

Intel® Skills
for Innovation

Professional Development Syllabus



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Overview

Intel® SFI Professional Development

Introduction

Intel's SFI Professional Development empowers educators as they assume their roles from adapters of technology to mentors of upgraded mindsets. The SFI Professional Development suite, consisting of four levels, equips educators with the necessary skills to adapt technology in an anywhere learning environment and create technology-infused learning experiences that build future-ready skills in learners. Through the content available on the Skills for Innovation Platform¹, educators are kept up to date with trends that impact the future of today's learners, supported by technology tools which maximizes the way teaching and learning takes place.

Intel® Professional Development uses a model consisting of four levels that transition educators from adapters of technology to mentors of innovation.

Adapter

Adapt Technology

This optional level is for educators who are new to technology in education. It supports them in building basic digital fluency through a mix of face-to-face and online modules.

Owner

Lead Learning Experiences

Level 2 helps educators transition from being content experts to effectively owning and leading learning experiences.

Catalyst

Catalyze Creative Confidence

In Level 3 educators are challenged to reimagine learning experiences using technology, thus empowering students to become confident innovators.

Mentor

Mentor Upgraded Mindset

Level 4 introduces educators to the upgraded mindsets that are essential for students to thrive in 4th industrial revolution and successfully navigate unknowns of tomorrow.

Contents of Intel® Professional Development



Level 1: Adapter of Technology²

Module 1³: Introduction to Technology in Education

Module 2³: Learning Computer Basics

Module 3: Learning Internet Basics

Module 4: Basics of Multimedia and Slides

Module 5: Basic of Word Processing

Module 6: Basic of Word Spreadsheets

Module 7: Collaborative Workspaces

Module 8: Learning Video Basics



Level 2: Leader of Learning Experiences

Course: Introduction to Learning Remotely

Course: Establishing effective Educator-Machine Partnerships

Course: Fostering Student Engagement in the Age of Digital Distraction

Course: Strengthening Real-world Relevance in Classroom



Level 3: Catalyst of Creative Confidence

Course: Analytical Thinking through Data

Course: Critical Reasoning to Make Better Decisions

Course: Bridging the Creativity Gap



Level 4: Mentor of Upgraded Mindset

Course: From Waterfall to Agile Mindset

Course: From Operational to Strategic Thinking

Course: From Follower to Entrepreneurial Mindset

Each course in Levels 2 and 3 contains three courselets

¹ Intel® SFI Professional Development suite is also SCORM-compliant and can be hosted on your learning management system. Contact your Intel service provider for more details.

² Hybrid learning approach

³ Conducted in-person format



Level 1

Adapter of Technology

Overview

Level 1 equips educators who are new to technology with a strong foundation in basic digital fluency. The content, delivered through face to face and supervised online sessions, consists of eight modules and are designed to develop basic competencies in the use of technology for teaching and learning.

Overarching Outcomes

- Equip educators who are new to technology with necessary skills for technology adaption in teaching and learning.
- Support educators in achieving digital literacy in the use of technology for education.



Level 1 ▪ Module 1

Introduction to Technology in Education

Delivery: Face to Face

Expected Duration: 2 hours



Overview

This is an introductory module for educators who have little experience in the use of technology in the classroom. Trainers will work together with educators in a face-to-face setting as they define educational technology's role in supporting learning and identify and evaluate existing and emerging technologies for course instruction or curriculum development.

Learning Objectives

Learners will be able to:

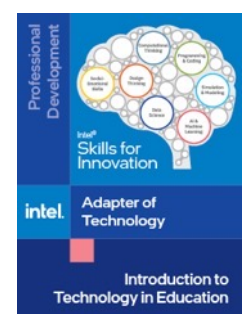
- Define educational technology's role in supporting learning.
- Understand the different levels of technology integration in the classroom.
- Reflect on the educator's role in a technology-rich classroom.
- Consider how to begin introducing technology to the classroom.

Activities and Tasks

- Discussion and sharing on definition of technology in education.
- Introduction to hardware, software and emerging technologies.
- Reflection on the changing role of educators from content experts to designers of learning experiences.
- Planning activity to introduce technology to the classroom.

Resources

- Trainer Guide
- Slide Deck
- Worksheet 1 (Chat Stations)
- Worksheet 2 (Case Study Reflections)



Level 1 ▪ Module 2

Learning Computer Basics

Delivery: Face to Face

Expected Duration: 2 hours



Overview

This module introduces educators to the basics of using computers and guiding learners with their use in the classroom. Comprising a face-to-face lesson, educators will explore the basics of computing and develop confidence in using computers for themselves and their learners.

Learning Objectives

Learners will be able to:

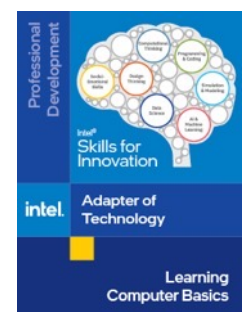
- Start up and shut down a computer.
- Work effectively on the computer desktop using icons and windows.
- Adjust the main operating system settings and use built-in help features.
- Upload, download, and organize files and folders.
- Understand the importance of protecting data and devices from malware and backing up data.

Activities and Tasks

- Identify computer basics, working with their components and functions.
- Familiarize with the computer desktop.
- Introduction to operating system and how it works.
- Discussion on File Extensions upon creating or downloading a file.
- Guidance on how to protect computer and its data with regular backups.

Resources

- Trainer Guide
- Slide Deck
- Worksheet 1 (Getting to know your computer)
- Worksheet 2 (File Extensions)
- Worksheet 3 (Protecting your computer)



Level 1 ▪ Module 3

Learning Internet Basics

Delivery: Online Supervised

Expected Duration: 4 hours



Overview

This module introduces educators to the basics of the Internet and how to use it in the classroom. Comprising practical guided learning, educators will learn about the functions of Internet browsers, navigation across websites and applications, and online safety. They will also learn how to use quizzes and Learning Management System (LMS) tools to facilitate lessons.

Learning Objectives

Learners will be able to:

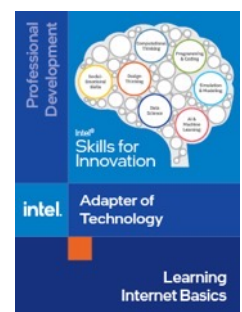
- Identify and use key browser functions.
- Understand basic Internet terminologies.
- Apply best practices on effective use of search engines, account sign up and navigating the Internet safely.
- Reflect on how to apply skills to teaching and learning.

Activities and Tasks

- Introduction to basics of navigating and using the Internet.
- Discussion and exploring on what is a web browser to navigate through the Internet.
- Learning how to navigate the Internet safely using safety measures.
- Discussion and sharing on the creative ways of using the Internet in the classroom.
- Planning activity to applying technology to the classroom.

Resources

- Trainer Guide
- Slide Deck
- Worksheet 1 (Google Image)
- Worksheet 2 (Internet Safety)



Level 1 ▪ Module 4

Basics on Multimedia/Slides

Delivery: Online Supervised

Expected Duration: 4 hours



Overview

This module will guide participants in the use of multimedia tools to foster interaction, engagement, and visual learning in their classrooms. Designed for K-12 educators who are embarking on their journey in education technology, educators will learn basic multimedia skills to enhance their teaching. This module will focus on two commonly used multimedia programs used by educators: Google Slides and Microsoft PowerPoint.

