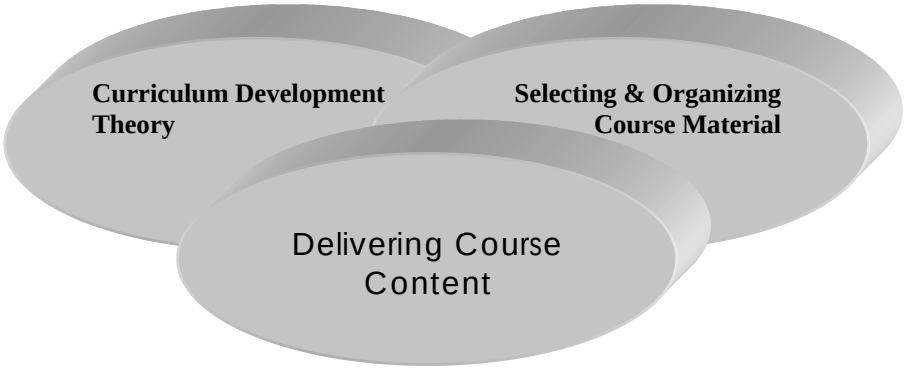
Effective Curriculum and Instruction for Career Education

A Synthesis Course
for
Career Education Instructors



By

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Effective Curriculum and Instruction for Career Education

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Introduction

Effective Curriculum and Instruction for Career Education is a higher level synthesis course that covers selected content from multiple courses within a teacher education sequence, such as curriculum development theory, selecting and organizing course content, and delivering course content (teaching methods).

This curriculum guide includes materials that may be used in different ways. First, this guide includes curriculum materials that will assist the college-level faculty plan and deliver a course for Missouri's career education teachers and can be found in the *Units of Instruction* sections. Second, this guide includes sample teacher materials (course description, course rationale, scope, sequence, curriculum alignment matrices, etc.) that may assist Missouri teachers meet local and state requirements. This information will be presented in the *Course Overview* sections and periodically in units and appendixes throughout this guide.

The Missouri Department of Elementary and Secondary Education's Division of Career Education requested and funded this curriculum project, with an emphasis to be placed on a student assessment course delivered via the web (per the title of the project "Web-based Assessment Course"). While the authors acknowledge student assessment is an integral component of teacher preparation, it was determined during development that assessment should be addressed within the context of affective curriculum and instruction planning and development. For this reason, this course has been given a working title of *Effective Curriculum and Instruction for Career Education* and will deliver many components within the context of curriculum alignment, including terminology, student objectives, instructional strategies, activities, and resources, and student assessment.

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Course Title and Description

Effective Curriculum and Instruction for Career Education (*ECICE*) serves two purposes for Missouri career education instructors. One purpose is to serve traditionally certified career education teachers through a higher level synthesis course. The second purpose is to serve new career education teachers who may be pursuing teacher certification via alternative methods. From either perspective, this course will cover selected content from different courses within a teacher education sequence, such as curriculum development theory, selecting and organizing course content, and delivering course content (teaching methods). While stand-alone, individually-delivered teacher education sequence courses may have difficulty properly linking theory, selecting content, and delivering content, *ECICE* focuses on all three components working in harmony so that career education instructors can effectively communicate their content consistent with current Missouri Department of Elementary and Secondary Education recommendations and standards.

This course is designed to relate directly to a teacher's existing curriculum. A blend of theory and application will be emphasized, with course materials drawn from many different career education program areas. In addition, teachers enrolled in this course will be required to use segments of their existing course curriculum throughout this course for reflective discussion and curriculum improvement purposes.

This three hour credit course is offered for graduate credit and may meet Missouri Department of Elementary and Secondary Education career education certification requirements. In addition, *ECICE* may meet graduate degree requirements for students pursuing advanced degrees.

Course Rationale

Effective Curriculum and Instruction for Career Education (*ECICE*) is needed by career education teachers as they strive to meet improvement suggestions by the Missouri Department of Elementary and Secondary Education. Career education teachers who successfully complete this course will comprehend both Division of Career Education's program section requirements and Missouri School Improvement Program requirements. In addition, all teachers, regardless of their content, grade level, and school funding design (private or public), should be able to link curriculum theory, selection and organization practices, and content delivery strategies for improved instructional design and delivery for their students.

This course may contribute to DESE Career Education teacher certification requirements. It may also meet graduate credit requirements in a student's degree program.

Course Scope

The following tasks will be delivered in *Effective Curriculum and Instruction for Career Education* (*ECICE*).

* = Denotes prerequisite competencies that, depending on teacher backgrounds, may be reviewed and discussed during this course.

1. Differentiate between curriculum development and instructional development terms
2. ***** Create course preliminary information (title, description, rationale)
3. ***** Create a scope and sequence for a course
4. ***** Create a scope and sequence for a program
5. Critique and improve existing curriculum components
6. Adapt a program/course evaluation plan for one's specific need
7. Evaluate instructional components for internal alignment
8. Evaluate instructional components for external alignment
9. Identify academic standards for external alignment
10. Identify technical standards for external alignment
11. Create instructional/curricular components that are fully aligned
12. Create measurable behavioral objectives using tasks, criterion, and conditions
13. Distinguish between learning domains
14. Develop domain-specific behavioral objectives
15. Develop domain-specific instructional strategies
16. Develop domain-specific student supplemental activities

17. Develop instructional strategies consistent with behavioral objectives and assessments
18. Incorporate Bloom's Taxonomy when writing behavioral objectives
19. Differentiate between measurement and evaluation
20. Develop content-specific and domain-specific authentic assessments
21. Develop content-specific and domain-specific process and product assessments
22. Create assessments that are internally aligned with learner objectives and instructional strategies
23. Develop an external alignment matrix
24. Develop an internal alignment matrix
25. Create measurable learner objectives (MLOs) from existing curriculum materials, including competencies and duty bands

The previous tasks will be organized and delivered within the following Measurable Learner Objectives (MLOs):

1. Describe Curriculum Components for Effective Instruction

1.1 Differentiate between curriculum development and instructional development terms

2. Evaluate Existing Curriculum Terminology and Components

2.1* Create course preliminary information (title, description, rationale)

2.2* Create a scope and sequence for a course

2.3* Create a scope and sequence for a program

2.4 Critique and improve existing curriculum components

3. Apply Curriculum Alignment Theory to Instructional Materials

3.1 Evaluate instructional components for internal alignment

3.2 Evaluate instructional components for external alignment

3.3 Identify academic standards for external alignment

3.4 Identify technical standards for external alignment

3.5 Develop an external alignment matrix

3.6 Develop an internal alignment matrix

4. Write and Clarify Instructional Objectives

4.1 Create measurable learner objectives (MLOs) from existing curriculum materials, including competencies and duty bands

4.2 Create measurable behavioral objectives using tasks, criterion, and conditions

4.3 Distinguish between learning domains

4.4 Develop domain-specific behavioral objectives

4.5 Incorporate Bloom's Taxonomy when writing behavioral objectives

5. Select Instructional Strategies, Activities, and Resources

5.1 Develop domain-specific instructional strategies

5.2 Develop domain-specific student supplemental activities

5.3 Develop instructional strategies consistent with learner objectives and assessments

5.4 Create instructional/curricular components that are fully aligned

6. Apply Assessment Theory to the Classroom

- 6.1 Differentiate between measurement and evaluation
- 6.2 Develop content-specific and domain-specific authentic assessments
- 6.3 Develop content-specific and domain-specific process and product assessments
- 6.4 Create assessments that are internally aligned with learner objectives and instructional strategies
- 6.5 Adapt a program/course evaluation plan for one's specific need

In addition to the six measurable learner objectives and 25 tasks listed above, additional competencies from the following career education program areas (identified by DESE staff and teachers enrolled in the course) may be delivered to assist the teachers in their classroom curriculum and instruction planning and preparation.

Program Area / Content-Specific Competencies (if applicable)

1. Agriculture Education
2. Business Education
3. Family and Consumer Sciences Education
4. Health Sciences Education
5. Marketing Education
6. Technology Education
7. Trade and Industrial Education

Course Sequence

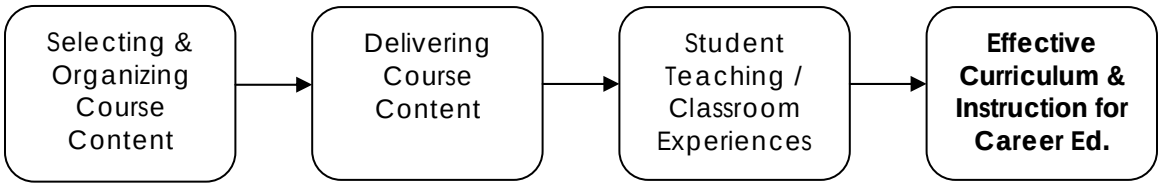
Effective Curriculum and Instruction for Career Education (*ECICE*) is a 3.0 credit hour course conducive to multiple delivery formats, such as a 16 week evening course (three contact hours per week), an ITV course, a web-based course, or a four-session "weekend" course (12.5 contact hours per session). Regardless of the delivery format, the following suggested course sequence illustrates two examples (16 week format and a four session weekend format) and is dependent on the individual learners and instructional climate of any given class.

Instructional Unit	16 Week Format	Four Session Format
Unit 1: Describe Curriculum Components for Effective Instruction	Week 1 (150 minutes)	Session 1
Unit 2: Evaluate Existing Curriculum Terminology and Components	Week 2 (150 minutes)	Session 1
Unit 3: Apply Curriculum Alignment Theory to Instructional Materials	Weeks 3-4 (300 minutes)	Session 1-2
Unit 4: Write and Clarify Instructional Objectives	Weeks 5-7 (450 minutes)	Session 2
Unit 5: Select Instructional Strategies, Activities, and Resources	Weeks 8-10 (450 minutes)	Session 3
Unit 6: Apply Assessment Theory to the Classroom	Weeks 11-15 (750 minutes)	Session 4

Program Sequence

Effective Curriculum and Instruction for Career Education (ECICE) may align with two distinctly different program sequences, depending on the backgrounds and career paths of the instructors enrolled in the course.

Sequence One: Traditional Teacher Education Program. For instructors who have completed a traditional teacher education program, this course may be viewed as a capstone course for practicing teachers that synthesizes select courses in a four-year traditional teacher education degree block as well as discussing curriculum and instruction alignment. These courses may include courses such as selecting course content, delivering course content (although this course will discuss content delivery theory rather than actually practicing content delivery), and student assessment:



Sequence Two: Non-traditional and Alternative Certification Sequence. For teachers pursuing / obtaining teacher education through procedures other than a traditional four year teacher education degree, this course may introduce elements of selecting course content, content delivery applications, student assessment, and aligning curriculum and instruction *prior* to the teachers completing their required teacher certification courses (selecting and organizing course content, delivering course content, and student assessment).

You are here…

At the beginning of each Unit of Instruction, a course road map will provide the course instructor with a visual organizer of where that unit's material corresponds with three courses commonly found in teacher education programs: curriculum development theory, selecting and organizing course content, and delivering course content (See *Figure 1*). Although *Figure 1* is designed to assist the course instructor prepare for each unit, it may also serve as a visual aid for the teachers enrolled in the course.

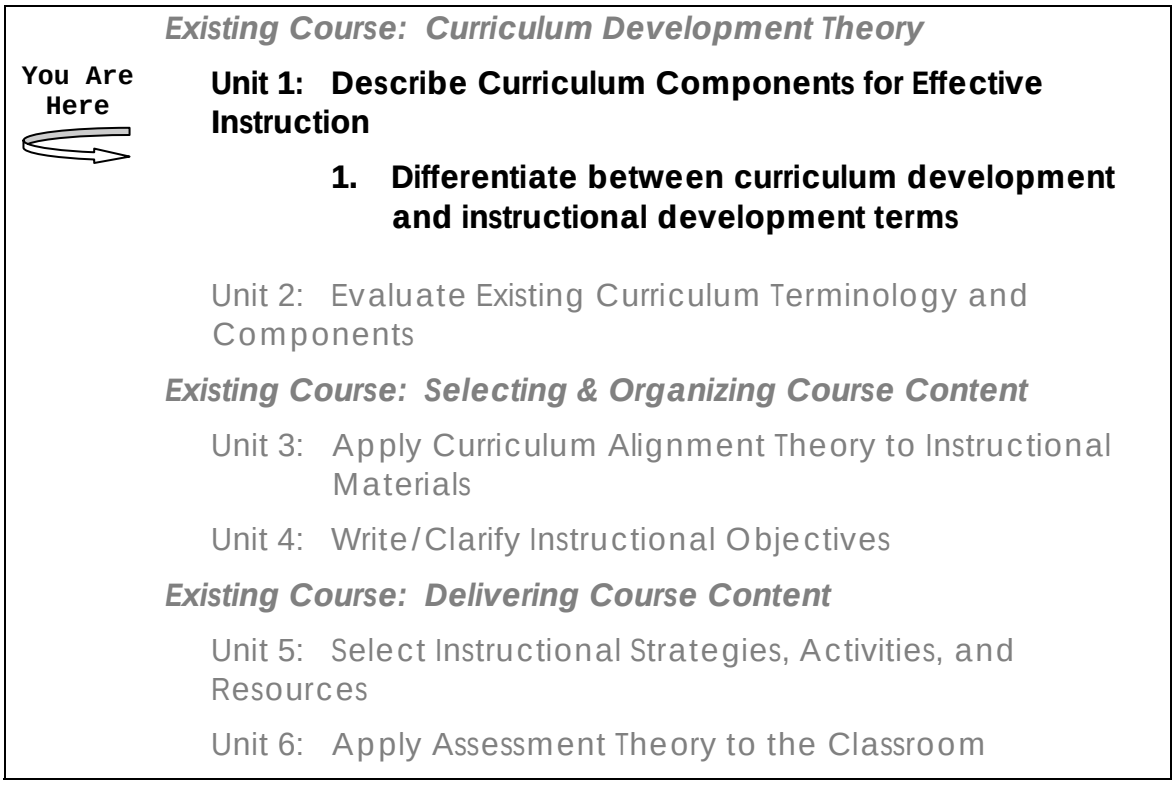


Figure 1. Visual organizer located at the beginning of each Unit.

Figure 2 illustrates that each component is oftentimes taught separately in a sequence of courses. However, all are related and contribute to successful planning and delivery of instructional content.

Just as *Figure 2* illustrates the interrelatedness of curriculum theory and instructional delivery, this course's content is also interrelated. A "synthesis" approach will be implemented, which means that during any given unit of instruction, the teachers enrolled in this class should be able to see the bigger picture of how one particular unit (that may fall under one section of the graphic) should also be addressed in another section of the graphic. *Figure 2* and a unit-specific *Figure 1* will be presented at the beginning of every unit.

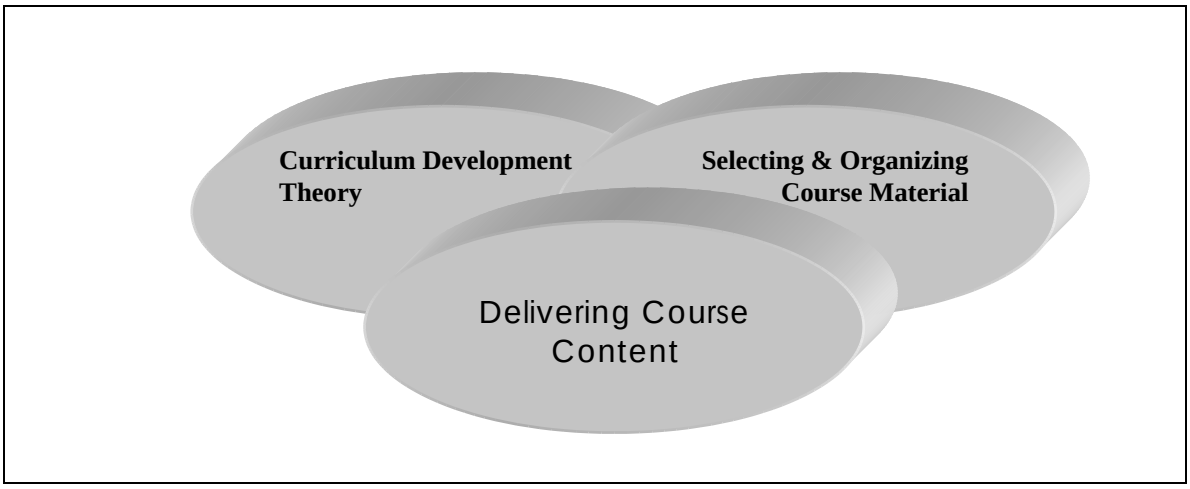


Figure 2. Relationship among curriculum development theory, selecting and organizing course materials, and delivering course content.

