Principles and Applications of Leading Teacher Learning and Training

Building frequently recurring training into the schedule is the most effective way to improve the team's performance.
The Dichotomy of Leadership, Jocko Willink and Leif Babbin

Contents

Faculty Development is a Duty

All leaders in a school have a duty to make sure that their teachers are fully equipped to fulfill the mission of the school. In spite of all the other pressures on an administrator's day, planned and unplanned, this duty remains one of the leader's chief responsibilities. Further, only administrators are in the position to make sure it occurs; if they don't do it, it won't happen. While the specific implementation may be successfully delegated, the head administrator must ensure that all those in a leadership position are making teacher learning and training a top priority. This must include having very specific plans and putting them on the schedule, and then following through to be sure the plans are being implemented and supported as needed.

Principles and Applications of Leading Teacher Learning and Training

This document is meant to introduce and describe some of the reasons for, and essential elements of, teacher training as it occurs during the school year in particular. Summer on-boarding and conferences make important contributions to teacher development, but it is the on-going, consistent attention to teacher training on site over the long-term as described below that has the greatest impact on the faculty as a whole.

The purpose of faculty development is to equip teachers to deliver the mission of the school. This has different aspects. The general mission, of course, is central, but this has to be understood in its parts. For example, many schools will have a set of characteristics of teaching excellence toward which teachers are making progress in their yearly goal-setting process. Teachers' professional growth goals are often set within this document. A school may identify a common trait or characteristic for the faculty as a whole or for a portion of the faculty to attend to. For many schools the on-going deepening of understanding of the principles of classical and Christian education comprise a key purpose of faculty growth. Personal understanding and professional application of these principles are central to the fulfilling of a school's mission. In addition, the development of habits of excellence in teaching, including strengthening situational awareness and the ability to make needed adjustments will usually be a main purpose of faculty learning and training.

Faculty development should be conducted in three general areas: (1) curriculum understanding and delivery, (2) philosophy and history of classical, Christian education, school culture, and organization, and (3) pedagogy. This handbook is mainly concerned with the last of these, with training teachers in effective classroom practice. Of course, curriculum and philosophical aspects are very important, but it is the classroom teacher consistently and competently executing the educational mission of the school that is essential to a school's

success. A classical, Christian school will have fundamental commitments to shaping students' hearts and desires and will see this, correctly, as the primary mission. But they share this part of the school's mission with the family and the church in many ways. On the other hand, the academic aspects of the mission—the tools of learning and the academic content—are almost entirely the work of teachers in the school's classrooms, and so helping teachers to become more excellent at their craft cannot be left to be done in a haphazard way. It must be a priority.

Faculty development will necessarily involve both individual plans with formal goal setting, certification work, formal and informal observations, etc., as well as faculty-focused development plans. This handbook lays out principles and applications primarily with the faculty as a whole, or divisions of the faculty, in mind.

The administrator's essential tasks for leading this faculty development are similar to what teachers are expected to do in their classrooms. The objective, goal, or learning target (I consider these terms interchangeable) must be clear to the 'students'. The over-all objective will be the development of habits of excellence as well as of conscious awareness of the classroom, but each learning and training exercise has, or should have—otherwise, why do it?—a clear purpose that is working toward the larger goal. Make this objective clear to participants at the beginning and reinforce it often. Just as in a classroom, there must be frequent checking for understanding of all participants. Trainers who don't check for understanding, or who take only voluntary responses, are making a fundamental error, and, worse, are reinforcing this error in their teachers. In addition to these, training and learning times must be engaging, that is, they must require the participants to be actively involved. A passive student rarely transfers the learning to actual practice.

Below I'll make the case that administrators should prioritize the professional development of teachers that is on-going, realistic, and engaging; that includes both times of learning and training exercises; and that is supported by a faculty culture of continuous feedback. I'll offer specific suggestions for learning and training exercises, as well as resources to assist these activities.

Faculty Learning and Training Must Be On-going, Realistic, and Engaging

To have a lasting impact on the consistent practice of teachers, faculty development must be a prioritized, routinely schedule part of the regular school calendar, it must be as realistic as possible, and it must be led 'from the back of the room', that is, it must require the faculty to do most of the thinking, to be actively engaged. The article below, from the February, 2022, issue of *Classis* makes this case more fully.