Learning Objectives

Learners will be able to:

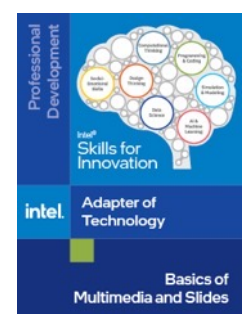
- Identify the key advantages and common uses of multimedia tools.
- Understand how to use presentation tools in the classroom.
- Confidently create, format, and modify a presentation.
- Develop presentation skills and explore ideas for using presentations creatively in their own classrooms.

Activities and Tasks

- Introduction to multimedia tools and their basic functions.
- Understand how educators use presentations to increase interactions with learners in classroom.
- Implementing and practicing basic functions of multimedia tools.
- Present in groups for critical feedback.

Resources

- Trainer Guide
- Slide Deck
- Worksheet 1 (Purpose Setting and Ideas)
- Worksheet 2 (Slide Critique)
- Worksheet 3 (Presentation Outline and Flow)
- Feedback Form



Level 1 ▪ Module 5

Basics on Word Processing

Delivery: Online Supervised

Expected Duration: 2 hours



Overview

Educators will identify the common uses of word processing in teaching and learning activities. This module equips educators with skills in word processing which will allow them to extend their skillset in using word processing programs effectively for processing documents.

Learning Objectives

Learners will be able to:

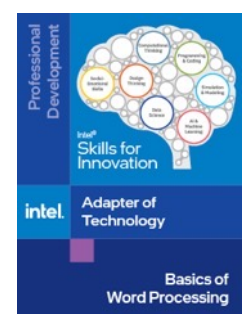
- Use a word processing application to create a document.
- Format text in a document.
- Add images, shapes, and charts to a document.
- Organize, save, and download documents.

Activities and Tasks

- Introduction of word processing applications and their basic features.
- Implementing and practicing basic functions of word processing applications.
- Learn how to save and download documents.
- Reflect and share on how to use the word processing application.

Resources

- Trainer Guide
- Slide Deck

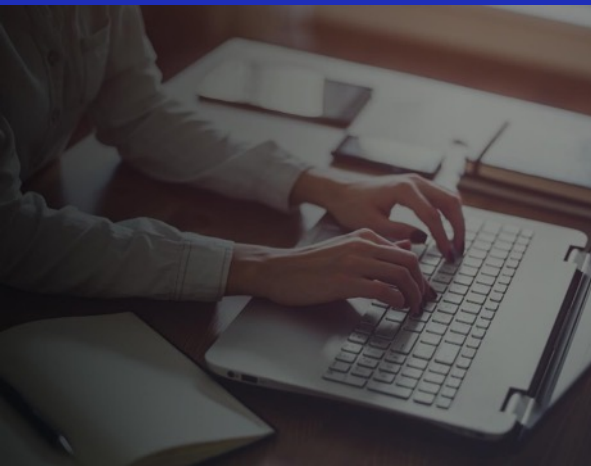


Level 1 ▪ Module 6

Basics on Spreadsheets

Delivery: Online Supervised

Expected Duration: 2 hours



Overview

This module introduces educators to spreadsheets that they can use to gather and manage classroom data. Educators will learn and practice basic spreadsheet management skills and functions using three commonly used spreadsheet programs: Microsoft Excel, Google Sheets, and Apple Numbers.

Learning Objectives

Learners will be able to:

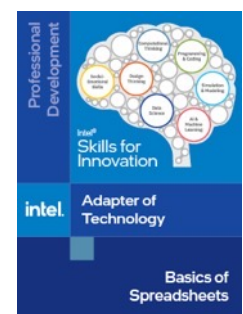
- Understand the basic concepts and common uses of spreadsheets.
- Perform routine tasks such as developing, formatting, and modifying a spreadsheet.
- Use a spreadsheet to sort, organize, and filter data.
- Reflect on how to apply these skills to teaching and learning.

Activities and Tasks

- Introduction of commonly used spreadsheet applications and their basic features.
- Learn how to create a spreadsheet and organize data.
- Learn how to calculate data using graphs, charts, etc.
- Reflect and share on how to use the spreadsheet application.

Resources

- Trainer Guide (Apple Numbers)
- Trainer Guide (Microsoft Excel)
- Introduction Deck
- Slide Deck (Apple Numbers)
- Slide Deck (Google Sheets)
- Slide Deck (Microsoft Excel)



Level 1 ▪ Module 7

Collaborative Workspaces

Delivery: Online Supervised

Expected Duration: 4 hours



Overview

This module introduces educators to collaborative workspaces that they can use for teaching and learning. Educators will learn how to use cloud storage applications and web-based tools that are used to facilitate effective collaboration among educators and learner groups.

Learning Objectives

Learners will be able to:

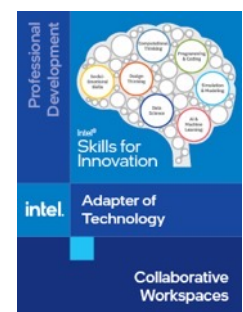
- Describe and explain the functions of an online collaborative workspace.
- Explain the purpose and benefits of online storage and collaboration.
- List online collaborative tools they can use in class.
- Use Google Apps or Microsoft Teams as well as online whiteboards and Socrative for online collaboration during lessons .
- Apply best practices when using online collaborative tools.

Activities and Tasks

- Introduction of online collaboration workspaces.
- Demonstration of common collaborative features.
- Implementing and practicing basic functions of collaborative features.
- Reflect and share on how to use collaboration workspaces in classroom.

Resources

- Trainer Guide
- Introduction Deck
- Slide Deck
- Worksheets 1 – 3
- Assignment



Level 1 ▪ Module 8

Learning Video Basics

Delivery: Online Supervised

Expected Duration: 4 hours



Overview

This module introduces educators to video tools that they can use to further enhance their teaching. Educators will learn to use a video conference tool to run a synchronous online lesson and explore the functions of a video recording tool which will enable the production of pre-recorded videos.

Learning Objectives

Learners will be able to:

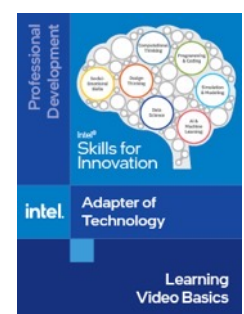
- List tools that can be used for running synchronous online lessons and recording videos, respectively
- Use Zoom, Google Meet, or Microsoft Teams to run a synchronous online lesson.
- Record and upload a video lesson.
- Apply best practices when conducting synchronous online lessons or recording with video.

Activities and Tasks

- Introduction of video conferencing tools and their basic features.
- Learning about basic participant and host controls.
- Create and run the video conferencing tool.
- Reflect on how to implement video conferencing tools in classroom.

Resources

- Welcome Slide Deck
- Google Meet – Trainer Guide/Slide Deck/Worksheets 1 – 3
- Microsoft Teams – Trainer Guide/Slide Deck/Worksheets 1 – 2
- Zoom – Trainer Guide/Slide Deck/Worksheets 1 – 2



Level 2

Leader of Learning Experiences

Overview

Help educators transition from being content experts to becoming effective owners and leaders of learning experiences. Educators will be able to create engaging and effective lessons in an anywhere learning environment supported by digital technologies. Strong partnerships are also forged between educators and technology where innovative pedagogical approaches are adopted to facilitate skills development in innovation. Through immersive learning experiences, educators engage learners in creative collaboration in authentic learning contexts.