Effective Curriculum and Instruction for Career Education

Unit 1: Describe Curriculum Components for Effective Instruction

Effective Curriculum and Instruction for Career Education

Unit 1: Describe Curriculum Components for Effective Instruction

Existing Course: Curriculum Development Theory

You Are Here

Unit 1: Describe Curriculum Components for Effective Instruction

1.1 Differentiate between curriculum development and instructional development terms

Unit 2: Evaluate Existing Curriculum Terminology and Components

Existing Course: Selecting & Organizing Course Content

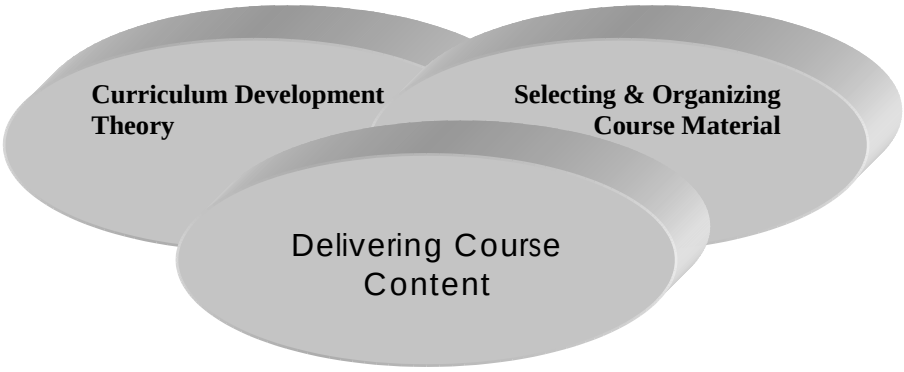
Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Unit 4: Write and Clarify Instructional Objectives

Existing Course: Delivering Course Content

Unit 5: Select Instructional Strategies, Activities, and Resources

Unit 6: Apply Assessment Theory to the Classroom



UNIT OF INSTRUCTION PLAN	
Name of Course:	Effective Curriculum and Instruction for Career Education
Measurable Learner Objective	Unit 1: Describe Curriculum Components for Effective Instruction
Duration of Unit:	Week 1 (150 minutes)
Rationale for Unit:	Regardless of the state and national standards teachers strive to meet, sound instructional practice includes curricular and instructional components that guide planning, delivery, and student learning. Learning how to create and implement these components are important and will be addressed in later instructional units within this course. However, this unit will focus on the definitions of these curriculum components and will attempt to provide comprehension and class consensus for the many different terms and definitions as many school districts and state department sections use a wide variety of terms and definitions when discussing curricular components.
Unit Task(s)	1.1 Differentiate between curriculum development and instructional development terms
Topical Outline (content to be covered):	Describe Curriculum Components for Effective Instruction a. Course components and definitions (title, description, rationale, scope, sequence, objectives, resources) b. Current trends in curriculum development c. Program area / content-specific materials

Teaching-Learning Activities:	1. Presentation/discussion 2. Identify existing curricula for required components 3. Describe, write sample/actual curriculum components (potential link with Unit 2) 4. Questions/answers/collaboration work
Instructional Resources:	1. Teacher's sample/actual curriculum 2. Course readings (instructor identified) 3. Presentation (digital file and slide handout) 4. Sample component items / worksheets 5. DESE Report Writing Form Definitions (Appendix B) 6. DESE MSIP Frequently Asked Questions (Appendix C) 7. Computer and projector
Facilities:	1. Classroom 2. Computer laboratory (teacher notebook computers)
Assessment Activities:	1. Peer assessment checklist: definitions of terms 2. In-class assessment: curriculum terms synonyms list 3. Teacher daily performance work (ongoing curriculum improvements) 4. Unit performance assessments: comprehension level 5. Final exam questions
Specialized Information:	According to the Missouri Department of Elementary and Secondary Education's Division of School Improvement, many Missouri teachers think a curriculum consists only of a title, description, scope, and sequence. Many school districts and state department sections also use different terms when discussing similar components. This unit will present required components that comprise a full curriculum, as well as clarifying these curricular terms.

Effective Curriculum and Instruction for Career Education

Unit 1: Describe Curriculum Components for Effective Instruction

Suggested Lesson Plan

Teacher:	(to be determined)
Subject Area:	Career Education Curriculum Alignment
Grade Level:	Graduate Credit
Unit Title:	Describe Curriculum Components for Effective Instruction
Lesson Title:	Curriculum Development and Instructional Development: Relationships and Terminology
Behavioral Objectives:	1. During class discussions, the teacher will describe and differentiate among curriculum and instructional development terms with 100% accuracy. 2. During peer assessments, the teacher will describe curriculum terminology consistent with DESE guidelines. 3. During class discussions, the teacher will appreciate the different terms used throughout various school districts and state department sections as evidenced by grouping similar definitions and creating a synonyms list for class discussion.
Materials/Resources Needed:	1. Teacher's sample/actual curriculum

2. Selected readings: Curriculum Development and Instructional Development (Miller & Miller, 2002; Finch & Crunkilton, 1999; Mager, 1962)
3. Electronic presentation: ECICE Unit 1
4. Sample component items / worksheets
5. DESE Report Writing Form Definitions handout (Appendix B)
6. DESE MSIP Frequently Asked Questions handout (Appendix C)
7. Assessment sheet: curriculum critique

Anticipatory Set:

- Discuss instructional and curriculum standards (MSIP, program accreditations).
- Why are they important?
- What is the relationship among the standards?
- What is curriculum and Instruction?

Objective/Purpose:

Relay to teachers: "As we strive to describe curriculum and instructional development terms, you will also begin identifying good examples of these components consistent with DESE terminology and definitions. In addition, you will also do the same for your partner's curriculum…."

Input/Teacher Background:

1. Teachers should provide their existing curriculum.
   - (*If they do not have their curriculum with them, use their partner's or a sample curriculum provided by the instructor or from*

the DESE website.)

2. If they are public middle school or secondary education instructors, they should have a working knowledge of MSIP.
   - *(If they do not, require them to meet and interact with their district MSIP coordinator, sign-up for a local committee, report on their most recent MSIP visit (related to curriculum), and identify their CSIP standards related to curriculum.)*
3. If they are in other types of institutions, they should have knowledge of any accrediting agencies that provide leadership/ governance in the curriculum and instruction arena.

Model:

- Instructor-led discussion
- Teacher/peer collaboration
- Question and answers

Check for Understanding:

1. Curriculum Components (theory)
   a. Course Title, Course Description, Scope, and Sequence are important but very small components of one's curriculum.
2. Instructional Components (theory)
   a. Lesson planning, delivery, assessments are oftentimes referred to as "instructional" components.
3. Relationship among these two groups of terms
   a. Both curriculum and instructional

components are needed for effective learning environments. Curriculum is generally considered higher level (administrative) and instructional is generally considered "classroom" or instructor level.

4. What does the teacher's school district require?
5. Who develops which components? Which are required? Why? MSIP only? Sound learning environment?
6. What does the teacher's regulatory agency require?

Guided Practice:

1. Describe/compare existing curriculum components in class.
2. Teacher collaboration teams (group teachers into teams with similar instructional content areas).

Closure:

1. Review major curriculum and instruction components.
2. Discuss differing terminologies and how communication can aid in discussing similar purposes of components.
3. Emphasize how teacher's existing curriculum will be used throughout this course, with each session presenting a new focus of their curriculum.
4. Tie to next unit: Evaluating the components for

accuracy (DESE and theory).

Independent Practice:

1. Describe/compare their partner's curriculum for the required components
2. Review their individual curriculum for the required components
3. Read course materials disseminated in class.

Effective Curriculum and Instruction for Career Education

Unit 1: Describe Curriculum Components for Effective Instruction

Program Area Specific Examples

The following curriculum samples will be presented during this Unit of Instruction. Additional samples will be presented as needed depending on the class population for any given semester.

Example 1: Marketing Education: Marketing Concepts Learner Outcomes
(Example purpose: Marketing Education emphasizes using Measurable Learner Objectives rather than Duty Bands)

Example 2: Trade and Industrial Education: Transition from Duty Bands to Measurable Learner Objectives (Cosmetology Competency Profile)
(Example purpose: Trade and Industrial's decision to make curriculum alignment more manageable by restating duty bands into measurable learner objectives)

Example 3: Family and Consumer Sciences: Family/Individual Health Sample Duty Bands from the Competency Profile
(Example purpose: The Course Rationale is included on the Competency Profile Card that emphasizes Duty Bands and Competencies; Introduce Duty Band F "Promoting Nutritional Health" for future internal alignment examples

Program Area Specific Examples: Marketing Education

Marketing Concepts Measurable Learner Objectives

An asterisk (*) indicates an advanced competency, which is a competency identified for inclusion in an advanced marketing class. Some of these competencies may be selected for inclusion in a first-year marketing education class based on local need.

1. Analyze the marketing mix.
- a. Identify the types of goods.
- b. Understand the basic vocabulary of marketing.
- c. Explain market share and identify factors affecting market share.
- d. *Recognize trends and developments in marketing.

2. Classify channels of distribution.
- a. Define channel of distribution.
- b. Describe two basic types of distribution.
- c. Describe the function performed by channel intermediaries.
- d. Identify factors that influence the length/width of a channel.
- e. Identify the characteristics of retailers, wholesalers, agents, and brokers.
- f. *Determine the most suitable channel of distribution for various products.

3. Identify marketing strategies.
- a. Define marketing strategy.
- b. *Identify factors that affect marketing strategies.
- c. *Describe a marketing strategy for a given situation.
- d. Define marketing mix and identify the elements of the marketing mix.
- e. Determine a marketing mix for a product or service.

4. Identify markets for a product and/or service.
- a. Define the meaning of a market for a product.
- b. Describe how a market for a product can be identified.
- c. Identify demographic characteristics that would compose market segments for particular products.

5. Identify the importance of marketing.
- a. Explain the importance of marketing in our economy.
- b. Define and explain the marketing functions involved in marketing products and services.
- c. Explain the marketing concept.

6. Describe the importance of international marketing.
- a. Define international trade.
- b. Explain why nations engage in international trade.
- c. *Describe how international trade affects the economic interdependence of nations.
- d. *Analyze international trends on marketing.

Program Area Specific Examples: Trade and Industrial Education

Transition from Duty Bands to Measurable Learner Objectives

Culinary Arts Competency Profile

(task statements omitted to emphasize transition from Duty Bands to Measurable Learner Objectives)

PREVIOUS DUTY BANDS		REVISED LEARNER OBJECTIVE	
A.	**Introduction to the Hospitality Industry**	**A.**	**Describe the tools, components, and practices of the hospitality industry**
B.	**Sanitation**	**B.**	**Demonstrate food sanitation procedures**
C.	**Safety**	**C.**	**Appreciate and apply all personal and work place safety procedures**
D.	Purchasing and Receiving	D.	Purchase, receive, and inventory culinary products
E.	Product Identification by Appearance and Taste	E.	Identify food products by appearance and taste
F.	**Food Preparation**	**F.**	**Prepare food products for consumption**
G.	Nutrition	G.	Demonstrate nutrition fundamentals
H.	Menu Planning	H.	Plan individual meal and full menu selections
I.	Service	I.	Provide hospitality service functions
J.	Leadership Competencies	J.	Demonstrate leadership skills in the classroom, industry, and society

Program Area Specific Examples: Family and Consumer Sciences

Family/Individual Health Competency Profile

Name: _____ **Family/Individual Health**

Course Rationale:
To improve the health of Missouri citizens, performance competencies in the family/individual health course taught in Family and Consumer Sciences Education programs enable students to:

a) construct meaning pertinent to health care knowledge;
b) communicate effectively with family members and health care providers;
c) solve problems impacting health and wellness; and
d) make responsible health care decisions involving individuals, families, and communities.

Directions:
Evaluate the student by checking the appropriate number or letter to indicate the degree of competency. The rating for each task should reflect **employability readiness** rather than the grades given in class.

Rating Scale:

3 Mastered – can work independently with no supervision
2 Requires Supervision – can perform job completely with limited supervision
1 Not Mastered – requires instruction and close supervision
N No Exposure – no experience or knowledge in this area

3	2	1	N	B. Promoting Individual Wellness	Notes:
				1. Define wellness	
				2. Describe lifetime fitness principles and techniques	
				3. Assess personal health practices and risks	
				4. Create a personal wellness plan	
				5. Analyze how the family, peers, community and global issues influence the health of individuals	
				6. Analyze situations that require professional health service	
				Other:	

3	2	1	N	F. Promoting Nutritional Health	Notes:
				1. Explain relationships between dietary guidelines and wellness	
				2. Compare nutritional needs at different stages of the life cycle	
				3. Identify nutritional needs of individuals with special health deviations	
				Other:	

Effective Curriculum and Instruction for Career Education

Unit 1: Describe Curriculum Components for Effective Instruction

Suggested Unit Assessment

Measurable Learner Objective:	Describe Curriculum Components for Effective Instruction
Behavioral Objectives:	1. During class discussions, the teacher will describe and differentiate among curriculum and instructional development terms with 100% accuracy. 2. During peer assessments, the teacher will critique their own and another teacher's curriculum terminology consistent with DESE guidelines. 3. During class discussions, the teacher will appreciate the different terms used throughout various school districts and state department sections as evidenced by grouping similar definitions and creating a synonyms list for class discussion.
Learning Domain(s):	Cognitive and Affective
Assessments:	1. Peer Assessment Checklist: Definitions of Terms 2. In-class Assessment: Curriculum Terms Synonyms List 3. Teacher Daily Performance Work (ongoing improvements to their curriculum) 4. Unit Performance Assessments 5. Final Exam Questions

Curriculum Terms Synonyms List (25 points total)
Bloom's Taxonomy Cognitive Levels Assessed: Knowledge, Comprehension, and Analysis.

Using peer collaboration, create a list of curricular and instructional terms complete with their citable definitions (readings, MSIP documents, DESE section documents, research, etc.). Some terms you may include are competencies, measurable learner objectives, grade level expectations, behavioral objectives, measurement, assessment, task statements, duty bands, and student objectives. During the next course meeting, each group will briefly present their list to the class. During the open discussion of the presentations, each teacher will have the opportunity to compare, contrast, and debate the different definitions and terms.

Grading:

Minimum 5 terms (1 point each; *Knowledge* level): ..... 5 points
Definitions (cited, 2 points each; *Knowledge* level):..... 10 points
Synonyms (1 point each; *Comprehension* level):..... 5 points
Discussion/Critique (1 point each; *Comprehension and Analysis*):... 5 points

Term	Your Definition (cite)	Synonym(s)	Discussion

Effective Curriculum and Instruction for Career Education

Unit 2: Evaluate Existing Curriculum Terminology and Components

Effective Curriculum and Instruction for Career Education

Unit 2: Evaluate Existing Curriculum Terminology and Components

Existing Course: Curriculum Development Theory

Unit 1: Describe Curriculum Components for Effective Instruction

You Are Here

Unit 2: Evaluate Existing Curriculum Terminology and Components

- **2.1* Create course preliminary information (title, description, rationale)**
- **2.2* Create a scope and sequence for a course**
- **2.3* Create a scope and sequence for a program**
- **2.4 Critique and improve existing curriculum components**

*** = Prerequisite Competencies**

Existing Course: Selecting & Organizing Course Content

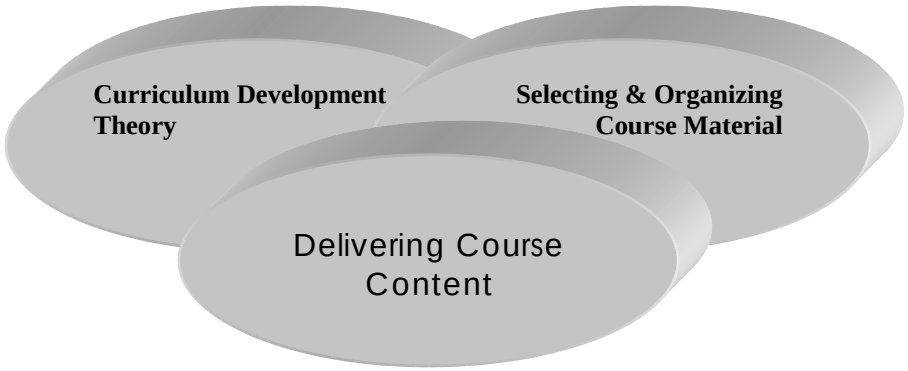
Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Unit 4: Write and Clarify Instructional Objectives

Existing Course: Delivering Course Content

Unit 5: Select Instructional Strategies, Activities, and Resources

Unit 6: Apply Assessment Theory to the Classroom



UNIT OF INSTRUCTION PLAN	
Name of Course:	Effective Curriculum and Instruction for Career Education
Measurable Learner Objective	Unit 2: Evaluate Existing Curriculum Terminology and Components
Duration of Unit:	Week 2 (150 minutes)
Rationale for Unit:	As discussed in Unit 1, many times learning can be impaired by simple misunderstandings of terminology. Some may use a term that is unknown or disagreed upon by others, when in actuality both may comprehend the "theory" behind the terminology. This unit will build on Unit 1, with an emphasis being placed on *evaluating* curriculum terminology and components.
Tasks	2.1* Create course preliminary information (title, description, rationale) 2.2* Create a scope and sequence for a course 2.3* Create a scope and sequence for a program 2.4 Critique and improve existing curriculum components
Topical Outline (content to be covered):	Evaluate existing curriculum terminology and components a. Review Unit 1 information: Required curriculum components b. Evaluate curriculum terminology for each teacher sample curriculum • Consistent with prerequisite competencies 2.1, 2.2, and 2.3: create required curriculum

	components if needed c. Evaluate DESE section requirements • Measurable Learner Objectives (formerly Duty Bands) and tasks versus Duty Bands and Competencies • Crosswalking 140 Competencies versus 16 "Measurable Learner Objectives" d. Program area / content-specific materials
Teaching-Learning Activities:	1. Presentation/discussion 2. Evaluate existing components for effective instruction 3. Evaluate existing duty bands, competencies, measurable learner objectives (link with Unit 4), course objectives, and behavioral objectives (link with Unit 4) 4. Questions/answers/collaboration work
Instructional Resources:	1. Teacher's sample/actual curriculum 2. Course readings (instructor identified) 3. Presentation (digital file and slide handout) 4. Sample component items / worksheets 5. DESE Report Writing Form Definitions (Appendix B; from Unit 1) 6. DESE MSIP Frequently Asked Questions (Appendix C; from Unit 1) 7. Computer and projector
Facilities:	1. Classroom 2. Computer laboratory (teacher notebook computers)

Assessment Activities:	1. Peer assessment checklist: Evaluating existing curriculum components 2. Teacher daily performance work (ongoing curriculum improvements or creating new components consistent with prerequisite tasks 2.1, 2.2, and 2.3) 3. Unit performance assessments: Evaluation level 4. Evaluating curriculum components assessment 5. Final exam questions
Specialized Information:	Based on the descriptive work completed in Unit 1, this unit will focus on evaluating curricular components. If a teacher doesn't possess the prerequisite competencies 2.1, 2.2, and 2.3, teachers will also create certain curricular components. Consistent with Bloom's Taxonomy (Cognitive domain), teachers will be required to work at higher cognitive levels (evaluating) in Unit 2 than in Unit 1 (knowledge, comprehension, and analysis).

