aws educate

Webinar Series on Remote Learning

TITLE

Teaching Online Your head in the cloud, your feet firmly on the ground:
10 suggestions for success

BRIEF SYNOPSIS

As you shift from traditional instruction to online instruction, learn from Dr. Michael Soltys the things you need to consider and actions you need to take for a successful transition. Don't think of this move to online teaching as a one-off, think of this as an opportunity to build an online offering that can serve your department and students for years.

SPEAKER

Michael Soltys

SPEAKER BIO:

Michael is a Professor and Chair of Computer Science, Information Technology and Mechatronics Engineering at California State University Channel Islands (CSUCI). His vision is to build a world-class department where cutting edge research is put at the service of students and community. His Ph.D. is from the University of Toronto, and he was chair of Computer Science at McMaster University (2001-2014), an Ulam professor at the University of Colorado Boulder (2007-2008), a visiting scholar at UC San Diego (2013), authored two books, and published over 50 papers. He specializes in Algorithms, Cybersecurity and Cloud Computing.

DURATION

37 min 53 sec

TIMESTAMPS

0:00 – Speaker Introduction
1:22 – Point 1: Online teaching in this new normal
3:01 – Point 2: Two initial shifts
6:02 – Point 3: The pedagogical shift
9:20 – Point 4: A shift to new tools
11:53 – Point 5: Be creative
13:57 – Point 6: Not a simulation of in-class
16:21 – Point 7: Grading has to be changed
17:56 – Point 8: Structure
19:14 – Point 9: Project enjoyment and passion
21:26 – Point 10: Sometimes online is better
23:47 – Next steps for you

Summary:

The impact of COVID-19 on our global education community warrants the shift of the traditional in-class experience to online. This transition is not easy or swift for most institutions. Educators and students are navigating remote teaching and learning opportunities together and with the support of distance education experts. In this webinar, Michael Soltys - Professor and Chair of Computer Science, Information Technology and Mechatronics Engineering at California State University Channel Islands (CSUCI), shares ten suggestions for online teaching success.

Point 1: Online teaching in this new normal

Online teaching is the new normal. Educational institutions have faced numerous emergencies that have disrupted on-site learning experiences. This current emergency can be viewed as an opportunity for institutions, educators, and students to grow, learn, and adapt. This is also a time for educators to meet the demand of learners who prefer online classes or blended solutions.

Point 2: Two initial shifts

When considering the move from traditional in-class teaching to online teaching, think about two critical shifts; online pedagogy and using new tool sets. These are major shifts to consider since face-to-face interactions and non-verbal cues, that educators rely on for student engagement, may not be present. In most cases, the in-class experience can be simulated and there are a variety of online tools that allow for face-to-face communication and real-time collaboration, plus the added benefit of tracking and reporting. Educators need to spend time learning these new tools and must also consider the unique needs of their students.

Point 3: The pedagogical shift

Going deeper into the pedagogical shift, educators should explore ways to compensate for lost non-verbal communication. Online collaborative tools allow for student discussion through forums and also encourage students to think critically when writing and submitting their responses. There are numerous advantages to using videoconferencing tools for student engagement; many interactions can be archived, repurposed, and revisited. New experiences can be created that go beyond the standard lecture.

Point 4: A shift to new tools

Going deeper into the shift to new tools, educators should commit to learning new tools from the educator and student perspective. Implementing new tools can be challenging, but it is important to exercise patience when adding new tools to the online class experience. Educators should avoid making the class about the tools and maintain focus on the subject matter. Automating processes for the tool and providing clear instructions to students helps sidestep this common pitfall.

Point 5: Be creative

Educators have to be creative. Many subjects can be customized to work successfully in an online environment. There are numerous examples to choose from and educators can utilize existing online courses and resources for students. Hands-on and communal experiences can be simulated with a creative approach.

Point 6: Not a simulation of in-class

Online teaching is its own entity and not a mere simulation of in-class teaching. When transitioning from traditional classrooms, it is important to focus on the advantages of teaching online instead of the disadvantages. Online tools provide numerous features and functionalities that can create fun and interactive learning environments.

Point 7: Grading has to be changed

Considerations should be made regarding online grading. Educators can take advantage of learning management system (LMS) grading options and provide assignments that students can submit. Educators have the same control over student assignments in an online environment but extra measures should be taken to assess student knowledge and reduce the risk of cheating.

Point 8: Structure

All components of an online class must be well structured and organized. Additionally, educators should communicate frequently and reiterate class objectives and expectations; students should know what is required of them each week. Failing to properly structure the class and lack of communication will lead to student disengagement.