Overarching Outcomes

- Create engaging and effective lessons in a virtual environment supported by digital technologies.
- Establish effective partnerships between educators and technology in the development of innovation skills through immersive learning experiences.
- Foster learner engagement through creative collaboration and innovative pedagogical approaches.
- Harness the use of technology in problem-solving of issues in authentic learning contexts.

This level consists of four courses. Each course contains three courselets. Refer to the respective course syllabus for more details.



Level 2 ▪ Course 1

Introduction to Learning Remotely

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

As schools transition from traditional physical classrooms to an anywhere learning environment, there is a need to explore the challenges and provide insights into how these practices affect various education stakeholders, including educators, learners, and their parents or guardians.

This comprehensive course aims to support and improve teaching and learning processes and focus on beneficial parent, teacher, and student learning partnerships. It also explores the importance of maintaining good mental and physical well-being for educators and learners in an anywhere learning environment.

Course Theme

- Creating an engaging virtual learning environment.
- Define educational technology's role in supporting learning.
- Communication skills in establishing strong home support.

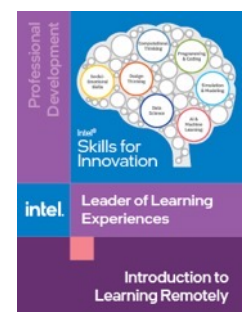
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Plan and design a 20-minute webinar.
- Design a microlearning experience.
- Discussion Post: What is the most memorable partnership you've had with a parent or guardian?
- Course Reflection: Record the most eye-opening revelation as you reflect on a successful or engaging virtual learning experience for your learners yourself.



Level 2 ▪ Course 1 ▪ Courselet 1

Setting Up an Effective Virtual Classroom

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet provides educators with practical tips and technological guidance to support virtual teaching and learning. Educators explore the workings behind designing and delivering authentic technology-based lessons in a secure environment for educator-learner communication.

Learning Objectives

Educators will be able to:

- Identify suitable and appropriate T&L methods to deliver lesson content in an anywhere learning environment.
- Create an authentic and engaging virtual T&L experience using technological tools.
- Organize the workspace to create both a professional online webinar and a secure discussion environment.

Activities

- Curation of technology tools for designing a virtual lesson plan.
- Workspace organization in preparation for a virtual learning environment.
- Creation of a Virtual Learning Blueprint.
- Plan and design a webinar. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam
Microphone or device with recording ability
Lighting (optional)

Software

Mentimeter
Padlet
Various webinar tools

Level 2 ▪ Course 1 ▪ Courselet 2

Enabling an Engaging Virtual Classroom

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet looks at two domains of engagement - emotional and intellectual. It highlights the role of maintaining good mental and physical well-being of both educators and learners in a remote learning setting. It will provide a general understanding of wellness in virtual learning environments and share self-care and student care skills tips. It will also provide practical ways of engaging learners through the application of microlearning.

Learning Objectives

Educators will be able to:

- Identify and manage the stress faced by educators and learners in a remote learning environment.
- Plan engaging remote learning experience using microlearning concepts.

Activities

- Exploration of self-care skills in managing stress.
- Application of microlearning tools in engaging learners effectively in a virtual learning environment.
- Design a lesson for microlearning. [certification task]
- Establishing a support system for engaged learning using online community platforms.

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Aww Whiteboard
Padlet
Video hosting applications such as YouTube



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Level 2 ▪ Course 1 ▪ Courselet 3

Enrolling Support of Parents in Students' Learning

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet adds to the discussion on effective virtual lesson planning by focusing on beneficial parent-teacher-student learning partnerships and effective communication principles. It will offer educators practical and on-the-ground tips to guide parents or guardians in supporting students' learning, especially when lessons migrate to a web-based and remote setting.

This courselet will adapt the O.W.L (Observe, Wait and Listen) method, which educators could apply to manage learning anxieties as they jointly guide students' learning through various online communication channels.

Learning Objectives

Educators will be able to:

- Engage parents through effective communication in addressing their child's remote learning needs.
- Empower parents as remote learning co-pilots (home tutoring).
- Design lesson plans with parental participation-and-communication as functional features.

Activities

- Establishing and application of various communication models between educators and parents or guardians for greater home support.
- Understanding constraints in communication methods in a school system.
- Design activities to encourage communication based on the O.W.L communication method.
- Reflection on effective communication and the application of O.W.L.
- Discussion Post: What is the most memorable partnership you've had with a parent or guardian? [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Communication channels:
ClassDojo, Edmodo, Remind



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Level 2 ▪ Course 2

Establishing Effective Educator-Machine Partnerships

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

Technology has become increasingly integrated with education for learners worldwide. What are the optimal teaching and learning practices that come about from such partnerships?

This course supports the educator's adaptation of education technology and development of innovation skills in creating learning experiences. By identifying opportunities in the use of technology, it also helps educators understand the education industry changes which impact the shift in their professional development goals.

Course Theme

- Impact of Fourth Industrial Revolution on education.
- Development of innovation skills through learning experiences.
- Best practices in technology-supported learning experiences.

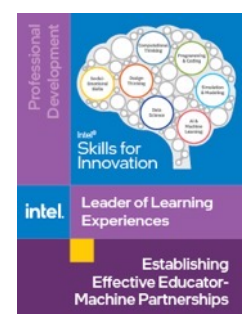
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Share a digital portfolio.
- Discussion Post: Reflect and share your experience in creating innovative lessons using technology
- Reflection on educator-machine partnership experience.
- Quotable learning highlight: Choose a famous quote and explain why it connects to concepts within this course.



Level 2 ▪ Course 2 ▪ Courselet 1

Getting Ready for Educator 4.0

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Educators gain an understanding of what changes “Industry 4.0” has on education and the possible impact on learning. Educators will reflect on their current teaching journey by creating a digital teaching portfolio and sharing potential advantages and concerns over technology in classrooms.

Moreover, they will also identify their professional development goals and map their action plans in applying technology to teaching and learning. In doing so, educators gain a profound and context-driven insight into innovation skills that learners need to master in their education.

Learning Objectives

Educators will be able to:

- Identify what Educator 4.0 competencies are and contextualize their relevance to their teaching and learning strategies.
- Reflect on their current teaching experiences and professional development goals through the creation of their digital teaching portfolio.
- Map and design an action plan that would align their professional development goals with students’ learning needs in an Educator 4.0 teaching and learning environment.

Activities

- Creation of a digital portfolio. [certification task]
- Integration and application of innovation skills in teaching and learning practices.
- Curation of professional development goals.

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Padlet
 Portfolium
 WordPress

Level 2 ▪ Course 2 ▪ Courselet 2

Applying Technology for Innovation

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Educators will explore ways to develop Skills For Innovation in their learning experiences. We will introduce three technology integration models and demonstrate how educators effectively apply technology in their classrooms to achieve innovation outcomes.

Upon completing this courselet, educators will develop tools that help grow innovative learners' capacities and begin integrating technology into their curriculum in preparation for a technology-driven society.

Learning Objectives

Educators will be able to:

- Identify the various roles that technology may play in the classroom.
- Differentiate between education technology and technology education.
- Identify the skills and context for meaningful technology integration.

Activities

- Application of seven innovation skills in teaching and learning.
- Application of three models of technology integration to encourage innovation outcomes.
- Design of technology integration plans.
- Discussion Post: Reflect and share your experience in creating innovative lessons using technology. [Certification Task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Minecraft
Padlet
Scratch



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Level 2 ▪ Course 2 ▪ Courselet 3

Discovering Opportunities and Threats of Machines

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet explores the opportunities and threats in using machines in a classroom. Technology advancement has allowed education to advance in many ways. Educators will examine curated case studies on technology usage in classrooms to derive best practices that may further improve technology-supported learning experiences.

