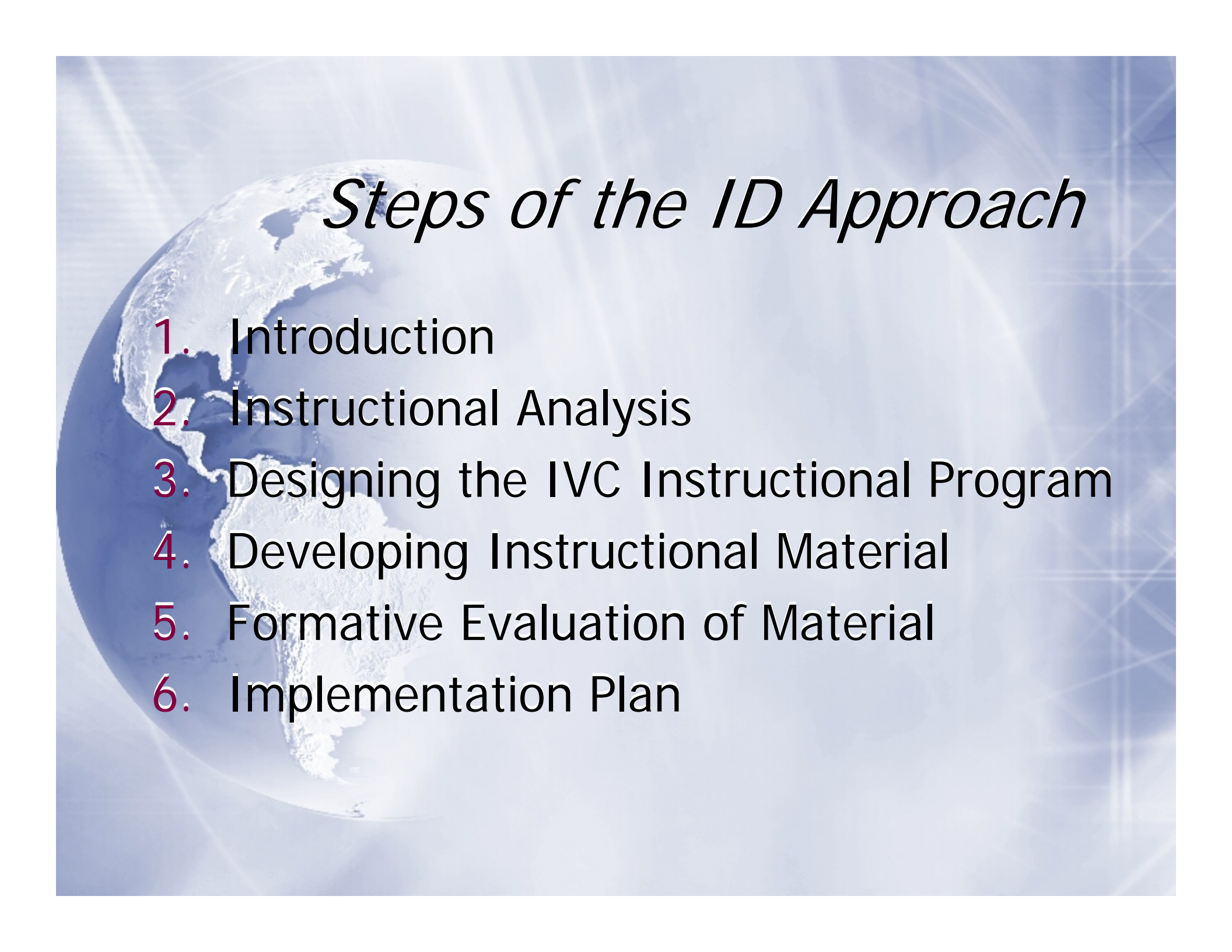




Instructional Design for Teaching, Learning, and Collaborating with Videoconferencing

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Steps of the ID Approach

1. Introduction
2. Instructional Analysis
3. Designing the IVC Instructional Program
4. Developing Instructional Material
5. Formative Evaluation of Material
6. Implementation Plan



