

USPTO REFERENCE MANUAL FOR SKILLS DEVELOPMENT



Curated by WPI IQP Team in Fall 2023

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Introduction

How to use this manual

The USPTO has a rigorous training program and numerous resources for supplemental training including the Patent Training Academy, supplemental CBTs, and resources provided by trainers within Art Units. This manual is the first step in creating new skills development programs for managers to use to help employees they recognize would benefit from it. This manual emphasizes soft skills for both patent examiners and managers to develop in addition to the extensive training resources already available to them.

Note that creating the recommended resources may fall out of a manager's normal responsibilities so managers are encouraged to collaborate with the USPTO offices responsible for creating training materials. These recommendations are geared towards optional skills development courses, rather than mandatory training.

Structure of this manual

The manual begins with a description of challenges broadly applicable to adult learning in the workplace and recommended solutions to each one. The rest of the manual consists of recommendations for developing individual core competencies. The first eight are targeted primarily at patent examiners and the next three focus on skills for managers. The glossary at the end includes learning methods, metrics of success, and other best practices and considerations applicable to workplace learning.

Context on the creation of the manual

This manual was started by a student team from WPI in Fall 2023. They conducted a literature review and interviewed organizations outside the USPTO to gain an understanding of best practices for adult workplace learning. They also learned of challenges commonly encountered by organizations implementing soft skills development: the remote environment, limited time, lack of motivation for training, and a variety of learning styles and preferences.

The team then conducted four ideation sessions with patent examiners from the R&D Lab and compiled a set of 8 core competencies necessary for success as an examiner. Patent examiners helped them match the competencies to learning and delivery methods, identify applicable metrics of success, and brainstorm other challenges that might arise. The team compiled this data into the first eight recommendations presented in this document. Finally, the team interviewed six USPTO managers, some of which manage examiners, to validate these recommendations and discuss their feasibility. Managers provided input about core competencies helpful to management roles as well as solutions to the challenges brought forth. This allowed the team to provide three more recommendations for core competencies targeted at developing skills in managers. The solutions to challenges provided by managers have been incorporated where applicable throughout the recommendations.

Broad Challenges/Solutions

The challenges described in this section are potential barriers to training that should be considered when recommending or creating new skills development courses. These challenges were identified primarily through ideation sessions with patent examiners from the R&D Lab as well as interviews with USPTO managers. Some of the challenges first arose in literature review and interviews with organizations with similar skills development needs as the USPTO and were then confirmed to apply to USPTO.

The USPTO has many training resources available, including the Patent Training Academy, Continuing Legal Education, Computer Based Trainings for examiners, and many more. These challenges and recommendations are not meant to diagnose training programs currently in place, instead they are ideas to keep in mind when developing new skills development programs.

Challenges	Recommended Solutions
<p><i>Challenge name</i></p> <p>These sentences describe the challenge and how it was identified at the USPTO</p>	<p><i>Brief description of recommended solution</i></p> <p>These sentences provide more context for the recommendation</p>
<p><i>Limited Time</i></p> <p>Patent examiners have limited time available to dedicate to skills development. They are constantly balancing quality, production, and docket management so it is difficult to carve out time for non-production activities.</p>	<p><i>Set aside two hours a quarter of non-production time for training activities like workshops, townhalls, or presentations.</i></p> <p>For most employees, workshops are hour-per-hour more beneficial than asynchronous training that provides minimal opportunities to practice the skill. Both patent examiners and managers spoke positively of group training activities where they learned from their peers as well as the instructor.</p>
<p><i>Trust in Instructor</i></p> <p>Patent examiners in ideation sessions expressed that speakers from outside USPTO do not understand their jobs and struggle to provide relevant instruction.</p>	<p><i>Skills development modules should be led by instructors who have experience in the roles they are teaching. Especially applicable to skills aimed at patent examiners.</i></p> <p>Qualified instructors with patent prosecution experience should be able to relate to the examiners learning the skill and better communicate why it is important for their jobs.</p>