Upon completing this courselet, educators will be better equipped with strategies to maximize learners' engagement in a safe and collaborative technology-supported learning environment.

Learning Objectives

Educators will be able to:

- Identify the opportunities and threats of machines in classrooms.
- Analyze learning experiences with S.W.O.T.
- Understand and demonstrate ways of adopting technology to enhance learning.

Activities

- Identification of opportunities and problems that technology creates in the classroom.
- Practice strategies in overcoming challenges of technology use.
- Conduct a S.W.O.T analysis on current learning experiences.
- Reflection on educator-machine partnership experience. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Assistive technology
Padlet



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Level 2 ▪ Course 3

Fostering Student Engagement in the Age of Digital Distraction

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

Motivation theories are important when we strive to understand why some learners perform better and thrive in school. There is a need to study the advantages of promoting teamwork and collaborative discussions.

Educators taking this course will explore the effect of peer collaboration in the Fourth Industrial Revolution and understand learners' motivation and how innovative pedagogical approaches increase learner engagement. It also helps educators understand how technology presents an opportunity to increase learner motivation through interactive participation options presented to them.

Course Theme

- Creative collaboration for anywhere learning.
- Innovation pedagogical approaches to inspire learners.
- Harnessing of technology to drive instructional change.

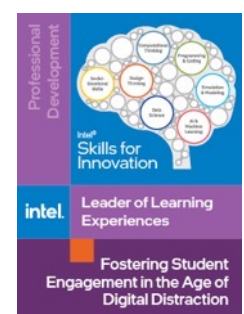
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Design a collaborative lesson unit with a peer.
- Share your gamification or escape room lesson plan.
- **Discussion Post:** How do you think student feedback should be developed across grade levels?
- 3-2-1 Reflection on learning in this course.



Level 2 ▪ Course 3 ▪ Courselet 1

Cultivating Creative Collaboration

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet examines how educators can create spaces and processes, both offline and online, to promote collaboration and classroom discussions. It also describes classroom practices that encourage and develop the building of collaborative skills, especially in designing and creating innovative solutions to different types of problems.

Learning Objectives

Educators will be able to:

- Differentiate between cooperation and collaboration.
- Build a culture for collaboration enabled by technology.
- Design collaborative group tasks to encourage innovation.

Activities

- Identification of collaborative behaviors and ways to assess them.
- Application of digital tools to facilitate collaboration.
- Apply collaborative strategies that encourage innovation.
- Design a collaborative lesson unit with a peer. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Flipgrid
Gsuites
Padlet
Wakelet



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Level 2 ▪ Course 3 ▪ Courselet 2

Turning Disengagement to Self-Determination

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet examines the factors that motivate learners. Educators will explore innovative pedagogical approaches that increase learner engagement and transform the classroom into an active learning space.

This courselet provides educators with skills to use technology to build intrinsic motivation through gamification.

Learning Objectives

Educators will be able to:

- Relate different motivational constructs to teaching and learning.
- Harness technology for multi-modal content delivery in blended learning.
- Apply gamification in the classroom to improve learner abilities.

Activities

- Observe trends in innovative pedagogies such as blended learning and gamification and their role in motivating learners.
- Use of ARCS model in the conduct of motivational analysis.
- Application of digital tools for multi-modal and interactive content delivery.
- Design and share gamification or escape room lesson plan. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Flippity
Gamified LMS
Hyperdoc
Pear Deck

Level 2 ▪ Course 3 ▪ Courselet 3

Selecting High-Engagement Assessment Forms

Delivery: Online Platform

Expected Duration: 2 hours



Overview

As learning in the contemporary classroom becomes more complex and student work becomes less machine scorable, how should assessment catch up?

This courselet looks at a range of creative high-engagement assessment formats that can motivate and engage learners by considering relevance, autonomy, collaboration, and authenticity.

Learning Objectives

Educators will be able to:

- Consider engagement and motivation in assessment design.
- Design tech-based performance tasks.
- Explore the use of digital tools in formative assessment.
- Consider the use of data to drive instructional change.

Activities

- Discussion on how assessment supports learner engagement.
- Application of digital tools for formative and performance-based assessment.
- Planning for instructional change based on collection and analysis of data.
- Discussion Post: How do you think student feedback should be developed across grade levels? [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

BYOD
Givethx
Padlet



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Level 2 ▪ Course 4

Strengthening Real-World Relevance in the Classroom

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

Educators seek to bring relevance to their classrooms by incorporating real-world issues with a standard learning curriculum. Creating a curriculum in touch with the world allows youths to become agents of change in their communities.

In this course, educators will analyze the shift in academic outcomes affected by the evolution of industries and incorporate self-learning elements into lessons to help learners harness technology for the benefit of their community. Educators will also develop ways to assess learning as they adopt authentic learning strategies.

Course Theme

- Incorporation of real-world issues in authentic learning context for deeper learning experiences.
- Use of technology in service-learning and benefit of the community.
- Assessment of authentic learning aided by technology and innovation skills.

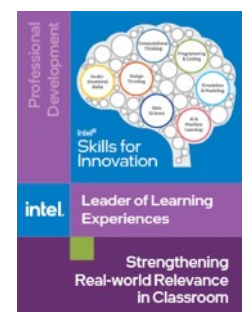
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Create an authentic learning lesson.
- Reflection: Plan of action to create opportunities for authentic learning experiences that harness technology for community good and teach values or skills for global citizens.
- Upload and share an assessment plan.
- Discussion Post: Choose a tool from a courselet and describe how it can be integrated into lessons.



Level 2 ▪ Course 4 ▪ Courselet 1

Uniting Real-World Issues with Academic Outcomes

Delivery: Online Platform

Expected Duration: 2 hours



Overview

How industries are evolving in a fast-paced world has called for a shift in academic outcomes. Manifested by skills, knowledge, and abilities that learners encounter in their learning experiences, these outcomes can be met by incorporating real-world issues into the curriculum.

In this courselet, educators explore how to merge real-world issues with academic outcomes for learners' deeper school experiences.

Learning Objectives

Educators will be able to:

- Demonstrate an understanding of the concept and rationale of authentic learning.
- Apply strategies in choosing appropriate real-world issues for lessons.
- Design a lesson uniting real-world issues with academic outcomes.

Activities

- Explore how authentic learning methods are used in introducing real-world issues.
- Application of authentic learning methods and strategies.
- Create an authentic learning lesson. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Padlet

Level 2 ▪ Course 4 ▪ Courselet 2

Harnessing Technology for Community Good

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Service-learning offers an opportunity for young people to contribute to a social cause. Through reflection and connecting in-school learning to community engagement, service-learning is a means of nurturing global citizens. The youth become agents of change for our current world and beyond.

This courselet looks at how educators can incorporate elements of service-learning into lesson plans. It also explores the strengths and pitfalls of technology and how educators can identify the appropriate use of technology in problem-solving.

Learning Objectives

Educators will be able to:

- Demonstrate an understanding of the concept of service-learning in education
- Analyze the strengths and pitfalls of technology in community good applications.
- Design a lesson plan to nurture caring and responsible global citizens.