1. Introduction to Problem

- Problem Statement
- Goal Statement
- Background of Learners and Context



Problem

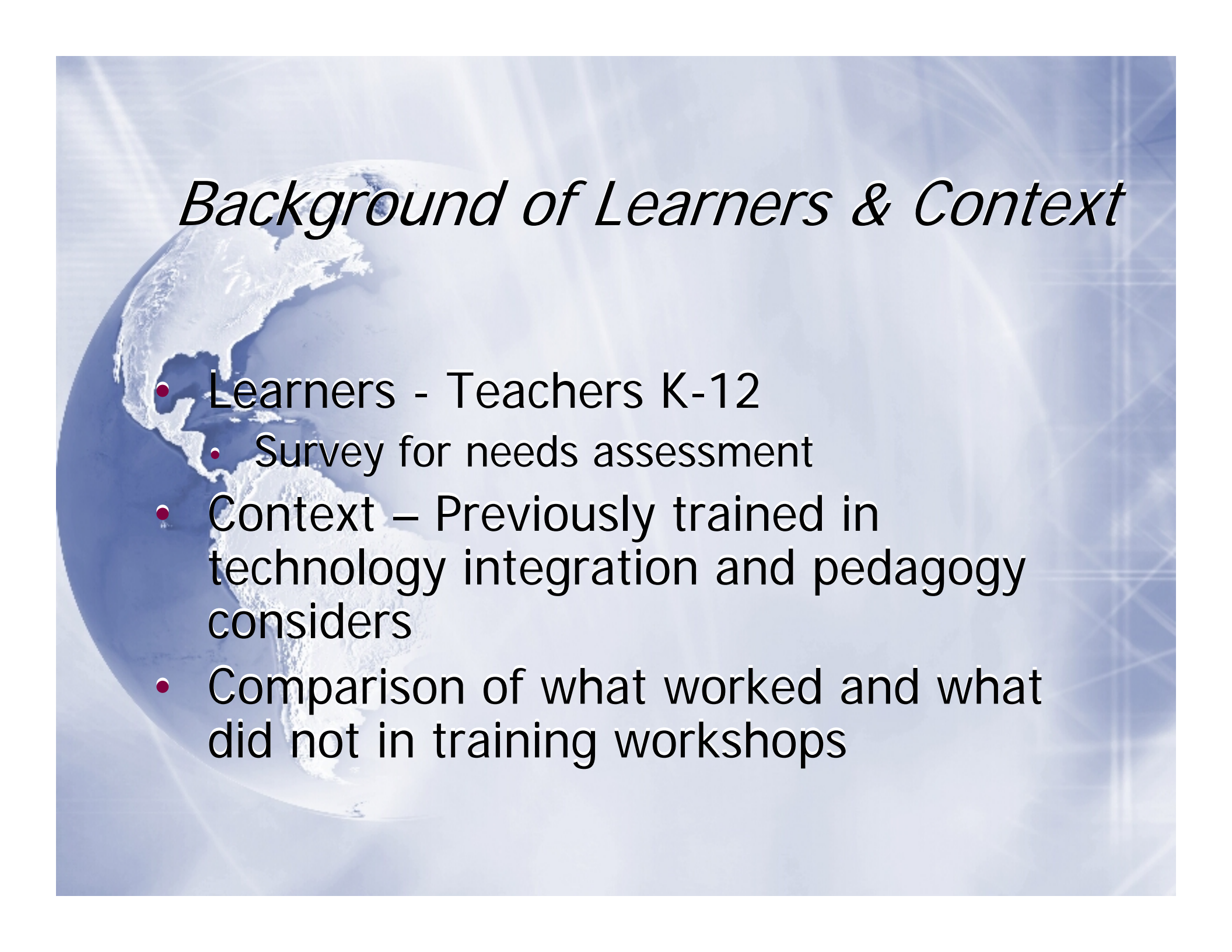
Teaching with interactive
videoconferencing requires:

- New levels of technical expertise,
- Knowledge of resources,
- Opportunities to practice, and
- New instructional strategies.



Goal

Develop professional training for teachers about how to use videoconferencing equipment for teaching, learning, and collaboration.



Background of Learners & Context

- Learners - Teachers K-12
 - Survey for needs assessment
- Context – Previously trained in technology integration and pedagogy considers
- Comparison of what worked and what did not in training workshops



2. Instructional Analysis

- Before teachers can instruct with IVC, they needed to understand how to operate the equipment.
- Task summary
 - Summarized tasks to achieve goal
 - Listed tasks associated with necessary sub-skills

