



Georgia Professional Standards Commission

Guidelines for Implementing Educator Preparation Rule 505-3-.54 Instructional Technology

Rule effective date: January 1, 2021

Version 2, March 2021

Table of Contents

Introduction	1
Guideline 1: Admission Requirements	2
Guideline 2: Content or Content Pedagogy Requirement	2
Guideline 3: Non-degree, Certification-only Options	3
Guideline 4: Field Experiences	3
Guideline 5: Conversion Mechanism	4
Glossary	5
Standard 1 Terminology	5
Standard 2 Terminology	6
Standard 3 Terminology	7
Standard 4 Terminology	9
Standard 5 Terminology	10
Standard 6 Terminology	11
Standard 7 Terminology	12
Standard 8 Terminology	13
References	15

Introduction

The Instructional Technology standards are based on International Society for Technology in Education (ISTE) 2017 standards. The purpose of the Instructional Technology standards is to improve P-12 teaching and learning by providing educators with broader and deeper Technological Pedagogical Content Knowledge (TPACK).

Programs based upon the Instructional Technology standards prepare educators who wish to effectively integrate technology into their own teaching practice and to assist other educators in utilizing technology to improve the teaching and learning process. Instructional Technology is classified as a Service (S) certificate (P-12) and it can be added to an existing level four (4) or higher teaching certificate (Induction, Professional, Advanced Professional, or Lead Professional), a leadership certificate, another service field certificate, or a Life certificate. To add the field of Instructional Technology, program completers must pass the state-approved content assessment in Instructional Technology.

The following guidelines are provided to assist in the development of advanced degree and/or certification-only programs in Instructional Technology at the Masters, Education Specialist, and Doctoral levels. They are intended to offer clarification and guidance for meeting the standards. The first guideline provides important reminders related to program admission requirements. Other guidelines are provided to clarify the content or content pedagogy hours required for Instructional Technology degree programs (Guideline 2). Guidelines are also provided for non-degree, certification-only programs (Guideline 3). Additionally, guidelines are included for field experiences (Guideline 4). Finally, guidelines for a conversion mechanism (bridge program) are provided to allow educators who have earned an Instructional Technology degree from an out-of-state institution before standards were developed and before Instructional Technology was a certification area to add the Instructional Technology certification field to their certificate (Guideline 5). A Glossary, providing explanations of terms used in each of the eight program content standards, is included at the end of the document. Although these are guidelines and not mandated, variances should be justifiable.

Guideline 1: Admission Requirements

As Instructional Technology programs lead to initial certification in the field, it is important for Educator Preparation Providers (EPPs) to ensure candidates meet the admission requirements specified in [Rule 505-3-.64](#). Program applicants must be certificate-holders. Specifically, they must hold a valid, level four (4) or higher teaching certificate (Induction, Professional, Advanced Professional, or Lead Professional), a leadership certificate, another service field certificate, or a Life certificate. EPPs are encouraged to verify the certification of applicants prior to program admission.

Guideline 2: Content or Content Pedagogy Requirement

Instructional Technology programs resulting in a degree must include a minimum of six (6) semester hours (or the quarter hours equivalent) of advanced level coursework focused on the content or content pedagogy of a certificate field held by the educator. The intent of the content or content pedagogy requirement is to expand or enhance the knowledge, skills and dispositions reflected in a previously awarded certificate area. All six (6) hours may be satisfied through advanced level content or content pedagogy courses in which educators are required to demonstrate advanced skills related to their field of certification. Three (3) of the six (6) semester hours may be satisfied through a thesis, research project or capstone directly focused on the content of a certificate field held by the educator.

The requirement of content or content pedagogy courses for all degree levels may be met in a variety of ways. One way might include a pedagogy course that is offered to a number of educators with a variety of content backgrounds. If this occurs, the assignments and experiences must be tailored to each individual educator so that his/her certification/content field is expanded or enhanced. However, it must be clear in the program that these six (6) hours are to be used only for that purpose.