Activities

- Analyze how schools use service-learning to engage and nurture learners to be global citizens.
- Introduction to Sustainable Development Goals by the United Nations (UN).
- Evaluate the effectiveness of technology for community good.
- Reflection: Plan of action to create opportunities for authentic learning experiences that harness technology for community good and teach values or skills for global citizens. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Mentimeter
Padlet

Level 2 ▪ Course 4 ▪ Courselet 3

Seeking Evidence for Authentic Learning

Delivery: Online Platform

Expected Duration: 2 hours



Overview

In this courselet, educators will develop ways to assess learning as they adopt authentic learning strategies. Assessment, as a crucial part of teaching, can impact a learner's development. Research has consistently shown that a good system of formative assessment in the classroom can develop a learner's achievement.

Educators will practice crafting an assessment plan to help learners be more successful in an authentic learning context through varied assessment approaches.

Learning Objectives

Educators will be able to:

- Explain the rationale of different assessment methods.
- Identify challenges in measuring authentic learning and ways to overcome them.
- Apply authentic assessment methods to authentic learning.

Activities

- Select suitable assessment tools for different types of authentic lessons.
- Research online assessment tools that can be used for assessment.
- Application of authentic assessment methods and tools to gather evidence of learning.
- Upload and share an assessment plan. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

E-Portfolio: Dreamdo Schools
Padlet
Parlay
Pear Deck



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Level 3

Catalyst of Creative Confidence

Overview

Inspires educators to reimagine learning experiences with technology to empower students to become confident innovators. Educators are introduced to creative teaching strategies which initiate critical reasoning skills for better decision-making. This level's contents provide educators with strategies in developing analytical thinking while stimulating creativity in learners with the use of data and emerging technologies.

Overarching Outcomes

- Develop analytical thinking through the application of data and technology in learning.
- Incorporate creative teaching strategies to initiate critical reasoning skills for better decision-making.
- Stimulate creativity in learners with the use of emerging technologies.

This level consists of three courses. Each course contains three courselets. Refer to respective course syllabus for more details.



Level 3 ▪ Course 1

Analytical Thinking Through Data

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

Data collection and visualization has an impact on the way educators provide information and how learners use them. Because of the delicacy of ethical data collection practices, it is important to study how data collection, visualization, and relationships with data affect learners in today's environment.

This course focuses on data collection and analysis of trends and patterns. Educators will explore how data collection with the support of emerging technology can redefine teaching practices and provide new learning experiences for learners.

Course Theme

- Application of data in supporting innovation skills.
- Ethical considerations in the use of data.
- Establishing relationships and deepening learner engagement through data.

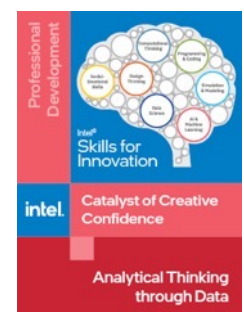
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Plan a lesson using Computer Vision or Natural Language Processing
- Sharing lesson ideas on the integration of data visualization.
- Discussion Post: Which of the three technology tools appeal to you, and how would you use them to enhance learning in your classroom?
- Reflection on ethical considerations in a school setting when working with data.



Level 3 ▪ Course 1 ▪ Courselet 1

Collecting and Using Problem-Driven Data

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet explores how data collection and analysis are valuable skills for educators and learners. Guided by a three-stage approach, the courselet will also introduce various data collection tools and machine learning applications suitable for use in a K-12 classroom. Ethical considerations of data collection, including sources of data, provide a balanced view of this skill set.

Learning Objectives

Educators will be able to:

- Define a problem that enables the appropriate selection of data collection sources and tools for analysis.
- Evaluate the ethical considerations and authenticity of the collected data.
- Develop skill sets and techniques in data collection and analysis through Computer Vision and Natural Language Processing.

Activities

- Formulating research questions based on a problem statement.
- Exploring digital tools for data collection.
- Creating a Hand-Sign reader as an example of Computer Vision.
- Reflection on using machine learning.
- Plan a lesson using Computer Vision or Natural Language Processing (certification task)

Technology Utilized in Courselet

Hardware

Laptop/Desktop
Mobile Phone (optional)

Software

Google Science Journal
Google Teachable Machine
Padlet
Sentiment Monitor

Survey Bot
Web Scraper

Level 3 ▪ Course 1 ▪ Courselet 2

Mapping Relationships with Data

Delivery: Online Platform

Expected Duration: 2 hours



Overview

In this courselet, educators will identify relationships in data and look at ways to enhance mapping using data visualization tools. These tools provide ways of observing and understanding trends, outliers, and patterns in data. Through case studies, educators examine best practices and challenges integrating technology and skills in data analysis.

Learning Objectives

Educators will be able to:

- Adapt and integrate digital data visualization tools in lesson plans.
- Troubleshoot and solve common issues related to data mapping.

Activities

- Exploration and application of data visualization tools for statistical data and text.
- Adaption of lesson plans integrating data visualization.
- Practice using different tools for data visualization.
- Share lesson ideas on the integration of data visualization. [certification task]
- Reflection on implementation lessons supported by data and data visualization tools.

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Gapminder
KH Coder
Padlet
Twitter



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Level 3 ▪ Course 1 ▪ Courselet 3

Facilitating Data-Inspired Discussions

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Discussions are used extensively as a strategy in learner-centered education. Within a collaborative environment, emerging technology extends the way discussions take place in an anywhere learning context. This courselet introduces these tools: data visualization, augmented reality (AR), simulations, and chatbots as resources that offer learners a deeper engagement with content through discussions.

Learning Objectives

Educators will be able to:

- Adapt and integrate technology tools to facilitate discussions in lesson plans.
- Troubleshoot and solve common issues related to the technology-supported discussion.

Activities

- Facilitate effective data-inspired discussions with technology tools.
- Practice skills in integrating technology tools in lesson plans.
- Discussion Post: Which of the three technology tools appeal to you, and how would you use them to enhance learning in your classroom? [certification task]
- Reflection on learning experiences from learners' perspectives.

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Augmented Reality: Metaverse
 Chatbot (on <http://chatfuel.com>)
 Data Visualization: Viz Grad
 Project



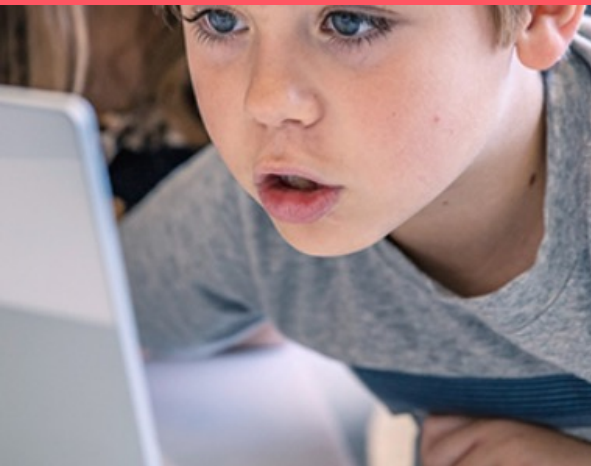
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Level 3 ▪ Course 2

Critical Reasoning to Make Better Decisions

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

The ability to apply critical reasoning provides a strong foundation for better decision-making. By introducing killer experiments, simulation models, evaluative thinking techniques and application of data, educators help learners build resilience when working on solution finding.

This course introduces educators to new ways of approaching problems. Educators set learners up for success by going through failure as a necessity for improvement. Educators engage learners in visible thinking by simulating technology-supported role-play and powering through debates backed by data science.

