





Acknowledgments

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INTRODUCTION

The Google IT Support Professional Certificate

The IT Support Professional Certificate, developed by Google and hosted on the Coursera online learning platform, can help people prepare for entry-level jobs in IT support in about six months. No experience is necessary.

The Certificate consists of five required courses that cover the fundamentals of IT support. Through a dynamic mix of video lectures, quizzes, and hands-on labs and widgets, the courses introduce learners to troubleshooting, customer service, networking, operating systems, system administration, and security. Along the way, participants will hear from Google employees with unique backgrounds and perspectives who started their careers in IT support.

How to Use This Guide

Since Grow with Google launched the Google IT Support Professional Certificate in January 2018, thousands of learners, often with no prior experience or college degree, have earned their Certificates. Most completed on their own. Yet learners can and do benefit from support outside of Coursera in classroom or online settings.

This guide is intended for Learning Facilitators, or those who support learners as they complete the Google IT Support Professional Certificate program. It is not a teacher's manual for the Certificate; rather, the guide contains practical strategies and examples that anyone can use to help learners to succeed. The guide, which we will update as additional insights emerge from provider organizations, draws upon a range of high-quality resources from the field to highlight specific practices that support learners completing the Certificate.

What is a Learning Facilitator?

A Learning Facilitator is anyone who helps learners gain new skills and knowledge in a program of study. Facilitators might be subject matter experts (teachers or professors), but do not have to be. Learning Facilitators:

- Provide access to educational resources;
- Organize the learning environment (in person or online);
- Monitor learner progress and coach learners;

- Provide opportunities for learners to reflect on their learning, self-assess, and take ownership of their own learning; and
- Encourage supportive social practices such as milestone celebrations and peer support opportunities.

If you have ever coached someone or a group of people through a task, many of the techniques we present in this guide may look familiar to you.

This resource is a companion to the *Quick-Start Guide for New Provider Organizations found* here. It was created by JFF, a national education and workforce nonprofit, with the support of Google.org and Grow with Google. JFF has been working with a range of high-performing nonprofit organizations and community colleges –in select states– to offer the Google certificate to learners. If you're interested in joining a learning community with provider organizations, attending a webinar, or learning more about the Certificate, please email JFF at jffcollaboration@gmail.com.

QUICK TIPS FOR SUCCESSFUL FACILITATION

Short on time? Take a look at these quick tips first, which we reinforce throughout the guide. Some apply to facilitation in general, and others are specific to online or hybrid learning like the Google IT Support Professional Certificate.

What a Good Facilitator Does

1. Model peer learning

You don't have to be the expert. Either in person or through technology, tap into the group to help answer a tough question and show learners that they can find the answer together.

2. Build a social environment

Encourage participants to get to know each other. Consider creating a group or program name. Use collective pronouns like "we" to emphasize a group identity.

3. Manage expectations

Each learner will face challenges along the way, and every person defines success differently. Be realistic with learners when they experience difficulty and speak candidly about what they will accomplish during a given period of time.

4. Encourage reflection and self-assessment

Research and experience show that allowing learners the time to reflect on their learning process helps to boost achievement. Ask for feedback on how the courses are going and be prepared to change plans to adapt to your learners' strengths and challenges.

5. Connect the curriculum to learners' goals and career pathways

Learners benefit from knowing how their coursework relates to their goals and how it can support them in their own career development. Integrate activities and discussions to help make these connections explicit to learners.

6. Connect learners to IT experts

Learners benefit from <u>interacting with IT professionals</u>, whether they are industry partners in your region or subject matter experts within your own organization. Consider how to involve industry. Some providers hire IT professionals as facilitators or invite them to participate in special topic sessions or career exploration activities.

Roles for Facilitating Online or Hybrid Learning

As an online learning facilitator, you can play many different roles* according to your own knowledge, resources, and abilities, such as:

1. Fixer and explainer of the technology

Practice on your own and invest time in <u>helping learners access</u> the Coursera and Qwiklabs platforms.