Examples of coursework appropriate to satisfy the content or content pedagogy requirement include, but are not limited to, the following:

- Advanced level content specific to the subject area in which the educator holds certification
- Methods or education strategies specific to the content area in which the educator holds certification
- Methods of teaching reading and writing to support learning in content areas
- Coursework focused on teaching specific content to students with special needs
- Coursework in integrating technology into content area instruction
- In-depth study of assessments of a content area

- Study of pedagogical content knowledge of specific content areas
- Study of curriculum models specific to a content area

Guideline 3: Non-Degree, Certification-Only Options

The non-degree certification-only option is available to educators who already hold an advanced degree and seek to add the field of Instructional Technology to their certificate. The certification-only option may be achieved through a stand-alone or embedded program. The stand-alone program is a planned sequence of courses and field experiences that lead to an educator meeting all Instructional Technology standards and program requirements. The embedded program is a planned sequence of courses and field experiences within an advanced degree program that lead to an educator meeting all advanced degree requirements, as well as all of the Instructional Technology standards for initial certification.

As is the case with degree-granting programs, certification-only programs in Instructional Technology must include appropriate field experiences allowing the educator to merge practice and theory in job-embedded, performance-based practice. Certification-only programs must be approved by the GaPSC, separately from degree-granting programs.

Certification-only programs in Instructional Technology do not require a minimum number of hours of advanced level coursework focused on the content or content pedagogy of a certificate field held by the educator.

Guideline 4: Field Experiences

As is the case with all programs leading to initial certification, Instructional Technology programs must include field experiences. Program providers must ensure candidates participate in field experiences that meet the requirements set forth in Rule 505-3-.01, paragraph (e) 4. A minimum of 100 hours of field experiences are recommended and they should occur across all P-12 grade levels (PK-2, 3-5, 6-8, and 9-12). Educators must document experiences working in settings that affect student learning. This might include working directly with students, or working with teachers, other educational professionals, or pre-service teachers through coaching, professional development or research. Institutions should schedule these hours dependent upon the needs of the educators. The experiences must be systematically designed and sequenced to increase the complexity and levels of engagement with which candidates apply, reflect upon, and expand their knowledge and skills.

Guideline 5: Conversion Mechanism (Bridge Program)

Individuals wishing to acquire certification in Instructional Technology based upon previously completed Instructional Technology (or equivalent) degree programs must meet the following criteria:

- Hold an advanced Instructional Technology or equivalent degree completed no more than ten (10) years prior,
- Pass the Georgia state-approved content assessment (GACE) in the field of Instructional Technology, and
- Provide evidence of meeting GaPSC Instructional Technology standards through a mechanism decided upon by the approved program provider.

GaPSC-approved EPPs offering approved Instructional Technology programs are eligible to offer the conversion mechanism, which includes a review of transcripts, artifacts, and professional and/or educational experiences against program standards. In reviewing transcripts, EPPs should consider whether or not the institution's expectations for recency of study are met. Educators meeting all standards may be submitted to GaPSC for certification. Educators who do not meet all standards should be admitted to the institution and provided with a program of study outlining coursework and/or experiences that upon successful completion will assure the EPP all Instructional Technology standards are met. EPPs should maintain evidence of completing this process for each applicable educator, as the conversion mechanism will be reviewed by GaPSC in conjunction with Continuing Approval Reviews.

Glossary

Standard 1. Learner

Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators:

- 1.a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.
- 1.b. Pursue professional interests by creating and actively participating in local and global learning networks.
- 1.c. Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.

Standard 1 Terminology:

1. **Explore and apply.** Learn about, test, and add into regular practice a variety of proven, promising and emerging learning strategies with technology.
2. **Pedagogical approaches made possible by technology.** Shifts in teaching and learning afforded by digital tools and resources, for example, increased personalization and differentiation; virtual collaboration, either in real time or asynchronously; project-based learning; science, technology, engineering, arts, and mathematics (STEAM); authentic projects with experts or real-world data; providing immediate feedback using digital tools; competency-based assessments and new data analysis tools.
3. **Creating and actively participating in.** For example, starting social media chats or groups; blogs that encourage discussion; virtual webinars, meet-ups, edcamps or unconferences; collaborative asynchronous writing or working teams.
4. **Local and global networks.** Virtual and blended learning communities such as social media groups or chats, virtual PLNs, conferences, meet-ups, edcamps, and school-based professional learning communities.
5. **Professional Interests.** Interests related to the fields of education and training such as but not limited to existing and emerging technologies, curriculum, instruction, skill development, and assessment.
6. **Stay current with research.** Stay current through practices like setting search engine email alerts for specific topics, following thought leaders or key organizations on social media or Really Simple Syndication (RSS) feeds, attending presentations or webinars, and subscribing to educational technology research journals or other media sources.
7. **Student learning outcomes.** The knowledge, skills, and dispositions a learner should demonstrate at the end of an assignment or learning unit.
8. **Learning sciences.** Interdisciplinary field bringing together findings – from research into cognitive, social, and cultural psychology; neuroscience and learning

environments, among others – with the goal of implementing learning innovations and improving instructional practice.