	<p>Likewise, skills development for managers should feature USPTO managers with demonstrated experience in the skills in question that can help their peers learn and practice.</p> <p>This challenge is closely linked to motivation so solutions might be more effective if implemented together.</p>
<p>Motivation</p> <p>Both managers and patent examiners spoke to challenges motivating employees to take optional training. Participants agreed that the need for a particular training should be obvious to them and their manager, or training materials should indicate their relevance to the examination job.</p>	<p><i>Short explanation of why a particular training is being suggested.</i></p> <p>Patent examiners expressed that they would like to hear a short explanation of why developing a particular skill is important to their jobs. Knowles (1980) first expressed that adults are interested in learning things they can directly apply and that adult learning is problem – centered.</p> <p>This challenge is closely linked to trust in the instructor so solutions might be more effective if implemented together.</p>
<p>Lack of Interpersonal Connections</p> <p>Patent examiners spoke fondly of the collaborative environment they worked in pre-pandemic and reminisced on experiences like asking questions to their colleague in the next cubicle over and bumping into colleagues in the patent search room, hallways, or cafeteria.</p>	<p><i>Build in time to connect with coworkers into already scheduled meetings like QEMs.</i></p> <p>Other organizations have used this method to promote the building of professional relationships in the remote workplace. The authors successfully used this method in their weekly sponsor meetings to develop productive professional relationships with their sponsor.</p> <p>Patent examiners identified casual conversations as ideal methods of delivering and sharing tips and tricks for work. However there are few opportunities to have those conversations when working remotely.</p>
<p>No one-size-fits-all</p> <p>The USPTO is a large organization with many different learning styles and preferences. Patent examiners said art units can have widely different needs.</p>	<p><i>Separate trainings targeted at different art units.</i></p> <p>For some core competencies it may make sense for split trainings by different art units and use multiple learning methods that were brought up separately by ideation session participants to account for varied learning styles and preferences.</p>

	It is possible that art units within the same Technology Center can share trainings but further research and testing is needed.
<p>Coaching</p> <p>While not a challenge, coaching is one of the learning methods brought up a few times by examiners in ideation sessions.</p>	<p><i>Direct interested employees to the USPTO Career Coaching Program:</i> CareerCoachingProgram@uspto.gov</p>

Attention to Detail

Attention to detail is important because it improves communication between employees and maintains an orderly environment. It's a skill that consists of the ability to focus on a specific task and retain information on said task. Additionally, it can improve the quality and consistency of the employee's work (such as office actions of patent examiners).

<p>Example traits for patent examiners years 1-3 that require attention to detail</p> <ul style="list-style-type: none"> - Comprehension - Documentation of evidence - Knowing your audience - Organization <p>Other Examples</p> <ul style="list-style-type: none"> - Time management - Ability to focus - Accuracy/consistency/quality - Possibility to have too much detail (e.g., high quality, low production) 	
<p>Learning Methods/Environment</p> <ul style="list-style-type: none"> - Group: Flipped classroom - Group: Gamification/Workshop - Asynchronous: Charts or Infographics (QRG) 	<p>Methods to Evaluate</p> <ul style="list-style-type: none"> - Returns of office actions - OPQA Quality Measurements
<p>Challenges to the Skill</p> <ul style="list-style-type: none"> - Varying standards of how much attention to detail is enough - Higher attention to detail increases quality but competes with production for examiners' time 	<p>Solutions</p> <ul style="list-style-type: none"> - Set standards for attention
<p>Stages in career</p> <ul style="list-style-type: none"> - Patent examiners in years 1- 3 - Managers 	

To develop attention to detail, a flipped classroom model is recommended. For the first, asynchronous portion, it may be useful to provide learners with a reference document (QRG) containing the most common errors the training is trying to address. This saves time and allows learners to familiarize themselves with the QRG before coming to the synchronous portion: a gamified workshop where learners split into teams to try to find and correct the most errors in a packet of office actions. A little friendly competition will boost engagement and make the training more appealing to patent examiners. Following the training, participants would still have access to the QRG to use in their everyday production work in order to repeat the exercise, which we have found can increase retention.