2. Pacing monitor

Help learners set <u>SMART goals</u> for their completion progress, and check to ensure they are on track.

3. Highlighter

Draw learners' attention to critical material and alert them to challenging content ahead.

4. Explainer of the content

Help answer questions about confusing concepts by empowering learners to ask each other, use online sources, like Coursera's virtual forums, or reach out to an expert.

5. Extender and applier of ideas

Take advantage of opportunities to bring concepts to life by drawing on outside speakers or asking learners to share personal stories.

6. Feedback and assessment provider

Facilitators have a "balcony view" of the whole program and can help identify topics that are troublesome for everyone. An online learning facilitator can also craft basic assessments to allow learners to evaluate how they are doing.

7. Coach

Get to know your learners and their individual barriers and assets. Help learners anticipate and plan ahead of upcoming personal commitments to avoid dropping off the program. Celebrate their accomplishments. Connect them to outside resources when necessary.

*Adapted from Pursuing Deep Equity in "Blended" Classrooms: Exploring the In-Person Teacher Role in Supporting Low-Income Youth Through Computer-Based Learning

WHAT WORKS IN ONLINE LEARNING

The Google IT Support Professional Certificate is available online through Coursera. Researchers have studied models of online learning to identify critical design elements and test what works best for learners. Learning Facilitators can draw on this information to decide how to organize the learning environment, and to identify what supporting activities they can provide to learners. This section of the guide provides an overview of online learning types and explains the practices that research has shown to be effective in supporting online learners.

Online Learning Designs

The <u>Quick-Start Guide</u> provides information that organizations should consider when building a program around the Google IT Support Professional Certificate, including example instructional designs such as hybrid or online-only. Within each of these categories, Learning Facilitators have many options for how they want to execute the Certificate.

For example, an online learning activity is commonly characterized by the extent to which the activity is *synchronous*, with instruction occurring in real time whether in a physical or a virtual place, or *asynchronous*, with a time lag between the presentation of instructional stimuli and student responses.

The chart below highlights several types of online learning experiences and how they differ for the learner. As you review your options, consider which program elements you may be able to organize. Most Google IT Support Professional Certificate learners explore the course content on their own time and look to Learning Facilitators to provide additional instruction or support activities in real time, either face-to-face or online.

Conceptual Framework for Online Learning

Learning Experience Dimension	Synchronicity	Face-to-Face Alternative	Face-to-Face Enhancement
Expository Digital devices transmit knowledge	Synchronous	Live, one-way webcast of online lecture course with limited learner control (e.g., students proceed through material in set sequence)	Viewing webcasts to supplement in-class learning activities
	Asynchronous	IT course taught through online video lectures that students can access on their own schedule	Online lectures on advanced topics made available as a resource for students in a conventional IT class
Active Learning The learner builds knowledge through inquiry-based manipulation of digital artifacts such as online drills, simulations, games, or microworlds	Synchronous	Learning how to troubleshoot a new type of computer system by consulting experts through live chat	Chatting with experts as the culminating activity for a curriculum unit on network administration
	Asynchronous	IT course taught entirely through web quests that explore changes in technology over time	Web quest options offered as an enrichment activity for students completing their regular IT course assignments early
Interactive Learning The learner builds knowledge through inquiry-based collaborative interaction with other learners; teachers become co-learners and act as facilitators	Synchronous	IT course taught entirely through an online collaborative ticket management simulation that multiple students interact with at the same time	Supplementing a lecture- based course through a session spent with a collaborative online simulation used by small groups of students
	Asynchronous	Professional development for IT teachers through "threaded" discussions and message boards on topics identified by participants	Supplemental, threaded discussions for pre-service teachers participating in a face-to-face course on evolving trends in technology

Exhibit reads: Online learning applications can be characterized by (a) the kind of learning experience they provide, (b) whether computer-mediated instruction is primarily synchronous or asynchronous, and (c) whether they are intended as an alternative or a supplement to face-to-face instruction.