Standard 2. Leader

Educators seek opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators:

- 2.a. Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders.
- 2.b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.
- 2.c. Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.

Standard 2 Terminology:

1. **Shape, advance and accelerate a shared vision.** Efforts that influence change and decision-making. These may include: participating on committees, leading by example, mentoring or collaborating with colleagues to improve practice using technology; advocating for technology use with parents and guardians, administrators, and other educators; and voicing thoughts on education technology policy to national, state, district, school or city leaders.
2. **Empowered learning with technology.** Learning where students are self-aware about their own learning preferences and needs, and have significant voice and choice in setting learning goals. Empowered students leverage technology to determine how they will learn, demonstrate competency in meeting their goals, and reflect on their learning process and outcomes.
3. **Engaging with education stakeholders.** Local stakeholders to engage in student learning success include district- and school-level administrators, educators, parents or guardians, community members, school board and state/government members, employers, higher education faculty and staff and, of course, students themselves. Connect with external stakeholders by presenting at national or international conferences, engaging with virtual professional learning networks (PLNs) and thought leaders, and expressing constituent opinions on education technology policy.
4. **Equitable access.** When all students have access to technology needed for learning and to culturally relevant curriculum and resources regardless of race, ethnicity, socio-economic status, gender identity, sexuality, ability, primary language or any other factor that might hinder or unfairly advantage one student over another.
5. **Educational technology.** Devices, apps, web resources, Internet access, technology support, and other digital tools used to deepen learning.
6. **Digital content.** Digital content may include open educational resources (OERs); digital media and podcasts; digital curriculum, including culturally relevant

curriculum; news and other websites; and digitized original or historical resources such as newspapers, virtual field trips or virtual reality (VR) software and devices.

7. **Learning opportunities.** Educators plan for learning that accommodates differing access levels and individual student needs, for example, providing homework alternatives for students who do not have internet access at home, providing competency-based or other opportunities to demonstrate learning, scaffolding student learning to challenge and support individual students where they are, and advocating for an equitable system for all students.
8. **Diverse needs.** Diverse needs might include learner variability; language skills; technology and internet access levels outside of school; and cultural specificity and challenges at home such as poverty, homelessness or instability.
9. **Identification.** Finding new tools or resources to enhance learning by asking or observing colleagues or students, reading related publications, and following other educators or thought leaders.
10. **Exploration.** Experimenting with new tools and resources for learning, and being open to calculated risk-taking and productive failure for continuous learning.
11. **Evaluation.** Analyzing and reflecting on the value of a new tool or resource for learning and possible improvements for the next time it is used.
12. **Curation.** Thoughtfully organizing resources in a way that is useful and meaningful.
13. **Adoption.** Incorporating selected new resources and strategies into regular practice.
14. **New digital resources and tools for learning.** These may include OERs; apps, websites, and other software; hardware tools and devices; networked devices and the “Internet of Things”; and emerging pedagogies around digital tools and resources.

Standard 3. Citizen

Educators inspire students to positively contribute and responsibly participate in the digital world. Educators:

- 3.a. Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationships and community.
- 3.b. Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.
- 3.c. Mentor students in the safe, ethical and legal practice with digital tools and protection of intellectual rights and property.
- 3.d. Model and promote management of personal data and digital identity and protect student data privacy.

Standard 3 Terminology:

1. **Make positive, socially responsible contributions.** For example, engaging productively with others online; sharing creative or intellectual work that is original, protected, and documented; being involved in virtual social actions such as

crowdsourcing, crowdfunding or mobilizing for a cause; using digital tools for entrepreneurship and innovation.

