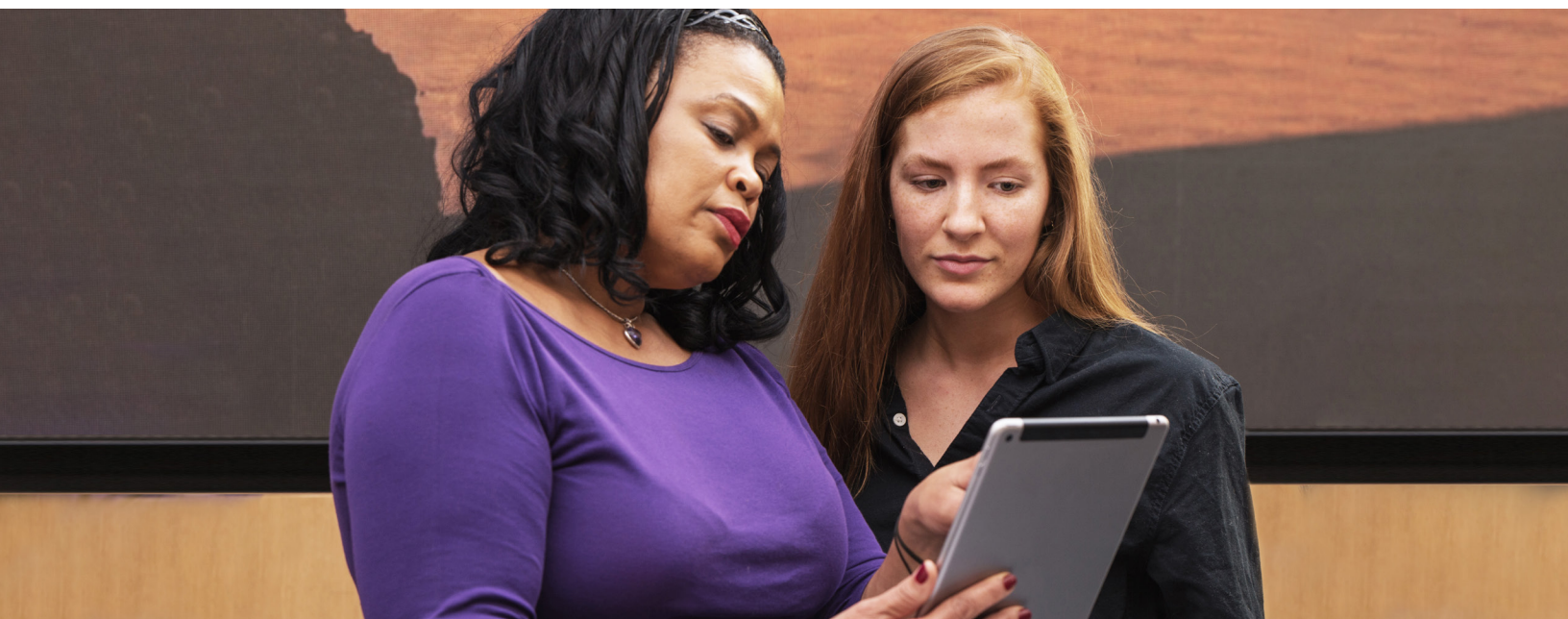
- **Differentiated Instructions**

With differentiated instruction, every student has a custom learning path, with milestones, assignments, and assessments that are specific to their learning needs. For example, one student may retain more information from a visual presentation while another may learn more from reading. Educators originally developed this strategy for students with special needs.

- **Inquiry-Based Learning**

This strategy relies, in part, on our innate curiosity. According to TeachHUB, “Inquiry-based learning strategies are used to engage students to learn by asking questions, investigating, exploring, and reporting what they see.” Having students ask and then answer their own questions gives them a deeper understanding of the material, and it helps develop research skills and independent problem-solving.