Point 9: Project enjoyment and passion

Educator's passion for teaching can be projected to their students online. Teachers should reassure students that time spent learning online is worth the effort and that online education is not second tier to traditional classroom instruction. Teachers should promote online collaboration and discuss how online offerings provide opportunities to learn in-demand skills for the digital workforce.

Point 10: Sometimes online is better

Teaching online can be better for certain subjects, especially technical subject matter. With online platforms, educators can provide the same experience for students and automate processes. Educators can easily control the online environment, allowing for consistent and accurate feedback to students.

Next steps for you

Educators can put the ten suggestions for success into practice by selecting two tools and learning how to use them. Educators can deliver a trial run of the class using one or both of the tools. Recording the trial class and reviewing it will help refine delivery of future classes. Educators can also design a student project that would work well within an online environment.

To access a downloadable version of this content, click here.

If you enjoyed this content, be sure to check out our live and on-demand webinars here.

Q&A with Michael Soltys:

Students & Teachers

Q: Is there a limit of students for an online class where you need to interact with students?

A: That is difficult to answer in general, but I find that you begin to have issues of scale with 50 or more students. I taught large programming classes of 750+, but then you need team of TAs to help reach out to students.

Q: What obstacles have you found with students transitioning online? Instructors are keeping up, however students are having issues with participation.

A: Yes, student engagement is an issue. It is an issue in in-classroom teaching as well. I find the answer to be to keep a very structured week.

Q: For a program like ours - brand new to online - how much is too much? Most all of our teachers are traditional and never taught online or used any online tools. How do you keep this from becoming overwhelming to not only the students but the teachers as well?

A: That is a valid concern. They should start small with basic tools and expand as they become more comfortable.

Q: Do you make recordings available to students and if so, do some students prefer to just learn by watching at a later time?

A: I used to do it, but now I decided against it, because it looked to me that students would skip the lecture, knowing that they can "always do it later." But in practice, they would just not do it, not to mention that if they watch it later, they don't have a chance to ask questions.

Q: 90% of my students do not have computers with internet. Consequently, their phones are their only access. Public libraries might be a resource, but many work or have children at home. Do you have any suggestions for online classes using only the phone?

A: That is a good point. The tool you decide on using should be based on guidance from your school or district.

Q: Do you see any benefits of using "peer grading" in an online class setting?

A: Very interesting question. I remember when I was in school, I didn't like it when the teacher did it, but now as I teacher I see great benefits (e.g., learning from both the mistakes and successes of other students, and humility.

Q: How do you hold students accountable and encourage participation?

A: Canvas has a nice feature that allows you to measure and grade student engagement - https://support.canvas.fsu.edu/kb/article/893-how-do-i-track-student-activity-in-my-course/

Q: Any suggestions for confirming the identity of students, especially during exams?

Given the COVID-19 situation, some certification centers are doing "at home proctoring". They do it by having a camera on the student.

Q: Any suggestions for teaching English Language Learners who have minimal computer skills?

A: Computer Science is an easier field than others for ESL people.

Tools & Techniques

Q: Other than Zoom, what other online tools are there?

A: Amazon Chime, Canvas, Blackboard

Q: I've never used blog posts. Any ideas?

A: I am using WordPress and posting to broadcast information, see: https://prof.msoltys.com/?page_id=1096 - I find it a very valuable tool

Q: Thanks so much for this, really helpful. Do you deliver online real-time computer programming seminar sessions? Do you have any comments about how effective this is please?

A: Yes we do, and I find teaching coding online to be very effective - as I mentioned my favorite tool there is Cloud9.

Q: What do you advise with regard to something like mathematics?

A: The old style, now unfortunately abandoned, is to have students solve a problem "on the blackboard". I taught a lot of mathematics over the years, and I find it a very good learning experience (but it is important to create a relaxed and friendly atmosphere in the class for it to be effective). This style could be simulated on Zoom.

Q: Is AWS Educate free software?

A: Yes!

Q: How do you upload presentations embedded with videos to make sessions lively?

A: Depends on your tools, but I use my WordPress blog a lot to host content, and then share it by sending links.

Q: Is the https://aws.amazon.com/robomaker/ course browser-based for students to work on their robots in a browser?

A: RoboMaker can be used via a browser.

Q: Could you compare AWS Cloud9 with repl.it? Any differences?