2. **Exhibit empathetic behavior.** For example, being civil and humane in online interactions and communications; not trolling or cyberbullying; standing up for others online; and being respectful of others' perspectives and experiences.
3. **Build relationships and community.** Using digital tools to contribute to the common good and build interpersonal bonds.
4. **Establish a learning culture.** With students, create shared values, social norms, and goals around the purpose and approach to learning in the digital world.
5. **Curiosity.** Encourage and support students' questioning of information and ideas put in front of them and pursuit of their own interests, ideas, and hunches.
6. **Critical examination of online resources.** Assessing the credibility and usefulness of information found online and in the media, for example, evaluating accuracy of source data, bias, and relevance to learning goals; learning to think about and check for personal biases and everyone's tendency to confirmation bias; and varying search terms to find alternative perspectives.
7. **Digital literacy.** Being able to use technologies effectively and being able to effectively discover, analyze, create, and communicate information using digital tools and resources.
8. **Media fluency.** The ability to meaningfully interpret large amounts of complex information in multiple formats and communicate and share across various media formats.
9. **Mentor.** Coaching or ongoing guidance that includes modeling of your own practice; sharing with and teaching others; and providing ongoing, productive feedback and advice.
10. **Safe practices.** Interactions that keep you out of harm's way, for example, knowing the identity of who you are interacting with; how much and what kind of information you release online; and protecting oneself from scams, phishing schemes and poor purchasing practices (e-commerce theft).
11. **Ethical practices.** Interactions that align with one's moral code, for example, preventing or not engaging in cyberbullying, trolling or scamming; avoiding plagiarism; and supporting others' positive digital identity.
12. **Legal practices.** Interactions that are mindful of the law, for example, abiding by copyright and fair use, respecting network protections by not hacking them, and not using another's identity.
13. **Protection of intellectual rights and property.** Mindful sharing of creative and intellectual work; knowing and using creative commons as well as innate copyright protections.
14. **Model and promote.** Educators engage in these best practices themselves; bring transparency to them with colleagues, parents, students, and other stakeholders; and promote them among students, colleagues, and other stakeholders.

15. **Management of personal data.** For example, creating effective passwords, authenticating sources before providing personal information, sharing personal data conscientiously, not posting address or phone numbers publicly.
16. **Management of digital identity.** How an individual is represented online in the public domain based on activities, connections or tagging through social media posts, photos, public online comments or reviews, and awareness and monitoring of depictions by others.
17. **Protect student data privacy.** Actively protecting students' personal or academic information through such precautions as not sharing student work, pictures or identifying information without permission from students and parents or guardians; being safe when working with student data in public or shared spaces; understanding companies' privacy and data management policies; and avoiding or gaining permission to use those without strong management and privacy for student data.

Standard 4. Collaborator

Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators:

- 4.a. Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.
- 4.b. Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.
- 4.c. Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.
- 4.d. Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.

Standard 4 Terminology:

1. **Authentic learning experiences.** Activities that are based on students' real-world experiences or current issues, use real data or work to solve real-world problems.
2. **Collaborate and co-learn.** Reconfigure the teacher-student relationship to encourage modeling and facilitating student learning through relationships built on collaborating and learning together.
3. **Diagnose and troubleshoot technology issues.** Able to draw on student and teacher knowledge to solve technology problems and model this practice for students, for example, restart a device, install software updates, transfer work from one device to another, troubleshoot when audio/video won't play, and recognize functional similarities between different devices or software.
4. **Collaborative tools.** For example, cloud-based, shareable documents and calendars; social media; video and audio conferencing software; and email.

5. **Authentic, real-world learning experiences.** For example, solving real-world local or global problems, career/workforce related projects and skill-building, and design projects and processes.
6. **Cultural competency.** Being able to interact appropriately and effectively with people from other cultures. Being mindful of others' experiences and aware of one's own identity and ideas about difference.
7. **Interact as co-collaborators in student learning.** In learning, cultural competency takes the experiences and identities of all parties as a sign of the uniqueness of each class and of each student. Thoughtfulness in designing learning experiences that consider cultural identities can enhance student learning and improve collaboration and communication with parents or guardians and other stakeholders.

Standard 5. Designer

Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators:

- 5.a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
- 5.b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.
- 5.c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

Standard 5 Terminology:

1. **Personalize learning experiences.** Capitalize on technology's efficiencies and functionality to meet students' individual learning needs. Examples might include scaled tests and quizzes; adaptability tools and features; software data that can capture where students are struggling or spending the bulk of their time; competency-based learning resources; tools that facilitate student reflection; project planning, organization, and time management; communication; collaborative work; individual research and curation; and design and creativity.
2. **Independent learning.** Student ownership over their learning goals, demonstration of competency and structuring of work.
3. **Learner differences and needs.** Systemic learner variability that, if planned for and supported, maximizes student learning and engagement, for example, differentiation, assistive technologies and accommodations; building motivation to learn by stimulating interest; multimodal content delivery; fostering learner awareness of their work preferences and recognition of how academic work aligns to personal goals.
4. **Record keeping.** Adaptability tools and resources; English language learner resources and tools; support for students with different access levels to technology and attendant support structures.