Adapted from: Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies (Washington, DC: U.S. Department of Education, 2010), https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

Best Practices

The practices below have had a positive impact on learners' self-confidence and learning gains in a wide range of online and in-person learning contexts—including postsecondary education and workforce development programs—and are relevant for older youth and adult learners alike. Learning Facilitators can adapt these these practices to each site's local context, taking into account the target learner population and the site's programming structure. Learning Facilitators can use each practice individually or as a set to put the target population on the path to completion of the Google IT Certificate program and to a successful career. When used consistently, these practices can help advance the capacity of Google IT Certificate providers to serve learners and support ongoing refinement of effective instruction.

Build Social Connections

Learners are more likely to both seek and offer help to overcome challenges within the group when they are in a trusting environment. As the Learning Facilitator, create experiences that build rapport among peers. Consider having the learners create a name for their cohort. Early in the program, have learners share their personal goals and motivations for completion. Recognize important milestones with the group, such as course completions or passing an especially tough assessment. Make time for collaborative activities or peer leadership. The right mix of activities will vary from group to group; regardless of group dynamics, investing in relationship building will improve communication and increase the likelihood that learners will reach out for support when they need it. Using free tools such as Google Groups, all Learning Facilitators, including those who are online-only, can create spaces for private interaction between group members.

Resources

- Google: What can you do with Groups?
- Society for the Teaching of Psychology: <u>Building Community in the Classroom through</u> <u>Ice-Breakers and Parting Ways</u>
- Inside Higher Ed: Online Students Don't Have to Work Solo

Include Reflection Opportunities

It is crucial to build time for formal learner reflection into the course curriculum, since learners may be unaware of how they learn best and which study strategies are most effective.

Learner reflection is designed to (1) deepen learners' understanding of self, behaviors, values, and insights they have about how they interact with their learning environment, and (2) use that information to meet their goals. Activities such as written journaling or using a video/audio recording can be effective in helping students develop reflection skills and seeing reflection as a

critical part of their learning process. Building a culture of reflection helps learners take a step back to learn from mistakes and recognize their strengths and weaknesses. It can make the difference between success and failure, in school and beyond. The following resources offer quick practical tips to integrate and make reflection a routine practice in the facilitation approach.

Resources

- Wabisabi Learning: Twenty-Five Self-Reflection Questions to Get Students Thinking about Their Learning
- Napa Valley College: <u>Using Critical Reflection Exercises to Enhance Student Learning</u>
- NuReva: 15 ways to spark student reflection in your college classroom.

Build Learners' "Grit"

It is important to gauge the degree of a learner's motivation and engagement, which typical assessments don't often capture. Adults who have struggled in school often benefit from discussions that build their sense of self-efficacy and confidence in themselves as learners. Facilitators can assist by providing continued feedback and support to help students with converting negative self-talk or lack of confidence into positive self-instruction. In turn, building new and effective habits motivates students and increases their likelihood to persist. In this way, facilitators can increase learners' capacity for resilience. Researchers like Angela Duckworth often refer to this notion as "grit."

Resources

- Angela Duckworth's Grit Scale
- Edutopia: True Grit: The Best Measure of Success and How to Teach It

Use Formative Assessment to Adjust Pacing

Formative assessments check progress toward learning objectives at a specific point in time rather than at the end of a learning experience. They can help facilitators identify which learners need more help and which might benefit from acceleration strategies, and then adjust their instruction and lesson plans accordingly. Learning Facilitators can conduct formative assessments in several ways, including:

- Checking for understanding either virtually or in-person;
- Using pace charts to monitor progress to date; or
- Identifying trends in performance for the group or individual.