To measure improvement in attention to detail, the recommendation is to assess before and after statistics on the number and reason of returns sent back to the group of examiners who participated in the training. We believe the OPQA could provide further guidance on these metrics. Potential challenges to keep in mind include the expertise of the workshop facilitator and reserving time for a group of examiners to take training together.

Written Communication

Developing written communication is critical to improving the quality of office actions and the clarity and precision of emails. Ideation session participants noted the importance of accepting feedback on their written office actions, especially as junior examiners. One participant relayed an experience where they met with their SPE to create a template for a type of office action that they still use. These experiences are well suited to group workshops to improve an art unit’s writing instead of individuals at a time. A manager we spoke to described poor emails as “terse”, “unclear”, and that they must “really draw it out of” their colleagues. Developing the skills below can improve email etiquette and thus efficiency in the office by reducing the unproductive and sometimes frustrating back-and-forth.

<p>Examples – Patent Examiners</p> <ul style="list-style-type: none"> - Clear and concise - Structure - Use of IT tools - Accepting feedback - Comprehension <p>Examples – Managers</p> <ul style="list-style-type: none"> - Writing emails - Anticipating questions - Knowing audience - Using correct language - Communicating up - Reporting out 	
<p>Learning Methods/Environment</p> <ul style="list-style-type: none"> - Group: Flipped Classroom - Individual: Coaching - Asynchronous: Collection of Practical Examples 	<p>Methods to Evaluate</p> <ul style="list-style-type: none"> - Self-rating - Quality statistics - Number or reason for returns
<p>Challenges to the Skill</p> <ul style="list-style-type: none"> - Art Unit Differences - Curating samples of model office actions, memos, emails, etc - Keeping writing samples up to date 	<p>Solutions</p> <ul style="list-style-type: none"> - Specialized trainings by art unit
<p>Stages in career</p> <ul style="list-style-type: none"> - Patent examiners years 1-3 - Managers 	

Three recommendations were created for developing written communication skills: one for synchronous group learning, one for synchronous individual learning, and an asynchronous option. For group learning, a skill building workshop where learners critique and improve anonymized writing samples in small groups is recommended. Depending on the audience and format of written communication being developed, the facilitator should be either an external writing expert or a USPTO employee recognized for their high-quality office actions. There may be challenges when curating a collection of writing samples. The individual learning method recommended is coaching so individuals can receive help tailored to their writing needs. To prevent inconsistent advice, individuals should only

consult one coach at a time – a SPE, colleague, or another federal employee found through the Federal Coaching Network. For employees looking for an asynchronous resource, curating a collection of well written office actions, internal office memos, sample internal and external emails, and any other written communications that are commonly needed in the workplace is recommended. For each delivery method, measuring improvement in an individual’s writing communication via introspective self-rating, OPQA statistics, and if applicable the reasons office actions are returned can all be used to measure success.

Oral Communication

Oral communication is the exchange of information and ideas through spoken words with a focus on the clarity and simplicity of your message, to help your audience with comprehension. A benefit of oral communication is it is faster than writing. Skills related to oral communication can include negotiating with attorneys and primaries, building relationships, and being courteous and respectful when talking to coworkers and attorneys.