5. **Authentic learning activities.** Learning experiences that have value or resonance beyond the classroom/academics, for example, solving real-world local or global problems; career-/workforce- related projects and skill building; wrestling with significant philosophical or intellectual problems; and design projects and processes.
6. **Active, deep learning.** Leveraging digital tools and resources so students can gain mastery of content area knowledge while also gaining vital competencies, including problem-solving, critical thinking, effective communication, collaboration, self-direction and belief in their ability to grow and improve with hard work and perseverance.
7. **Instructional design principles.** Established and evolving best practices and guidelines for designing learning experiences for targeted learners.
8. **Create innovative digital learning environments.** Maximize learning by designing effective instruction in a variety of learning environments and rethinking physical space to enhance new models of classroom learning such as blended learning, online learning and various device models such as 1:1 tablets or laptops, mobile devices and computer labs.

Standard 6. Facilitator

Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students. Educators:

- 6.a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
- 6.b. Manage the use of technology and student learning strategies in a variety of environments such as digital platforms, virtual environments, hands-on makerspaces, or in the field.
- 6.c. Create learning opportunities that challenge students to use a design process and/or computational thinking to innovate and solve problems.
- 6.d. Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.

Standard 6 Terminology:

1. **Foster a culture.** Creating shared values, social norms and goals around the purpose and approach to learning by, for example, bringing students into the process of establishing and maintaining culture; setting up space and time for students to fail and try again; establishing space and time for student reflection and goal setting; allowing students voice and choice in demonstration and evaluation of competency.
2. **Independent and group settings.** Individual or collaborative group work, conducted online, face to face or hybrid.
3. **Use of technology and student learning strategies.** Keep students supported, on task, and learning in a variety of face-to-face, digital or hybrid environments.

4. **Hands-on makerspaces.** Spaces designed to challenge students to create and learn through hands-on, authentic experiences throughout elementary, middle, and high school. Students explore, create, invent, and develop solutions to real-world problems using high-end (e.g., electronics, 3D printing, coding, robotics) and low-end technology tools (e.g., cardboard, art supplies, legos).
5. **Design process.** A methodology for problem-solving; a series of steps used to solve a problem and design a solution. For example, human-centered design process, project-based learning, engineering design processes, and scientific method.
6. **Computational thinking.** A problem-solving process that includes, but is not limited to, the following characteristics: formulating problems in a way that enables us to use a computer and other tools to solve them; logically organizing and analyzing data; representing data through abstractions such as models and simulations; automating solutions through algorithmic thinking (a series of ordered steps); identifying, analyzing, and implementing possible solutions with the goal of achieving the most efficient and effective combination of steps and resources; and generalizing and transferring this problem-solving process to a wide variety of problems.

Standard 7. Analyst

Educators understand and use data to drive their instruction and support students in achieving their learning goals. Educators:

- 7.a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.
- 7.b. Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.
- 7.c. Use assessments and other qualitative and quantitative data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.

Standard 7 Terminology:

1. **Alternative ways to demonstrate competency.** Alternatives for how students demonstrate knowledge, skills and dispositions might include students exhibiting competency in a final project or presentation; using an e-portfolio system that manages student artifacts and reflections; and allowing students to choose their pathway for learning and when they show competency rather than forcing all learners into the same pace or schedule.
2. **Reflect on their learning.** Use digital tools to reflect on the process of learning, successes and areas for improvement, and to set goals for future adjustments to improve learning focus, process or approach.
3. **Formative assessments.** Examples include apps that take real-time measures of knowledge and understanding through surveys or embedded questions; recording software that allows students to reflect on or explain their thinking; sites and apps

where students respond to discussion or reflection questions; and backchannel chats or messaging systems that allow students to ask questions or clarify for each other.