Leading Teacher Training 'From the Back of the Room'

One of the chief responsibilities of the school administration—perhaps second only to ensuring overall fidelity to the mission of the school—is the training and development of teachers. It is the teachers who must carry out the mission every day in their classrooms, so they need to be equipped with a clear understanding of the philosophy of classical, Christian education, the curriculum they are teaching, the students in their classrooms, and the tools of effectively teaching that curriculum to those students.

Helping teachers grow in their classroom practice is an indispensable role of the administrator. Teachers in classical, Christian schools are generally readers and learners, and will typically grow in their chosen art, though at different rates and in different areas, and they will

tend to gravitate toward those areas that most interest them. Some will be drawn to philosophical books, old and new, others to methods gleaned at a conference. These are all good and necessary. But for the school to carry out its mission the faculty as a whole will need to develop certain understandings, common assumptions, habits, and even vocabulary about excellent classroom teaching. It will be up to the administrator to see that these are learned and consistently applied. It is a task that is never finished, but it is critical.

Too often, however, this training is neglected, and even when done it may be through methods we would discourage our teachers from using—lectures, 'discussion' involving just a few people, and other largely passive means. Instead, administrators should design training time so that teachers actively participate, not only for their benefit, but also to model the kind of engaged teaching that should be the norm in teachers' classrooms. Administrators rightly expect teachers to have their students actively engaged in their learning—teacher training should model this.

Administrators need to think about how to lead teacher training from the 'back of the room'—that is, designing faculty meetings and other teacher training times to provide opportunities for (that is, require) teachers to be fully engaged in the learning, to actually do most of the thinking and talking. Administrators must move teachers from passive spectators to fully active participants in their learning.

In order to make a lasting impact on teachers' thinking and classroom practice, training should engage teachers in the thinking and activity, be a frequent and regular element of faculty meetings, and be as realistic as possible. The goal is to establish a faculty cultural norm with the expectation that all teachers will be constantly learning to improve their understanding of classical Christian education, as well as their classroom practice.

On-going

To be most effective, teacher training needs to be done on a consistent basis. Lasting growth is not generally accomplished by one-time presentations, guest speakers, or even reading books for ACCS teacher certification, as valuable as those may be. Learning that sticks and has impact on practice is done slowly over a long period of time. Think about a drip-system, not a fire-hose. Therefore, nearly every faculty meeting should have some time given to it for teacher development. I contend that at least one-half of all faculty meeting time should be devoted to some aspect of engaged teacher training. Since faculties need to meet regularly for on-going training, administrators should take advantage of those few times when teachers are together and make the most of them. This will necessarily mean that as much business as possible will be shifted to email or quick announcements. Administrators need to maximize a school's most limited resource—a teacher's time.

An important element of consistency is the reinforcement of the ideas learned in the training. This can only be done by frequent (even if brief) observations of individual classrooms, with specific feedback to teachers about the elements previously or currently learned. This is an on-going, indeed never-ending, task, but lasting growth in a faculty will not occur without an administrator making sure that what is being learned in teacher training is being done in classrooms. To be sure, this is a cooperative endeavor, but someone must make sure it is implemented broadly throughout the school's classrooms. Only the administrator is in a position to do this.

Realistic

Like all training, the more realistic teacher training is the better. Realistic training develops among other things situational awareness, that is, a recognition of what is working and what isn't, and why, and a sense of what is happening and what is likely to happen in the

classroom. This awareness gives teachers the ability to anticipate and adjust accordingly. Realistic training develops skills and gives teachers tools in a situation where they can practice and debrief when the stakes are low.

Ideally, teacher training would involve live student classrooms. Because this isn't usually practical, administrators should build into meetings opportunities for teachers to deal with situations that simulate what they will face in the classroom. These situations provide opportunities to practice those principles that are being focused on in the faculty meetings.

Asking teachers to think through various scenarios is one way to do this. These can range from very brief, typical situations (e.g., "About a third of the class has completed the assigned task, but the others are still working quietly and diligently. What will you do?"), to more complex situations requiring more analysis and discussion (e.g., 'critical incidents'; see note below). These scenarios may be a warm-up activity for a teacher meeting, or they may be the featured item, depending on time available, the type of scenario, and the goals of on-going training. And as much as some teachers may resist, role playing interactions with parents or students in common situations can be very instructive, and will lead to engaging and practical discussions.