Examples – Patent Examiners <ul style="list-style-type: none"> - Clear and concise - Courteous and respectful - Negotiating - Accepting feedback - Comprehension 	
Learning Methods/Environment <ul style="list-style-type: none"> - Role Playing - Live Lectures/Podcasts 	Methods to Evaluate <ul style="list-style-type: none"> - Successful audience response - Reviewer/primary feedback - Did the interaction go as planned - Introspective self-rating
Challenges to the Skill <ul style="list-style-type: none"> - Comfortability to practice - Difficulty measuring improvement of the skill - Different perspectives of what would be considered “good” oral communication 	Solutions <ul style="list-style-type: none"> - Measure training in multiple ways
Stages in career <ul style="list-style-type: none"> - Patent examiners years 1-3 	

Three recommendations to develop oral communication skills are provided. The synchronous group option is a combination of lecture and role play where the instructor describes an oral communication strategy and learners have the opportunity to practice with a partner. Frequently rotating partners could allow learners to practice interacting with different personalities and communication styles. Employees seeking individualized help could utilize coaching through the Federal Coaching Network. During an ideation session, examiners said they would prefer to develop oral communication skills through audio formats instead of readings, so it could be useful to make a collection of video and audio resources available to interested employees. Examples include recorded lectures and podcasts by public speaking experts, psychologists, and historical orators. To measure an employee’s improvement in oral communication, 360-degree reviews could be used, including a self-rating. Participants in the role play group may also report their observed level of success. Challenges such as difficulty finding qualified and engaging instructors, learners’ potential discomfort for participating in role play, and varying levels of oral communication capabilities going into the training should all be kept in mind when creating a training.

Time Management/Pacing

Time management is the process of planning and managing the time spent on specific tasks to increase efficiency. The patent examiners mentioned during the ideation session that time management was very important to their job and pacing and decisiveness were critically important skills.

<p>Examples for Patent Examiners's</p> <ul style="list-style-type: none"> - Scheduling, planning, goal setting - Decisiveness - Motivation - Knowing when to break/ask for help <p>Examples for Managers</p> <ul style="list-style-type: none"> - Decision Making 	
<p>Learning Methods/Environment</p> <ul style="list-style-type: none"> - Casual Conversation - Peer-to-Peer 	<p>Methods to Evaluate</p> <ul style="list-style-type: none"> - Meeting of office & personal goals - Docket management and production statistics/quality
<p>Challenges to the Skill</p> <ul style="list-style-type: none"> - Learning differences (no one-size-fits-all) - Goal and docket differences - Difficult to balance quality & speed 	<p>Solutions</p> <ul style="list-style-type: none"> - Art Unit specific trainings
<p>Stages in career</p> <ul style="list-style-type: none"> - Patent examiners years 1-3 - Managers 	

For individuals interested in developing their time management skills, it may be beneficial to recommend casual conversations with colleagues, especially from the same art unit who understand the technical complexities and can provide specific advice. For employees seeking an asynchronous resource, a compiled resource of short videos with transcripts featuring successful examiners across different art units should be created. In each video, an examiner would describe their work process, how they pace their workload throughout a biweek, and strategies they use to search efficiently and make informed decisions. Managers can use production goals over the course of several months to track improvement in time management and decisiveness. A more holistic collection of metrics would include a 360 review including reviews from colleagues, SPE, and self-reflective surveys about an examiner's confidence in their decision-making. A challenge with developing time management is that every employee has different goals and different lives outside of work that factor into how they structure their biweek, especially in a remote environment where personal and professional lives blur together. Some examiners may also struggle to ask for help, which pushed us to recommend an asynchronous resource for them to consult.

Agency Initiatives/Mission

USPTO's strategic plans includes 5 goals for 2022- 2026: to drive inclusive U.S. innovation and global competitiveness, promote the efficient delivery of reliable IP rights, promote the protection of IP against new and persistent threats, bring innovation to impact for the public good, and generate impactful employee and customer experiences by maximizing agency operations. Additionally, agency initiatives could include DEI&A, TEAPP, the USPTO strategic plan or other initiatives or opportunities provided by the USPTO. In the ideation sessions, it was also brought up that this set of skills may include big picture thinking – that the agency's goals are not to reject everything but instead to help the applicant.

