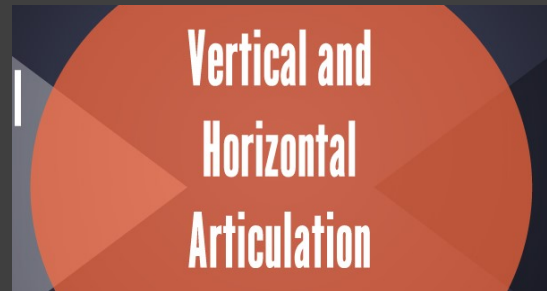




Vertical to Horizontal Articulation for Student Success

Presented by:
Dr. Rose Irby-Wilkins



Vertical to Horizontal Articulation for Student Success

Module I: Defining Curriculum Design and Instructional Design

- A. Curriculum Design
- B. Types of Curriculum Designs
- C. What is Instructional Design
- D. Application of Data and Learning Theories in Instructional Design
 - How People Learn
 - Domains of Learning.

Module II: Vertical and Horizontal Articulation

- A. Vertical Articulation
- B. Horizontal Articulation

Module III: Application of Instructional Design with State of Alabama ELA Common Standards

***** Summative Activity**

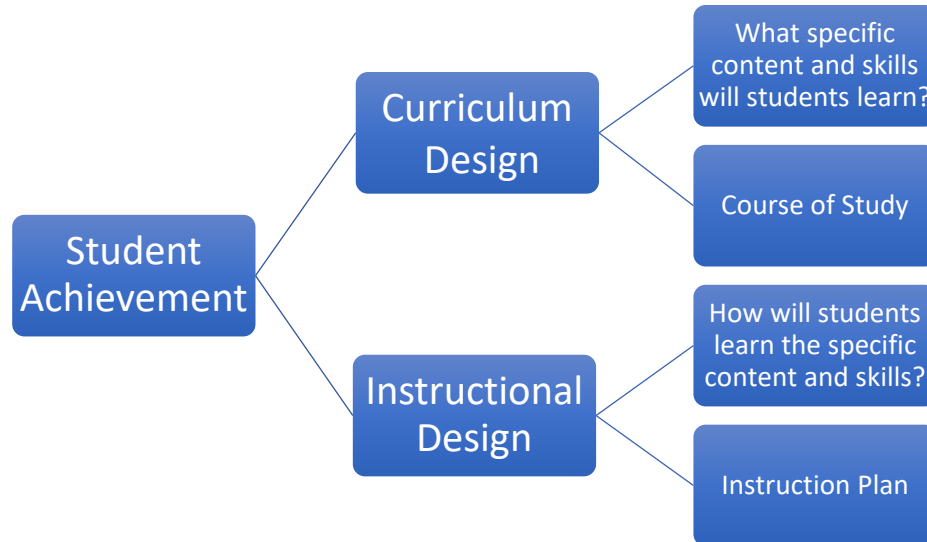
- A. Creating a Learning Alignment Process
- B. Planning an Articulation Strategy (Sample Instructional Design Model)
- C. Critical Areas & Feeder Patterns
- D. Horizontal and Vertical Instructional Sample (ELA)

Reflection and Questions

Module I: Defining Curriculum Design and Instructional Design

Curriculum development and instructional design are related, and sometimes synonymous, terms.

Typically, the two are differentiated as follows: **Curriculum design** is what students will learn, while the **instructional design** is how students will learn it.



A. Curriculum Design

Curriculum design is the specific organization of curriculum, which includes what is often defined as "**the arrangement of the elements into a substantive whole.**" Thus, components of a curriculum are organized into a coherent, meaningful sequential plan, such as a **course of study**.