Resources

- NWEA: 27 Easy Formative Assessment Strategies for Gathering Evidence of Student Learning
- eLearning Industry: Formative Assessment in eLearning: What eLearning Professionals Should Know
- Campus Technology: sample pace chart

Support Learners in Self-Assessment

Setting expectations and goals of the training early on can help facilitators and learners establish a culture of reflective analysis and self-assessment during the training. Learners typically come to the training with different backgrounds and experiences, and may not be aware of how evaluating their own learning can support their advancement in the Google IT Certificate program. It is crucial to highlight the importance of reflective analysis and self-assessment during the learning process and include activities that enable learners to adopt different methods of assessing their own experience. Self-assessments can occur in various ways, including orally as a whole class, in small groups, and in written form. The latter should include follow-up from Learning Facilitators who devote some time to questioning learners about what they have written and asking them for additional explanations.

Resources

- Australian Journal of Adult Learning: Self-evaluations in adult education and training
- City University of New York: <u>Sample Reflective Questions and Prompts</u> (page 122 at the link)
- Robin Cook Bondy: <u>Self-Assessment: why I support it in Adult Learning</u>

Teach Learners to Engage in Self-Regulated Learning

Self-regulated learning strategies are research-based instructional techniques that help learners monitor and manage their own learning skills and habits. The Institute for Education Science's Strategies for Postsecondary Students in Developmental Education—A Practice Guide for College and University Administrators, Advisors, and Faculty, linked under Resources below, discusses strategies to teach students how to become self-regulated learners. This includes focusing students on the parts of the learning process over which they have control.

The guide highlights four key steps in teaching learners to self-regulate: demonstrating how to (a) approach a task, (b) implement that approach or strategy, (c) evaluate how well the approach or strategy worked, and (d) decide what to do next. Facilitators should encourage learners to improve their estimation of their current capabilities, integrate monitoring and

reflecting on the learning process with coursework or course content, and present learners with examples and models of how to monitor and reflect on the course subject matter.1

Resources

• What Works Clearinghouse: Strategies for Postsecondary Students in Developmental Education—A Practice Guide for College and University Administrators, Advisors, and Faculty: Recommendation 5 (starting at page 44)

PROMISING PRACTICES FOR FACILITATING THE GOOGLE IT SUPPORT PROFESSIONAL CERTIFICATE

Effective facilitation can take many forms. The following are examples of what current Learning Facilitators at provider organizations have been doing to keep their learners on track to complete the Certificate.

Examples from the Field: Nonprofit Organizations

Creating Opportunities to Catch Up

Programs like the Google IT Support Professional Certificate have flexible pacing. Learners can speed up when they easily grasp key concepts in the curriculum or slow down when life or the content becomes challenging. In some cases, some learners might fall behind their peers and need to catch up.

Both Kiron Open Higher Education in Germany and Francis Tuttle in Oklahoma City, Oklahoma, have implemented a creative approach to solve this problem. They instituted special sessions on a weeknight or Saturday morning specifically for learners to catch up to their peers. At Francis Tuttle, even those who are on track can come in to assist their peers. All session attendees are rewarded with transit support funding that helps everyone make it to the session.

Catch-up sessions can be either structured, with a facilitator leading the group through a challenging topic, or more open access, serving as a lab session where participants can work on their own and call in support from a facilitator or peer as needed.

Leveraging Peer Leadership

At Year Up, an organization that works with opportunity youth and young adults, learners in Baltimore and Los Angeles are offered the chance to help their peers succeed in the Certificate courses. When learners express interest in taking the Certificate, Year Up asks them if they might be interested in a leadership opportunity. Year Up then selects a small number of applicants to help lead the Certificate program.

Peer leaders are volunteer facilitators who move through the Google IT Support Professional Certificate courses on their own while also helping check on a small group of peers. They are responsible for scheduling small-group study sessions and keeping Year Up staff updated on their group's progress.

The peer leadership structure helps to prepare Year Up learners for a team-based workplace while keeping the entire cohort on track at the same time. It also provides opportunities for learners to reflect on their learning experience and participate in problem-solving efforts for their whole group.