Course Theme

- Visible thinking as a precursor to improved decision-making skills.
- Teaching strategies that build critical thinking skills.

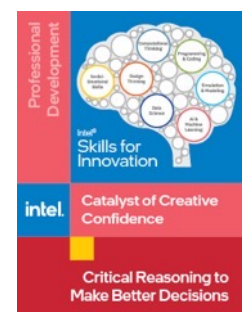
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Plan an evaluative and technology-supported approach to experiments.
- Design technology-supported and immersive role-play to develop evaluative thinking.
- Discussion Post: How do your learners respond to data-powered debates? Share your experiences in conducting this lesson.
- Reflection: Using technology to build critical thinking skills in learners.



Level 3 ▪ Course 2 ▪ Courselet 1

Designing Killer Experiments

Delivery: Online Platform

Expected Duration: 2 hours



Overview

In this courselet, educators are introduced to a new way of looking at experiments: killer experiments. Killer experiments involve embracing a mindset that sees failure as a necessity for improvement and, in the process, builds resilience in learners.

This courselet will also analyze different ways of conducting investigations and technology-enabled experiments. With further support from case studies, educators will apply strategies engaging the killer experiment mindset in lesson planning.

Learning Objectives

Educators will be able to:

- Demonstrate an understanding of killer experiments and their application in developing resilience in learners.
- Identify strategies that overcome limitations in location and equipment when conducting experiments.
- Design technology-enabled experiments in developing learners' evaluative thinking skills.

Activities

- Overcome limitations of experiments through the use of technology.
- Integrate smartphone technology and killer experiment mindset in lessons.
- Plan an evaluative and technology-supported approach to experiments. [certification task]
- Reflection on conducting technology-supported experiments.

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam
Smartphone

Software

Phyphox
Science Journal
Sense-it

Level 3 ▪ Course 2 ▪ Courselet 2

Simulating Immersive Role Play

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Immersive role-play makes thinking visible for our learners as they verbalize and construct knowledge. In this courselet, educators explore different ways of using role-play and explore why and how to approach technology-supported role plays for teaching and learning.

Learning Objectives

Educators will be able to:

- Understand how to use technology-supported role-play for evaluative thinking.
- Implement technology-supported role-play in lessons.
- Design technology-supported role-play lesson plans.

Activities

- Exploration of how role-play is a strategy for evaluative thinking.
- Design technology-supported and immersive role-play to develop evaluative thinking. [certification task]
- Plan instructional objectives using higher-order thinking skills.
- Reflection on planning and delivery of lessons.

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam
Sphero Robot (optional)

Software

Branching scenarios: h5p, Ren'py, Twine
Chatbot: Botpress, Dialogflow, Watson

Sphero Edu



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Level 3 ▪ Course 2 ▪ Courselet 3

Powering Debates with Data

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet will examine how educators can take a data-powered approach to class debates using Big Data and data visualization tools.

Exploring how data can be controversial or misleading presents a new perspective on how debates can happen during lessons while supporting learners' evaluative thinking as they appraise data and use it to build, substantiate, and assess arguments.

Learning Objectives

Educators will be able to:

- Adapt and integrate data visualization into debate lessons.
- Troubleshoot and solve problems related to data-supported debates.

Activities

- Identify best practices and common problems when using data in debate preparation.
- Integrate data visualization in conducting debates in lessons.
- Adapt lesson plans to integrate evaluative thinking in data-powered debates.
- Identify changes to current lessons to facilitate data-driven debates.
- Discussion Post: How do your learners respond to data-powered debates? Share your experiences in conducting this lesson. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Palladio
RAWGraphs
Tableau Public



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Level 3 ▪ Course 3

Bridging the Creativity Gap

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

With emerging technologies comes a new source of possibilities for educators in creating a dynamic and creative classroom environment. Educators can explore novel learning methods supported by artificial intelligence and other digital tools that enable idea generation and deep learning through modeling.

This course equips educators in idea generation using innovation skills supported by digital technologies. It also explores how learners' creativity in problem-solving can be nurtured through the crafting of unique narratives of their learning paths using prototyping and digital portfolios.

Course Theme

- Idea generation supported by emerging technologies.
- Simulating creative thinking and charting learner's growth.

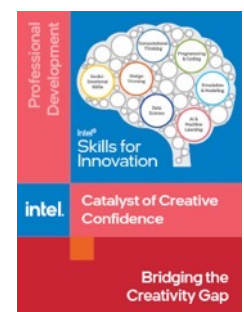
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Adapt AI tools into the curriculum by designing a lesson plan.
- Plan a design thinking project using a digital prototyping tool.
- Project: Designing a digital portfolio.
- Discussion Post: Many strategies have been introduced in this level through the three courses. Select one digital tool that you have used and share how you can extend learning in your classroom using this tool.



Level 3 ▪ Course 3 ▪ Courselet 1

Generating Ideas Using Artificial Intelligence

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet focuses on using Artificial Intelligence (AI) in generating innovative ideas using critical thinking skills. Through an in-depth look at machine learning and deep learning, educators are exposed to AI's possibilities in creating a dynamic and creative classroom environment.

Learning Objectives

Educators will be able to:

- Apply various techniques engaging AI in generating innovative ideas.
- Adapt and integrate AI tools into an idea generation lesson.

Activities

- Exploration and uncovering the potential of AI in supporting creative and innovating thinking in learners.
- Preparation of classroom for AI-supported idea generation.
- Identify strategies for implementing an AI-supported brainstorming lesson.
- Adapt AI tools into the curriculum by designing a lesson plan. [certification task]
- Reflecting on how AI can support the curriculum

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Auto Draw
InferKit
Iris.AI
Lumen5

MuseNet
Open Knowledge Maps
Write with Transformer



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Level 3 ▪ Course 3 ▪ Courselet 2

Prototyping Possibilities with Emerging Technologies

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet provides educators with strategies, processes, and tools to support learners in problem-solving through prototyping. Prototyping is a strategy that seeks to investigate and create models based on ideas while stimulating creative thinking and enabling deep learning.

Learning Objectives

Educators will be able to:

- Identify various types of prototypes that can be integrated into classroom learning.
- Plan a prototyping lesson using various technology tools.

Activities

- Learn about prototyping and its merits and challenges in implementation.
- Ways to use prototyping across different forms of learning artifacts while encouraging a growth mindset.
- Practice the different stages of prototyping.
- Plan a design thinking project using a digital prototyping tool. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Interactive wireframes: InVision, JustinMind, Marvel
Wireframes: InVision Freehand, JustinMind, Pencil Project, PoP

Padlet
Storyboard programs: Canva, Scenes, Storyboarder



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Level 3 ▪ Course 3 ▪ Courselet 3

Creating Digital Portfolios

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Digital portfolios offer educators a way to capture learners' growth in a meaningful way while encouraging them to take ownership of their learning.

This courselet provides educators with ideas on supporting learners in their learning by crafting unique narratives of their growth and achievement through digital portfolios.

Learning Objectives

Educators will be able to:

- Explore how digital portfolios can be used for growth, showcase, and assessment.
- Adapt and integrate a reflective and storytelling approach to guide learners in creating digital portfolios.