Examples <ul style="list-style-type: none"> - DEIA - Incentives and opportunities - Economic implications 	
Learning Methods/Environment <ul style="list-style-type: none"> - Townhalls - Short-form communication 	Methods to Evaluate <ul style="list-style-type: none"> - Quizzes - Surveys - Observed morale Increase
Challenges to the Skill <ul style="list-style-type: none"> - Difficult to find the right person to answer question - 	Solutions <ul style="list-style-type: none"> - Create a standard - Easily accessible resources regarding agency initiatives
Stages in career <ul style="list-style-type: none"> - Patent examiners years 1-3 	

To develop an understanding of agency initiatives/missions, managers could use townhalls and announcements made to the USPTO website or via email. Townhalls allow all employees to learn about initiatives across the office, be aware of what is going on in other departments and ask questions of high-level managers. Improvement can be measured through anonymous satisfaction surveys during townhalls and general observations on morale among employees.

Problem Solving

Problem solving includes abilities such as strategic or tactical thinking and planning, along with knowing who and when to ask for help. This could be useful in the patent examiners job when they are searching for prior art and negotiating with attorneys. Additionally, this could include patent examiners creatively using the tools at their disposal to craft a good rejection. For managers, this could be useful in spotting mistakes and working with employees to solve them.

<p>Examples for Patent Examiners</p> <ul style="list-style-type: none"> - Creatively assembling rejections - Examination and search tools <p>Examples for Managers</p> <ul style="list-style-type: none"> - Strategic and tactical planning <p>Examples for All</p> <ul style="list-style-type: none"> - Strategic and tactical thinking 	
<p>Learning Methods/Environment</p> <ul style="list-style-type: none"> - Workshops - Charts/graphics 	<p>Methods to Evaluate</p> <ul style="list-style-type: none"> - Applicant responses - Feedback from supervisors - 360-degree review - Docket health
<p>Challenges to the Skill</p> <ul style="list-style-type: none"> - Relevance to examination - Consistency - Creating effective charts or graphs 	<p>Solutions</p> <ul style="list-style-type: none"> - For relevance to examination, skills development modules targeted at patent examiners should feature successful patent examiners. Likewise, modules for managers should feature USPTO managers that are able to demonstrate the skills in question.
<p>Stages in career</p> <ul style="list-style-type: none"> - Patent Examiners years 1-3 - Managers 	

To develop problem solving skills, asynchronous resources like QRGs or infographics outlining how to search effectively and craft a rejection from different pieces of prior art can be created. Additionally, employees can further discuss and practice within art units, possibly during already scheduled meetings like QEMs. In terms of metrics of success, a conversation between an examiner and their SPE / primary about their progress and self-confidence in problem solving can occur.

Personal Well-Being

Personal well-being can include maintaining a good work life balance and building relationships with coworkers. This is important to lessen stress, which has been proven to increase retention. In the ideation sessions, it was brought up that the relationship with the examiners SPE can impact wellbeing, which shows the importance of this competency for managers as well. Additionally, this competency can include empowerment, which can build self-confidence.

<p>Examples for Patent Examiners</p> <ul style="list-style-type: none"> - Relationship building (peers, supervisors) - Networking - Stress management <p>Examples for Managers and Patent Examiners's years 4+</p> <ul style="list-style-type: none"> - Team building - Conflict resolution 	
<p>Learning Methods/Environment</p> <ul style="list-style-type: none"> - Off-site trips - Team building workshops - Mentoring 	<p>Methods to Evaluate</p> <ul style="list-style-type: none"> - Examiner stress - Increased belonging - Observed morale - 360-degree review
<p>Challenges to the Skill</p> <ul style="list-style-type: none"> - Recognition of value of the skill - Available time - Conflict with examination metrics 	<p>Solutions</p> <ul style="list-style-type: none"> - Setting time aside every quarter to do soft skills development - Advertise change in perception of value and need for soft skills
<p>Stages in career</p> <ul style="list-style-type: none"> - Patent examiners years 1-3 - Patent examiners years 4+ - Managers 	

Offsite trips provided by the SEE program and mentoring can aid in employee well-being. During ideation sessions, patent examiners remarked that the SEE program builds interpersonal connections both with other examiners and colleagues outside the USPTO like attorneys. Mentoring develops personal wellbeing as the mentor can be a resource and can assist in fostering new professional connections. In terms of metrics, the USPTO can use a 360 review including reviews by peers, supervisors, and a self-evaluation on an employee's satisfaction at the USPTO.