The strategies listed above are by no means the only ways to teach, but they give you an idea of the many options available. The instructional method you choose will depend on the content, the available technology and other resources, student abilities, and the setting.

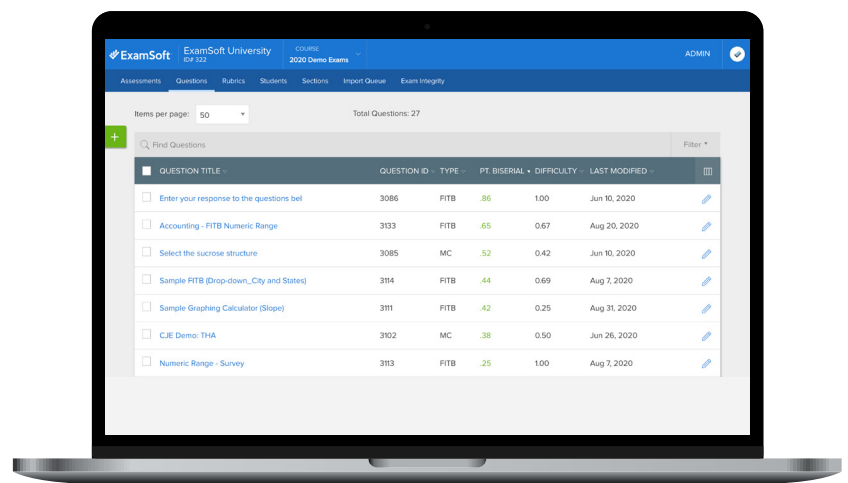


Bloom's Taxonomy

Although Bloom's Taxonomy is one of the most widely used pedagogical concepts, many professionals who haven't undergone training in formal education aren't familiar with it. "Bloom's Taxonomy is a hierarchical ordering of cognitive skills that can, among countless other uses, help teachers teach and students learn," writes Terry Heick for TeachThought [3].

Teachers use Bloom's Taxonomy as a basis for many aspects of teaching, including the following:

- Building lesson plans
- Creating assessments
- Assessing instructional techniques
- Mapping curriculum



In 1956, Benjamin Bloom published this classification system of learning objectives, and it has been in constant use ever since. Nearly 50 years after its publication, Lorin Anderson and David Krathwohl published a revised version of Bloom's work. In addition to expanding the framework, they also changed the taxonomic names to verbs and gerunds to better mirror the active ways in which we learn.

The revised version of Bloom’s Taxonomy is as follows:

| | | | |
|-------------------|---|--|---|
| Remember | <ul style="list-style-type: none"> • Recognizing | <ul style="list-style-type: none"> • Recalling | |
| Understand | <ul style="list-style-type: none"> • Interpreting • Exemplifying • Classifying | <ul style="list-style-type: none"> • Summarizing • Inferring | <ul style="list-style-type: none"> • Comparing • Explaining |
| Apply | <ul style="list-style-type: none"> • Executing | <ul style="list-style-type: none"> • Implementing | |
| Analyze | <ul style="list-style-type: none"> • Differentiating | <ul style="list-style-type: none"> • Organizing | <ul style="list-style-type: none"> • Attributing |
| Evaluate | <ul style="list-style-type: none"> • Checking | <ul style="list-style-type: none"> • Critiquing | |
| Create | <ul style="list-style-type: none"> • Generating | <ul style="list-style-type: none"> • Planning | <ul style="list-style-type: none"> • Producing |





Curriculum Design for New Professors

Think of curriculum design as an instructional plan. “Curriculum design is a term used to describe the purposeful, deliberate, and systematic organization of curriculum (instructional blocks) within a class or course,” according to admissions consultant, curriculum developer, and education writer, Karen Schweitzer [4].

Many considerations go into curriculum design. Here are just a few:

- What are the learning goals?
- Are there restraints and limitations?
(e.g., technology, online vs. in-class, knowledge and skill level of students)
- How long is the course?
- Which pedagogical method is best suited?
- How will you map the curriculum?