Effective Curriculum and Instruction for Career Education

Unit 2: Evaluate Existing Curriculum Terminology and Components

Suggested Lesson Plan

Teacher: (to be determined)

Subject Area: Career Education Curriculum Alignment

Grade Level: Graduate University Credit (3.0 hours)

Unit Title: Evaluate Existing Curriculum Terminology and Components

Lesson Title: Critiquing and Improving Existing Curriculum Components and Terminologies

Behavioral Objectives:

1. During class discussions and if they have not developed curriculum components, the teachers will create the required curriculum components consistent with DESE requirements.
2. When evaluating existing curriculum and instructional materials, the teachers will suggest improvements consistent with theoretical and practical suggestions.
3. During peer assessments, the teacher will critique their own and another teacher's curriculum and instructional components consistent with DESE guidelines.
4. During class discussions, the teacher will appreciate effective curriculum and instruction components as evidenced by improving their

components consistent with theoretical and practical guidelines.

Materials/Resources Needed:

1. Teacher's sample/actual curriculum
2. Selected Readings: Curriculum Development and Instructional Development (Miller & Miller, 2002; Finch & Crunkilton, 1999; Mager, 1962)
3. Electronic Presentation: ECICE Unit 2
4. Sample Component Items / Worksheets
5. DESE Report Writing Form Definitions handout (Appendix B; from Unit 1)
6. DESE MSIP Frequently Asked Questions handout (Appendix C; from Unit 1)
7. Assessment Sheet: Curriculum Critique

Anticipatory Set:

- Background Information: ECICE Unit 1.
- Describing multiple curriculum components.
- May need to create components if the teacher hasn't done so before.
- Unit 2 will allow teachers to evaluate and improve those components consistent with DESE standards.
- Prerequisite competencies 2.1, 2.2, and 2.3 will be addressed if needed.

Objective/Purpose:

Relay to teachers: "As we described curriculum and instructional development terms and components in Unit 1, you will now critique your existing curriculum for consistency with DESE

terminology, definitions, and standards. In addition, you will also critique your partner's curriculum…."

Input/Teacher Background:

1. Teachers should provide their existing curriculum that may have been modified based on Unit 1.
    - *(If they do not have a curriculum, or they used their partner's examples during Unit 1, this unit will allow them to begin working on the required components of their curriculum.)*

Model:

- Instructor-led discussion
- Teacher/peer collaboration
- Question and answers

Check for Understanding:

1. Review components addressed in Unit 1
    a. Course Title: Short and descriptive
    b. Course Description: Two types for multiple purposes: Formal and informal (may be limited to a specific number of words)
    c. Rationale: Justify why course is important and tie to the district's mission/philosophy
    d. Scope: What does this course cover?
    e. Sequence: Two types: Course sequence (content sequence) and Program sequence (where course fits within the full program)
2. Evaluate the accuracy of each component by critiquing it against the theory and practical

examples provided in class:

a. Theory (Miller & Miller, 2002; Finch & Crunkilton, 1999; Mager, 1962)
b. Practice (Class and DESE examples)

Guided Practice:

1. Critique existing curriculum components in class
2. Teacher collaboration teams (teachers into teams with similar instructional content areas)
3. If teachers do not have existing curricular components, they should use this time to develop their components consistent with the theory and practice presented in class.

Closure:

1. Review critiques and evaluations of the components presented in this unit.
2. As discussed in Unit 1, re-emphasize the teacher's improved curriculum to be used throughout this course, with each session presenting a new focus of their curriculum.
3. Tie to future units: Unit 3 (Curriculum Alignment) and Unit 4 (Instructional Objectives).

Independent Practice:

1. Describe/compare their partner's curriculum for the required components.
2. Review their individual curriculum for the required components.
3. Read course materials disseminated in class.

Effective Curriculum and Instruction for Career Education

Unit 2: Evaluate Existing Curriculum Terminology and Components

Program Area Specific Examples

The following curriculum samples will be presented during this Unit of Instruction. Additional samples will be presented as needed depending on the class population for any given semester.

Example 1: Business Education Business Technology Rationale

Example 2: Health Sciences Education Core Curriculum Course Description and Rationale

Program Area Specific Examples: Business Education

Business Technology Course Rationale

This area of instruction provides content for employment in one of the largest major occupational groups, administrative support. Demand in this career area will continue to expand as businesses utilize advanced office technology to increase their production efficiency and improve the quality of their products and services. This area of instruction benefits students by enhancing the software application skills and communication competencies needed by administrative support professionals and those students continuing their education.

Program Area Specific Examples: Health Sciences Education
Core Curriculum Course Description and Rationale

Course Description

This course will prepare the successful graduate to: 1) make an informed health career choice, 2) develop a foundation of academic knowledge to pursue further education in a health career, and 3) develop entry level job skills within a selected focus area of health careers. The curriculum focuses on knowledge and skills that are common to most health careers. This is accomplished through teaching academic knowledge in the classroom in lecture, discussion, and small group work, practicing skills in the laboratory, and applying those skills and knowledge in the clinical setting.

Course Rationale

The Health Care Industry, the largest industry in the United States, includes more than 200 job titles. The need for Health Care professionals will continue increasing as a result of an aging American society who will require more health care as they age. In addition, new technology allows physicians to save premature babies, replace failing organs, and maintain a healthier human body over more years, thus requiring more care providers.

Opportunities for careers abound. However, students need to learn about these diverse careers to make an informed career decision. Students need the opportunity to match the job of the health professional with their own personality traits, academic vision and ability, and personal dreams.

Entry-level jobs are available in the health care arena, but require skill training. Many students plan pursuing education beyond high school. A

career plan may include working in an entry-level job while pursuing additional education. Most health careers require education beyond high school. Many can be accomplished with only one or two years of education while others require four or more years of post-high school education.

This program will provide for career selection, an academic foundation to facilitate success in post-high school education as well as entry level skills.

Effective Curriculum and Instruction for Career Education

Unit 2: Evaluate Existing Curriculum Terminology and Components

Suggested Unit Assessment

Measurable Learner Objective:	Evaluate Existing Curriculum Terminology and Components
Behavioral Objective:	1. During class discussions and if they have not developed curriculum components, the teachers will create the required curriculum components consistent with DESE requirements. 2. When evaluating existing curriculum and instructional materials, the teachers will suggest improvements consistent with theoretical and practical suggestions. 3. During peer assessments, the teacher will critique their own and another teacher's curriculum and instructional components consistent with DESE guidelines. 4. During class discussions, the teacher will appreciate effective curriculum and instruction components as evidenced by improving their components consistent with theoretical and practical guidelines.
Learning Domain(s):	Cognitive and Affective
Assessments:	1. Peer assessment checklist: Critiquing existing curriculum components 2. Teacher daily performance work (ongoing curriculum improvements or creating new components consistent with prerequisite tasks 2.1, 2.2, and 2.3)

	3. Unit and final exam assessments: Comprehension and Analysis levels 4. Identifying curriculum components assessments

Peer Assessment: Critiquing Existing Curriculum Components

Bloom's Taxonomy Cognitive Levels Assessed: Comprehension & Analysis

Identify and critique your or your partner's curriculum component by critiquing against the criteria provided in the right column

Component	Criteria (Binary Assessment: Yes or No)
Course Title	☐ Accurately communicates emphasis of course ☐ Succinct (less than 12 words) ☐ Other:
Course Description	☐ Consistent with school district requirements (word limit, format, tense, voice, etc.) ☐ Addresses requisite/prerequisite courses ☐ Includes length of course ☐ Includes meeting logistics (optional) ☐ Other:
Course Rationale	☐ Justifies why course is needed ☐ Linked to the District's Mission and Philosophy ☐ Includes references to external alignment sources (MSIP) ☐ Includes type of graduation credit the course provides ☐ Other:
Course Scope	☐ Identifies specific tasks to be delivered ☐ Presents tasks organized under MLOs ☐ Presents MLOs in complete, *measurable* terms ☐ Other:
Course Sequence	☐ Presents logical order for MLOs to be presented ☐ Includes all and only MLOs presented in Scope ☐ Other:
Program Sequence	☐ Identifies prerequisite courses needed in sequence ☐ Identifies courses that follow course in sequence ☐ Other:

Potential Unit and Final Exam Questions for Unit 2
Bloom's Taxonomy Cognitive Levels Assessed: Analysis & Evaluation

Essay/Constructed Response Questions

1. Evaluate the following course description for consistency with materials presented in the class. Provide suggestions where needed.
   - *(course descriptions will be inserted depending on the population of the teachers enrolled in the course)*

2. Evaluate the following two sequences. Provide insight (and improvements, if needed) into the purposes of each (course sequence or program sequence)
   - *(course sequences will be inserted depending on the population of the teachers enrolled in the course)*

3. Analyze the measurability of the following task statements. In your answer, indicate how you as an instructor would assess the task and provided improvements if needed.
   - *(task statements will be inserted depending on the population of the teachers enrolled in the course)*

Effective Curriculum and Instruction for Career Education

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Effective Curriculum and Instruction for Career Education

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Existing Course: Curriculum Development Theory

Unit 1: Describe Curriculum Components for Effective Instruction

Unit 2: Evaluate Existing Curriculum Terminology and Components

Existing Course: Selecting & Organizing Course Content

You Are Here

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

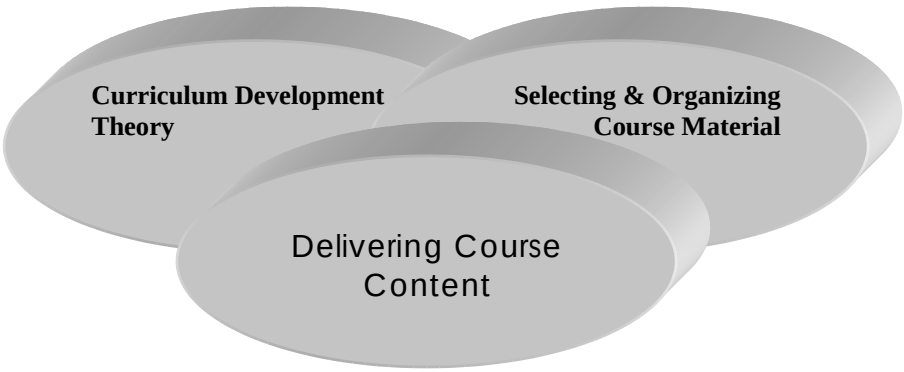
- **3.1 Evaluate instructional components for internal alignment**
- **3.2 Evaluate instructional components for external alignment**
- **3.3 Identify academic standards for external alignment**
- **3.4 Identify technical standards for external alignment**
- **3.5 Develop an external alignment matrix**
- **3.6 Develop an internal alignment matrix**

Unit 4: Write and Clarify Instructional Objectives

Existing Course: Delivering Course Content

Unit 5: Select Instructional Strategies, Activities, and Resources

Unit 6: Apply Assessment Theory to the Classroom



UNIT OF INSTRUCTION PLAN	
Name of Course:	Effective Curriculum and Instruction for Career Education
Measurable Learner Objective	Unit 3: Apply Curriculum Alignment Theory to Instructional Materials
Duration of Unit:	Weeks 3-4 (300 minutes)
Rationale for Unit:	All class participants, regardless of their chosen occupation (instructor, industry trainer, etc.), will be required to deliver "aligned" instruction. This includes ensuring our planning, delivery, and assessments are all consistent with our measurable learner objectives (i.e., verb choices and learning domains). It also includes ensuring what we're teaching/delivering meets external academic, technical, and professional standards (external alignment).
Tasks:	3.1 Evaluate instructional components for internal alignment 3.2 Evaluate instructional components for external alignment 3.3 Identify academic standards for external alignment 3.4 Identify technical standards for external alignment 3.5 Develop an external alignment matrix 3.6 Develop an internal alignment matrix
Topical Outline (content to be covered):	Curriculum alignment theory a. Internal alignment

	• Objectives / instructional strategies / assessments b. External alignment • Course alignment (program sequence) • Academic standards • Technical standards c. Program area / content-specific materials
Teaching-Learning Activities:	1. Presentation/discussion 2. Critique existing curricula for alignment (teachers and their partners) 3. Create sample alignment matrix (external and internal) 4. Questions/answers/collaboration work
Instructional Resources:	1. Teacher's sample/actual curriculum 2. Course readings (instructor identified) 3. Presentation (digital file and slide handout) 4. Sample component items / worksheets 5. DESE Report Writing Form Definitions (Appendix B; from Unit 1) 6. DESE MSIP Frequently Asked Questions (Appendix C; from Unit 1) 7. DESE Curriculum Sampler (2003) (Appendix D) 8. Computer and projector
Facilities:	1. Classroom 2. Computer laboratory (teacher notebook computers)
Assessment Activities:	1. Peer assessment checklist: evaluating existing curriculum alignment 2. Teacher daily performance work (ongoing curriculum alignment or creating new alignment matrices) 3. Unit and final exam assessments (evaluation level)

	4. Evaluating Curriculum Alignment Assessments (Unit 6)
Specialized Information:	The key focus of this unit is Internal and external alignment. This is a chance to truly assess ALL domains rather than assessing in the over-used cognitive domain. All new instructors must learn to assess in ALL learning domains, as well as maintain consistency in what is stated, delivered, and assessed (verb levels and domains). In addition, the curriculum should carefully align the course's measurable learner objectives with external academic, technical, and professional standards when available. However, one must realize that merely "crosswalking to standards that sound good" without providing documentation on how the material will be delivered and assessed is merely an exercise in futility.

Effective Curriculum and Instruction for Career Education

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Suggested Lesson Plan

Teacher:	(to be determined)
Subject Area:	Career Education Curriculum Alignment
Grade Level:	Graduate University Credit (3.0 hours)
Unit Title:	Apply Curriculum Alignment Theory to Instructional Materials
Lesson Title:	Curriculum Alignment: Internal Alignment (Unit 3a) Curriculum Alignment: External Alignment (Unit 3b)
Behavioral Objectives:	1. While critiquing their curriculum, teachers will incorporate internal and external alignment strategies consistent with DESE guidelines. 2. When internally aligning their curriculum, teachers will use consistent taxonomy verbs consistent with DESE and Bloom's Taxonomy literature. 3. While internally aligning their curriculum, teachers will appreciate the emphasis of internal alignment as evidenced by instructing and assessing the same domain as their measurable learner objectives. 4. When externally aligning their curriculum, teachers will select state/ national academic

and technical standards consistent with their program areas.

5. While externally aligning their curriculum, teachers will appreciate the importance of external academic and technical standards as evidenced by critically selecting the appropriate links for the specific measurable learner objectives.
6. While planning their curriculum and instruction, teachers will appreciate the importance of external and internal alignment as evidenced by aligning their curriculum regardless of state and local requirements.

Materials/Resources Needed:

1. Teacher's sample/actual curriculum.
2. Selected Readings: Curriculum Development and Instructional Development (DESE Curriculum Sampler, 2003; Miller & Miller, 2002; Finch & Crunkilton, 1999; Mager, 1962).
3. Electronic presentation: ECICE Unit 3.
4. Sample component items / worksheets.
5. DESE Report Writing Form Definitions handout (Appendix B; from Unit 1).
6. DESE MSIP Frequently Asked Questions handout (Appendix C; from Unit 1).
7. Computer and projector.

Anticipatory Set:

- Class Feedback: Teachers' knowledge/ experience with aligning their curriculum. MSIP

team experiences?

- Internal alignment experiences? What is internal alignment?
- External alignment? What is external alignment?
- So WHY do we align our curriculum? Biggest reason....Required locally? State Level? No....because it helps plan and deliver effective instruction.

Objective/Purpose: Relay to teachers.... "We'll learn how to internally and externally align our curriculum during these next two sessions. But we'll also be focusing on the affective domain during these two weeks, hopefully modifying any behaviors that say we should only align our curriculum because it's ***required***....We want to do it because it's solid educational practice."

Input/Teacher Background:

1. Teachers should provide their existing curriculum that may have been modified based on Units 1 and 2. The information discussed in this unit will provide a strong base for the following three units: Addressing Measurable Learner Objectives (Unit 4), Instructional Strategies, Activities, and Resources (Unit 5), and Assessments (Unit 6).
2. Teachers should provide any district level requirements addressing curriculum alignment and related components, such as graduation goals and external technical and academic

standards.

Model:

- Instructor-led discussion
- Teacher/peer collaboration
- Question and answers

Check for Understanding:

1. Curriculum alignment is more than a matrix
2. Internal alignment
   a. Measurable learner objectives must be stated in "measurable" terms (verb level). Similar to behavioral objectives (Unit 4), MLOs will be in either the cognitive, psychomotor, or affective domains.
   b. Commonly illustrate internal alignment in a "matrix" format (see DESE Curriculum Sampler, 2003, and DESE program area-specific examples).
   c. Measurable learner objectives (Units 1, 2, and 4) require teachers to think how they'll plan, teach, and assess.
   d. Must stay in the same learning domain (cognitive, psychomotor, affective).
   e. Internal alignment: Not "rocket science." As easy as staying in the proper domain (among MLOs, instructional strategies, and assessments) and staying consistent with verb levels (Bloom's Taxonomy).
   f. Must stay in the same Taxonomy level (Bloom's Taxonomy emphasize with #6

above).