Professional Development

This skillset can include networking and establishing relationships. The USPTO has many opportunities to advance in each employee's career which this skillset can assist.

<p>Examples for Patent Examiners years 1-3</p> <ul style="list-style-type: none"> - Mentoring - Networking - Awareness of resources <p>Examples for Patent Examiners years 4+</p> <ul style="list-style-type: none"> - Leadership <p>Examples for Managers</p> <ul style="list-style-type: none"> - Establishing relationships across business units 	
<p>Learning Methods/Environment</p> <ul style="list-style-type: none"> - Presentations - Mentoring - Short-form communication 	<p>Methods to Evaluate</p> <ul style="list-style-type: none"> - Promotions - Training statistics - Participation statistics - 360-degree review - Completion of individual goals
<p>Challenges to the Skill</p> <ul style="list-style-type: none"> - Accessibility/ Availability of opportunities - Advertisement of opportunities 	<p>Solutions</p> <ul style="list-style-type: none"> - Patent examiners noted that they would like to hear a short explanation of why a particular training is being suggested to them. - Short-form communication can be used to advertise opportunities.
<p>Stages in career</p> <ul style="list-style-type: none"> - Patent examiners years 1-3 - Patent examiners years 4+ - Managers 	

Networking events and presentations, mentoring and coaching, and short form communications to let employees know of resources and new opportunities can all be used to improve professional development. Networking events include cross-discipline presentations and conferences. Mentoring opens metaphorical doors to someone's network while executive coaching, provided by the Federal Coaching Network, builds skills necessary to progress in one's career. To measure office-wide professional development, managers can look at participation and application statistics for new opportunities as well as employees' self-reflection on individual goals.

Management Skills

Management skills encompass a variety of abilities that help leaders effectively organize and direct a group of people. These skills include technical and soft skills which can be learned through training or experience.

Examples <ul style="list-style-type: none"> - Project management - Work breakdown structure - Managing diverse skillsets - Motivating employees - Communication a vision - Change management - Influencing subordinates 	
Learning Methods/Environment <ul style="list-style-type: none"> - Infographics - Workshops - Mentoring / coaching 	Methods to Evaluate <ul style="list-style-type: none"> - Casual conversations - Performance appraisal plan
Challenges to the Skill <ul style="list-style-type: none"> - Trainings are too high level 	Solutions <ul style="list-style-type: none"> - Repeated practice
Stages in career <ul style="list-style-type: none"> - Managers 	

For developing management skills, mentoring and coaching, infographics, and workshops can be used. Managers praised presentations immediately followed with workshops as a means of learning and practicing skills like creating a work breakdown structure or managing diverse skillsets. Infographics could be used to summarize the presentation and be used as a resource for future use. In terms of metrics, managers can use conversations with higher up managers hitting the following topics: a manager’s belief vs the actual performance of their group, their familiarity with reports, and their performance appraisal plan. In our interviews managers identified that some management skills training stays at too high a level due to lack of time. In addition, they stressed the importance of repeated practice, which influenced our decision to recommend workshops.

Interpersonal Skills

Interpersonal skills include verbal and nonverbal communication that determines how you relate and interact with others. With strong interpersonal skills, people can be successful in both their professional and personal lives as they help you to communicate, cooperate, and connect with others in different situations.