Example

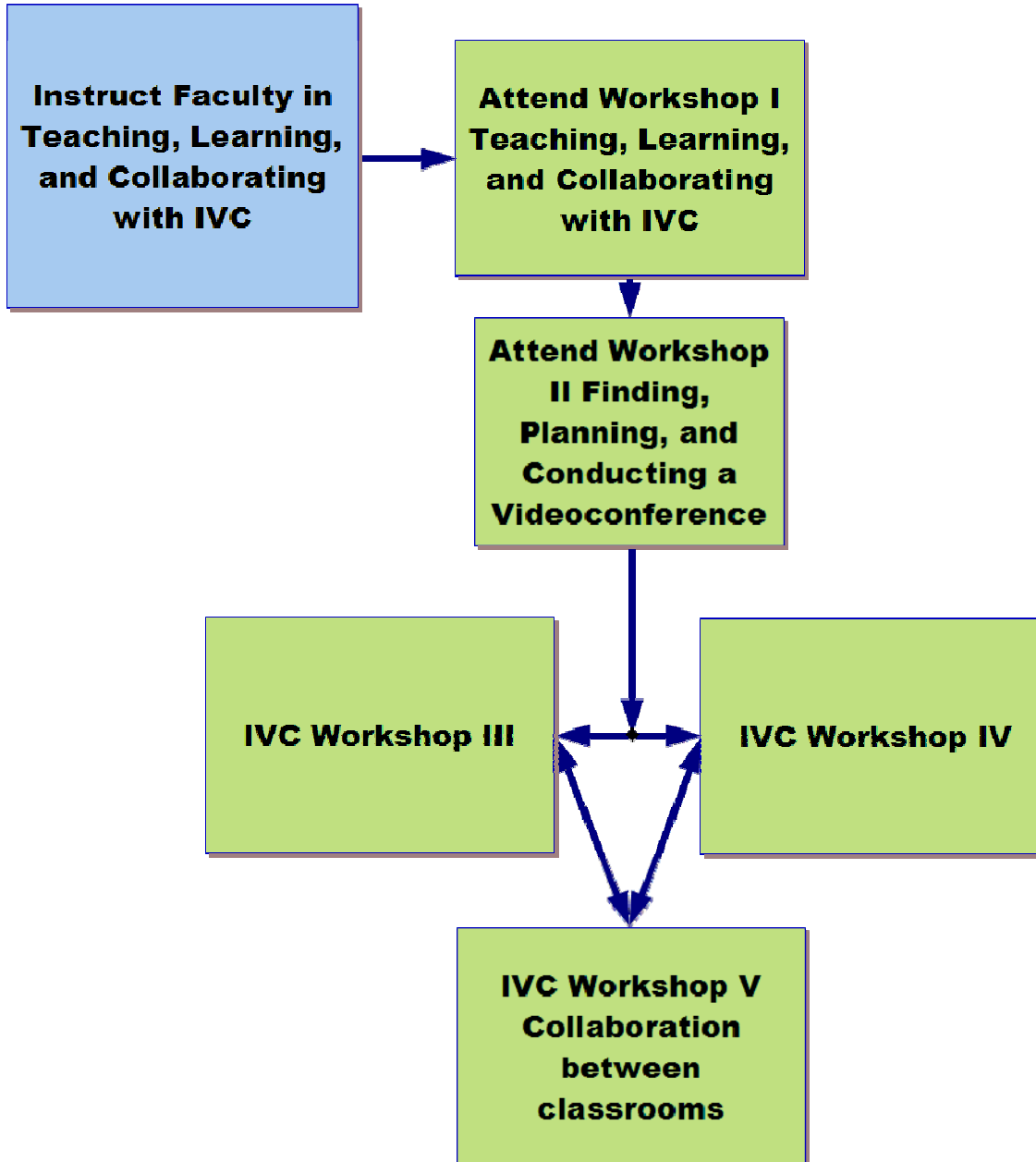
Videoconferencing Call Task Inventory

Tasks and Subtasks	Task Knowledge
<p>6. Practice adjusting cameras. Adjust near camera settings. Adjust far camera settings. Exit adjusting camera settings. View remote site.</p>	<ul style="list-style-type: none">• Distinguish between near and far buttons on the remote control.• Recognize that the camera icon on the monitor interprets to mean that either the near or far button on the remote has been depressed to adjust camera control.• Understand when the monitor displays the near or far site.• Manipulate the arrow keys to pan and tilt.• Manipulate the zoom key to zoom in and out.• Understand how to exit the camera settings to return to viewing the dialed location. <p>Terms: Far camera, near camera, pan, tilt, zoom</p>



Hierarchical Flow of Events

- Developed diagram of planned IVC workshop instruction
- Created an associated sub flow diagram for each IVC workshop



Example



3. Designing the Instructional Program

- Outlined the sequence of instruction
 - Flowed from the diagrams
- Learning objectives alignment
- Instructional Strategy for IVC Workshops
 - Keller's ARCS model (Attention, Relevance, Confidence, Satisfaction)
 - Build a community of learners