- The developer has already thought of curriculum design, formulated the curricular aims, goals, and objectives, and selected the appropriate curriculum content, learning experiences, and evaluation procedures.
- Curriculum design is influenced by the developer's philosophical, psychological, sociological, and historical orientation and, ideally, by the characteristics of a comprehensive curriculum.
- Balance is an essential consideration in curriculum organization. It refers to the appropriate emphasis on different aspects of the curriculum's content, learning experiences, and intended outcomes.
- Curriculum designs work well when developers align target skills and content based on interests and needs. The psychological growth stages of children drive decisions concerning sequence in the curriculum as well as the following considerations:

- **The course/field of study** (i.e., starts from the most straightforward concepts, principles, and operations to the most complex).
- **Chronological learning-** (Content, skills, and processes are sequenced based on the characteristics of learners at the different stages of their growth and development to ensure that learning experiences are within their level of maturity and capabilities.
- **Psychological principles of learning** - Whole-to-part, concrete-to-abstract, simple-to-complex, and similar other learning principles also guide the sequencing of the curriculum from the psychological viewpoint.
- **Learner's interests and needs**
- **Transference and Application** -Analysis of how people use knowledge in everyday interactions or social functions

B. Types of Curriculum Designs

There are several types of curriculum designs are used by developers, which are broadly categorized into the following major groups:

- traditional or subject-centered designs
- learner-centered designs
- problem-centered or society-centered designs
- unified designs

C. What is Instructional Design

Instructional design is the creation of instructional materials. However, the instructional design goes beyond simply creating teaching materials. It also carefully considers how students learn and what materials and methods will most effectively help individuals achieve academic goals.

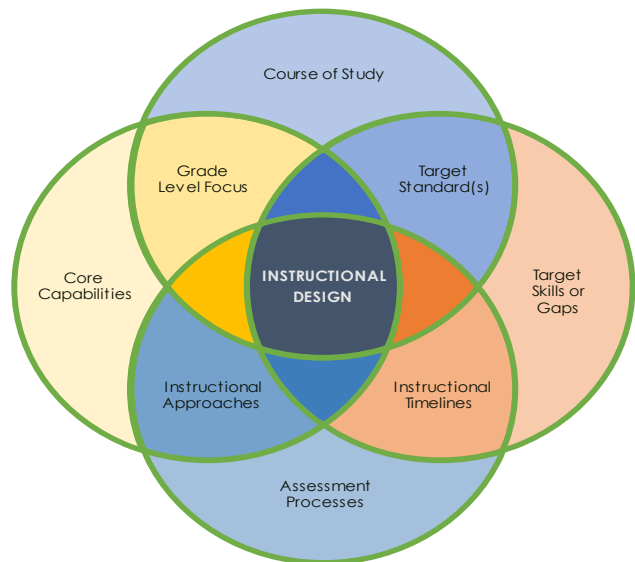
- The instructional design identifies gaps in students' knowledge, skills, and attitudes, analyzes learning needs, and develops learning material to close them.
- Instructional design helps give meaningful and practical instructions to learners to make learning easier for them.
- The goal of instructional design is to make learning as accessible as possible for the learner. Therefore, the core of the instructional design process is the learning objective or desired outcome for the learner.
- Instructional design principles consider how educational tools should be created and delivered to any learning group across grade levels.



Critical Steps in the Instructional Design Process

Here are the primary steps to follow when designing instructional learning materials for students:

- Step 1:** Conduct a needs analysis to identify the needs of your target grade levels and core curriculum areas, as well as training to address staff needs.
- Step 2:** Based on the analysis of learners, performance gaps, or target skills, create a general outline of target skills or content to address needs.
- Step 3:** Identify the learning objectives. Objectives should focus on the outcomes of students will expect to achieve at the end of instruction as measured by assessments or other tasks.
- Step 4:** Once topics or standards are selected, decide whether the priority focus will include **vertical articulation** or **horizontal articulation**. (*Identify which colleagues will be involved?*)
- Step 5:** Organize the targeted content and identify a flow using different visual tools. Use core content from course of study, symbols, images, icons, etc.
- Step 6:** Launch the instructional plan (approach), monitor, and assess it to determine whether it is effective in accomplishing the learning objectives, fulfilling the requirements of the course of study, and addressing any specific needs of learners.