A: They look similar to me, but hard to compare as I have a lot of experience with Cloud9 and very little with repl.it - so I don't know how stable it is, how good its code highlighting? One feature on Cloud9 I like a lot, is that you can choose your editor. I am very fast with vi, so I appreciate having it.

Q: Can you please give examples of tools?

A: Zoom, Slack, Canvas are my principal trio, with AWS Educate portfolio.

Q: What are your recommendations as to how to ensure maximum security online?

A: There are many aspects to security. You should work with your school or district's IT department on this.

Q: In your opinion, what is a good length of time for each online session?

A: Depends on how content-heavy your lecture is. As educators we all know the graph, where the first 5 minutes students settle down, and then they are receptive for 15min, and then it climbs down very quickly. You can repeat this cycle a few times if you have something "fun" in between.

Q: My class runs 90 minutes. Any suggestions for how to keep interest and concentration for a longer period of time?

A: I am currently teaching "Cloud Foundations" with 90 min lectures - it is a challenge. I would say that for every 15 min of teaching with slides, you need an activity - quiz, breakout room, a demo, etc.

Q: I'm using Canvas for instruction and the class is beginning computer skills. Any tips or ideas for how to present materials in a very simplistic way?

A: We have resources available as part of the AWS Educate program. https://aws.amazon.com/education/awseducate/

Q: Can you tell me about Slack and Canvas? Are there online sites to learn these things and can you incorporate them into Zoom conferences?

A: Slack is a group communication tool and Canvas is a learning management system. Both have great online tutorials from the company. Zoom is a real-time meeting tool, so they all complement one another.

Q: Do you recommend muting all microphones when you have a class of more than 4 so there is no feedback or background distractions?

A: Yes

Q: How do the breakout rooms work on Zoom? Do you group students to conduct a discussion for a period and retrieve their images when a certain time limit has elapsed?

A: Yes, but they have to be very well structured - select a leader who will then report to everyone else.

Q: Can you share more about time limits on quiz questions?

A: Usually 2.5 minutes for a multiple-choice question that is one paragraph long, and 4 to 5 minutes possible for one sentence answers. That works for me.

Q: How is AWS education portfolio different from Google's education suite?

A: Significantly more developed, over a much longer period of time, in my experience.

Q: How useful is texting for distance learning?

A: The goal is to engage students, so use any tool that is available and that meets your school's guidelines.

Q: I found that using WhatsApp is a very interesting one-on -one strategy and good for faster connections. What do you say about this?

A: That is a great idea! WhatsApp is universal and mobile.

The resources and websites listed below are recommended by webinar speakers and may be provided by third parties. AWS does not control or guarantee the accuracy, relevance, or completeness of information contained on the linked websites or resources provided by webinar speakers. AWS is not affiliated with and does not endorse any third party products, services, organizations, or companies described in the websites and resources. AWS does not endorse the views of the webinar speakers or the third party products and services that are referenced.

Resources:

Adobe Connect - Adobe Connect virtual classroom provides solutions for rapid training.

Amazon Chime – Amazon Chime is a communications service that lets you meet, chat, and place business calls inside and outside your organization, all using a single application.

AWS Cloud9 - AWS Cloud9 is a cloud-based integrated development environment (IDE) that lets you write, run, and debug your code with just a browser.

AWS Educate - Through AWS Educate, students and educators have access to content and programs developed to skill up for cloud careers in growing fields.

AWS Educate Office Hours for Educators and Students – Webinars, office hours, and training sessions for educators and students

AWS RoboMaker – provides a complete cloud solution for robotic developers to simulate, test, and securely deploy robotic applications at scale.

Blackboard – Blackboard learning management system provides solutions, resources, and tools to help you deliver quality training.

Canvas – Canvas learning management platform provides digital learning environments and integrated learning products for teachers and students.

D2L – Brightspace learning management system provides online learning and teaching for schools and enterprises.

Discord – Discord is a VOIP application designed for video gaming communities that lets users communicate via video, audio, and text.

GoToMeeting – GoToMeeting is an online meeting, desktop sharing, and video conferencing software package that allows for user communication in real time.

Kahoot – Kahoot is a game-based learning platform, used as educational technology in schools and other educational institutions.

Monday – Monday.com is a work operating system that enables organizations to build custom workflow apps in a code-free environment.

MyLab IT – MyLab IT is a teaching and learning platform that provides a personalized online learning experience for users.

Quizizz – Quizizz provides gamified quizzes for every subject to play in class or at home.

Slack – Slack is a collaboration platform that replaces email and helps teams work together efficiently.

WordPress – WordPress is an open-source content management system that allows users to create free websites and blogs.