While short scenario discussions are a regular element of our faculty meeting, in our experience the most fruitful of realistic training exercises has been teaching labs, or live mini-lessons presented by teachers to a class of teachers acting as students. The goal of these lessons is to make the situation as realistic as possible, as teachers practice implementing excellent teaching practice. The teacher creates an abbreviated lesson plan (generally twenty minutes, although we have had good success with 'the first five minutes', as well) in which they begin the lesson and carry it through for about fifteen minutes, and then skip to the wrap-up at

the end of lesson. Some teachers play the role of students, others are observers. After the lesson, teachers engage in a thorough, candid discussion of what went well and what could be improved on.

While there are limitations to this (such as the short time frame and limited subject context), live lessons present a rare opportunity to experience and then analyze together as a faculty the same lesson. This leads to a deeper common understanding of the elements of excellent teaching, a common vocabulary for discussing teaching, as well as witnessing and discussing together the missed opportunities in a lesson. And, of course, the presenting teacher benefits from the admittedly more stressful situation by having to carefully think through a lesson and then receive feedback from other teachers. The additional element of having to perform under real but benign pressure can help develop a more trained response to situations that might otherwise cause a teacher difficulty. Along with increased understanding of principles teachers will develop habits through repeated practice and participation.

Presenting and discussing in this way requires a high degree of trust among the faculty. In order for the discussion to be fruitful for all, that is, to make an impact on their classroom practice, both what went well and what did not must be discussed, and teachers can't shy away from offering suggestions, as well as friendly critique. Presenters need to be able to welcome all comments, because the point is improvement, both personally and corporately. In addition, for discussion to be most productive teachers should have at least the beginning of a shared understanding of what makes good classroom practice. Depending on the school's situation, administrators may want to at first significantly lead the feedback for these mini-lessons in order to identify, reinforce, or even introduce those practices.

Engaging

Teacher training will often have a classroom aspect. Books like *The Seven Laws of Teaching* deserve to be read and re-read by teachers and discussed by faculties. Other books and articles on teaching, school culture, and the philosophy of classical Christian education in general are worthy of our time and attention as an element of training.

But it is critical that administrators make this discussion time as engaging as possible. The work of thinking and even presenting information should be shifted to teachers as much as possible, in small groups or individually. Administrators need to resist the temptation to lecture or make presentations, and instead have teachers fully engaged. Here are just a few ideas:

- Small group work and presentation
- Use of sticky notes—with small groups, revise with full group
- Discussion centers
- Graphic organizers
- Group chart creation and presentation (curated discussion)
- Fill-in blanks for prediction and/or review
- Card carousel—using 3x5 cards with quotations or ideas, circulate and add to, then discuss
- 'Exit Pass' with personal application
- Analysis of classroom video using observation form
- Role-plays (see below)
- Scenario discussion (see below)
- Live lessons with teachers as 'class' (see below)

However it is done, the main idea is to find ways to have teachers fully engaged in the presenting and discussing of the ideas. The last two items on the list—scenarios and live lessons—will be discussed more fully below. They represent the most engaging as well as realistic means of teacher training available to us.

Teachers are the single most important factor in a school's success in fulfilling its mission. Therefore, the administrator's duty is to plan and implement a realistic and on-going

program of teacher training that requires full engagement from all faculty, and to make sure that what teachers learn is applied in their classrooms.

Faculty Development Must Include Learning and Training

This continuous and engaging teacher development will include two basic kinds of exercises, those that focus on learning –discussion-based, informational exercises such as presentations or book discussions, and training—active, realistic exercises that provide opportunities for the application of learning. Faculty development should include both discussion-based learning exercises as well as action-based training exercises.

In fields where on-going professional development has literal life and death implications, realistic, live-action training is common. We can learn from them by applying training principles that improve classroom practice, multiplying the value of both learning and training sessions. This will lead to better teaching and thus better learning.

Recently, an ACCS teacher included this critique of faculty development programs in a presentation:

Typically, the program is three-pronged. First, it involves in-service events, where someone from within the school delivers a lecture about something having to do with classical education. A few schools will occasionally bring in someone from outside their community to lecture on classical education, although this is relatively rare because it is expensive, and most schools try to run their faculty development programs on the cheap…they are held directly after school, when teachers are mentally exhausted and in no mood for deep intellectual activity. These in-service events are not exactly meetings, though they do mirror the modern meeting in that they are dry…

…and finally, faculty development involves reading certain pre-approved books on the subject of education, writing a review of the book, and then submitting the review for approval to the administrator who oversees the development program. Teachers may also be required to attend a classical educators conference once every few years—like the ACCS conference, for example.