D. Application of Data and Learning Theories in Instructional Design

When considering an instructional design process, data analysis is a critical first step.

Activity: (1) Use the data below to complete the Data Analysis Protocol:

(2) How can teachers use Reading Benchmark data to initiate an instructional design?

****Sample Grade Level Snapshot Reading Data**

Student	Grade	Initial Proficiency Group (B1)	Grade Level Proficiency (B1)	Expected Grade Level Prof (EOY)	Projected Grade Level Prof (EOY)	Projected Years of Growth (EOY)	Reading Lessons Complete/Assign	Avg Comp %	Status
LB	6th	At/Above	7.7	9.2	8.8	1.1	12/36	94%	
JP	6th	Well Below	2.1	4.6	2.8	0.7	4/36	82%	
AC	6th	Below	5.0	7.0	6.8	1.8	18/44	89%	
ML	6th	Below	3.0	5.0	3.1	0.1	1/45	100%	
CT	6th	Well Below	0.5	3.0	0.5	0.0	0/9	-	-

****Sample Multi-Grade Level Snapshot Reading Data**

Grade	Enrolled	Test	Assessed	Avg Comp Text Lexile	Avg Vocab	Avg Rate	Avg Proficiency Text Lexile	ProficiencyGroups
6	37	B1	20	400-640	3.9	144	400-640	
7	49	B1	22	400-640	5.4	123	400-640	
8	52	B1	26	400-640	6.9	130	620-790	
9	36	B1	23	770-870	8.1	146	770-870	
10	30	B1	14	620-790	7.2	124	620-790	
11	12	B1	1	620-790	6.6	91	620-790	
12	7	B1	1	0-230	0.6	-	0-230	

5 Step Data Analysis Protocol

Data Probe	Analysis
<p><i>Step 1: What parts of this data catch your attention? Just the facts.</i></p>	
<p><i>Step 2: What does the data tell us? What does the data NOT tell us?</i></p>	
<p><i>Step 3: What good news is there to celebrate?</i></p>	
<p><i>Step 4: What are the problems of practice suggested by the data?</i></p>	
<p><i>Step 5: What are our key conclusions? What are the recommendations for addressing the problems of practice?</i></p>	



How People Learn:

- The **information processing model** is the prevailing theory in cognitive psychology. It includes three types of memory (*sensory, working, and long-term memory*) that interact to encode incoming information.
- All information perceived by sensory memory will pass to working memory when the learner pays attention to it. Thus, to be learned, materials must be processed in working memory, reflecting our consciousness, where mental activities occur.
- Working memory is limited in duration and capacity. Therefore, the limitation in working memory is considered a critical factor when designing instruction.
- Students use two types of rehearsal when processing information in the working memory: **maintenance** and **elaborative rehearsal**.
 - *Maintenance rehearsal*, or *rote memorization*, occurs when the learner goes over the learning material many times to remember it without thinking (surface learning).
 - *Elaborative rehearsal* is the process of organizing the information to reach meaning (i.e., understanding or deep learning).



Domains of Learning.

Gagne, R.M., (1985) identified the five domains of learning that affect the learning process: 1) *motor skills*, 2) *verbal information*, 3) *intellectual skills*, 4) *cognitive strategies*, and 5) *attitudes*.



Reference: *The Conditions of Learning and Theory of Instruction*. New York: Holt, Rinehart, and Winston, 1985.



Phases of Instructional Design Models

Another main task is to analyze instructional processes to determine instructional goals, develop instructional strategies, and develop and conduct an evaluation to assess and revise instructional materials

**There are many different instructional design models, but they all include the following essential phases:



Module II: Vertical and Horizontal Articulation

A. Vertical Articulation

Vertical organization refers to the longitudinal arrangement of content as reflected in the presence of sequence, continuity, and vertical articulation in the curriculum. Sequence refers to the vertical arrangement of the curriculum content (including skills and processes).