3. External alignment
   a. Tying MLOs to external sources (academic and technical standards at the state and national level).
   b. Must externally align cautiously. Must teach and assess everything that is externally aligned (MSIP, etc).
   c. Discuss Outstanding Schools Act (1993) and how Career Education was not one of the core six areas. How did Division of Career Education respond? By liberally aligning ("crosswalking") to MANY Show-Me Standards to emphasize how important Career Education was to all academic areas.

Guided Practice:

1. Teachers critique their existing alignments
2. Teachers critique their partner's alignments
3. If teachers haven't aligned their curriculum, create an external and internal alignment matrix using their district format or one provided by DESE.

Closure:

1. Internal alignment: Improves instructional planning, delivery, and assessment.
   - Must stay consistent among verb levels and learning domains.
2. External alignment: Linking to external academic standards or Frameworks for

Curriculum Development (DESE) and technical standards (optional). Also tied to program sequence (alignment of courses).

- External standards must be taught and assessed if aligned with curriculum (cautious alignment).

3. Regardless of local and state requirements, hopefully this class is relaying that these are important for sound instructional practice and that's why it needs to be done.
4. This appreciation will carry on to future units of instruction, including Measurable Learner Objectives (MLOs), Instructional Strategies, Activities, and Resources, and Assessments.

Independent Practice:

1. Complete internal alignment matrix and compare with partner's matrix (similar content area).
2. Complete external alignment matrix and compare with partner's matrix (similar content area).
3. Read course materials disseminated in class.

Effective Curriculum and Instruction for Career Education

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Program Area Specific Examples

The following curriculum samples will be presented during this Unit of Instruction. Additional samples will be presented as needed depending on the class population for any given semester.

Example 1: Business Education Business Technology (2004) Competencies and External Alignment Matrix (Duty Band A).

(Example purpose: The Business Technology course materials are externally and internally aligned at the competency level rather than at the measurable learner objective level. This requires documenting internal alignment links (instructional strategies, resources, assessments) and external alignments links (Show-Me Standards, external technical standards) for every competency listed rather than at the measurable learner objective level.)

Example 2: Lab Safety in Trade and Industrial Education Programs (2003) Internal Alignment Matrix (Learner Objective A)

(Example Purpose: The Laboratory Safety in Trade and Industrial Education Programs internally and externally aligns at the Measurable Learner Objective level rather than at the competency (or task) level, thus reducing the amount of links for documentation purposes.

Example 3: Agricultural Education Curriculum Enhancements Volume II (2004) External Alignment Matrix (Performance-based Assessments aligned with Show-Me Standards)

(Example Purpose: Agriculture Education's emphasis in aligning unit performance-based assessments with the Missouri Show-Me Standards).

Example 4: MSIP Training Materials Internal and External Alignment Matrix from the Missouri DESE Curriculum Sampler (2003).

(Example Purpose: Both internal and external alignment can appear in one matrix rather than having two matrices. The emphasis should be placed on instructional clarity, planning, and delivery.)

Program Area Specific Examples: Business Education

Business Technology Competencies (Duty Band A)

The *National Standards for Business Education* numbering system is developed to correlate with the competencies listed in each duty band, column 2. The *National Standards* are converted from bulleted items to a numbering system as follows: CD.I.A.3.1, means Career Development, Roman numeral I, Section A, Level 3, the first bulleted item.

The following suggested competencies, developed by an advisory committee, are intended to serve as a basis for your course curriculum. The list is neither inclusive nor required in its entirety. You may select competencies from other lists, and develop competencies of your own to define the outcomes you expect your students to achieve. The Show-Me Standards identified provide a guide. If activities you choose align better with other Standards, you should align your competencies/objectives to those Standards instead of these shown here.

Competencies		Show-Me Standards	National Standards for Business Education
A. Explore Careers in Business			
1.	Utilize career assessment tools (e.g., student interest survey, aptitude test).	CA1, 1.10	CD.I.A.3.1, CD.I.A.4.2
2.	Analyze various business careers by looking at salary, benefits, job requirements, educational requirements, employment outlook, etc.	CA3, 4.8	CD.II.A.2.2, CD.II.A.2.3
3.	Research career choice.	CA5, 1.2	CD.II.A.5.1
4.	Prepare a career development plan.	CA3, 4.8	CD.I.B.2.2, CD.I.B.3.2
5.	Participate in work experience activities (e.g., job shadowing).	SS6, 1.10	CD.V.A.2.2, CD.V.A.3.1

Program Area Specific Examples: Trade and Industrial Education

Laboratory Safety in Trade and Industrial Education

Internal Alignment Matrix (Learner Objective A)

Learner Objective	Task Statements	Instructional Strategies	Resources	Assessments
A. Insure Personal and Coworker Safety	1 At all times wear the required personal protective equipment while in the laboratory or on the job site. 2. Appreciate the importance of personal protective equipment by monitoring their peers' actions and making the necessary corrective recommendations. 9. Appreciate the importance of safe equipment/tool use by monitoring their peers' actions and making the necessary corrective recommendations. 15. Recognize when personal medical attention is needed and contact the appropriate personnel (other students to get assistance, instructor, supervisor, etc.). 16. Recognize when coworkers/peers need medical attention and contact the appropriate personnel (other students to get assistance, instructor, supervisor, etc.).	• Video: Personal Protective Equipment (Safety 2 Lesson Plan) • Class Discussion: Required Personal Protective Equipment for this course (Safety 2 Lesson Plan). • Instructor Demonstration: How to properly adorn Personal Protective Equipment (Safety 2 Lesson Plan) • Role Play: Taking Responsibility for our Coworkers' Safety (Safety 2 Lesson Plan) • Simulation Video: Identifying Safety Problems in the classroom (Safety 3 Lesson Plan) • Instructor Demonstration: Proper safety practices for tools/equipment (Safety 3 Lesson Plan)	• PPE Video (Missouri Center for Career Education) • Safety Catalog • Specific PPE for content area (with order forms) • Simulation Video: Identifying Safety Problems (Missouri Center for Career Education) • Demonstration Sheets for tool/equipment safety	• Personal Protective Equipment Checklist (formative assessment – ongoing) • Simulation: Identifying Safety Problems (coworkers) • Simulation: Identifying Safety Problems (tools and equipments) • Unit Assessments (cognitive)

Program Area Specific Examples: Agriculture Education

Agricultural Education Curriculum Enhancements (Volume II)

Performance-based Assessments External Alignment with the Show-Me Standards (Agriculture Mechanics Example)

Show-Me Standards Table

Performance-Based Assessment Activity (One for Each Curriculum or Unit Listed Below)	Show-Me Standards Applicable to Activity
Agricultural Mechanics Unit for Agricultural Science I Common Hand Tools	1.8: Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation CA6: Participating in formal and informal presentations and discussions of issues and ideas
Common Power Tools	2.1: Plan and make written, oral and visual presentations for a variety of purposes and audiences HP5: Methods used to assess health, reduce risk factors, and avoid high-risk behaviors (such as violence, tobacco, alcohol and other drug use)
Woodworking	2.5: Perform or produce works in the fine and practical arts CA3: Reading and evaluating nonfiction works and material (such as biographies, newspapers, technical manuals)
Tool Sharpening and Reconditioning	2.5: Perform or produce works in the fine and practical arts CA3: Reading and evaluating nonfiction works and material (such as biographies, newspapers, technical manuals)
Arc Welding	2.5: Perform or produce works in the fine and practical arts CA3: Reading and evaluating nonfiction works and material (such as biographies, newspapers, technical manuals)

Program Area Specific Examples

Missouri DESE Curriculum Sampler (2003) Curriculum Alignment

Curriculum Alignment

MSIP 6.1.1 *Each written curriculum guide must include alignment of the measurable learner objectives for each course to the knowledge, skills, and competencies that students need to meet the district's goals and the Show-Me Standards.*

Quality curricula are aligned both internally and externally. **External alignment** indicates the measurable learner objective and related activities and assessments reflect the demands of the Show-Me Process and Knowledge Standards at the appropriate learning level. Relating the objective, activity and assessment to the Frameworks for Curriculum Development is another option. Districts may reference national standards in addition to the Show-Me Standards. **Internal alignment** indicates there is a close relationship among measurable learner objectives, instructional activities, and assessments (all having external alignment to the Show-Me Standards or Frameworks for Curriculum Development). Assessments included in the curriculum should be linked to what is taught. When learner objectives, activities, and assessments are aligned, the assessments test the knowledge and skills described in the measurable learner objective.

Example from MSIP Training Materials (Bird, Eastwood, & Flakne, 2002).

LEARNER OBJECTIVE	***ACTIVITY***	***ASSESSMENT***	***SHOW-ME STANDARDS***
Students will: analyze and organize data and draw a graph that depicts the data analysis.	**Students will:** work cooperatively in small groups with a set of varied manipulatives (attribute blocks, buttons, M&M's, etc.), analyze the possible groupings by common attribute, organize the manipulatives by a single attribute (shape, color, size, etc.), and construct a graph to show their findings.	**Students will:** work individually to analyze the possible groupings within a set of manipulatives, organize the manipulatives by the chosen grouping, and construct a graph that represents the findings.	1.8 MA 3

Effective Curriculum and Instruction for Career Education

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Suggested Unit Assessment

Measurable Learner Objective:	Apply Curriculum Alignment Theory to Instructional Materials
Behavioral Objective:	1 While critiquing their curriculum, teachers will incorporate internal and external alignment strategies consistent with DESE guidelines. 2 When internally aligning their curriculum, teachers will use consistent taxonomy verbs consistent with DESE and Bloom's Taxonomy literature. 3 While internally aligning their curriculum, teachers will appreciate the emphasis of internal alignment as evidenced by instructing and assessing the same domain as their measurable learner objectives. 4 When externally aligning their curriculum, teachers will select state/ national academic and technical standards consistent with their program areas. 5 While externally aligning their curriculum, teachers will appreciate the importance of external academic and technical standards as evidenced by critically selecting the appropriate links for the specific measurable learner objectives. 6 While planning their curriculum and instruction, teachers will appreciate the importance of external and internal alignment as evidenced by aligning their curriculum regardless of state and local requirements.

Learning Domain(s):	Cognitive and Affective
Assessments:	1. Peer Assessment Checklist: Evaluating Existing Curriculum Alignment. 2. Teacher Daily Performance Work (ongoing curriculum alignment or creating new alignment matrices). 3. Unit and Final Exam Assessments: Analysis and Evaluation level. 4. Evaluating Curriculum Alignment Assessments (Link with Unit 6).

Peer Assessment: Evaluating Existing Curriculum Alignment

Bloom's Taxonomy Cognitive Levels Assessed: Analysis and Evaluation

Evaluate an identified curriculum of your choice for external and internal alignment using the following checklist. Analyze and evaluate the component in the left-hand column against the criteria at the right.

Alignment	Criteria (Binary Assessment: Yes or No)
External: Academic (MSIP)	☐ Established link between MLOs/activities/assessments and Show-Me Standards (Process) ☐ Established link with MLOs/activities/assessments and Show-Me Standards (Knowledge) ☐ Established link with MLOs/Activities/Assessments and the Frameworks for Curriculum Development (optional) ☐ Links are consistent with curriculum and standard intent/scope ☐ Other:
External: Technical (National Standards)	☐ Established link with MLOs/Activities/Assessments and Technical Standards (Technical Standard: _____ _____) ☐ Links are consistent with curriculum and standard intent/scope ☐ Other:
Internal Alignment	☐ Learner objectives (MLOs) are measurable (Bloom) ☐ Instructional activities are measurable and are consistent (Bloom level/verb and learning domain) with MLOs ☐ Assessments measure same Bloom level/verb and learning domain as MLOs and instructional activities ☐ Other:
External Alignment Validation	☐ MLOs/activities/assessments, when aligned with an external standard, are delivered and assessed in the classroom ☐ Other:

Unit and Final Exam Assessments: Potential Assessment Items

Bloom's Taxonomy Cognitive Levels Assessed: Analysis and Evaluation

On a typed/word processed document to be attached to this sheet, analyze and evaluate the following MLO, instructional activity, and assessment for curriculum alignment. Your critique should include the consistency among the MLO, instructional activities, and assessments, as well as the validity presence of the external alignment (both listed and needed sources) in the MLO, instructional activities, and assessments. In addition, you may use the following resources in your work:

- Missouri Show-me Standards
- Peer Assessment: Evaluating Existing Curriculum Alignment

LEARNER OBJECTIVE	ACTIVITY	ASSESSMENT	EXTERNAL ALIGNMENT
Students will: Disassemble and reassemble a personal computer "CPU" at the component level (within the main box).	**Students will:** Work cooperatively in small groups to describe how to disassemble and reassemble a personal computer workstation, including peripherals. Observe a CTSO event that emphasizes computer repair	**Students will:** Complete a multiple choice and illustrations written exam on "CPU" disassembly and reassembly. Students will keep a journal of their group's activities.	Show-Me Standards: 1.6, 3.6 CA 3

Effective Curriculum and Instruction for Career Education

Unit 4: Write and Clarify Instructional Objectives

Effective Curriculum and Instruction for Career Education

Unit 4: Write and Clarify Instructional Objectives

Existing Course: Curriculum Development Theory

Unit 1: Describe Curriculum Components for Effective Instruction

Unit 2: Evaluate Existing Curriculum Terminology and Components

Existing Course: Selecting & Organizing Course Content

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

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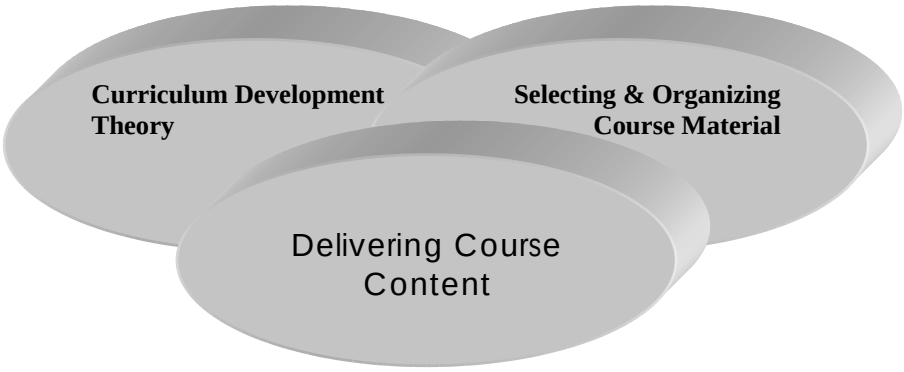
Unit 4: Write and Clarify Instructional Objectives

- **4.1 Create measurable learner objectives (MLOs) from existing curriculum materials, including competencies and duty bands.**
- **4.2 Create measurable behavioral objectives using tasks, criterion, and conditions.**
- **4.3 Distinguish between learning domains**
- **4.4 Develop domain-specific behavioral objectives**
- **4.5 Incorporate Bloom's Taxonomy when writing behavioral objectives**

Existing Course: Delivering Course Content

Unit 5: Select Instructional Strategies, Activities, and Resources

Unit 6: Apply Assessment Theory to the Classroom



UNIT OF INSTRUCTION PLAN	
Name of Course:	Effective Curriculum and Instruction for Career Education
Measurable Learner Objective:	Unit 4: Write and Clarify Instructional Objectives
Duration of Unit:	Weeks 5-7 (450 minutes)
Rationale for Unit:	Consistent with Unit 1's attempt at clarifying terminology, Unit 4 will continue clarifying the many different definitions of "objectives" and how they relate to the classroom. It is important for teachers to write many different types of objectives, as well as be able to accurately communicate the objective's intent with all stakeholders. An emphasis will be placed on transitioning a teacher's existing curriculum from the "duty band/competency" format to a "measurable learner objectives and tasks" format. This may assist the teachers in creating more manageable internal and external alignments. In addition, this unit will emphasize creating behavioral objectives at the lesson plan level.
Unit Task(s):	4.1 Create measurable learner objectives (MLOs) from existing curriculum materials, including competencies and duty bands. 4.2 Create measurable behavioral objectives using tasks, criterion, and conditions. 4.3 Distinguish between learning domains

	4.4 Develop domain-specific behavioral objectives 4.5 Incorporate Bloom's Taxonomy when writing behavioral objectives
Topical Outline (content to be covered):	Curriculum Objectives a. Theoretical discussions • Readings (Mager, 1962; Miller & Miller, 2002; DESE Curriculum Sampler & GLEs, 2003; Finch & Crunkilton, 1999) b. Relationship among "objectives" (different types) • Grade level expectations (GLEs) • Course objectives • Unit objectives • Measurable learner objectives (MLOs) • Behavioral objectives c. Behavioral objectives • Components (task, condition, and criteria) • Behavioral objectives: learning domain overview • Behavioral objectives: cognitive • Behavioral objectives: affective • Behavioral objectives: psychomotor d. Linking behavioral objectives to all other objectives (measurable learner objectives, unit objectives, course objectives) e. Program area / content-specific materials
Teaching-Learning Activities:	1. Presentation/discussion 2. Critiquing existing curricula for measurable learner objectives and behavioral objectives for links to other materials 3. Writing sample/actual measurable learner objectives

	and behavioral objectives 4. Questions/answers/collaboration work
Instructional Resources:	1. Teacher's sample/actual curriculum 2. Course readings (instructor identified) 3. Presentation (digital file and slide handout) 4. Show-Me Administrators Curriculum Consortium 5. Missouri Center for Career Education Definitions (Appendix E). 6. Sample component items / worksheets 7. Computer and projector
Facilities:	1. Classroom 2. Computer laboratory (teacher notebook computers)
Assessment Activities:	1. Peer Assessment Checklist: Evaluating behavioral objective components (task, condition, criteria) 2. Teacher daily performance work (ongoing objective development) 3. Unit and final exam assessments (comprehension, application, and evaluation levels)
Specialized Information:	While the tasks presented for this unit will focus on measurable learner objectives and behavioral objectives designed to influence daily instruction at the lesson plan level, other types of objectives related to a course in general (course objectives) and broad student objectives that drive the curriculum development process (unit objectives) will also be discussed. It is imperative the teacher be able to differentiate among the different types of objectives, while at the same time see the relationship among all types of objectives for the instructional planning delivery process.