While perhaps overly critical of hard-working administrators doing their best with limited resources, much of what is described above is, unfortunately, very common. Often what is stated as a teacher training program generally consists of attendance at a conference and participation in the school's teacher certification process. Many schools will also have occasional administrator observations, usually scheduled well in advance. In general, faculty development is thought of as events for individuals or a one-time, mostly passive group-learning experience.

All of these activities are useful in their place, but they do not constitute a full faculty development plan designed to help teachers grow as classical educators. Administrators should create plans that prioritize on-going, engaging and realistic times for teacher learning. We also need to distinguish between and include two different kinds of exercises: group or individual learning, and hands-on, active training with opportunities for practice with feedback.

I have written elsewhere (*Classis*, February, 2022) about the need for faculty development to be a regular part of the school's schedule. This consistency is important in that it helps to create a faculty culture where growth in their craft is a priority to administrators and an expectation for all. Faculty development should be as engaging as possible. If they can't involve wine, beer, and days off, as the writer quoted above wishes (and who doesn't?), regular faculty development meetings should at least be designed so teachers are active participants and not passive recipients. Yes, we're all tired afterschool, but if the exercises are intellectually

interesting and clearly applicable, as well as having some movement and thoughtful conversation with other adults (something that is perhaps lacking in some teachers' days) built in, then teachers will see the benefits of the time. Administrators should lead from 'the back of the room' in ways that put the teachers in the place of a discoverer of the learning, they should "excite and direct the self-activities of the learner." Small group scenario discussions, the creation of graphic organizers to teach a concept, role-playing, and presenting lessons to a live 'class' all have teachers in the center of the learning and the doing.

In addition, those responsible for faculty development should consider and plan for two very different aspects: learning and training. Learning exercises are primarily discussion-based whose purpose is to increase knowledge and understanding. Sometimes these are passive (lectures, presentations, on-line video, etc.), but the best kinds of learning exercises build in active participation from teachers, e.g., scenario discussions, lesson plan analysis, etc. At their best, learning exercises give teachers an opportunity to consider ideas together in a classroom situation, to discuss ranges of responses and applications. All of this learning is critical for developing the situational awareness necessary for teachers to make adjustments in their classrooms, anticipate potential issues and opportunities, and to apply their knowledge and understanding of the many elements of their school's mission (i.e. pedagogy, curriculum, philosophy and culture).

An often-neglected aspect of faculty developing are training exercises. Although sometimes used generically, 'training' is a different kind of exercise with a different expected outcome from learning. Training is distinguished from learning in that it focuses on regular, realistic practice of the learning elements. While learning exercises are discussion-based, training exercises are action-based. Exercises in training give repetitions in as realistic a situation as

possible. They are designed to put teachers into realistic, dynamic situations where they must respond to unplanned circumstances. This is, of course, more like actual teaching. Training exercises, followed by an honest discussion of what went well and what didn't, will support teachers and faculties toward developing habits of excellent teaching. To gain the full effect realistic training should be a regular part of the faculty development calendar, not a one-time event.

An example of an active training exercise is live 'teaching labs', where the teacher delivers an abbreviated lesson to a class of fellow teachers acting as students. These live exercises are followed by robust analysis and discussion. Other examples include role-playing conversations (e.g., a parent-teacher conference), and practicing targeted scenarios (e.g., 'check for understanding in a manner that is both involuntary and plenary' (that is, involving all students)). All of these are meant to be as realistic and unscripted as possible, thereby requiring teachers to practice situational awareness and apply wise and prudent action in a dynamic circumstance.

Below are some examples of learning exercises and training exercises:

Learning exercise examples (discussion-based):

- Scenario discussions (e.g., classroom scenarios, critical incident discussions, lesson plan analysis, etc.)
- Reading topical articles, essays, or books
- Seminars
- Workshops
- On-line classes
- Consultant presentation
- Regional or national conferences

Training exercise examples (action-based; repetitions in realistic situations):

- Teaching labs: live, real-time lesson presentation in realistic situation; follow-up analysis
- Walkthrough/observation feedback with follow-up discussion, implementation and feedback loop
- Scenario role-play

It has been said that you're only as good as your training. I think it's probably closer to the truth that we're never quite as good as our training, but we certainly won't be any better. While many schools emphasize continued learning, and some provide ample resources for learning opportunities, faculty development plans should explicitly include frequent training opportunities, as well. Regular, realistic, and engaging faculty development is critical to the success of a school's mission. Both learning and training exercises are also important to help teachers grow in their understanding and application of the principles and practices of classical, Christian education.