4. **Summative assessments.** Examples include, tests that allow for visual, interactive or other responses as an alternative to traditional testing questions; performance-based assessments that showcase knowledge, process and thinking; portfolios, videos or competency-based assessments that can be completed and evaluated when students feel ready; and tools that differentiate for students of differing abilities.
5. **Accommodate learner needs.** Account for and understand diverse student learning needs to support the success of all learners.
6. **Timely feedback.** Feedback that maximizes digital tools to provide students substantive feedback as quickly as possible. Examples include built-in data capturing of assessment systems and other digital tools; modeling how to understand and use tool-embedded feedback mechanisms such as "help" tips, error notifications, and gamified success or failures; using commenting tools or audio and video tools to provide direct feedback on student work.
7. **Inform instruction.** Analyzing assessment data to adjust current instruction or iterate on future instruction. Applies to both class-wide and individual student instruction approaches.
8. **Assessments.** Process of gathering both formative and summative data from multiple sources to refine educational programs and improve student learning.
9. **Quantitative Data.** Numerical data that express a certain quantity, amount, or range.
10. **Qualitative Data.** Non-numerical data gathered through techniques such as interviews, observations, documents, or artifacts (e.g., art, photos, videos, etc.).
11. **Student self-direction.** Student ownership of learning goals, process, and demonstrations of competency that can be enhanced with transparency and knowledge of how to capitalize on assessment data from teachers, administrators, parents or guardians, and students themselves.

Standard 8. Coach

Educators plan, provide, and evaluate the impact of professional learning for educators and leaders to advance teaching and learning with technology. Educators:

- 8.a. Establish coaching relationships to support educators as they explore new instructional strategies and integrate technology to improve student learning.
- 8.b. Design and implement professional learning based on needs assessments and the theories and frameworks for adult learning.
- 8.c. Evaluate the impact of professional learning and continually reflect on how to improve coaching and professional practice.

- 8.d. Foster educator participation in professional learning networks to help them connect with other educators and stay abreast of current and emerging technologies and innovations.

Standard 8 Terminology:

1. **Professional Learning.** Learning through various instructional designs such as job-embedded professional development (Darling-Hammond & McLaughlin, 1995; Hirsh, 2009), instructional coaching (Knight, 2007), professional learning communities (Dufour, DuFour, Eaker, Many, & Mattos, 2016), or professional learning networks (Trust, 2012), which may be a directed initiative or independently chosen and planned by the professional.
2. **Coaching relationships.** Dispositions that strengthen the working relationship between coaches and educators, such as social-emotional awareness, self-awareness, a sense of ethics and integrity, active listening, and effective communication.
3. **Explore new instructional strategies.** Learn, try out and iterate a variety of proven, promising and emerging instructional strategies and once decisions are made, incorporating selected resources into regular practice and work flows.
4. **Integrate technology. When educators and students use technology in the classroom as a tool for learning.** For example, students use technology to demonstrate their learning by creating movies, podcasts, slide shows, etc.
5. **Needs assessments.** A systematic approach for identifying areas for professional learning and assessing the capacity to meet those needs.
6. **Theories and frameworks for working with adults.** Theories for working with adults, developing learning objectives based on learners' needs, providing a process for achieving those objectives, creating opportunities for learner choice, and evaluating learners' progress.
7. **Evaluate the impact of professional learning.** Measuring and analyzing participant feedback about specific professional learning, and evaluating aggregated professional learning against system goals for changes in culture or teacher practice.
8. **Professional learning networks.** Virtual, blended learning or in-person communities like professional learning communities.
9. **Emerging technology.** New technologies or using existing technology in new ways.
10. **Innovations in pedagogy.** Shifts in teaching and learning, such as increased personalization and differentiation; real-time or asynchronous collaboration; authentic projects with experts and real-world data; providing immediate feedback using digital tools; competency-based assessments and data analysis tools.
11. **Innovations.** Ideas or creative thoughts that come from either "invention" (something totally new) or "iteration" (a change of something that already exists).

References

- Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*, 92(6), 81–92.
<https://doi.org/10.1177/003172171109200622>
- DuFour, R., DuFour, R., Eaker, R., Many, T. W., & Mattos, M. (2016). *Learning by Doing: A Handbook for Professional Learning Communities at Work™ (An Actionable Guide to Implementing the PLC Process and Effective Teaching Methods)* (3rd ed.). Solution Tree.
- Hirsh, S. (2009). A new definition. *Journal of Staff Development*, 30(4), 10–16.
- Knight, J. (2007). *Instructional Coaching: A Partnership Approach to Improving Instruction*. Corwin Press.
- Trust, T. (2012). Professional learning networks designed for teacher learning. *Journal of Digital Learning in Teacher Education*, 28(4), 133–138.
<https://doi.org/10.1080/21532974.2012.10784693>