Effective Curriculum and Instruction for Career Education

Unit 4: Write and Clarify Instructional Objectives

Suggested Lesson Plan

Teacher:	(to be determined)
Subject Area:	Career Education Curriculum Alignment
Grade Level:	Graduate University Credit (3.0 hours)
Unit Title:	Write and Clarify Instructional Objectives
Lesson Title:	1. Theory and overview of curriculum objectives (Lesson 4a). 2. Transitioning to measurable learner objectives (MLOs) from other curriculum materials (Lesson 4b). 3. Writing behavioral objectives and linking them to the various types of "instructional objectives" (Lesson 4c).
Behavioral Objectives:	1. When discussing multiple curriculum objectives, the teacher will differentiate among different types of objectives consistent with professional literature. 2. When planning their curriculum, the teacher will create effective course and unit objectives consistent with the professional literature. 3. Given their existing competencies and duty bands, the teacher will create course-specific measurable learner objectives (MLOs) consistent

with DESE and course literature.

4. Given professional literature and class discussions, the teacher will create cognitive behavioral objectives consistent with Mager (1962).
5. Given professional literature and class discussions, the teacher will create affective behavior objectives consistent with Mager (1962).
6. Given professional literature and class discussions, the teacher will create psychomotor behavioral objectives consistent with Mager (1962).
7. While in the classroom, the teacher will be able to distinguish among behavioral objective components (task, condition, and criteria) with 100% accuracy.
8. When planning instructional materials, the teacher will appreciate the learning needs of their students as evidenced by addressing all three learning domains.

Materials/Resources Needed:

1. Teacher's sample/actual curriculum.
2. Selected Readings: Curriculum Development and Instructional Development (DESE Curriculum Sampler, 2003; DESE Grade Level Expectations Materials, 2004; Miller & Miller, 2002; Finch & Crunkilton, 1999; Mager, 1962).
3. Electronic presentation: ECICE Unit 4.

4. Guest presenters: Show-Me Administrators Curriculum Consortium.
5. Missouri Center for Career Education Definitions (Appendix E).
6. Sample component items / worksheets.
7. Domain/verb lists (Miller & Miller, 2002).
8. Computer and projector.

Anticipatory Set:

- (Addressing measurable learner objectives versus competencies): Per Unit 3 of this course, how many of you are aligning your curriculum at the "competency" level? How many competencies do teachers have for their courses? (Emphasize Marketing Education and Trade and Industrial Education crosswalking at the MLO level.)
- (Addressing writing behavioral objectives): At the lesson plan level, how do teachers communicate their daily expectations of their students (lesson plan level)?
- Do the teachers communicate what they expect the students to "know"?
- Do the teachers communicate what they expect the students to "appreciate and feel?"
- Do the teachers communicate what they expect the students to "do"?
- Do the teachers communicate what the students will be accomplishing during this course (course objectives)?

- Do the teachers communicate what the students will be accomplishing during the unit (unit objectives)?
- Do the teachers link all of their different types of objectives to DESE's Grade Level Expectations (GLEs) for their content areas?

Objective/Purpose: Relay to teachers…."It's important for us to be able to differentiate among the many different types of 'objectives' (per Unit 1 of this curriculum). It's also very important for us to be able to communicate at the lesson plan level what we expect students to know/feel/do (task), how they'll be assessed (condition), and how well we expect them to perform or what standard we'll assess them against (criteria). In addition, it is important to recognize the massive amount of curricular alignment (internal and external alignment) required at the competency level and how this unit can introduce you to aligning at the 'measurable learner objective' level as discussed in Units 1, 2, and 3."

Input:

1. Teachers should provide their existing curriculum that has been modified based on Units 1 and 2, (including their main measurable learner objectives), as well as their notes/plans on curriculum alignment. Since curriculum alignment will "begin" with the planning surrounding the MLOs and GLEs, the teachers

must begin thinking how they will address the MLOs and GLEs at the lesson level (instructional strategies, resources needed, and assessments).

Model:

- Instructor-led discussion
- Teacher/peer collaboration
- Question and answers
- Guest presenters: Show-Me Administrators Curriculum Consortium
- Model ECICE measurable learner objectives that drive Unit 4 and future units (Unit 5: Strategies/ Activities/Resources and Unit 6; Assessments)

Check for Understanding:

1. Multiple types of "objectives" teachers use:
   a. Those at the "course" level (course objectives).
   b. Those at the "unit" level (MLOs).
   c. Those at the "lesson plan" level (behavioral objectives).
2. Newer terms some teachers may not be familiar with:
   a. Measurable learner objectives (MLOs).
   b. Grade-level expectations (GLEs).
   c. Guest presenters from the Missouri Show-Me Administrators Curriculum Consortium will provide insight.
3. Behavioral objectives:
   a. Behavioral objectives at the lesson level must relate to the objectives at the "macro" level

(MLOs, unit objectives, course objectives, GLEs).

b. Different types of behavioral objectives: cognitive, affective, and psychomotor.
c. Different components of behavioral objectives: task, condition, criteria.
d. Based on Mager's work (1962): must tie to the bigger picture as they communicate what the students must do, how they'll do it, and how well we expect them to perform. Strong link to Unit 3 (curriculum alignment).
e. Each learning domain incorporates specific verbs (some overlap). Much planning must go into determining which verbs best communicate the lesson's expectations.
f. Each domain has its challenges, but the most difficult domain may be the affective domain. Psychomotor objectives may not be applicable depending on the content.
g. When writing behavioral objectives, it may be helpful to simply write three phrases: what the students will do, how they will accomplish it, and how well (to what standard) they will be expected to perform. The phrases can then be arranged to form a meaningful sentence consistent with the literature (condition, task, criteria).

Guided Practice:

1. Teachers critique their existing objectives,

identifying the types of objectives illustrated.

2. Teachers critique their partner's objectives, identifying the types of objectives illustrated.
3. If the MLO format is consistent with their DESE content area recommendations and school district requirements, the teachers will begin transitioning from the competency/duty band format to the measurable learner objective format (Appendix E).
4. If teachers have not created behavioral objectives, use class handouts to create two objectives in each domain (psychomotor objective may not be applicable).

Closure:

1. Objectives: Many different types, but all within the same unit should be related to the macro level objectives.
2. MLOs versus competencies/duty bands: Which is best for the teacher regarding curriculum alignment, DESE recommendations, and/or school district requirements?
3. Behavioral objectives are delivered at the lesson plan level, and can guide instruction in three domains (cognitive, affective, psychomotor). Psychomotor objective may not be applicable.
4. Behavioral objectives have three components (task, condition, criteria).

Independent Practice:

1. Read all materials disseminated in class (theory,

DESE documents, samples, etc.).

2. If consistent with their DESE content area recommendations and local district requirements, teachers begin transitioning their existing competencies and duty bands to measurable learner objectives (Appendix E).
3. Teachers choose one unit of instruction from their existing curriculum and identify or create their "macro" objectives (MLOs, unit objectives, course objectives, etc.) and use that MLO for their internal and external alignment starting point.
4. Based on that unit, choose one lesson plan and create behavioral objectives that if met will support the appropriate "macro" objectives (psychomotor objective may not be applicable).

Effective Curriculum and Instruction for Career Education

Unit 4: Write and Clarify Instructional Objectives

Program Area Specific Examples

The following curriculum samples will be presented during this Unit of Instruction. Additional samples relating to this unit may be found in Units 1 and 2. Also, additional samples will be presented as needed depending on the class population for any given semester.

Example 1: Business Education's Business Technology (2004) Course, Explore Careers in Business Unit Overview.

(Example purpose: The "Explore Careers in Business" Unit provides an overview that includes a unit goal and measurable learner objectives. These measurable learner objectives are also stated as competencies on the Business Technology competency profile as indicated by the competency letter/number listed at the end of the measurable learner objective. While behavioral objectives (lesson plan level) are not provided on the overview, adequate information in the Explore Careers in Business Unit should assist business education teachers create appropriate behavioral objectives. In addition, internal and external alignments, instructional activities, and assessments are included on the unit overview, which are appropriate examples for units three, five, and six of this curriculum guide.

Program Area Specific Examples: Business Education

Business Technology *Explore Careers in Business* Unit Overview

EXPLORE CAREERS IN BUSINESS

Overview

GOAL: Students will evaluate career opportunities in business and prepare a written career development plan utilizing assessment tools and analyzing career data.

Measurable Learner Objectives	Crosswalk to Show-Me Standards	Instructional Activities	Assessment
Utilize career assessment tools (e.g., student interest survey, aptitude test). A1	CA1, 1.10	Utilize career assessment tools to determine career interests and select several business careers to research. Using the *Occupational Outlook Handbook* (OOH) and similar sources, answer questions on selected careers to determine salaries; training, duties and responsibilities, qualifications of persons working in career; educational requirements; opportunities for advancement; and future outlook. Narrow your decision to one career area and write a career development plan that depicts timelines and specifies activities to achieve career goal.	Use assessment *Explore Careers in Business* to evaluate the career development plan based on activities to be conducted along the timeline from current status to perceived career goal. Also assess evidence of information collected during the career assessment and career research stages: use of assessment tools and resources for career research. Accuracy of grammar, spelling and punctuation in writing will also be assessed.
Analyze various business careers by looking at salary, benefits, job requirements, educational requirements, employment outlook, etc. A2	CA3, 4.8		
Research career choice. A3	CA5, 1.2		
Prepare a career development plan. A3	CA3, 4.8		
Access information from professional, technical, and electronic resources. D6	CA3, 1.4		
Use correct grammar, spelling, and punctuation. D1	CA1, 2.2		

Effective Curriculum and Instruction for Career Education

Unit 4: Write and Clarify Instructional Objectives

Suggested Unit Assessment

Measurable Learner Objective:	Write and Clarify Instructional Objectives
Behavioral Objective:	1. When discussing multiple curriculum objectives, the teacher will differentiate among different types of objectives consistent with professional literature. 2. When planning their curriculum, the teacher will create effective course and unit objectives consistent with the professional literature. 3. Given their existing competencies and duty bands, the teacher will create course-specific measurable learner objectives (MLOs) consistent with DESE and course literature. 4. Given professional literature and class discussions, the teacher will create cognitive behavioral objectives consistent with Mager (1962). 5. Given professional literature and class discussions, the teacher will create effective behavior objectives consistent with Mager (1962). 6. Given professional literature and class discussions, the teacher will create psychomotor behavioral objectives consistent with Mager (1962). 7. While in the classroom, the teacher will be able to distinguish among behavioral objective components (task, condition, and criteria) with 100% accuracy. 8. When planning instructional materials, the teacher

	will appreciate the learning needs of their students as evidenced by addressing all three learning domains.
Learning Domain(s):	Cognitive and Affective
Assessments:	1. Peer Assessment Checklist: evaluate behavioral objective components (task, condition, criteria; analysis and evaluation level). 2. Teacher daily performance work (ongoing objective development). 3. Unit and final exam assessments (comprehension and application level).

Peer Assessment: Evaluating Behavioral Objectives

Bloom's Taxonomy Cognitive Levels Assessed: Analysis and Evaluation

Evaluate an identified curriculum of your choice (or materials developed in class) for behavioral objectives using the following checklist. Analyze and evaluate the component in the left-hand column against the criteria at the right.

Behavioral Objective Components	Criteria (Binary Assessment: Yes or No)
Task	☐ Clearly states what the student will know (cognitive), feel/appreciate (affective), or do (psychomotor). ☐ Only states one measurable task (not multiple tasks within one objective). ☐ Verb choice (Miller & Miller, 2002) is consistent with MLO ☐ Verb choice (Miller & Miller, 2002) is consistent with unit objective. ☐ Verb choice (Miller & Miller, 2002) is consistent with learning domain specified. ☐ Other:
Condition	☐ Clearly states in what environment the student will be performing (written exam, in the lab, etc.). ☐ Indicates what materials the students may use (Optional: "Given the appropriate laboratory equipment," etc.). ☐ Avoids using "time" components as a condition ("At the end of this lesson," etc.). ☐ Other:
Criteria	☐ Clearly states the required knowledge or performance ("with 100% accuracy", "per manufacturer's specifications", etc.) ☐ Other:

Unit and Final Exam Assessments: Potential Assessment Items
Bloom's Taxonomy Cognitive Levels Assessed: Comprehension and Evaluation

On a typed/word processed document to be attached to this sheet, choose ***one*** duty band and corresponding competencies from your content area competency profile and address the following questions/issues:

1. How is the current duty band stated (complete sentence? topic only?).

2. Is the duty band "measurable" using the appropriate verb? If not, restate the duty band into a measurable learner objective.

3. How many competencies are currently listed under the duty band?

4. What issues must be discussed if the duty band is transitioned to a measurable learner objective? (e.g., tracking competency attainment; 80%/80%; school district policy/requirements; DESE requirements/ recommendations).

5. What are the benefits of transitioning from the "duty band/competency" format to the "measurable learner objective/task" format?

6. What are the concerns of transitioning from the "duty band/competency" format to the "measurable learner objective/task" format?

Unit and Final Exam Assessments: Potential Assessment Items

Bloom's Taxonomy Cognitive Levels Assessed: Comprehension and Application

On a typed/word processed document to be attached to this sheet, choose ***one*** of the following MLOs to create the components (task, condition, criteria) for a cognitive behavioral objective, an affective behavioral objective, and a psychomotor behavioral objective for the lesson plan level. You may use the following resources in your work:

- Verb list (Miller and Miller, 2002)

Learner Objective: The student will disassemble and reassemble a personal computer "CPU" at the component level (within the main box).

	TASK	CONDITION	CRITERIA
COGNITIVE:			
AFFECTIVE:			
PSYCHOMOTOR:			

Stated Objectives (Sentences):

Learner Objective: The student will create employability documents.

	TASK	CONDITION	CRITERIA
COGNITIVE:			
AFFECTIVE:			
PSYCHOMOTOR:			

Stated Objectives (Sentences):

Effective Curriculum and Instruction for Career Education

Unit 5: Select Instructional Strategies, Activities, and Resources

Effective Curriculum and Instruction for Career Education

Unit 5: Select Instructional Strategies, Activities, and Resources

Existing Course: Curriculum Development Theory

Unit 1: Describe Curriculum Components for Effective Instruction

Unit 2: Evaluate Existing Curriculum Terminology and Components

Existing Course: Selecting & Organizing Course Content

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Unit 4: Write and Clarify Instructional Objectives

Existing Course: Delivering Course Content

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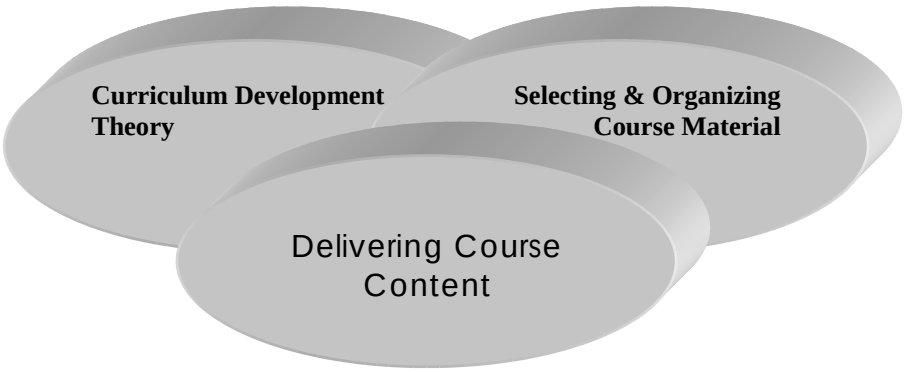
Unit 5: Select Instructional Strategies, Activities, and Resources

- **5.1 Develop domain-specific instructional strategies**
- **5.2 Develop domain-specific student supplemental activities**
- **5.3 Develop instructional strategies consistent with learner objectives and assessments**
- **5.4 Select instructional/curricular components that are fully aligned**

Unit 6: Apply Assessment Theory to the Classroom



UNIT OF INSTRUCTION PLAN	
Name of Course:	Effective Curriculum and Instruction for Career Education
Measurable Learner Objective:	Unit 5: Select Instructional Strategies, Activities, and Resources
Duration of Unit:	Weeks 8-10 (450 minutes)
Rationale for Unit:	Consistent with internal alignment practices, measurable learner objectives (MLOs) must be supported with appropriate instructional strategies, activities, and resources in the classroom. This unit will address creating strategies and identifying resources for classroom instruction that are aligned with the MLOs (Unit 4) and student assessments (Unit 6).
Unit Task(s):	5.1 Develop domain-specific instructional strategies. 5.2 Develop domain-specific student supplemental activities. 5.3 Develop instructional strategies consistent with learner objectives and assessments. 5.4 Create instructional/curricular components that are fully aligned.
Topical Outline (content to be covered):	Instructional Strategies, Activities, and Resources. a. Instructional strategies and activities: • Appropriate strategies based on unit objectives, measurable learner objectives, and behavioral objectives

	• Appropriate strategies based on learner types (learning styles) b. Instructional resources: • Types (Miller & Miller, 2002; DESE Curriculum sampler, 2003) • Written, electronic, personnel, site visits) • Aligned with measurable learner objectives and assessments
Teaching-Learning Activities:	1. Presentation/discussion 2. Critique existing strategies, activities, and resources for alignment 3. Identify strategies, activities, and resources 4. Establish sample/actual curriculum resources (writing, identifying, selecting, contacting) components 5. Questions/answers/collaboration work
Instructional Resources:	1. Teacher's sample/actual curriculum 2. Course readings (instructor identified) 3. Presentation (digital file and slide handout) 4. Sample component items / worksheets 5. Computer and projector
Facilities:	1. Classroom 2. Computer Laboratory (teacher notebook computers)
Assessment Activities:	1. Peer assessment checklist: Strategies, activities, and resources (analysis & evaluation level) 2. Teacher daily performance work (strategy, activity, and resource development) 3. Unit and final exam assessments (comprehension and evaluation level)
Specialized	This unit addresses strategies, activities, and resources

Information:	represents the second phase of curriculum alignment. It is important for the teachers to recognize the instructional planning and delivery process does not start with this phase, but rather with the measurable learner objectives (Unit 4).