- New learning is based on previous knowledge.
- Vertical articulation occurs when proper sequencing of learning experiences entails identifying which content, skills, or processes are prerequisites for the next.
- Vertical articulation occurs when teachers of different courses that belong to the same field of study plan together to map out the scope and sequence of their respective classes.
- A well-sequenced curriculum provides for cumulative and continuous learning. Decisions concerning sequence in the curriculum align with the following considerations:
 - the logical structure of the course of study
 - chronological learning
 - psychological principles of learning
 - learner's interests and needs
 - analysis of how people use knowledge in their work or social functions.

B. Horizontal Articulation

The horizontal design is the arrangement of topics, themes, or courses offered at the same point in time (i.e., same grade or year level, or same grading cycle/semester).

- Horizontal articulation is concerned with scope and relatedness topic or content.
- Horizontal articulation occurs when educators determine the breadth of content. Discussions focus on answering questions such as: *"What topics, themes, ideas, concepts, principles, theories, and other forms of knowledge (subject matter) as well as skills, competencies, and activities should be covered?"*
- When designing based on horizontal articulation, the primary issue in making decisions about content is finding out which knowledge is most worthy of inclusion in the curriculum.
- A practical approach in horizontal articulation is planning a lesson, unit, or minicourse that integrates related concepts, principles, or themes from two or more subjects.
- Technology is a driving force in horizontal because it allows students quick access to information, which would enable teachers to cover a broad scope of information or content.

Summary
Key Points

1. Both horizontal and vertical articulation are critical components of a practical Instructional Design.
2. Communication among and across grade levels will significantly enhance understanding of progress on common standards and achievement alignment with the state's Course of Study.
3. Teachers in feeder pattern grades would benefit from collaborative planning sessions.
4. Data pools from each grade level are essential for curriculum mapping and overall instructional designs.

Horizontal Alignment/Articulation	Vertical Alignment/Articulation
<ul style="list-style-type: none"> ❖ All classes with the same name teach the same concepts. ❖ Each class uses identical <ul style="list-style-type: none"> -Tests/Quizzes/Assessment -Grading Scale -Homework -Timeline for Unit/Topic ❖ Each teacher's lesson plans are unique. 	<ul style="list-style-type: none"> ❖ Each class flows seamlessly to the next. ❖ Concepts in each class are not repeated. ❖ Remediation and review are built-in but are short, self-contained days, not repeated units.

Reference Video for Enhancing Awareness of Vertical and Horizontal Articulation/Alignment
<https://www.youtube.com/watch?v=6A8NotPsqZU>

Module III: Application of Instructional Design with State of Alabama ELA Common Standards

A. Creating a Learning Alignment Process

When designing an instructional plan, it is essential to identify appropriate alignment regardless of vertical or horizontal articulation. The following is a sample of learning alignment:

Approaches to learning alignment



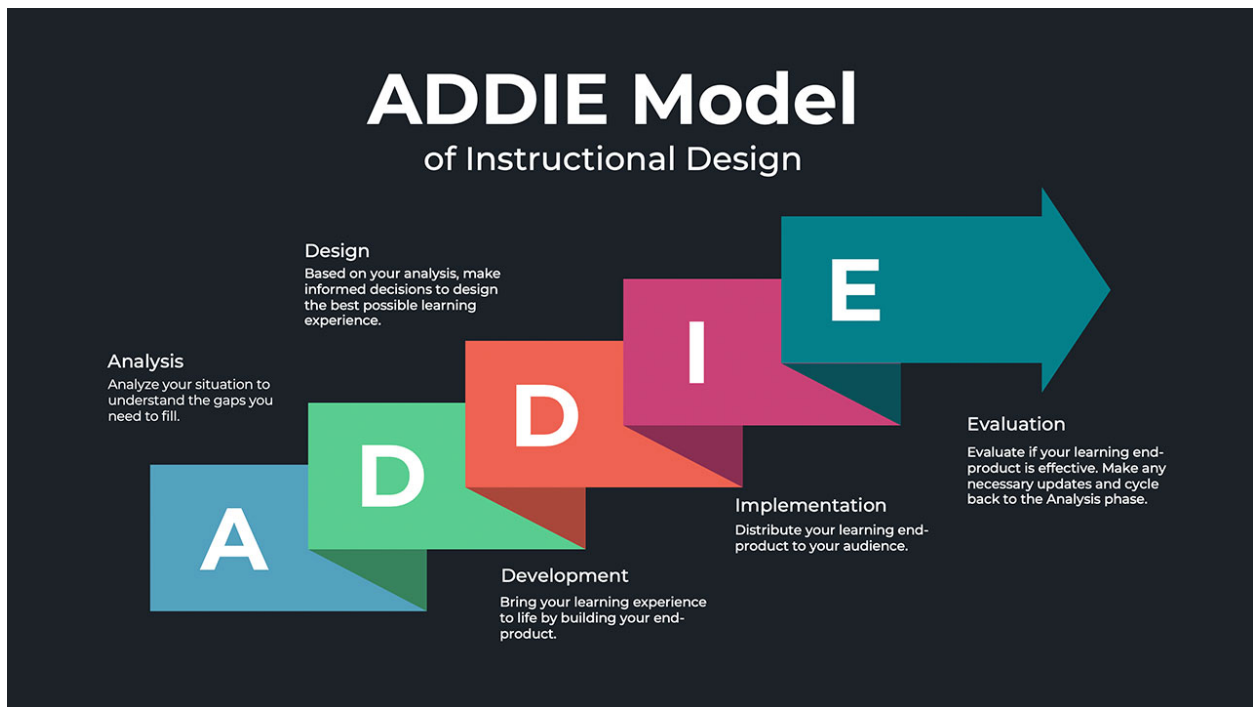
Diagram via
©Copyright Showeet.com

Alison Yang



B. Planning an Articulation Strategy (Sample Instructional Design Model)

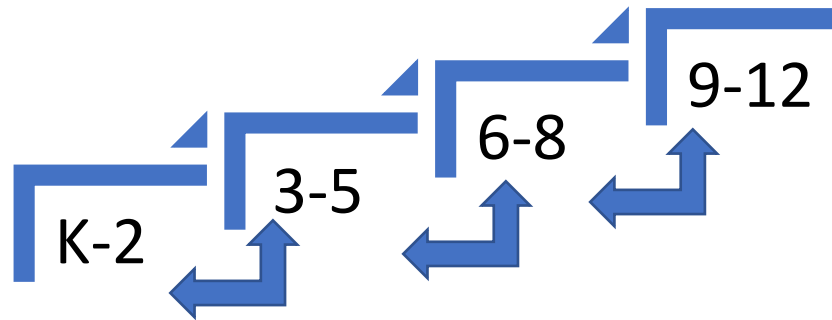
Although there are many instructional design models, we have selected the ADDIE Model for this planning activity. The ADDIE model is more straightforward to use. To produce effective instructional processes and positive outcomes, all models require the following phases: analysis, design, development, implementation, and evaluation. These phases represent the acronym ADDIE. The outcomes of each stage inform the subsequent phase.



Summative Activity:

Use the ADDIE Model to design a vertical articulation strategy and horizontal articulation in at least two ELA Common standards at each of the core feeder patterns in the state of Alabama.

1. Using the Alabama Course of Study, identify which critical ELA common standards and skills are prerequisites for each Feeder Pattern.



2. Select 2-3 ELA commons standards and identify if they should follow vertical articulation alignment or horizontal articulation alignment.

<https://alex.state.al.us/browseStand.php>

3. How will you communicate the proposed plan to colleagues?

**For more information regarding instructional design highlighting vertical or horizontal articulation, please get in touch with Dr. Rose Wilkins- info@irbywilkinsgroup.com or call 708-250-6778.