Teaching and Supporting Pre-Service and In-Service Teachers During COVID-19

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The Institute for School Partnership connects Washington University with the surrounding K-12 community to inspire and empower educators and students with the resources they need to succeed.

We identify best practices in teaching and learning and implement these practices in local schools, particularly those with the most vulnerable and underserved students. We translate the most current research in education into learning opportunities for educators at all levels.
How does the ISP support teacher learning?
How does the ISP support teacher learning?
March 16, 2020

Dear University Faculty and Staff,

We are in unprecedented times. The coronavirus (COVID-19) has changed all of our lives and raised deep concerns for all of us. Our primary responsibilities at this time are to take care of ourselves, support our families, do all we can to slow the spread of the disease, and help the university maintain its essential role. Among the most critical of these roles for the university is, of course, the provision of medical services.

In order to help us meet our responsibilities, the university is taking a set of major steps:

1. **Alternate Operations:** To reduce the spread of the disease, starting as soon as possible and no later than next week, only employees who are required to perform essential work that requires a physical presence should report to their place of work. This will last through at least April 6. This week, managers will be identifying essential functions that must be completed on campus and developing department-specific plans for other work that can be completed remotely. In certain areas, particularly—but not exclusively—for those critical to delivering medical services, all work will be deemed essential and employees performing that work will be required to report to their regular location. In some cases, all employees in a unit or doing a specific function that does not require physical presence on campus will be required to work remotely. In others, a skeleton or rotating group will need to be on campus.

   The goal is to implement this change starting March 23, but some units may need more time to develop and implement their plans. If units can develop and implement their plans before March 23, they should. Your manager will provide more information.

2. **Performance of Work:** We recognize that there are some employees who cannot effectively work remotely and whose regular duties and physical presence are not essential under university alternate operations. We will be working with managers to develop plans for redeployment of employees impacted. Employees who cannot work remotely and cannot be reassigned will be eligible for the special paid time off benefit mentioned below. We will be providing more information to employees in this category as soon as possible.

3. **Special Paid Time Off:** During this pandemic, all employees will be eligible for up to 10 days of special paid time off for circumstances related to COVID-19. This is in addition to regular time off policies available to employees. This time off can be used in the case of quarantine, self-quarantine, illness or family care needs related to COVID-19 exposure or other related scenarios. Details of this benefit are available on the COVID-19 FAQ page. Given its important role in delivering health care services to the region, the School of Medicine will distribute a separate policy regarding travel and vacation.

4. **Child Care Services:** Human Resources is working diligently to obtain additional child care services for faculty and staff, prioritizing those who provide medical services and others whose on-campus work is deemed essential. We will be providing you with more information about child-care services as it becomes available.

Attached are a set of FAQs providing more details on the information summarized above as well as other issues related to COVID-19. Additional information is available on the university’s COVID-19 website. Please direct questions to your manager or the university’s COVID-19 hotline (314-935-8390 or 888-234-2863).

I will be back in touch as the situation changes.

Sincerely,

Andrew D. Martin
Chancellor

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Working remotely beginning now, in response to recent Covid-19 news

Corcoran, Heather <hcorcoran@wustl.edu>

Hello UC faculty and coordinators,

The university has just requested that all university employees (including faculty, staff, and all students) begin working exclusively from home, starting tomorrow—this afternoon, if possible. Given the four cases of Covid-19 at WashU, we now have early signs of community transmission. WUSTL health experts are now predicting a fast upick in the number of cases in our vicinity. We need to keep people at home, as many healthy as possible. This includes not visiting the campus for quick pickups of items, mail, etc. I underscore: no one should be on campus.
Sophisticated online course delivery takes a significant amount of planning and work to achieve!

Mid-semester courses were moved to fully online and faculty had to adapt

Faculty were encouraged to
  - Focus on meeting key learning goals
  - Move all interactions to Canvas
  - Revise academic policies

Support was offered in the form of
  - Workshops
  - Consultations
  - Resources and models
  - Virtual conversations

Additional supports added into the new academic year
Code.org as a Test Case

March - June

● Uncertainty over fate of Summer PD
● Participated in 3 Code.org Virtual PDs in preparation
  ○ Released tips for leading virtual workshops
● Building upon Code.org Virtual Model to move workshop online
  ○ 3.5 hours synchronous daily
  ○ 1-2 hour asynchronous work daily
I am glad this is a discussion topic. I have had this conversation with my school’s administration, colleagues, parents and students. I teach at an all boys high school and the biggest barrier I face in CS is the lack of students of color that participate. This year, I with a group of CS/STEM students, have formed a committee to address this very issue. We have begun by listening to students of color to find out why they don’t participate. It has been very educational and enlightening.