Effective Curriculum and Instruction for Career Education
Unit 5: Select Instructional Strategies, Activities, and Resources
Suggested Lesson Plan

Teacher:	(to be determined)
Subject Area:	Career Education Curriculum Alignment
Grade Level:	Graduate University Credit (3.0 credit hours)
Unit Title:	Select Instructional Strategies, Activities, and Resources
Lesson Title:	1. Selecting Instructional Strategies and Activities (Lesson 5a) 2. Identifying and Selecting Instructional Resources (Lesson 5b)
Behavioral Objectives:	1. Given measurable learner objectives from a unit of instruction, the teacher will select instructional strategies consistent with DESE internal alignment requirements. 2. When selecting instructional strategies, the teacher will reinforce the unit's measurable learner objectives as evidenced by basing their decisions on effective instructional practice rather than convenience. 3. Given measurable learner objectives from a unit of instruction, the teacher will select instructional activities consistent with DESE internal alignment requirements.

4. When selecting instructional activities, the teacher will advocate student learning as evidenced by critically choosing only those instructional activities that support the unit's measurable learner objectives.
5. Given measurable learner objectives from a unit of instruction, the teacher will identify and select instructional resources consistent with DESE internal alignment requirements.
6. When presenting instructional resources, the teacher will motivate the students by incorporating only relevant and authentic resources.

Materials/Resources Needed:

1. Teacher's sample/actual curriculum.
2. Selected Readings: Instructional Strategies, Activities, and Resources (DESE Curriculum Sampler, 2003; Miller & Miller, 2002); Finch & Crunkilton, 1999.
3. Electronic presentation: ECICE Unit 5.
4. Sample component items / worksheets.
5. Domain/verb lists (Miller & Miller, 2002).
6. Computer and projector.

Anticipatory Set:

- Teachers have already laid the foundation for strategies, activities, and resources by their measurable learner objectives and their behavioral objectives identified/created in Unit 4 of this course. Consistent with internal

alignment practices, the teachers must now critically identify, select and select effective instructional strategies, activities, and resources. An emphasis will be placed on choosing the most effective materials over "convenient" materials.

- Have teachers reflect on past strategies, activities, and resources that "worked" and those that "did not work."
- Have teachers analyze their curriculum for units that need new or reinforced strategies.
- Have teachers analyze their curriculum for units that need new or reinforced activities.
- Have teachers analyze their curriculum for units that need new or reinforced resources.

Objective/Purpose: Relay to teachers…."We've successfully passed the first station of internal alignment theory by completing Unit 4 of this course (objectives). Station two will require us to critically select curriculum strategies, activities, and resources that support our objectives. Remembering there are three stations in this process (Units 4, 5, and 6), we must also be thinking ahead to Unit 6 (assessments) when selecting our strategies, activities, and resources (domain and verb level)."

Input:

1. Consistent with previous units, teachers should provide their existing curriculum that has been

modified and improved based on Units 1-4 of this course. Especially important will be their revised (or main) measurable learner objectives, as well as their notes/plans on curriculum alignment. Since the curriculum alignment process was initiated in Unit 4 with their measurable learner objectives (MLOs), the teachers must begin thinking how they will deliver and reinforce the MLOs by identifying and selecting appropriate strategies, activities, and resources.

Model:

- Instructor-led discussion
- Teacher/peer collaboration
- Question and answers
- Model ECICE curriculum strategies, activities, and resources that align with the course measurable learner objectives.

Check for Understanding:

1. Review: What are Instructional Strategies? Instructional Activities? Instructional Resources?
   a. Materials and activities at the course delivery level that reinforce our MLOs, unit objectives, and course objectives.
   b. Materials and activities that reinforce/provide for student learning
   c. Materials and activities that must be used appropriately for all student learners and learning styles.

d. Resources: anything needed to deliver the content (electronic, written, etc.).

2. Instructional strategies and activities: Types (Miller and Miller, 2002):
   a. Oral presentation and questioning techniques.
   b. Discussion/collaborative methods.
   c. Demonstrations.
3. Instructional activities and resources: Types by domain:
   a. Written-based (cognitive and affective).
   b. Electronic-based (digital and analog; cognitive and affective).
   c. Personnel-based activities (peer interaction, field trips, guest speakers; cognitive and affective).
   d. Lab-based activities (cognitive, affective, and psychomotor).

Guided Practice:

1. Teachers critique their existing strategies, activities, and resources for alignment with their measurable learner objectives (MLOs).
2. Teachers critique their partner's strategies, activities, and resources for alignment with their partner's MLOs.
3. If alignment is not met, improve the strategies/activities/resources consistent with DESE requirements.
4. If alignment appears to be met, critically

analyze if all learning domains and verbs (per the MLOs) are consistent.

5. After critique, if alignment needs improvement, create/identify new strategies, activities, and resources to strengthen the instructional delivery.
6. Teachers complete the "strategies/activities/ resources" section of their internal alignment matrix consistent with DESE recommendations or school district requirements/format.

Closure:

1. After instructional planning, instructional delivery (what happens inside the classroom) can be summarized by what strategies, activities, and resources are used.
2. These strategies, activities, and resources must be aligned with the measurable learner objectives.
3. Unit 6 of this course will emphasize the remaining piece of curriculum alignment: Assessing the MLOs consistent with how they were delivered in the classroom (strategies, activities, and resources).

Independent Practice:

1. Read all materials disseminated in class (theory, DESE documents, samples, etc.).
2. Complete strategies/activities/resources section of internal alignment matrix (consistent with DESE recommendations and local school district requirements). This exercise will only "list" the

strategy, activity, and resources needed.

3. Building on item 2 above, teachers will choose one unit of instruction from their existing curriculum (or improved curriculum based on this course) and identify or create aligned instructional strategies, activities, and resources needed to deliver the instruction.
4. Begin critiquing or planning assessments that will align with their MLOs (Unit 4) and their instructional strategies/activities/resources (Unit 5).

Effective Curriculum and Instruction for Career Education
Unit 5: Select Instructional Strategies, Activities, and Resources
Program Area Specific Examples

The following curriculum samples will be presented during this Unit of Instruction. Additional samples will be presented as needed depending on the class population for any given semester.

Example 1: Missouri Department of Elementary and Secondary Education's Description and Requirements for Instructional Activities/Strategies (DESE Curriculum Sampler, 2003)

Example 2: Business Education's Business Technology (2004) Course, *Explore Careers in Business Teaching Points*.
(Example purpose: The Business Technology teaching points include instructional strategies, activities, and resources that support the unit's measurable learner objectives course competencies for Business Education.)

Example 3: Family and Consumer Sciences Education's Implementation Handbook for Family and Consumer Sciences (2003) *Food Safety and Sanitation in the Kitchen* student activities and resources.
(Example purpose: Family and Consumer Sciences includes student activities and resources in their Model Assessment guide. This emphasizes internal alignment throughout the instructional process.

Program Area Specific Examples

Missouri DESE Curriculum Sampler (2003) Instructional Activities/Strategies Descriptions and Requirements

Instructional Activities/Strategies

MSIP Standard 6.1.1 *Each written curriculum guide must include instructional strategies and specific assessments (including performance-based assessments) for a majority of the learner objectives.*

Instructional activities describe the specific procedures teachers use to teach the skills/concepts needed to demonstrate the stated learning objectives. Instructional activities describe the learning level of the objective and the knowledge and skills necessary for success on the assessment. The description of the instructional activity should be detailed enough to enable replication by teachers.

Instructional strategies are teaching-learning techniques or methods used to present instruction in the classroom. Examples of instructional strategies are lecture, whole-group instruction, cooperative learning, flexible grouping, one-on-one instruction, computer-assisted instruction, and hands-on activities. Reference to the instructional strategy should be included in the curriculum guide. It may be part of the description of the specific instructional activity or listed separately.

Examples of instructional activities/strategies may be found in the Curriculum Format section (DESE Curriculum Sampler, 2003).

Program Area Specific Examples: Business Education

Business Technology (Explore Careers in Business Unit)

EXPLORE CAREERS IN BUSINESS

Teaching Points

Overview

A person who prepares for the job market by exploring career options based on interests, reviewing resources for job requirements and completing and interpreting career assessment tools can better train to be the best candidate for a career in a particular business field. This assignment allows a person to use career assessment tools; select, analyze and research career options from electronic resources; and develop a career plan with consideration given to organization and writing skills.

Content Review

Review and/or teach the following with the students:

1. Topics on working and career choices
   a. What is a career?
   b. What is a job?
   c. Can a job impact a career?
   d. What is personality and how does it impact career choices?
   e. What is aptitude and how does it impact career selection?
   f. Can interests impact career selection?
   g. What if something is desired other than the career indicated by assessment tools? (How does desire and will power impact career and life choices?)
   h. How does education impact career selections, salary and advancement ?
   i. What is involved in planning and what steps are used in planning for a career and charting activities to reach a goal (problem solving)?
2. Accuracy of grammar, spelling, punctuation and capitalization; proofreading and editing
3. Interpreting career assessment tools
4. Graphical organizers and methods to organize information over timelines
5. Using information obtained from professional and technical journals, books and electronic resources

Activity Preparation

Discuss with students preparation for a career and ways education, work history, student organizations, volunteer activities, etc. impact future employment opportunities. Have students diagram their current status (student and grade level), their perception of where they want to be in five years and activities they will have to participate in to reach that five-year goal. Some ways this information can be diagrammed are graphically, as a table or a chart, or as textual paragraphs (career development plan).

Brainstorm with the students questions that a person would want to have answered when researching a career: salary, requirements, advancement, education, working conditions, etc.

Have students use the Internet to locate various career information and tools.

- Career assessment tools
- Resources that can be used to research careers

Discuss the assignment with the students.

- Use the career assessment tools to determine career choice (career fit)
- Based on career options provided from assessment tools, select two careers to research
- Use the OOH and other resources to research careers (obtain information on various careers)

Resources

Supplies and Materials Needed

Overhead projector or appropriate equipment for reviewing
Transparencies of graphical organizers, chartings, timelines, etc.
Computers with Internet connection
Hard copies of OOH, *Dictionary of Occupational Titles* and *Missouri Works*
Hard copies of career assessment tools

Web Sites

The following Web sites provide career assessment tools:

http://www.jobhuntersbible.com/counseling/counseling.shtml
This site provides several career assessment and personality tools.

****The Princeton Review Quiz** (also called the Birkman Method) consisting of 24 questions

****The Career Interests Game** - - Exercises in color with career links

****The Career Key - -** This site also provides information on education beyond high school

****NOTE:** Clicking on a career area of interest links to the job title in the *Occupational Outlook Handbook*

http://www.schoolfinder.com/careers/3step1.asp (Consists of an 80-item questionnaire; you must register to complete the questions. **DO NOT request long report.**)
Click on a career area, and information similar to the *Occupational Outlook Handbook* will appear. A school listing will also be provided; schools are located in Canada (some even have e-tours).

http://www.myfuture.com/career/interest.html (Has a 60-question career assessment and a 70-item personality test)

The Career (Work Interest) Quiz: The career options link to armed forces sites and compares civilian job titles to military job titles by responsibilities and requirements.

The Personality Quiz: A preliminary report is provided, but a more extensive reports costs approximately $14.95. A listing of "famous" people who have similar personality types are also available at this site.

http://www.personalitytype.com
Upon completion of this quick personality quiz, a job listing will be provided.

The following Web sites link to the *Occupational Outlook Handbook* and similar sources:

Bureau of Labor Statistics: **http://stats.bls.gov/oco/**
The *Occupational Outlook Handbook* (OOH) has information on almost every job performed in the United States as well as other countries. It provides great detail on outlook for the future as well as information on the current job market.

Missouri Works: **http://www.works.state.mo.us**
Missouri Works indicates what is happening in Missouri and also provides links to similar information as that found in the OOH. Use the following path to locate information similar to details from the *Dictionary of Occupational Titles*: Workforce Information → Labor Market Information (LMI) → Occupational Classifications. (The path may have changed since this publication, but you are looking for occupational classifications.)

America's Career InfoNet: **http://www.acinet.org/acinet/**
Using this site, go to Career Exploration then View Career Videos to learn more about nearly 300 selected occupations or see if the "Career Videos" link is available on the homepage, download real player (free) if needed. The videos are also closed-captioned.

+++++ For streaming videos on occupational areas ++++++ **(TEACHER NOTE: America's Career InfoNet can also be used to locate career information for self-assessment. *CAUTION!!* Most instruments have fees.)**

- Review all Web sites on assignment sheet and any selected from the resources listing below to ensure accuracy of Web addresses and changes to the site.
- List and/or collect additional Web sites or paper and pen tools on career/interest/personality/aptitude assessment. (Make necessary copies if paper assessment tools will be used.)

Books, Articles and Other Resources

NBEA. (November 1999). *Keying In*, "Online Teaching Resources" *10(2)*.

NBEA. (January 1998). *Keying In*, "Electronic Resumes and Other Job Searches", p. 7.

Obtain books, videos and other materials from Career and Technical Education Resources (CATER).

CATER: **http://www.cater.missouri.edu/**

Career Path Planner for Secondary Students; Missouri's Career Path Series
Desborough, Kristin
Book -- 1. Explore career paths and your personality, and identify a career focus. 2. Develop skills to reach your career goals. 3. Make plans to pursue your career path interests [7015 — C&E 11.0000 CE17]
COLUMBIA, MO, INSTITUTE FOR WORKFORCE EDUCATION, 1998.
(NOTE: pp. 3-4 has a sample pen and paper career assessment tool)

Career Explorer
Hoffman, Thomas
Game -- Welcome to the world of career guidance! The objective of this game tool is to introduce your students to the career guidance process in a non-threatening and familiar way. Students will learn about career exploration. (secondary thru post-secondary) [3657 — C&E GAME 12]
CAREER EXPLORERS, 1994.

Program Area Specific Examples: Family and Consumer Sciences

Food Safety and Sanitation in the Kitchen (Model Assessments)

Implementation Handbook for Family and Consumer Sciences

Food Safety and Sanitation in the Kitchen

Teacher Background Information

Foodborne illness may cause flu-like symptoms such as nausea, vomiting, diarrhea, or fever. Sometimes people may not recognize the illness is caused by bacteria or other pathogens on food. Most cases of foodborne illness can be prevented. Proper handling when cooking or processing food destroys the harmful bacteria.

Thousands of types of bacteria are naturally present in our environment. Not all bacteria cause disease in humans. For example, some bacteria are used beneficially in making cheese and yogurt. Bacteria that cause disease are called "pathogens." When certain pathogens enter the food supply, they can cause foodborne illness.

Bacteria may be present on products when they are purchased. Raw meat, poultry, seafood, and eggs are not sterile. Neither is produce such as lettuce, tomatoes, sprouts, and melons. Foods, including safely cooked, ready-to-eat foods, can become cross-contaminated with bacteria transferred from raw products, meat juices or other contaminated products, or poor personal hygiene. Proper food handling ensures safe and sanitary kitchens.

Food safety and kitchen sanitation topics may include HACCP, food storage, cross-contamination, equipment sterilization, and foodborne illnesses. These topics and others are presented through the Internet addresses below:

Gateway to Government Food Safety Information

http://www.foodsafety.gov/~fsg/fsghaccp.html

Iowa State University Food Safety Project

http://www.extension.iastate.edu/foodsafety/educate.html

The National Food Safety Database

http://www.foodsafety.org/index.htm

Partnership for Food Safety Education

http://www.fightbac.org/steps/

USDA Foodborne Illness Education Information Center

http://www.nal.usda.gov/fnic/foodborne/wais.shtml

U.S. Dept of Health and Human Services

http://www.hhs.gov/news/press/2000pres/20000316a.html

Higher Order Thinking Skills

Analysis: Select resources for information on food safety and kitchen sanitation issues

Synthesis: Demonstrate time management techniques, prepare and present an oral presentation regarding kitchen sanitation, develop procedures for sanitizing equipment/tools

Evaluation: Recommend safe food handling and kitchen sanitation procedures

Contribution to Mastery

Process Skills

PS/A-1, PS/A-2, PS/A-3

Content Competencies included

Career and Family Leadership L-2, L-5, O-2

Child Care Provider/Assistant B-1, B-4

Food Science C-1, C-3, C-4, C-5, C-6, C-7, C-8, C-9, C-10

Nutrition and Wellness F-2, F-3

Show-Me Standards included

H/P3; 1.10, 4.7

National Family and Consumer Sciences Education Standards

2.1.3, 5.3.1, 8.2.2, 8.2.5, 8.2.8, 8.3.3, 9.2.2. 9.2.5, 14.4.1, 14.4.2, 14.4.6

Student Instructions
Scenario

You are an employee of Our Town Health Department. Your job is to inspect family and consumer sciences classrooms for kitchen sanitation and safety compliance. Next week you will be working at your own high school. The family and consumer sciences teacher has asked you to do a sanitation demonstration showing the students how quickly bacteria grow and the true cleanliness of kitchen lab surfaces. You have an entire class period to work with the students. You will need to discuss sanitation habits that students must practice in food labs.