Creating a 'Feedback-Rich Environment'

In order for the learning and training described above to be most effective administrators will need to make continuous observation and feedback to teachers a priority. It will not be enough to have even weekly learning and training sessions. Administrators, or lead teachers, will need to regularly check to see if the learning and training is transferring to the classroom. The development of habits of excellence across a faculty takes time, and continual reinforcement through praise and suggestions for improvement will be necessary. Administrators need to beware of fatigue at this point. With turn-over among faculty and the general inertia toward cutting corners or slipping back into old habits that plagues us all, it can seem to be a never-ending process to make significant progress. This is probably accurate. However, over time faculties will become more self-perpetuating—that is, that the expectations of teachers

toward excellent habits will drive growth as a faculty. But we never fully arrive at this point, so continuous follow-up is always needed.

There are many ways this will take place in a school, formal and informal. Regular one-on-one meetings to review observations, as well as casual lunchroom or copy room conversations, are examples of important ways of creating a faculty culture where professional growth and discussions about teaching are valued.

Of special importance are regular lesson plan review and feedback, and informal walkthrough observations. These can be done at any time the administrator or faculty leader has the opportunity, and since they do not require large portions of time they can be done frequently. Both provide an opportunity to give focused praise and suggestions for improvement that target areas being developed in the learning and training exercises. Teachers should get used to having an administrator in their classrooms frequently for short periods of time, and to receiving brief and specific feedback on observations made. Teachers should be invited to discuss any observations or questions they have. These conversations can be informal and even casual—just an every-day discussion about some aspect of teaching. This is the kind of culture a school should strive for. Feedback on lesson plans will work similarly. Administrators can focus on a few critical items (e.g., clear learning targets or formative assessments) and offer teachers feedback that supports the on-going learning and training the entire faculty is doing. Again, teachers are invited to continue the conversation in person, or to ask questions.

These walkthroughs and lesson plans are not formally evaluative in that they are not being placed in a personnel file (although on-going concerns or issues may rise to that level at some point). The objective is to encourage a continual self-evaluation on the part of teachers of

their classroom planning and instruction, by deliberately connecting continual observation

feedback to the learning being done in teacher training.

Professional development of teachers is an important duty of school administrators.

These activities should be an integral part of the school calendar, on-going, and realistic as well

as engaging. As much as possible these training and learning exercises should model and

reinforce the approaches to teaching we want our teachers to use in their own classrooms.

Some Resources for Leading Teacher Learning and Training from the Back of the Room:

- *The Four Foundations of Great Teaching*
  This booklet aims to develop understanding and habits in four important areas: Backward Planning, Formative Assessment, Instruction, and Classroom Culture and Management.

- *Curriculum for Using The Four Foundations of Great Teaching for Teacher Training*
  This document includes nearly thirty faculty meeting lesson plans for learning and practicing principles in the 'Four Foundations' booklet.

- *Implementing Teaching Labs*
  Live role-play training exercises are a highly valuable means of developing common understanding of excellent teaching among a faculty. This handbook leads administrators through the steps to successfully putting them in place.

- *Engaging Faculty Development Activities Using The Seven Laws of Teaching*
  This document contains several teacher learning sessions that require teachers to do the thinking as they work through the principles in John Milton Gregory's classic work.

- *Scenarios for Teacher Development*
  This collection of dozens of scenarios provide fodder for faculty discussions from brief situations (e.g., write a clear learning target) to more complex classroom situations. The goal is the development of situational awareness

- *Developing Professional Judgment through Critical Incidents*
  Critical incidents are any situation—not emergencies—in a classroom that can be analyzed and discussed. The goal is the development of situational awareness.