Tapping into Learner Motivations

Goodwill Industries International has a network of sites across the United States offering the Google IT Support Professional Certificate. These Goodwill locations serve a diverse population of adult learners with a wide range of abilities. Recognizing that every learner has a unique reason to participate, some Goodwill sites have found that tapping into individual aspirations can help drive success.

At some sites, Goodwill asks participants to hold up a white board where they have written their own reason for taking the Google IT Support Professional Certificate. A Goodwill facilitator then takes a photo. When learners enter Course 3, which challenges them with several hands-on lab activities, the facilitator sends the photo back to the learners as a reminder of the reason they chose to participate.

This approach combines a personal understanding of each learner's story with data-driven insights about when learners typically encounter challenges. Facilitators can help learners tap into their own motivations.

Learners can also benefit from seeing the success of others who have completed the Certificate—especially those who may have faced similar struggles or barriers. Google updates its IT Support Certificate page with learner success stories that can serve this purpose.

Examples from the Field: Community Colleges

Tracking Individual Learner Progress

At Eastern Gateway Community College (EGCC) in Ohio, faculty who facilitate the Google IT Support Professional Certificate rely on more than just their IT expertise to help learners succeed. They spend a significant amount of time understanding their learners' experience throughout the Certificate courses.

At EGCC, all learners experience the course completely online, and many do not have time for synchronous (real-time) interaction with their Learning Facilitators. To make sure that they still understand how learners are doing, EGCC faculty use the data available to them in the Coursera dashboard to see which assignments or labs are missing, how much progress each

student has made, and whether there are any trends in the cohort (such as a particularly tough assessment). More information on making the most of Coursera can be found on the <u>Coursera</u> website.

Even basic progress information allows EGCC instructors to send messages congratulating learners on their success or proactively reach out to those who are less active or who may be off track. Investing time to build a detailed understanding of where learners are succeeding or faltering can help Learning Facilitators budget their time wisely when doing outreach.

Infusing Industry Knowledge

At Grand Rapids Community College in Michigan, most learners work at their own pace and then attend optional lab sessions with a Learning Facilitator. At first, the labs simply reinforced content from the Certificate courses themselves, such as the proper method to disassemble and reassemble a computer.

The Learning Facilitator, who operates a local IT consulting business, noticed that lab attendance began to decrease after the first few sessions. After informally surveying the learners, the Facilitator decided to use lab time differently: instead of reinforcing content with every lab session, the Facilitator used the sessions to provide examples of how learners might apply the skills from a given section in a real-world context with a client. The Facilitator would offer examples, such as how to understand and logically organize a client's local network into subnetworks. Once the lab sessions became more connected to real-world practice, learners began attending in larger numbers.

Facilitators don't have to work in the IT industry to bring in real-world knowledge. At College of the Canyons in California, Learning Facilitators invite industry experts for weekly "lunch and learn" sessions, during which participants can interact with local IT professionals in a casual setting. Facilitators can even use online platforms such as Nepris to allow IT professionals to join the group virtually.

TOOLS AND RESOURCES

This compilation of materials created by JFF, Coursera, and other national organizations provides more information for learning facilitators as they design, operate, and continuously improve their Google IT Support Professional Certificate program delivery.

The Google IT Support Professional Certificate and Coursera Platform

- Coursera administrator guide (Coursera for Business)
- Quick-Start Guide for New Provider Organizations (JFF)

Best Practices for Facilitating Online Learning

- P2PU Learning Circles Facilitator Handbook (P2PU)
- Facilitating Online: A Course Leader's Guide (Centre for Educational Technology)
- Blended and Online Learning (Vanderbilt's Center for Teaching)
- Pursuing Deep Equity in "Blended" Classrooms: Exploring the In-Person Teacher Role in Supporting Low-Income Youth Through Computer-Based Learning (Teachers College Record)
- Online Student Engagement: Tools and Strategies (Faculty Focus Special Report)