I have had a very similar issue. I work in a predominantly black school (~95%) and CS-based electives have historically been extremely hard to get students to enroll in and have been disproportionately white when compared to our population.
What were the one or two things you liked most about the activities you did in this workshop and why?

- just interacting with others and learning from them.
- I liked the hands on approach to learning and the collaboration with both experienced and new teachers.
- I liked the plugged activities because they gave me more hands-on learning.
- I liked the breakout sessions because it allowed us to interact with other CS teachers. The lessons where we worked on code.org was beneficial, since we actually got to experience things as a students, with other teachers around to help us out.
- I enjoyed the break out rooms, I listened and the understanding for the CS class became clear.
- The hands on work in the App Lab, and the collaboration with peers.
- I really liked the hands on stuff where we could be the learner and practice with the widgets and the platform.
Improvement Science

Driver Diagram
(possibly wrong, definitely incomplete)

AIM: Supporting ourselves & our stakeholders during this time of crisis
(short term & long term, with equity lens)

Internal Systems
Parent Support
Student Support
Teacher Support
District/School Support
Nurturing Social-Emotional Health

Internal processes functioning well
Knowledge of science, grade level appropriateness, questioning strategies
Activities that support STEM learning

High-quality virtual instruction
Connection/collab. among teachers
Activities that support STEM learning

Knowledge of ISP resources and best practices
Feeling "heard"

Long-term & ongoing planning support

Primary Drivers
Secondary Drivers

Draft 3.27.20
mySci: Using improvement science for teacher learning

**Goal:** Identify the needs of our teachers, gather practice based evidence and evidence based practice to build consensus within our organization around our to approach to virtual professional development.
mySci: Using improvement science for teacher learning

**Plan:** Shared lessons learned from participating in and/or leading virtual PD.

**THINK TIME** Reflect/review your notes from these PDs: what ideas &/or strategies from these PDs are worth sharing for the good of the group.

- **What idea(s) might help us refine our ISP PD doc?** (e.g. equity, deep learning, best practices)
  - Deeper learning and time - everything takes longer virtually so plan for that - ME/MT/RR
  - Needs assessment, reflection, learner as decision-maker - RR/RC
  - Teacher have expertise and can lead PD - JN/LC/LA
  - Participation in learning, actively pushing against "sage on a stage" model - ME/WL/LA/RC
  - "ALL Ss will..." as a type of - DMG/RR/AL

- **What virtual facilitation strategies/structures/tools should we consider?**
  - Getting all of our individual Zoom settings set up "right" - ME/HM/AB/AL/LC/RL
  - Minimizing number of platforms used/docs to access for sessions - MT/RR/LA/CL/dg/AB
  - Built-in/structured independent think/work time - AL/HM/AB/LC
  - Norm setting and intentional introductions - RR/LA/AB/CL
  - Plan to scaffold for adult learners - MT/AB
  - Emailing pre-work/meeting slides, agenda early - LC/AL/AB/HM

**Supporting continuous improvement - AL**

- Respect cognitive load by taking frequent breaks - MT/LC
- Be thoughtful in what we "throw out" due to time and zoom fatigue - DMG/LC/AB
- "ALL Ss will..." as a type of - DMG/RR/AB

**Supporting**

- Plan to scaffold for adult learners - MT/AB
- Emailing pre-work/meeting slides, agenda early - LC/AL/AB/HM
- Minimizing number of platforms used/docs to access for sessions - MT/RR/LA/CL/dg/AB
- Built-in/structured independent think/work time - AL/HM/AB/CL
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- Plan to scaffold for adult learners - MT/AB
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**We should be**

- Add 15 min

**Explicit deliverables for breakout groups, JK, TE, HM, MT, RR LC/AL, AB**

**Structure time for introductions during breakout rooms (if needed), JK, TE**

**Shared reference points for group discussion (e.g. a scenario, video, short reading, data set), AB/MT**
mySci: Using improvement science for teacher learning