Examples <ul style="list-style-type: none"> - Managing up - Understanding politics - Maintaining relationships with employees - Understanding and customizing response to audience - Negotiation Examples for HR <ul style="list-style-type: none"> - Emotional Intelligence - Empathy 	
Learning Methods/Environment <ul style="list-style-type: none"> - Workshops - Role play - Mentoring / coaching - Casual conversations 	Methods to Evaluate <ul style="list-style-type: none"> - 360 reviews with anonymous subordinate feedback - Manager observations
Challenges to the Skill <ul style="list-style-type: none"> - Differing personalities 	Solutions <ul style="list-style-type: none"> -
Stages in career <ul style="list-style-type: none"> - Managers - HR 	

Workshops, mentoring & coaching, and casual conversations can be used for developing interpersonal skills particularly targeted at managers. In particular, role play is well suited to developing negotiation skills. These skills are harder to teach so training these interpersonal methods may cause new managers to be receptive to what they hear and take the opportunity to practice at the same time. It is difficult to measure interpersonal skills, so 360-degree reviews should be used, with a particular focus on getting the anonymous opinion of the manager's direct reports. Additionally, observations on how well a manager and their team are working together to accomplish goals can assist in measuring success. While differing personalities may present a challenge to developing interpersonal skills, they are a reality in the workplace and a required hurdle to management success.

Data Tools

Data tools help support an organization's efforts to store, manage, analyze, distribute and secure data.

Examples <ul style="list-style-type: none">- Understanding reports- Data manipulation- Data analysis- SQL	
Learning Methods/Environment <ul style="list-style-type: none">- Infographics- Microlearning modules- On-the-job	Methods to Evaluate <ul style="list-style-type: none">- Self-evaluate
Challenges to the Skill <ul style="list-style-type: none">- No one size fits all	Solutions <ul style="list-style-type: none">- Develop standard of data skills
Stages in career <ul style="list-style-type: none">- Managers	

To develop data manipulation skills, infographics, microlearning modules, and on the job practice and repetition can be used. To measure improvement, employees should rate their self-confidence in these skills over the course of several months. At the USPTO there is no one-size-fits-all in regard to either training structure or need for data manipulation skills so the USPTO should create a standard of data manipulation skills expected of managers.

Glossary

Delivery Methods	Type	Description
360-Degree Feedback	Metric	Employees receive anonymous feedback from four levels: superiors, peers, subordinates, and self (Kaplan & Palus, 2014). This provides a more rounded view of the employee's performance.
Coaching	Learning Method	Coaching takes a more student- or coachee- driven approach than mentoring, where the coachee will take any concerns to the coach, and the coach will guide them.
Flipped Classroom	Learning Method	An approach where students first explore new course content outside of class by viewing a pre-recorded lecture video or digital module or completing a reading or preparatory assignment. In-class time is organized around student engagement, inquiry, and assessment, allowing students to grapple with, apply, and elaborate on course concepts (Berkeley, 2023).
Formative-Summative Evaluations	Metric	Formative evaluations are conducted throughout a course and can be used to evaluate a student's learning and correct any misconceptions. Summative evaluations are conducted at the end of a course and can measure the amount of learning. Formative evaluations can be described as an assessment “for” learning, whereas summative assessments are an assessment “of” learning (Bin Mubayrik, 2020)
Gamification	Learning Method	Gamified learning systems aim to provide an engaging learning experience for users by using game-like elements to improve motivation, engagement, and student performance (Toda et al., 2019). Game elements commonly used in educational settings include experience points, user avatars, a clear progression of goals, virtual currencies, and a system of badges and medals.
Mentoring	Learning Method	Mentorship programs match experienced employees to juniors to develop hands-on skills and promote relationship-building.
Pre- and Post-Test	Metric	Pre- and post-testing includes administering the same test directly before the course, and directly after (Brophy, n.d).

Prereading	Learning Method	Prereading is a specific type of flipped classroom where students are first introduced to material through a reading before or at the beginning of class.
Role-play	Learning Method	In role-play settings learners take on roles in a fictional setting and apply their skills and lessons learned from past experiences to the problem at hand.
Rubrics	Metric	Rubrics are a method of measuring learning success in the form of a grid where marking criteria are listed in the first column and the corresponding performance levels are in the first row (Morton et al., 2021).

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