Learning Objectives

- Aligned with:
 - Bloom's taxonomy domains
 - Adherence to NETS Teacher Standard Performance Indicator
 - Associated NETS Teacher Standard
 - Criteria for assessing learners' comprehension of objectives

Example

Sample Table. Learning Objectives, NETS Standard Adherence, and Criteria for Assessing Learners' Comprehension of Objectives for Workshop II, Finding, Planning, and Conducting a Videoconference

Cognitive Domain	IVC Learning Objectives	Adherence to NETS Teacher Standard Performance Indicator	Associated NETS Teacher Standard						Criteria for Assessing Learners' Comprehension of Objectives
			1	2	3	4	5	6	
Application	6. Locate relevant videoconferencing resources for further opportunities such as professional conferences, virtual field trips, and global collaboration opportunities using the workshop handouts as a reference.	7. Use technology to locate, evaluate, and collect information from a variety of sources. 12. Evaluate and select new information resources and technological innovations based on their appropriateness to specific tasks.	X	X		X	X		Search for an IVC content program using the presentation hard copies. Show results to the SUCCESS Manager. Complete Videoconferencing Request Form Pass = Locate a program that is within the parameters of the schools' requirements and complete the request form. Fail = Can not find a program from the resources provided and/or can not locate the request form.



Instructional Strategies

- Intended to:
 - Instill belief in and comfort with technology,
 - Motivate the teacher learners about the potential applications for IVC,
 - Be hands on,
 - Provide learner satisfaction,
 - Model strategies for the teachers, and
 - Create assessment criteria for meeting objectives.



4. Developing Instructional Material

- Build a foundation
- Assessment of Teacher Participants
- Instructional Strategies for the Design of the Materials
- Resources for teachers











Assessment of Teacher Participants

- Formative assessments (modeling)
- Component review
- Teacher evaluation rubric

Appendix F. SUCCESS IVC Equipment Review Quiz IVC Design Plan 112
SUCCESS - IVC Equipment Review

Name _____ Date _____

Match the picture of the POLYCOM interactive videoconferencing component on the left hand side with the equipment name on the right hand side. Connect the pictures to the names with lines.

IVC Pictures	IVC Equipment Names
	1. Address Book on Polycom Monitor
	2. Microphone
	3. Cart for equipment
	4. On/Off switch on the back of the Polycom ViewStation Camera
	5. Polycom ViewStation Remote Control
	6. IVC Monitor
	7. Start-up Screen on the Polycom ViewStation
	8. Polycom icon displaying that there is an IP connection.
	9. Expression of presenter after you dial an IP call successfully.
	10. Polycom Viewstation Camera

Example

Assessment Rubric for Teacher Participants

IVC Learning Objective	Rubric Score Descriptions				Rubric Score
	4 Advanced	3 Proficient	2 Basic	1 Novice	
<p>Cognitive domain: Application</p> <p>6. Locate relevant videoconferencing resources for further opportunities such as professional conferences, virtual field trips, and global collaboration opportunities using the workshop handouts as a reference.</p>	<p>Search for an IVC content program using the presentation hard copies and show results to the presenter. Locate a program that is within the parameters of the schools' requirements and complete the Videoconferencing Request Form.</p>	<p>Search for an IVC content program using the presentation hard copies and show results to the presenter. Locate a program that is within the parameters of the schools' requirements but fail to complete the Videoconferencing Request Form.</p>	<p>Search for an IVC content program using the presentation hard copies and show results to the presenter. Results indicate a program that is not within the parameters of the school's Requirements. Search for another IVC content program.</p>	<p>Unable to narrow search for an IVC content program using the presentation hard copies and show results to the presenter. Review the handouts again to try for another search.</p>	



Strategies for Design

- Included the following methods:
 - Lab time
 - Case studies
 - Open-ended questions
 - PowerPoints
 - Lecture
 - Small group work
 - Vary delivery



5. Formative Evaluation

- Formative evaluation self-review
- One to one evaluations
- Review results of one to one evaluations
- Revision of instructional materials



Goals of the formative assessment

- Identify voids in the instruction.
- Ensure that enough time was provided to cover the content.
- Discern whether the learning activities engaged and motivated the learner.
- Make sure that the handouts were relevant and would be utilized by the teachers in their own implementations.



6. Implementation Plan

Determination about:

- Time and equipment required
- Support, instruction, and evaluation
- Costs
- Summative evaluation
 - Quantitative assessment (rubric)
 - Instructional strategy evaluation survey
- Revisions



Questions and Comments

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Thank you!