**Do:** Practiced Internally

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**Should we change what plants live around our home?**

**What We Think Right Now**

- **I think**
  - Yes, because if we just have grass there's not enough different things for plants and animals to eat. Bees are important and they don't eat grass. We should have plants to attract bees. - RR

- **because**

- **IDK. The plants around my house seem fine. Why should I change it if it is fine? I don't have flowers but there are plenty of bees. - TE**

- **We need plants to help feed us during the zombie apocalypse! - TE**

**Questions We Have (What we need to know)**

- **If we wanted to know the answer to this question, I wonder...**
- **What plants are good/not good to have around the house? - MT**
- **What plants are native to our area that I can plant by my house? - MT**
- **What plants are bad for pets? - TE**
- **What plants require the least amount of water/care? - TE**
- **How did the plants get to my house in the first place? - RR**
- **What plants come back every year? - RR**
- **What plants can we grow that we can eat? - TE**

**Breakout Room Norms and Roles:**

1. Choose one person to record answers (one sticky note per answer).
2. Choose one person to keep track of time. You have 7 minutes.
3. Everyone gets to speak at least once. Don't hog the airwaves.
4. There is no "right" or "wrong" answer right now.
mySci: Using improvement science for teacher learning

Study: Gave and received feedback

- **Quick and simple activity - bite sized - LC**: Cog board was fine for me. I have been up for two hours now (no coffee yet) and don’t feel overwhelmed. This was a good start for me - Melanie

- **Norms for breakout rooms were an improvement! AL**: I liked having an easy "intro" activity for those who are still feeling out Jamboard

- **What are the norms that facilitate using technology and how do we introduce and support these?**: What did you like about this?

- **Is there an effective way to do verbal "roadmapping" during a session? - LC**: What questions do you have?

- **It would be good to have the sentence stems/table tents for discussion visible in the breakout room +1 TE**: Is it important to use one consistent tool (Jamboard vs. Google)? - AL

- **Clarity of directions is always important - in the breakout rooms it was a little hard to go back to the norms/directions/spaces... +1(MT)**: Can you save what is shared in the jamboard to revisit another time? - MT

- **It’s difficult to go between various platforms. For example, looking at the shared screen and finding the jamboard and then trying to find the zoom screen again. I didn’t get back to see Lauren’s grass before you moved on. Add task card not on the same page as the breakout room jamboard slide was confusing +1 TE**: Task card not on the same page as the breakout room jamboard slide was confusing +1 TE

- **I probably would not have done a whole-group consensus slide and instead asked to use the chat for themes**: Notes get "lost" behind other notes. I also know that they have to show them. +1 TE

- **What would you change about this?**: What would you change about this?

- **What did you learn?**: What did you learn?

**NEXT STEPS:**
- **Tech team (Denise and Tori): "best virtual PD practice"**
- **Test told us you can make the timer visible to participants in the Zoom breakout rooms (I want to learn how to do this AL + LC)**
- **Setting up Zoom breakout rooms: you need to be the host and there’s a difference between random & assigning people to specific rooms**

- **Some districts reduce the use of Jamboard**
**mySci: Using improvement science for teacher learning**

**Act:** Developed tools to promote consistency through our organization.

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**Virtual Professional Development Menu 2020**