• Curriculum Mapping

Curriculum mapping is a visual way to design curriculum. Many instructors create a grid or a spreadsheet that includes content, timelines, and other factors. As instructors build a curriculum map, they consider the class format, the desired learning outcomes, the related assessments, student knowledge, the goals of the institution, the learning materials, the available technology, and much more. As instructors reach conclusions and define their approach, they fill in the cells of the grid. The end result is a fully mapped document, arranged by topics and needs that can serve as a reference for the entire learning experience.

- **Student Assessments**

Student assessments can take many forms. In the workplace, this might be a quick analysis of a new employee's work. In this example, if there's a need, you can remediate immediately through direct feedback. In the classroom, assessments will usually be more formal, in the form of quizzes, papers, presentations, and exams.

A formative assessment is often a quiz, sometimes ungraded. Formative assessments allow teachers to gauge how the students are doing before the final exam — which will be a summative assessment. Students then have the opportunity to improve their knowledge and close skill gaps prior to their final assessment.

Summative assessment are often final exams or licensure exams. These are always graded, and they are often points of transition to the next level of learning or employment. A failed summative assessment means that students must remediate and then retake the exam.

- **Test Analysis**

Test analysis ensures a fair and equitable assessment. Exam creators must determine if each student has a chance at success based on the construction of the exam. Are there any unfair biases in the assessment? Does the exam demonstrate the students' mastery of the subject matter? Is the exam comprehensive? Professors must ask these questions and more as they write an assessment.

After exam-takers complete the assessment, the instructor will know how well they performed. They'll know what worked, what didn't work, and who needs help.

- **Item Analysis**

Educators must evaluate each exam item to gauge the quality of the assessment. Typically, this evaluation is based on psychometrics. According to Science Direct, "Psychometrics is the field of mathematics that is concerned with the statistical description of instrumental data and with the inferential statistical description of the relationships between variables" [5].

Here are a few things to consider when judging the quality of an item:

| | |
|--|--|
| Item Difficulty Index (p-value) | This is the distribution of test-takers who answered the question correctly. For example, if an item has a p-value of .80, 80% of exam-takers answered correctly. |
| Discrimination Index | This is the ratio of students who did well on the exam compared to students who did poorly. A positive index means that higher-performing students have a high likelihood of choosing a correct answer, and students who perform poorly are more likely to choose an incorrect distractor. |
| Upper Difficulty Index (upper 27%) | This is the exam difficulty index for exam-takers who perform in the top 27%. |
| Lower Difficulty Index (lower 27%) | This is the exam difficulty index for exam-takers who perform in the bottom 27%. |
| Point Bi-serial Correlation Coefficient | This is the correlation between the exam-taker's response on an individual item and their performance on the assessment as a whole. A higher point bi-serial index indicates that performing well on this item most likely equates to a student performing well on the exam overall. |
| Kuder-Richardson Formula 20 (KR-20) | This measures regularity in item difficulty for the exam as a whole. This aids exam-writers in determining consistency of an assessment. If the item difficulty is consistent, average scores will remain relatively stable in the future. |

The Importance of Exam Integrity

There is much more to exam integrity than just fairness and accuracy. In a licensure exam, for example, a compromised exam could invalidate the licenses awarded to those who honestly passed the assessment. In the case of the Bar exam, the resulting hassle could cost time, money, or even a candidate's job offer.

Exam integrity is also crucial for the institution, especially those applying for accreditation. Accreditation can improve the retention rates of students and instructors, funding (both private and public), and professional reputation.