(Resources may be downloaded from classicalteaching.com)

Sources in Support of Challenging and Engaging Faculty Development

"'Awkward' is simultaneously the barrier to learning and necessary for accelerated learning. If you don't feel awkward you're learning at a snail's pace. Awkward is accelerated learning."
        -Chris Voss (author of *Never Split the Difference*)

 "The goal of stress exposure training is to prepare personnel to perform tasks effectively under high-demand, high-stress conditions…"

        -*Stress Exposure Training,* Driskell and Johnston, in *Making Decisions Under Stress*,
        Cannon-Bowes and Salas, eds

"Research has shown that, for some tasks, normal training procedures (training conducted under normal, nonstress conditions) often do not improve task performance when the task has to be performed under stress conditions…the transfer of training from the classroom conditions to operational conditions may be poor when there are no stress-inclusive simulations or training."
        -*Stress Exposure Training,* Driskell and Johnston, in *Making Decisions Under Stress*,
        Cannon-Bowes and Salas, eds

"Training must be realistic...training must focus on the fundamentals...Training must be repetitive...Training must be continuous for everyone."
        -*The Dichotomy of Leadership*, Jocko Willink and Leif Babbin

Practice should be spaced out over time and be challenging

        Lon Bartel, PhD; VirTra https://www.policemag.com/download?id=655290&dl=1
        (S.C.O.R.E)

        Space out practice
        -By 'spacing' training activities out over time, (1-2 hours every other day, or at least once per week versus 8-hour marathon cramming sessions) you will be able to learn more information and retain it longer

        Massed practice refers to a style of practice where an individual engages in a large amount of training in a single, uninterrupted session. The goal of massed practice is to improve the skill or behavior through intensive repetition, with the assumption that the more you practice in one session, the better you will get.

        On the other hand, spaced practice refers to a style of practice where an individual engages in smaller amounts of training, spaced out over time. In this method, there are breaks between practice sessions, and the goal is to retain and reinforce the learned skill or behavior over a longer period. The idea behind spaced practice is that by spacing out

the training sessions, the brain has time to consolidate and reinforce the newly acquired information, leading to better retention and transfer to new situations. In general, **spaced practice has been shown to be more effective than massed practice in terms of long-term retention and transfer to new situations**, although the optimal spacing between sessions can vary depending on the task and the individual.

Spacing helps when learning a skill because it allows the learner to spread out their study and practice over a longer period of time, instead of trying to learn everything in a single session. **This approach has been shown to be more effective than massed practice, where all the study and practice is done in a single session.**

There are several reasons why spacing is beneficial when learning a skill:

> • *Improved retention***:** Spacing helps to promote long-term memory retention by allowing the learner to revisit the material at spaced intervals, which helps to strengthen the neural connections in the brain.
> • *Enhanced understanding***:** By revisiting the material over time, the learner can build a deeper understanding of the skill and identify areas where they may need further improvement.
> • *Avoidance of overloading***:** Spacing helps to avoid cognitive overload by breaking down the learning into smaller, manageable chunks, which can make the learning process less overwhelming and more effective.
> • *Better transfer:* Spacing also helps to promote transfer of learning, as it allows the learner to apply what they have learned to real-world situations and contexts, which can help to consolidate their understanding of the skill. Overall, spacing is an effective approach to learning skills as it allows the learner to take a more gradual and structured approach, which can help to promote better retention, understanding, and transfer.

Challenge must exist
-If it doesn't challenge you, it doesn't change you
Obstacles help us deal with error in the environment
-Practice must occur in less-than-perfect environments
Randomize the skills
-A variety of potential scenarios rather than predictable, specific situations
-Practice looks worse but performance is better
Exceptions exist with the very new or if prior to a precise performance

Teacher development that is not ongoing and engaging is a waste of time

The New Teacher Project (TNTP) survey of 10,000 teachers (2015) found that most teachers surveyed said that the usual one-time professional development workshops were useful toward their improvement.

https://tntp.org/publications/view/the-mirage-confronting-the-truth-about-our-quest-for-teacher-development

https://tntp.org/assets/documents/TNTP-Mirage_2015.pdf

https://www.washingtonpost.com/local/education/study-billions-of-dollars-in-annual-teacher-training-is-largely-a-waste/2015/08/03/c4e1f322-39ff-11e5-9c2d-ed991d848c48_story.html

"For example, **less than half of the teachers we surveyed told us they received professional development that was ongoing**, tailored to their specific development needs or even targeted to the students or subject they teach."