Activity

As you prepare for your presentation, you will (a) make an agenda outlining the full presentation; (b) gather a list of current, reliable resources you can use and/or share with students; (c) prepare a 10-minute oral presentation about food safety or sanitation practices in a kitchen that focuses on one to three of the topics you would discuss in the full class period (kind of a mini-lesson); and (d) prepare a visual aid to support your oral presentation of safe food handling or sanitary kitchen procedures to prevent foodborne illness.

Product/Performance Expectations

Through this assignment you are expected to demonstrate:

- ✓ Time management skills in researching and presenting information
- ✓ Understanding reliable sources of information on kitchen sanitation and food safety issues
- ✓ Knowing food safety and kitchen sanitation procedures
- ✓ Positive communication skills through an oral presentation
- ✓ Good use of visual aids to support the oral presentation

Evaluation Criteria

- Turn in an agenda outlining a presentation for the full class period, identify topics you would discuss during this time frame, and include a bibliography of at least three sources consulted.
- Give a 10-minute oral presentation discussing one to three food safety or sanitation procedures.
- Present one visual aid such as a chart or poster to support oral presentation.

Your grade is based on the criteria listed on the scoring guide. This assignment is worth _____ points.

Effective Curriculum and Instruction for Career Education

Unit 5: Select Instructional Strategies, Activities, and Resources

Suggested Unit Assessments

Measurable Learner Objective:	Select Instructional Strategies, Activities, and Resources
Behavioral Objective:	1. Given measurable learner objectives from a unit of instruction, the teacher will select instructional strategies consistent with DESE internal alignment requirements. 2. When selecting instructional strategies, the teacher will reinforce the unit's measurable learner objectives as evidenced by basing their decisions on effective instructional practice rather than convenience. 3. Given measurable learner objectives from a unit of instruction, the teacher will select instructional activities consistent with DESE internal alignment requirements. 4. When selecting instructional activities, the teacher will advocate student learning as evidenced by critically choosing only those instructional activities that support the unit's measurable learner objectives. 5. Given measurable learner objectives from a unit of instruction, the teacher will identify and select instructional resources consistent with DESE internal alignment requirements. 6. When presenting instructional resources, the teacher will motivate the students by incorporating only relevant and authentic resources.

Learning Domain(s):	Cognitive and Affective
Assessments:	1. Peer assessment checklist: Strategies/Activities/ Resources 2. Teacher daily performance work (strategy, activity, and resource development) 3. Unit and final exam assessments (comprehension and evaluation level)

Peer Assessment: Evaluating Instructional Activities/Strategies/Resources

Bloom's Taxonomy Cognitive Levels Assessed: Analysis and Evaluation

Evaluate an identified curriculum of your choice (or materials developed in class) for instructional activities, strategies, and resources using the following checklist. Analyze and evaluate the component in the left-hand column against the criteria at the right.

Components	Criteria (Binary Assessment: Yes or No)
Instructional Activities	☐ Clearly describes the specific procedures the teacher will use to deliver instructional content related to the MLO. ☐ Clearly describes the learning level of the MLO. ☐ Clearly describes the knowledge/skills necessary for success on the unit's assessments. ☐ Instructional activity is clearly stated (replicable). ☐ Verb choice is consistent with learning domain specified. ☐ Other:
Instructional Strategies	☐ Techniques or methods are clearly stated for the purpose of presenting instruction in the classroom ☐ Methods included at least one of the following: lecture, whole-group instruction, cooperative learning, flexible grouping, one-on-one instruction, computer-assisted instruction, hands-on activities, or similar. ☐ Are clearly stated as part of the activity's description or otherwise clearly stated. ☐ Other:
Instructional Resources	☐ Support instructional strategies and activities ☐ Represent multiple learning styles and domains ☐ Other:

Unit and Final Exam Assessments: Potential Assessment Items

Bloom's Taxonomy Cognitive Levels Assessed: Comprehension and Application

On a typed/word processed document to be attached to this sheet, choose ***one*** of the following MLOs to create/identify instructional activities, strategies, and resources. You may use the following resources in your work:

- DESE sample materials (cite per APA)
- School district materials (cite per APA)
- Resources@MCCE and existing content area sample materials (cite per APA)

Learner Objective: The students will disassemble and reassemble a personal computer "CPU" at the component level (within the main box).

Strategies	Activities	Resources	Notes

Learner Objective: The student will create employability documents.

Strategies	Activities	Resources	Notes

Effective Curriculum and Instruction for Career Education

Unit 6: Apply Assessment Theory to the Classroom

Effective Curriculum and Instruction for Career Education

Unit 6: Apply Assessment Theory to the Classroom

Existing Course: Curriculum Development Theory

Unit 1: Describe Curriculum Components for Effective Instruction

Unit 2: Evaluate Existing Curriculum Terminology and Components

Existing Course: Selecting & Organizing Course Content

Unit 3: Apply Curriculum Alignment Theory to Instructional Materials

Unit 4: Write and Clarify Instructional Objectives

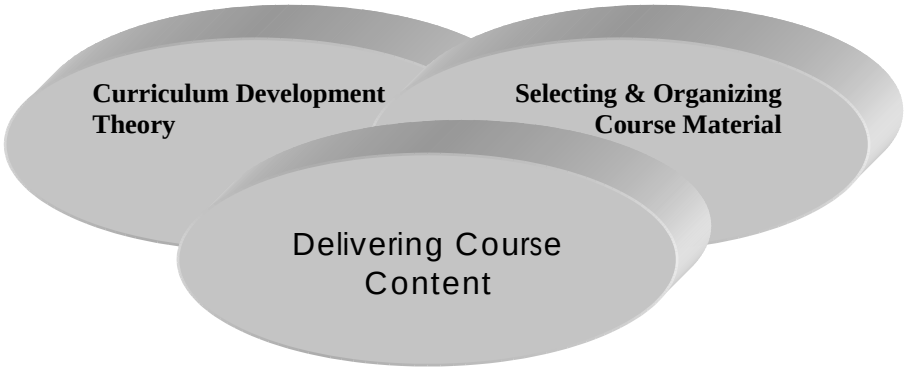
Existing Course: Delivering Course Content

Unit 5: Select Instructional Strategies, Activities, and Resources

You Are Here

Unit 6: Apply Assessment Theory to the Classroom

- **6.1 Differentiate between measurement and evaluation**
- **6.2 Develop content-specific and domain-specific authentic assessments**
- **6.3 Develop content-specific and domain-specific process and product assessments**
- **6.4 Create assessments that are internally aligned with learner objectives and instructional strategies**
- **6.5 Adapt a Program/Course Evaluation Plan for one's specific need**



UNIT OF INSTRUCTION PLAN	
Name of Course:	Effective Curriculum and Instruction for Career Education
Measurable Learner Objective:	Unit 6: Apply Assessment Theory to the Classroom
Duration of Unit:	Weeks 11-15 (750 minutes)
Rationale for Unit:	Assessment is the final component of the curriculum alignment model for effective instruction. In previous units of instruction, the teachers focused on measurable learner objectives (Unit 4) and instructional strategies, activities, and resources (Unit 5). This unit is needed so that teachers can learn to effectively assess student learning in all three learning domains consistent with their MLOs as well as focus on evaluating the effectiveness of their program (program evaluation).
Unit Task(s):	6.1 Differentiate between measurement and evaluation 6.2 Develop content-specific and domain-specific authentic assessments 6.3 Develop content-specific and domain-specific process and product assessments 6.4 Create assessments that are internally aligned with learner objectives and instructional strategies 6.5 Adapt a Program/Course Evaluation Plan for one's specific need

Topical Outline (content to be covered):	Apply Assessment Theory to the Classroom a. Terminology and discussions • Measurement versus evaluation • Student assessment • Authentic assessments • Formative and summative assessments • Performance-based assessments (PBA) • Program evaluation b. Student assessments by learning domain • Creating assessments: Formative and summative items (for all domains and items below) • Creating assessments: Cognitive domain • Creating assessments: Psychomotor domain • Creating assessments: Affective domain • Critiquing assessments: Authentic assessments • Critiquing assessments: performance-based assessments c. Aligning assessments with existing curricular components • Internal alignment (aligning with MLOs and strategies, activities, and resources) • External alignment (assessing all components that are present in an external alignment, including MSIP (academic) standards and technical standards d. Program evaluation plans • Developing written program evaluation plans for program improvement • Incorporating student assessment data into the

	program evaluation plan (relationship between student assessment and program evaluation) • Current topics: "Accountability" and the relationship to the written program evaluation plan
Teaching-Learning Activities:	1. Presentation/discussion 2. Critiquing existing curricula for effective assessments (assessment theory and alignments) 3. Writing sample/actual assessment items (consistent with assessment theory and alignments) 4. Guest Presenters: DESE staff (program evaluation) 5. Questions/answers/collaboration work
Instructional Resources:	1. Teacher's sample/actual curriculum 2. Course readings (instructor identified) 3. Presentation (digital file and slide handout) 4. Sample assessment items / worksheets 5. Guest presenters (DESE staff) 6. Computer and projector
Facilities:	1. Classroom 2. Computer Laboratory (teacher notebook computers)
Assessment Activities:	1. Peer assessment checklist: Effective student assessments by domain and alignment (analysis and evaluation level) 2. Teacher daily performance work (student assessments and program evaluation) 3. Unit and final exam assessments (analysis and comprehension level)
Specialized Information:	The final unit of this course will focus on student assessment and program evaluation. The student assessment sessions will include assessment theory

	(creating effective assessments by domain, including performance-based assessments and authentic assessments), and curriculum alignment considerations (internal and external). The program evaluation session will include establishing a written program evaluation plan (that should incorporate student assessment data) for effectively improving the teacher's instructional program.

Effective Curriculum and Instruction for Career Education

Unit 6: Apply Assessment Theory to the Classroom

Suggested Lesson Plan

Teacher:	(to be determined)
Subject Area:	Career Education Curriculum Alignment
Grade Level:	Graduate University Credit (3.0 credit hours)
Unit Title:	Apply Assessment Theory to the Classroom
Lesson Title:	1. Assessment terminology (Lesson 6a) 2. Creating student assessments by learning domain (Lesson 6b) 3. Aligning assessments with existing curricular components (Lesson 6c)
Behavioral Objectives:	1. When presented with assessment theory definitions and discussions, the teacher will differentiate among all terms with 100% accuracy. 2. Given existing measurable learner objectives and instructional strategies/activities/resources, the teacher will create performance-based and authentic cognitive assessments consistent with DESE requirements and professional literature. 3. Given existing measurable learner objectives and instructional strategies/activities/resources, the teacher will create performance-based and authentic affective assessments consistent with DESE requirements and professional literature.

4. Given existing measurable learner objectives and instructional strategies/activities/resources, the teacher will create performance-based and authentic psychomotor assessments consistent with DESE requirements and professional literature.
5. When planning student assessments, the teacher will appreciate assessment theory, student needs, and stakeholder needs as evidenced by incorporating authentic performance-based assessments into their program.
6. Given DESE materials, the teacher will create a written program evaluation plan consistent with DESE/MSIP requirements.
7. When planning a written program evaluation plan, the teacher will recognize the importance of program evaluation as evidenced by developing a realistic plan to collect and assess data for program improvement.

Materials/Resources Needed:

1. Teacher's sample/actual curriculum.
2. Selected Readings: Assessment theory and practice (DESE Curriculum Sampler, 2003; DESE content area sample assessments, Miller & Miller, 2002); Finch & Crunkilton, 1999.
3. Electronic presentation: ECICE Unit 6.
4. Guest Presenters; DESE staff (course evaluation)
5. Sample assessment items / worksheets.

6. Domain/verb lists (Miller & Miller, 2002).
7. Computer and projector.

Anticipatory Set:

- Tie to previous units (Units, 3, 4, and 5)
- Teachers have already identified/created their measurable learner objectives (Unit 4) and their instructional strategies, activities, and resources (Unit 5).
- The curriculum alignment process comes "full circle" with the teachers being required to assess in the proper domain, at the proper level (Bloom's Taxonomy), as well as those items that were externally aligned (tie to Unit 3 and the term "selective alignment").
- To complete effective instructional practice, Unit 6 will emphasize creating effective student assessment which should be authentic and performance-based.
- Have teachers reflect on past assessments that "worked" and those that "did not work."
- Have teachers analyze their curriculum for units that need new or reinforced authentic, performance-based assessments.
- Illustrate how student assessment contributes to effective program evaluation, which will lead the teachers in developing a written program evaluation plan consistent with MSIP standards.

Objective/Purpose: The objective of this unit is to reinforce

incorporating authentic, performance-based assessments into the teacher's curriculum. In addition, the teachers must recognize the importance of internal alignment (assessing the MLOs and instructional strategies/activities/ resources) and external alignment (assessing all academic and technical standards that appear in their alignment matrix).

Input:

1. Consistent with previous units, teachers should provide their existing curriculum that has been modified and improved based on Units 1-5 of this course:
   a. Revised (or main) measurable learner objectives.
   b. Revised instructional strategies/activities/ resources.
   c. Internal and external alignment matrix.
   d. Notes/plans on curriculum alignment.
2. Note to Course Instructor regarding teacher inputs: Based on Unit 4 (MLOs) and Unit 5 (instructional strategies/activities/resources), the teachers must now critique, revise, and create new authentic, performance-based assessments that align with their previously-developed instructional materials.

Model:

- Instructor-led discussion
- Teacher/peer collaboration

- Guest presenters: DESE staff (program evaluation)
- Question and answers
- Model ECICE curriculum assessments that align with the course measurable learner objectives
- Emphasize model assessments from teachers enrolled in the class.

Check for Understanding:

1. Assessment terminology and practice (review and present new information):
   a. Measurement versus evaluation
   b. Student assessment
   c. Authentic assessments
   d. Performance-based assessments (PBA)
   e. Summative and formative assessments
   f. Program evaluation
2. Creating student assessments by learning domain (and consistent with curriculum alignment)
   a. Summative and formative assessments (for all of the following domains and items)
   b. Cognitive assessment items
   c. Psychomotor assessment items
   d. Affective assessment items
   e. Authentic assessment items
   f. Performance-based assessment items
3. Aligning assessments with existing curricular components
   a. Internal alignment (aligning with MLOs and

strategies, activities, and resources)

b. External alignment (assessing all components that are present in an external alignment (academic and technical standards)

4. Program evaluation plans
   a. Developing written program evaluation plans for program improvement
   b. Incorporating student assessment data into the program evaluation plan (relationship between student assessment and program evaluation/improvement)
   c. Current topics: "Accountability" and the relationship to the written program evaluation plan

Guided Practice:

1. Teachers critique their existing assessments against their measurable learner objectives (MLOs) and their strategies/activities/resources for curriculum alignment. Make improvements if needed.
2. Teachers critique their existing assessments for authenticity and performance-based items and make improvements if needed.
3. Teachers critique their partner's existing assessments with their partner's measurable learner objectives (MLOs) and their strategies/activities/resources for curriculum alignment. Suggest improvements if needed.
4. Teachers critique their partner's existing

assessments for authenticity and performance-based items and suggest improvements if needed.

5. If alignment is not met, improve the assessments consistent with DESE requirements.
6. If alignment appears to be met, critically analyze if all learning domains and verbs (per the MLOs) are consistent.
7. After full critique, if alignment needs improvement, create/identify new assessments to strengthen the instructional delivery.
8. Teachers complete the "assessments" section of their internal alignment matrix consistent with DESE recommendations or school district requirements/format.
9. Teachers complete their written program evaluation plans.

Closure:

1. Final piece of curriculum alignment: Authentically assessing our students with performance-based assessments that are aligned with the unit's measurable learner objectives (MLOs) and supported by the instructional strategies, activities, and resources.
2. Must continue developing authentic, performance-based assessments consistent with the professional literature (domain specific and learning-level specific).
3. Strong emphasis on accountability at the local,

state, and national levels (current legislation) and how it ties with the written program evaluation plan.

Independent Practice:

1. Read all materials disseminated in class (theory, DESE documents, samples, etc.).
2. Complete assessments section of internal alignment matrix (consistent with DESE recommendations and local school district requirements). This exercise will only "list" the assessments by name/identifying number.
3. Building on item 2 above, teachers will choose one unit of instruction from their existing curriculum (or improved curriculum based on this course) and develop authentic, performance-based assessments needed to assess student learning consistent with the measurable learner objectives and instructional strategies, activities, and resources developed in previous units of this course.
4. Teachers complete their written program evaluation plan consistent with local school district/MSIP requirements and DESE recommendations.