<table>
<thead>
<tr>
<th>PD Title</th>
<th>Short Description</th>
<th>Time Frame</th>
<th>Template/Tool</th>
<th>Draft Slides</th>
<th>&quot;Chew&quot; Slide Templates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to mySci (for K-5 students or PD)</td>
<td>This PD provides an overview of the mySci program and all of its physical and virtual components that are launched with mySci. Current mySci teachers may also benefit from this session as a refresher and update on all of the new virtual tools, resources and website changes.</td>
<td>60 minutes; asynchronous + 60 min synchronous tea</td>
<td>Javiera (K-5)</td>
<td>Javiera (K-5)</td>
<td>Asynchronous A+B's slides; Asynchronous A+B's slides</td>
</tr>
<tr>
<td>mySci K-8 PD</td>
<td>Kit PD helps teachers unpack the big science ideas from a particular unit and engage in the &quot;how to&quot; of class lessons and materials. Teachers walk through a day of teaching that will help them more confident and effective in teaching implementing the grade-specific mySci units.</td>
<td>90-120 minutes; asynchronous + 90-120 min synchronous tea</td>
<td>Javiera (K-5); Javiera (5-8)</td>
<td>Javiera (K-5); Javiera (5-8)</td>
<td>Asynchronous A+B's slides; Asynchronous A+B's slides</td>
</tr>
<tr>
<td>Launching a mySci Unit Virtually</td>
<td>Teachers will engage in the launch of a mySci unit as learners in a virtual environment. Teachers will experience tools and strategies to leverage student engagement and student learning in the context of a mySci unit.</td>
<td>60-90 minutes</td>
<td>Heather (5-8); Heather (K-5)</td>
<td>Heather (5-8); Heather (K-5)</td>
<td>Asynchronous A+B's slides; Asynchronous A+B's slides</td>
</tr>
<tr>
<td>Strategies for implementing mySci Virtually (not a training session)</td>
<td>This session provides teachers with an overview of the mySci program and new resources designed to support the teaching of mySci virtually. Instructional strategies, learning &amp; learning will also be discussed.</td>
<td>60-90 minutes; asynchronous + asynchronous + asynchronous</td>
<td>Tom (K-5)</td>
<td>Tom (K-5)</td>
<td>Asynchronous A+B's slides; Asynchronous A+B's slides</td>
</tr>
</tbody>
</table>

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**Facilitator PD Prep List**

**Provided by Facilitator**

- Email the partnership manager 1 week before the PD to share:
  - Zoom link (link here)
  - Asynchronous pre-work (intro to mySci K-5 example; Summer PD sample)
  - Slide deck with concise agenda, norms for participation and Zoom norms in the slides (see ROOT SLIDE TEMPLATES for virtual PD and iterations thereof)
  - ISP Tips for a Great Virtual Learning Experience

**Virtual PD Details** (Zoom info, # Participants, Contact for mySci)

<table>
<thead>
<tr>
<th>Zoom Link</th>
<th>Set-Up/Staging (Arrival time, logistics planning, breakout grouping of participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ participants</td>
<td>Open Zoom meeting to yourself 15-30 min prior to the official start time to:</td>
</tr>
<tr>
<td></td>
<td>- Check for stable internet connection; have your hotspot as backup</td>
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<tr>
<td></td>
<td>- Perform sound check, visual check (lighting/background), and screen staging (only 1 tab open during screen sharing)</td>
</tr>
<tr>
<td></td>
<td>- Edit breakout room names and set timers for the first breakout activity (see sample)</td>
</tr>
<tr>
<td></td>
<td>- Host ENABLE simultaneous screen share if needed in small groups</td>
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<tr>
<td></td>
<td>- If you plan to have participants edit the slides at any point, set the sharing settings to “anyone with the link can edit.”</td>
</tr>
<tr>
<td></td>
<td>- Ensure the first slide contains all necessary info (link to slides, instructions for any asynchronous work (renaming in Zoom and Zoom link))</td>
</tr>
</tbody>
</table>

Open Zoom meeting to participants in the waiting room 5-10 min before the official start time. As people arrive:

- Host should screen test of first slide at the start time

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**Virtual PD Agenda**

**PD Menu**

**Slides Template**

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**Hello and WELCOME to mySci PD!**

We will begin promptly at TIME.

In the meantime, please:
1. Access the slides at: [THIS URL HERE]
2. Read slides 3-9 for important instructions and an overview of our time together.

In the event that your Internet connection is disrupted, click this [Zoom Link] to get back into the PD session.
**mySci: Using improvement science for teacher learning**

**Act:** Continuous iteration based on feedback from colleagues and teachers

**Virtual Summer Grade-banded Kit PD 2020**

**TODAY’S FACILITATORS:**
- Melanie Turnage: Co-Facilitator
- Lauren Church: Co-Facilitator
- Heather Milo: Logistics Coordinator
How was the PD valuable to teacher professional growth?