"**The districts we studied don't seem to be creating time for teachers to engage in the activities they say could be more effective.** For example, even though nearly three-quarters of the teachers we surveyed said that observing other excellent teachers was a good use of their development time, they reported observing excellent peers less than twice a year. By contrast, **teachers spent an average of 24 hours per year participating in one-time professional development workshops, even though only 36 percent view them as a good use of time**. It seems, then, that beyond failing to help most teachers actually improve meaningfully, districts are not even meeting the arguably lower bar of giving teachers what they say they need."

Realistic and immersive training is more effective

Police Training in Practice: Organization and Delivery According to European Law Enforcement Agencies
(https://www.frontiersin.org/articles/10.3389/fpsyg.2021.798067/full)

"Recent literature in the field of police training investigated how to better facilitate skills and improve specific components of police training. For instance, Di Nota and Huhta (2019) have illustrated how **realistic and immersive scenario-based training can improve police officers' skills such as situational awareness and decision-making.**

Similarly, **integrating elements of anxiety and stress into training** — akin to what police officers would experience in high-risk on-duty situations — has shown to improve use of force performance under stressful conditions and paved the path for police training to become more realistic (Oudejans, 2008; Nieuwenhuys and Oudejans, 2011; Andersen et al., 2016).

Furthermore, police instructors are called to create learner-centered training environments that foster the "exploration and learning of functional solutions" to reduce the gap between police training and police work on duty (Koerner and Staller, 2021, p. 10; White and Escobar, 2008).

This means **moving away from traditional classroom-based, trainer-centered teaching** to enhance performance, skill transfer, and retention.

According to training coordinators and instructors, using **scenario-based training is seen as the most holistic and effective form of training**. Scenario-based training is implemented in the delivery of training in each of the interviewed law enforcement agencies. Instructors make use of scenario training to combine training components…

The integration of stress inoculation training and decision making is for most training coordinators and instructors an important part of these role-plays. **Instructors use scenario trainings and role-plays to increase stress resilience** of trainees and prepare them for stress encounters on duty…

The latter approach—**varying the environment and situation context** of the scenario from one repetition to the next—allows trainees to explore solutions and make decisions regarding the use of the skill taught in the lesson…moving away from isolated technique mastery of a single skill (Abraham and Collins, 2011), implementing decision-based training…"

Stress in training aids learning transfer

> *Stress Exposure Training,* Driskell and Johnston, in *Making Decisions Under Stress*, Cannon-Bowes and Salas, eds

> "The goal of stress exposure training is to prepare personnel to perform tasks effectively under high-demand, high-stress conditions…"

> "Research has shown that, for some tasks, normal training procedures (training conducted under normal, nonstress conditions) often do not improve task performance when the task has to be performed under stress conditions…the transfer of training from the classroom conditions to operational conditions may be poor when there are no stress-inclusive simulations or training."

Distributed and varied learning is more lasting

> *How We Learn: The Surprising Truth About When, Where, and Why It Happens*
> Benedict Carey (2014)

> **Chapter 4-Spacing Out: The Advantage of Breaking Up Study Time**
> Distributed learning
> - Studying a new concept right after you learn it doesn't deepen memory much, if at all; studying it an hour later or a day later, does. (68)
> - It's best to review the material one or two days after initial study; then a week later; then about a month later. After that, the intervals are longer (73)
> - Teaching third graders addition once a day for ten days was far more effective than twice a day for five days (73)
> - For intervals of days or weeks, 'Forget to Learn' theory comes into play. Forgetting aids learning in two ways: actively, by filtering out competing facts, and passively, in that

some forgetting allows subsequent practice to deepen learning, like an exercised muscle. (74)
- A good class should make the material stick, and spaced review (in class) is one way to do that. (76)
- Cramming works fine in a pinch. It just doesn't last. Spacing does. (79)

Chapter 8-Being Mixed Up: Interleaving as an Aid to Comprehension
- Varied practice is more effective than the focused kind, because it forces us to internalize general rules (152)
- Interfering with concentrated or repetitive practice forces people to make continual adjustments (156)
- Whenever researchers scrambled practice sessions, in one form or another, people improved more over time than if their practice was focused and uninterrupted (156)
- Interleaving is mixing related but distinct material during study (163)
- Building into our daily practice not only a dose of review but also an element of surprise (171)
- Mixing of items, skills, or concepts during practice, over the long-term helps us to achieve a clearer grasp of each one individually (164)