Activities

- In-depth exploration of the purpose of digital portfolios in teaching and learning.
- Establishing routines in the art of reflection and storytelling as part of digital portfolio creation.
- Six steps in designing a digital portfolio.
- Project: Designing a digital portfolio. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

Classroom management systems: Canvas, ClassDojo, Fresh Grade, Google Classroom

Digital portfolio platform: bulb, Pathbrite, Seesaw, trov.vit



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Level 4

Mentor of Upgraded Mindsets

Overview

Introduce educators to upgraded mindsets that are essential for students to thrive in Industry 4.0 and successfully navigate unknowns of tomorrow. While learning how educators can innovate for the future through powerful strategic thinking, they will also learn approaches towards nurturing and applying an Agile Mindset in teaching and learning. Educators will cultivate an entrepreneurial mindset by discovering the role of technology in creating value for the future.

Overarching Outcomes

- Nurture and apply an Agile Mindset in teaching and learning practices.
- Innovate for the future through powerful strategic thinking strategies.
- Cultivate an entrepreneurial mindset by discovering the role of technology in creating value for the future.

This level consists of three courses. Each course contains three courselets. Refer to respective course syllabus for more details.



Level 4 ▪ Course 1

From Waterfall to Agile Mindset

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

In response to the changing environment beyond the classrooms, we look at how the Agile Mindset and its methodologies can prepare learners for succeeding in the outside world.

This comprehensive course aims to explore the Agile Mindset and how it applies to teaching and learning and prepares educators with the competencies to implement the Agile methodologies in the classroom successfully. It also helps educators understand how to apply the Agile Mindset and its methodologies to project-based learning approaches while preparing learners to be more resilient.

Course Theme

- Agile Mindset in curriculum and pedagogy to nurture innovative thinking.

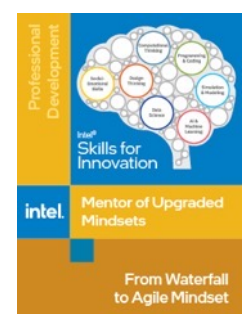
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Reflection: What can you take away from your experience implementing games or lessons that facilitate agile thinking.
- Redesign a lesson using Kanban Board as a tool.
- Design ideas for an assessment plan for an Agile project.
- Discussion Post: How does an Agile mindset prepare learners to be future-ready?



Level 4 ▪ Course 1 ▪ Courselet 1

Nurturing an Agile Mindset in Learners

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet explores the Agile mindset and how it applies to teaching and learning (T&L). Using self-regulatory, iterative, and process-driven work processes, discover how this mindset can support learners' collaborative work and be more self-directed in their learning.

Educators will be able to apply values and traits to designing lessons that incorporate Agile decision-making and thinking.

Learning Objectives

Educators will be able to:

- Demonstrate an understanding of the values and principles of the Agile mindset.
- Learn how the Agile mindset can be applied to the classroom by inculcating the Agile mindset in our teaching and learning approach.
- Discover ways to integrate agile thinking into the curriculum through game-based learning and other activities.

Activities

- Differentiating between the Waterfall approach and the Agile approach in project development.
- Using games to nurture an Agile mindset.
- Explore different ways to excite learners in using an Agile mindset.
- Creation of a unique Agile Manifesto.
- Reflection: What can you take away from your experience implementing games or lessons that facilitate agile thinking. [certification task]

Technology Utilized in Courselet

Hardware

Software

Laptop/Desktop

NIL

Level 4 ▪ Course 1 ▪ Courselet 2

Managing Teams with Agile Tools

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet prepares educators with the competencies and mindset to skillfully implement Agile in the classroom. Educators will explore popular methodologies and tools adapted for education to support the Agile approach to teamwork in the classroom.

Learning Objectives

Educators will be able to:

- Learn how to facilitate an Agile mindset using the Shu-Ha-Ri method.
- Demonstrate an understanding of methodologies that support the Agile approach, specifically Scrum and Kanban.
- Gain an awareness of the challenges in implementing Agile.

Activities

- Share how the Shu-Ha-Ri mindset can be applied in a lesson or unit.
- Identify challenges in implementing Agile and ways to overcome them.
- Introduction to Scrum, eduScrum, and Kanban.
- Practice methodologies with tools that support an Agile approach in education.
- Redesign a lesson using Kanban Board as a tool. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Padlet
KanBan Board (on Google Docs)

Level 4 ▪ Course 1 ▪ Courselet 3

Adapting Agile in Project-Based Learning

Delivery: Online Platform

Expected Duration: 2 hours



Overview

In this courselet, educators focus on applying the Agile mindset and methodologies to project-based learning approaches. Upon successful application of Agile in lessons, educators will look at how assessment and feedback loops can be used to support better learning.

Learning Objectives

Educators will be able to:

- Adapt and apply Agile principles to a project-based learning approach.
- Implement formative and summative assessment using Agile methodologies.

Activities

- Adapt and apply Agile principles to a project-based learning approach.
- Determine when and how to assess Agile projects and the integration of innovation skills.
- Co-construct an assessment rubric with learners.
- Design ideas for an assessment plan for an Agile project. [certification task]
- Reflection: Which of the assessment methods or tools are most effective for your learners?

Technology Utilized in Courselet

Hardware

Software

Laptop/Desktop

NIL

Level 4 ▪ Course 2

From Operational to Strategic Thinking

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

With a rapidly-changing world, forward and future thinking is needed to provide foresight for the next decade and beyond. It is important to help learners develop future thinking skills to help them cope with the possibility of a transient and volatile world.

This comprehensive course explores how current events divulge clues about what is to come and how to find opportunities to practice futures thinking in the classroom. It explores how to create multiple scenarios resulting from drivers of change and build immersive stories for analysis and developing plans for effecting the future.

Course Theme

- Futures Thinking mindset and its role in envisioning possibilities for the future.

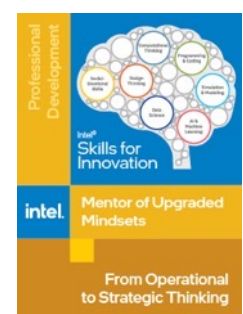
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Share ideas with other educators to introduce Futures Thinking to learners.
- Describe an artifact from a scenario.
- Create an interdisciplinary unit plan to demonstrate the application of Futures Thinking.
- Create an artifact of the future based on the information generated from earlier activities in the courselet.



Level 4 ▪ Course 2 ▪ Courselet 1

Creating Visions of the Future

Delivery: Online Platform

Expected Duration: 2 hours



Overview

This courselet examines how current events provide clues for what is to come in the form of signals of change. Educators can then engage Futures Thinking in preparing learners for an unpredictable future in a systematic manner. Educators will also explore opportunities for learners to apply this mindset in the classroom through Futures tools.

Learning Objectives

Educators will be able to:

- Identify signals of change in scenarios and use the STEEP framework to analyze and evaluate current issues.
- Design a class activity that will help learners develop a broad view of the present.

Activities

- Reflection on strengths exhibited by learners that show elements of Futures Thinking. [certification task]
- Use the STEEP framework supported by research tools to analyze and evaluate current issues.
- Demonstrate an understanding of the terms 'focal question', 'signals of change,' and 'drivers of change' in envisioning the future.
- Engage learners in a game to practice identifying drivers of change.
- Share ideas with other educators to introduce Futures Thinking to learners. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Internet search functions (e.g. Google)
Twitter



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Level 4 ▪ Course 2 ▪ Courselet 2

Envisioning Future Possibilities

Delivery: Online Platform

Expected Duration: 2 hours



Overview

Change comes about through a combination of drivers. However, what can learners do with the drivers of change? This courselet will explore how to create multiple scenarios resulting from drivers of change and build immersive stories for analysis and understanding.