Employability Skills: Definitions, Curricula, and Trainings

- Common Employability Skills (The National Network)
- Framework for 21st Century Learning (Partnership for 21st Century Learning)
- Employability Skills (U.S. Department of Education)
- Skill Building Blocks (MHA Labs)
- 21st Century Employability Skills (New World of Work)
- Skills for the 21st Century (Center for Curriculum Redesign)

HOW TO CONTRIBUTE TO THIS GUIDE

This guide is a living resource. JFF will continue to add tools and examples of promising practices created by providers offering the Google IT Support Professional Certificate. JFF invites facilitators working with the Certificate to contribute to future versions of the guide.

Give Us Feedback

Have you tried some of the techniques suggested here? Let us know how well they worked, what you changed, or what else should be included to make the guide more helpful to facilitators. If you have successfully used other strategies not covered here, share them with JFF.

Submit Your Own Tools and Resources

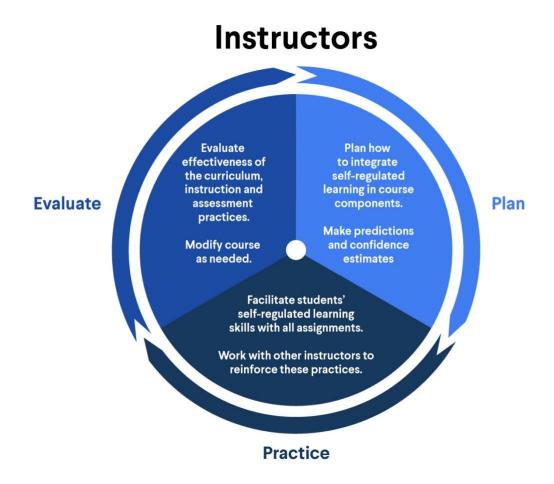
JFF is actively compiling a collection of example resources that Learning Facilitators use, including

- Course schedules or syllabi;
- Pace charts;
- Lesson plans for supplemental learning activities;
- Course guides;
- IT industry guides; and
- Other instructional materials created by provider organizations.

We encourage providers to contribute to this resource library by emailing JFF. Future versions of this guide will include instructions on how to access the resources that provider organizations shared.

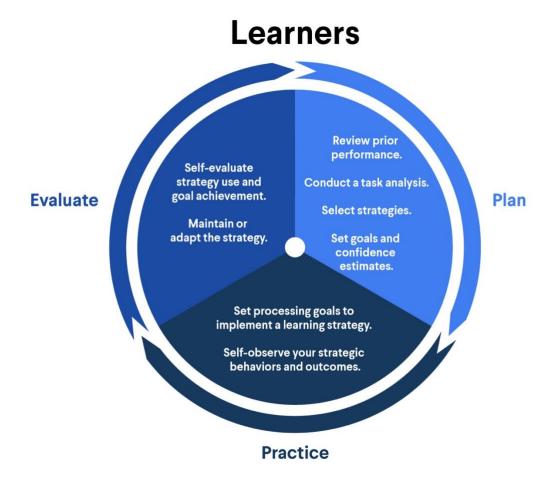
APPENDIX A: SELF-REGULATED LEARNING

Self-regulated learning can be defined as one's ability to understand and control one's learning environment. Self-regulation abilities include goal setting, self-monitoring, self-instruction, and self-reinforcement.²



Adapted from: Strategies for Postsecondary Students in Developmental Education—A Practice Guide for College and University Administrators, Advisors, and Faculty (Washington, DC: U.S. Department of Education, 2016), https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/wwc_dev_ed_112916.pdf#page=50

² TEAL Center Fact Sheet No. 3: Self-Regulated Learning (Washington, DC: American Institutes for Research, 2010), https://lincs.ed.gov/sites/default/files/3_TEAL_Self%20Reg%20Learning.pdf.



Adapted from: Strategies for Postsecondary Students in Developmental Education, https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/wwc_dev_ed_112916.pdf#page=50.