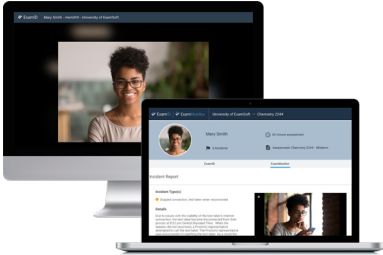


ExamSoft, the computer-based assessment solution for faculty, staff, and administrators, is a web-based platform that educators can use to create and grade exams quickly and easily. Reports generated by ExamSoft reveal the successes as well as the learning opportunities for each student. Using this platform, exam administrators will see psychometric measurements of each exam item, which helps educators grow as teachers and improve their students' outcomes.



Examplify is the application students and exam-takers use to take their exams. Students download and take their assessments on their own devices, including PCs, Macs, or iPads. They may also use computers in a lab, either on campus or at a testing center.

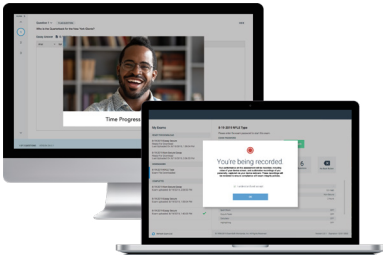
 **ExamID**[™]
Auto-Identity Verification



Security is one of the primary concerns when giving an assessment, and ExamSoft provides multiple safeguards to guarantee exam integrity. Verified identification of the exam-taker is a critical pillar of exam security. While checking IDs may be ideal for smaller, in-person testing centers, it is inefficient at best when it comes to remote or large-scale, in-person exams. ExamID is the solution.

The most advanced facial recognition software of its kind, ExamID makes exam-taker identification easier, faster, and more reliable than ever before. It is an ideal solution for remote exams, and it also works great for exams in auditorium-style classrooms, where it's difficult to confirm the identity of each person in the room.

 **ExamMonitor**[™]
Virtual Test Proctor



While academic dishonesty can be a problem in any setting, it is especially problematic in a remote exam situation. ExamMonitor, using the latest in A.I. analysis, can detect any attempts at cheating. This remote proctoring solution records each assessment for administrative review if the A.I. flags any instances that indicate a student might be attempting to cheat.

It works like this. First, an exam-taker verifies their identity with ExamID. Then ExamMonitor records audio and video through the device's webcam and microphone while simultaneously capturing the on-screen activity. ExamMonitor then uploads the files to ExamSoft. A trained professional will review the files if the A.I. flags any suspicious behavior. The reviewer will note any abnormalities in the proctoring reports sent to faculty and administrators. WiFi is only required for the identification verification component and uploading files — not for the duration of the exam.

ExamID's two-step authentication process — a username and password and biometric facial recognition — makes exam-taker impersonation nearly impossible. ExamID also virtually eliminates the possibility of human error.



ExamNow is the solution for formative assessments (e.g., ungraded quizzes). Formative assessments allow instructors to monitor exam-takers' progress in real time, unlike summative exams at the end of a unit or term. Using formative assessments, teachers can identify opportunities for remediation. Instructors can also use the information gathered from formative assessments to determine how they may need to adjust their pedagogical strategies.



Instructors use ExamSCORE to apply specific criteria for grading (or rubrics) to exams, eliminating the risk of subjective grading. This tool also simplifies grading, and teachers can use it on their computers or tablets.



Exam Assessment Content Reserve

Formative exams are crucial for ensuring that students don't fall too far behind their learning milestones. This is especially important for programs that lead to licensure and certification. To improve assessments, ExamSoft has partnered with experts to offer categorized exam content that allows instructors to gauge students' readiness for the big exam.

No matter where you are in your teaching journey, ExamSoft can help.



Summary

While teaching in real-world settings is part of the role many professionals play, it's not uncommon to need a bit of help after transitioning to the classroom. Pedagogy, curriculum design, assessments, and other aspects of high-level instruction aren't common knowledge, so professionals in an instructional role may need some help applying these principles. ExamSoft provides the reporting and analytics tools — and much more — that give new educators the information they need to improve outcomes for their students, their programs, and their institutions.

References

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About ExamSoft

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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