“_This was a super helpful session which gave me very practical tips about using MySci in a virtual environment. I don’t think I necessarily grew in my knowledge of teaching science but it is EXACTLY what I needed. I really wish other curriculum companies had something like this._”

-Maplewood Richmond Heights Teacher

Gained Virtual Teaching Skills

“_It was helpful to know where to find and how to use the virtual resources so that we don’t have to re-create them._”

-Pattonville Teacher

Exploring Resources

“_This PD was very well put together and super engaging. I appreciated the facilitators and their willingness to allow the teachers to share their experiences, questions and resources._”

-UCity Teacher

Multiple: Engaging and/or Interactive PD, Professionalism of PD

“_Offering ideas to implement and challenge me to go outside my box! Thank you for that!_”

-Southern Boone Teacher

General Tips and Ideas

“_Very valuable in showing me the new features for online learning as well as going through the different ways that students can respond to the various questions asked throughout science lessons. LOVED getting time to explore the site, resources, and discussing with fellow grade level mates on how we would use these items in our teaching._”

-Multiple: Navigating the mySci Website, Student Engagement Strategies, Peer Collaboration
What adaptations should we consider for future mySci PD?

"Nope, it/everything/you was great!"
-Pattonville, Macon Co. R-I, Confluence, Hazelwood x3, and Union Teachers

Don't Make Any Changes

"It was a bit too long spent on one activity I wish I had more freedom to explore the resources."
-Northside Community Teacher

Pacing/Use of Time

"Breakout rooms for grade levels to look at specific content? Or stick to one unit, like, exclusively, even when looking at extra online resources-- so that you get an idea of what it looks like to cobble together a lesson for your kids."
-Northside Community Teacher

Grade Banding or Grade Level

"I wish we’d had more time"
-Hillsboro Teacher

Pacing/Use of Time

"As an educator of 2nd graders, I spent the entire time thinking how this would look in my classroom. 7yr olds are struggling with technology. I would've like to have seen a lesson for younger students. PD's are always geared around older students."
-Northside Community Teacher

K-2 Focus

"Some time for teachers to plan and work together with a resource, mysci partner Lauren, there to help them if they have questions."
-Northside Community Teacher

Work Time

"Maybe have a video of a lesson being taught for each grade level?"
-Warren County Teacher

Modeling
Designing effective, high-quality, virtual professional learning for educators

September 2020
Jeanne Norris, ISP Instructional Specialist
Rachel Ruggirello, ISP Associate Director

Looking at the consequences of COVID-19, it’s often easy to focus on what’s lost and not what has been potentially gained. While traditional in-person professional development has been the norm, virtual PD, despite some challenges, presents unique opportunities for providers. Pivoting from in-person to online can be an efficient way to meet learning needs, even for those people used to the in-person touch. What’s key is setting up the conditions for a growth mindset.

Below are 10 strategies for educators to design effective, high-quality, virtual professional development learning environments for educators, with practical implementation suggestions.

1 ACKNOWLEDGE HUMANNESS

The virtual environment can feel detached and isolating, as if everybody is on their own island. It can be difficult to read body language and emotions. That’s why it’s extremely important to cultivate empathy by engaging meaningfully with people in your virtual room. Spend time building connections and relationships with participants. Here are some ways to set up your learning experience to counteract the challenges of self-isolation and build a learning community:

• Connect to the people in your room
While ice breakers can be polarizing, there are ways to authentically allow for teachers to connect to you and other teachers. You can use breakout rooms.

What have we learned?

● Acknowledge humanness
● Know your audience
● Reduce cognitive load
● Test the technology
● Engage teachers
● Don’t sacrifice deeper learning
● Advocate for ideal learning experiences
● Allow for multiple learning pathways
Implications

● Improvement takes time and a disciplined approach
  ○ Learn fast, fail fast, and improve quickly

● Some challenges persist
  ○ Access to reliable internet
  ○ Variety of technology platforms and steep learning curve

● In a time of crisis, embrace the potential for innovation and growth!
  ○ Connect with educators in new ways
  ○ Promote collaboration across schools and districts
  ○ Allow for ubiquitous learning
  ○ Increase confidence with technology

Surprisingly, the constraints put in place by technology, allow for more interactive or collaborative experiences than you might have otherwise had in person.
Thank you!

Rachel Ruggirello
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Tori Engel
vengel@wustl.edu
Our reach with virtual PD

Over **439 teachers** attended trainings

Participants from at least **27 districts**

**98 hours** of mySci PD provided