Learning Objectives

Educators will be able to:

- Use drivers of change to create scenarios that demonstrate future possibilities.
- Explain the use of multiple scenarios for analysis and a deeper understanding of future possibilities.
- Enhance a scenario with storytelling and creating artifacts.

Activities

- Envision the future through the use of scenarios.
- Generate scenarios based on drivers of change using a 2x2 matrix.
- Apply storytelling techniques to scenarios in lessons.
- Describe an artifact from a scenario. [certification task]
- Discussion Post: Analysis of scenario created by Detroit Automakers.
- Consolidate learning through the creation of a lesson plan focusing on scenario generation.

Technology Utilized in Courselet

Hardware

Laptop/Desktop
Sphero robot (optional)

Software

CoSpaces
Minecraft

Level 4 ▪ Course 2 ▪ Courselet 3

Innovating for the Future

Delivery: Online Platform

Expected Duration: 2 hours



Overview

In this courselet, educators will draw on various strategies to develop plans for effecting the future. Starting with a discussion on preferred futures, educators apply innovation skills by creating artifacts to stimulate conversation and motivate action towards the envisioned future.

Learning Objectives

Educators will be able to:

- Use what-if questions to create scenarios for different futures.
- Explore the process of innovation by creating artifacts for the future.
- Apply the Futures Wheel to determine the impact of various scenarios.

Activities

- Create what-if questions to facilitate discussions based on a scenario in a 2x2 matrix.
- Carry out experience mapping to facilitate interaction with a scenario of a preferred future.
- Create an artifact of the future based on the information generated from earlier activities in the courselet. [certification task]
- Use the Futures Wheel (a Futures Thinking tool) to generate possible impact and consequences resulting from implementing or enacting a scenario.
- Create an interdisciplinary unit plan to demonstrate the application of Futures Thinking. [certification task]

Technology Utilized in Courselet

Hardware

Software

Laptop/Desktop

NIL



intel

Level 4 ▪ Course 3

From Follower to Entrepreneurial Mindset

Delivery: Online Platform

Expected Duration: 6 hours (3 courselets x 2 hours)



Course Overview

Curiosity motivates learners to explore their surroundings and make sense of their everyday experience. When harnessed effectively, it can become a tool that helps educators delve deeply into the way learners think. It is important to know how to harness learners' curiosity and encourage storytelling to build innovators and forward thinkers.

This course explores the science behind curiosity and how it drives innovation. Educators will explore the entrepreneurial mindset, its tools and various strategies in order to create value in learning.

Course Theme

- Curiosity and importance of an entrepreneurial mindset in preparation for the Fourth Industrial Revolution.
- Storytelling as part of the journey to innovation.

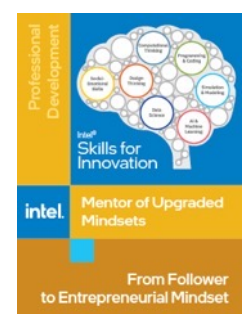
Certification

A course certificate will be awarded upon completion of course content and assigned tasks for each course.

A level certificate will be awarded upon completion of all courses.

Requirements

- Completion of Courselets 1, 2 and 3.
- Design and implement an inquiry-based lesson using the 5E model and a digital tool.
- Discussion post: What activities can be carried out to support a value creation pedagogy?
- Create a technology-enabled storytelling lesson plan.
- Reflection: In what ways has technology helped you stimulate curiosity in your teaching and learning?



Level 4 ▪ Course 3 ▪ Courselet 1

Cultivating the Curious Mind

Delivery: Online Platform

Expected Duration: 2 hours



Overview

In this courselet, educators learn the science behind curiosity and how it enables learning and drives innovation. It also describes classroom practices and technological tools that stimulate curiosity, which educators can use to transform learners' curiosity into inquiry and ultimately empower them to become curious life-long learners.

Learning Objectives

Educators will be able to:

- Demonstrate an understanding of the importance of curiosity and how it shapes the entrepreneurial mindset towards creativity in the classroom.
- Apply teaching strategies that cultivate curiosity in the classroom.
- Design a technology-infused lesson that focuses on sparking learners' curiosity, allowing deeper learning through discovery.

Activities

- Explore the five dimensions of curiosity that affect how learning and growth take place.
- Create conditions to stimulate curiosity and achieve authentic motivation in learning.
- Design and implement an inquiry-based lesson using the 5E model and a digital tool. [certification task]
- Gamify learning tasks to harness learner's natural curiosity using a digital tool.
- Design a self-directed lesson to allow deeper learning through discovery.

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Canva

ClassDojo

Explain Everything

GoSkills

KooBits (paid subscription)

Padelet

Pinterest

Wakelet

Video conferencing tools (Google Meet, Skype, Zoom, etc.)


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Level 4 ▪ Course 3 ▪ Courselet 2

Creating Value for the Fourth Industrial Revolution

Delivery: Online Platform

Expected Duration: 2 hours



Overview

How can educators instill a mindset in learners that will allow them to respond to constant change, find opportunities that create value, and develop perseverance? One solution is to develop the entrepreneurial mindset, as it has many of the components to face the challenges that the Fourth Industrial Revolution brings.

This courselet will explore the entrepreneurial mindset and tools educators can use to guide learners to create value for others using a value creation pedagogy.

Learning Objectives

Educators will be able to:

- Identify trends from Fourth Industrial Revolution and see them as opportunities for value creation.
- Adopt value creation pedagogy for teaching the entrepreneurial mindset.
- Apply the Unified Progression Model in their value creation lesson.

Activities

- Understand the trends in the Fourth Industrial Revolution and reflect on how educators can prepare learners for it.
- Introduction to entrepreneurial education and its approaches for K-12 classrooms.
- Discussion post: What activities can be carried out to support a value creation pedagogy? [certification task]
- Design and develop a lesson that uses value creation.
- Evaluate a lesson using a spider diagram.

Technology Utilized in Courselet

Hardware

Laptop/Desktop

Software

Anaconda
Python
Online sharing platform: YouTube,
Vimeo

Scratch 2



Level 4 ▪ Course 3 ▪ Courselet 3

Enhancing Communication with Digital Storytelling

Delivery: Online Platform

Expected Duration: 2 hours



Overview

When learners become effective storytellers, they can capture people's attention and make their innovations stand out above the rest. In this courselet, educators explore beyond what they already know of storytelling and discover novel ways to shape the entrepreneurial mindset using stories and inspire learners in their innovation journey.

Learning Objectives

Educators will be able to:

- Demonstrate an understanding of storytelling in sense-making and communication of ideas in an innovation culture.
- Apply teaching strategies using digital tools in enhancing communication through storytelling.
- Design a lesson that enables learners to tell powerful and inspiring stories of their innovation journey.

Activities

- Discover the role of stories and storytelling as part of sense-making in understanding innovation.
- Practice storytelling models and use digital storytelling tools to create an entrepreneurial narrative.
- Ideate ways in which learners can communicate ideas using digital tools.
- Create a technology-enabled storytelling lesson plan. [certification task]

Technology Utilized in Courselet

Hardware

Laptop/Desktop with camera function or webcam

Software

CoSpaces
Digital Storytelling Tools: Adobe Slate, 30hands Starter, Pixton, ShowMe Interactive Whiteboard, WeVideo

Infogram
Padlet
Online sharing platforms: Maptia, YouTube
Scikit-learn



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