Effective Curriculum and Instruction for Career Education

Unit 6: Apply Assessment Theory to the Classroom

Program Area Specific Examples

The following curriculum samples will be presented during this Unit of Instruction. Additional samples will be presented as needed depending on the class population for any given semester.

Example 1: Missouri Department of Elementary and Secondary Education's description and requirements for Assessments (DESE Curriculum Sampler, 2003)

Example 2: Marketing Education 2002 Fall In-service Documentation: Assessing the Missouri Show-Me Standards
(Example purpose: Marketing Education solicited teacher examples of how they were assessing the Show-Me Standards in the Marketing Education classrooms.)

Example 3: Agriculture Education Cross-Referenced Chart for Adapting Performance-Based Assessments (Sample illustrated: Agriculture Mechanics unit for Agricultural Science I course)
(Example purpose: Agriculture Education has created the Agricultural Education Curriculum Enhancements (Volume II) to emphasize its use of performance-based assessments).

Example 4: Trade and Industrial Education Authentic Assessment Checklist for Daily Safety Practices

Example purpose: The flexible checklist (by unit, MLOs, tasks, and days assessed) can be used to authentically assess and document daily student work consistent with course grading procedures and measurable learner objectives.

Program Area Specific Examples

Missouri DESE Curriculum Sampler (2003) Assessment Descriptions and Requirements

Assessment

MSIP Standard 6.1.1 *Each written curriculum guide must include instructional strategies and specific assessments (including performance-based assessments) for a majority of the learner objectives.*

In order to measure student progress and inform instruction, assessments are included in many curriculum guides. There should be a variety of assessment types in the guides, including performance-based assessments. Some assessments may cover more than one objective, or one objective may have multiple assessments.

Curriculum guides should include a description of the assessment or a copy of the assessment. Descriptions of assessments should be detailed enough that a teacher could easily understand how to duplicate the assessment. Assessment descriptions should include more information than "teacher observation" or "scoring guide." The criteria used in the observation or scoring guide should be listed.

Formative assessments provide feedback to teachers to help modify and improve teaching and learning. Examples of formative assessments include classroom questions, observations, drafts of papers, and tests or quizzes. **Summative assessments** measure the degree of learning upon the completion of a set of learning activities. Examples are teacher-made exams, project presentations and end-of-semester or end-of-year examinations.

Characteristics of an Effective Assessment Program

- ✓ are aligned with the objectives and with Missouri's Show-Me Standards, and corresponding scoring guides are clearly defined to evaluate student work,
- ✓ are of varying types to allow students a wide range of opportunities to demonstrate proficiency,
- ✓ include those that are authentic in nature and allow students to solve real-life problems,
- ✓ provide opportunities for students to demonstrate multiple ways of responding to a given situation,
- ✓ are specifically designed to provide meaningful feedback on student learning for instructional purposes (formative), and
- ✓ are specifically designed to provide feedback on a student's degree of success in learning a particular objective (summative).

Assessment data (state and local) should be used to improve instructional practices and student performance.

Examples of assessments may be found in the Curriculum Format section (DESE Curriculum Sampler, 2003).

Program Area Specific Examples: Marketing Education

Fall In-service Documentation: Assessing the Show-Me Standards

Marketing Education
Fall In-service
2002

A compilation of Marketing Education teacher responses to the following items related to assessment of Show-Me Standards not tested by the Missouri Assessment Program.

List specific applications of technology in your curriculum.

- CD Portfolios of student work – good projects
- Job procurement using various computer software – resumes, cover letters, etc.
- Utilizing e-mail mentors
- Research careers, different economies, different generations, fact finding – Internet
- College and job applications from Internet to complete
- CDs for math and grammar remediation
- Job performance expectations on software to catalog student's behavior (Rock Bridge)
- Web page design using Front Page (advertising)
- Design banner ads
- Smart Board Applications – students operate and present
- Digital camera – selling items on eBay for a DECA function
- Ad designs using PageMaker, Adobe Photoshop, and Corel Draw, Photo Draw
- Missouri Works for job searches
- DOT for career searches
- Scanners to download images for brochures/flyers
- Simulations
- Teacher developed and student developed PowerPoint presentations (career research, sales presentation, product planning, marketing concepts, getting to know your job, chapter presentations)
- ACT Discover and CS Bridges on-line
- MS Publisher – brochures, flyers, real estate project (like sales presentation)
- MS Excel – data manipulation and chart making
- Sandwich Shoppe computer simulation
- Career scope computer software which poses questions to students regarding careers and provides information on which to make decisions
- DECA Software testing
- Close circuit telephones to teach telephone techniques
- DECA Quiz Bowl software
- Dorothy software
- Corporate View
- Internet for international product search, labor market information
- Job search engines

- Desktop publishing to produce documents for employer appreciation banquet (menu, invitations, program)
- Video – digital camera, slide presentations, taking pictures of kids at employment site, sales demonstrations
- Spreadsheets – fundraising
- Database – employer information
- Digital camera – pictures to use in marketing research projects for DECA.
- Scanning images for projects or presentations
- PowerPoint, Excel, and Access together for projects. Students design homecoming t-shirts and manipulate data in Excel, do sales predictions, etc.
- Promotions unit – utilize video camera and computers to record audio and TV commercial and editing
- Hot Dog Stand computer simulation
- Artic Express computer simulation
- Embark website (Ecos) which allows students to do personality assessments, and stores the data; scholarship locators
- Create PowerPoints for target markets for specific products and have them present to class
- Students research regulators of government on the Internet and make a poster to explain the agency and current example
- Prepare a promotional campaign using PowerPoint promotions after researching a product and make presentation to business people who tell them if their idea is feasible
- Research a career using Internet (Missouri Works, America's Job Bank) and they must complete all forms and interview with an actual business person
- Applications of Microsoft Excel to track DECA budgets, simulate banking activities, and/or keep track of vendor databases for fundraising
- E-mailing business people to get information for preparation of marketing research projects
- Digital camera used at Fall DECA Conference and prepare a PowerPoint reviewing the conference
- Virtual Business simulation at the end of Marketing I class (tutorial) – lure for next courses
- Virtual Business with entrepreneurship and business management intermittently throughout the quarter
- Research how to catch shoplifters. Prepare PowerPoint presentations to propose a security plan
- Microsoft Excel to make graphs for any kind of project.
- Newspaper articles using Microsoft Word
- Create DECA bucks account in Microsoft Excel for recording "pay"
- Microsoft Excel for inventory and ordering for school store
- Word for tables for competitive events projects
- Varitronic poster machine for making visual aids for fundraiser
- Quicken for doing school store books (profits, balance, etc.)
- Digital camera Photoshop for p.r. information (bulletin boards, newsletters, etc.)
- Press release in Microsoft Word in a format acceptable to newspaper
- Hourly/wage and payroll in Excel for internship
- Sports internet search – adding a franchise to a major hockey league. Locate existing teams, locate a city, name team, etc.

- E-mail: students have own accounts and do an assignment and send as an attachment to the teacher.
- Web page design with Dream Weaver for their particular student organization.
- Telemarketing used for fundraising for civic projects
- Business plan for marketing plan using Microsoft Word
- Job interview – simulated through the Internet – answer questions (Hazelwood Curriculum Connections – list of websites pertaining to marketing)
- Season Ticket Baseball 2003 – sports marketing – managing team and making decisions
- Living in the Real World for budgeting principles
- I-Movies for videotaping commercials
- Avid Cinema for ads, presentations, creating promotions for advertising DECA activities
- First Class for e-mail mentors
- Internet – e-mail project with International students to research specific topics (customs), business plans, IRS, small business, download forms)
- Video camera for mock interviews
- Netop to monitor what all students in room are doing on their computers
- Excel for supply and demand graphing
- Access to create customer databases
- Threshold competitor is a simulation to make decisions on capital budgeting, etc.
- Access to do market research to sift through
- Business Plan Pro and Marketing Plan Pro software (Prentice Hall)
- MarkED CDs for job skills
- Video visualizer for scanning documents or art – can show anything
- Use computers in store to do a perpetual inventory and maintain inventory
- Use bar code printer
- Develop website for a toner recycling business (e-commerce)

How is student-conducted research included in your curriculum?

- Research products to sell in the school store
- Job search
- Focus groups/questionnaires for William Woods marketing competition
- Taste test for McDonald's – then focus groups
- Career exploration for job requirements
- Research market prototypes
- Research product design and sales demonstration
- Develop marketing strategy designed for specific business and presented to the business
- DECA written events – marketing research (Internet, interviews, books, articles, etc.)
- Social responsibility research papers – business ethics website
- In-class presentations on a business or entrepreneur researched
- Interest surveys of students – further pursue research on areas of interest for further education
- Professionals interviewed in career of interest
- Prompt student to prepare questions prior to a guest lecturer
- Social security and pension research

- Business plan research for entrepreneurship
- Consumer safety research, environmental hazards research on specific companies
- Various economic indicators of international companies (CIA.org)
- MDA, KFC – to get franchise information to do business in this manner
- Sports marketing – geographic location research for team placement
- Communications unit – in charge of HR for company and have to do business within another country; have to determine customs, etc.
- DECA competition – scavenger hunt – DECA website – have to answer questions
- Search on city the school district is in (demographic and geographic)
- Primary research for marketing Research Project survey other students; college fairs to research colleges
- Secondary research – websites ERSYS.com/usa and Census.gov to find demographic information
- Academic research looking for journal articles and academic based research
- Sports marketing – internet research on stadium capacity
- College bowl and superbowl advertising costs
- MS Word and PowerPoint to chart results of sports marketing research
- Company research presented on PowerPoint – companies students would like to work for
- Occupational Outlook Handbook for careers
- Search engines to conduct research on companies and behaviors of athletes (do you want them endorsing your product?)
- Job opportunities in other cities – student researches what it would cost to move there, prices for living, etc.
- A needs assessment for a school store
- Go to search engine and find out what products are imported to U.S.
- Research product line for sales demonstration
- Plan a business trip
- Job manual research
- School research to find an area for improvement in the school
- Functions – pick a company and find out how each of the functions applies to that company
- Government websites – consumer protection, employee protection
- Students choose a specific product and they would survey the other students and rank the brands by popularity and determine why they were more popular. Using the Internet, students can decide where to offer the product based on demographics (use U.S. Census Bureau and Department of Labor sites)
- Students do research on social responsibility via the Internet. Contact companies and identify their social responsibility stance. Present the information using a PowerPoint presentation
- Census information for business ownership
- Research price comparisons for products being purchased for the classroom.
- Research specific products and create brochures to sell the products
- Break class into five groups and assign one of survey techniques. They decide what they wish to research (pros and cons of each research techniques)
- Study for community of business topics (development of public swimming pool, prepare a business directory, etc.)

- Interview people in management to determine how they got started
- Student write a marketing plan to present to the management
- Research a trip (sports or recreational), find prices, etc., and present to client
- Research interest, aptitudes, and personality traits (Bridges.com) on Internet
- Interview students to determine which products will do well in the school store. Interview freshmen to seniors
- Research vocabulary words to find an article which features the word and write a one page report (instruction on use of search engines)
- Research on liability on lawsuits
- Research product failures. Company research – history and progress. Analyze their success factors
- Success Week – research successful people and find common traits for their success
- Students give employer a gift on Boss's Day. Students research gifts.
- Etiquette lessons then do an actual dinner to use their new skills
- History of their employer, ownership of the company, etc., publicly traded or privately owne
- Products Americans love to hate (White Castle, Ovaltine, etc.)
- Community projects where they do individual marketing research for individual companies
- New product development patent searches on the Internet
- Taste testing
- Analyzing training manuals
- Research with pre-school and middle-school for TWEENS
- Table tops and trivia – research advertising costs, potential placements in restaurants)
- Business plan for a school store and make presentation to principal
- Marketing research written projects for DECA
- Research a product in order to do a sales presentation (local businesses, Internet research)
- Missouri Works to put resumes on line and research potential jobs

How do you incorporate workplace readiness skills in your curriculum?

- Ethical behavior
- Resumes , applications
- Telephone skills
- Communications skills
- Interpersonal Skills
- Mock interviews
- Role plays (Marketing Essentials)
- Reviewing tax forms, tax deductions
- Student evaluations from employers
- School store – employees, order
- Thank you letters
- Cover letters
- Workman's comp
- Virtual business interview on Internet (Monster.com) and msnvirtual
- Human relations on the job

- Career critique research comparing two different jobs and skills they need for each; select the job which most closely fits their talents
- Quarterly workplace readiness evaluations
- Dress for Success
- Teamwork skills
- Dinner etiquette and dinner interviews
- Networking for different job sources
- Self assessment
- Personality inventories
- Use appropriate business vocabulary
- Missouri Career Guide from employment office; Choices or Bridges program
- Job shadowing
- Following directions test
- Health and nutrition
- Courteous behavior
- Business letters
- Modeling workplace skills, ourselves, as teachers
- What not to do in a job interview (video) – student generated
- How to conduct a business meeting
- Job packet for internship students – researching the company
- Character education
- Political correctness – behavior in classroom
- Time management
- Customer service
- Portfolios – ASVAB test, resume, cover letter, assessments
- Public speaking
- Leadership roles in the DECA chapter
- Job hunting handbook
- Organizational skills through DECA
- Work keys assessment
- Photocopies of all student resumes and cover letters with names deleted – give to next year's class and students select top four out of each group
- Guest speakers discussing applications
- Mock interview day with local employers – cover letter, resume, dress, non-verbals, and follow-up letter
- What would you do? – workplace readiness and ethics
- Job action plan – weakness on evaluation – student writes a plan to let employer know how they plan to improve
- Human resources – using MarkED laps – sexual harassment, diversity issues, etc., scheduling
- Practice "People Smarts" skills (i.e., to appreciate people, how to listen well, etc.)
- Case problems from assorted books on dealing with people in the workplace.
- Marketing II kids teach Marketing I kids how to count back money and evaluate them. The Marketing I kids evaluate the Marketing II kids on their training skills
- Mock telephone training
- Filling out a job application and interviewing for a job (switch marketing class with the math class)
- Students bring in five blank job application forms

- Lab person does a presentation on drug tests
- Students register for Missouri Works
- Variety of employers' orientation books for review to identify the requirements the company has for ethics based on mission statements
- Stress management
- Workplace safety
- Co-worker relations
- Simulation to write purchase orders, requisitions, business letters, conduct business meetings, dealing with investment companies in community, meeting deadlines, etc. (The Mean Jeans Company)
- All classroom behaviors are translated to workplace behaviors
- Communications – listening skills
- Administer a workplace readiness exam, filling out appropriate forms for employment (through research educator)
- Mini-unit on income taxes, paychecks (coop students)
- Cooperative education
- School store staff

What do you do to incorporate formal and informal presentations and discussions?

- Informal presentation to class concerning their job (internship)
- Presentation on careers
- Sales demonstration
- Students prepare overhead on specific topic and present to the class
- Class divided into small groups (jigsaw) to present information
- Have student teach a class
- Trade show on pumpkins (Project Pumpkins) to elementary school students
- Presentations to junior high school on DECA and economics
- St. Louis workstudy fair where students do informal presentations
- Morning Mayor show on Rolla news and information (radio)
- Coop students prepare a bulletin board or poster on their place of employment
- Parliamentary procedure
- MDA telethon locally
- Students as Ambassadors – they represent the program while at work
- Students make commercials and it can be aired on channel one
- DECA meetings – officers present
- School board meeting presentations
- Advisory board meetings – student representation
- Presentation to inform other students about DECA
- Sales demonstrations
- Present Instructional Management Plans
- Case problems in small groups
- Debate on ethical issues
- Four part oral presentation – three minutes to do an introduction of a classmate; 60 second commercial about the workplace with a prop; Dimensions article summarized in five minutes
- Free Enterprise billboards created in hallway – must explain to classmates

- Plugging into Marketing to develop a PowerPoint on the 4 P's of Marketing
- Students teach a section of a chapter to classmates
- Give students a case study and give them five minutes to prepare a presentation
- Me in a Box activity – students bring in items that are meaningful and descriptive of themselves and what they want to do career wise – show and tell in front of peers
- Election activities for DECA
- Chairing committees for DECA
- Recruiting other students for M.E./DECA
- Presentations to Chambers, civic organizations, etc.
- Written scholarships Wall street journal the classroom edition. Students select an article and have to summarize the article orally.
- Students introduce themselves from Day 1. Each week they must do something to present in class.
- Divide chapter content in small groups to teach to the rest of the class.
- Formal sales presentation addressing the class.
- Free Enterprise team presents to the school board. Present to other schools.
- Competitors informally present their project.
- Kiwanis, Rotary presentations based on DECA activities
- Veterans Day Assembly which involves the community and DECA members run the program. Elementary school presentations – flag etiquette, Halloween safety
- Seniors have Toastmasters International come in to complete the Youth Leadership Program (public speaking)
- Employer Appreciation Banquets
- Installation ceremonies
- Students introduce guest speakers
- Store Leadership team has to develop employee handbook, etc. and they instruct the other employees
- Student presentations of marketing research in the classroom
- Introduction of guest speakers
- Mentors on-line for students writing business plans
- Fashion show scripting and presentation
- PowerPoint presentations – project on McDonald's promotional meal
- Skits to reinforce classroom presentation
- Presentations to Junior High on community service
- School assemblies
- DECA Week activities
- Training demonstrations
- Cooperative learning – roundtable with different answers to different questions and kids make decisions on agreement or disagreement
- Presentation to administrators to get approval on prospective projects
- Presentations to businesses when they've done research on that business
- Employer appreciation banquet
- DECA officers interacted with Lions Club members
- Cable presentations
- Workplace safety video
- Formal sales presentation – videotaped for critiquing
- DECA Vice President for each class that presents reports to class

- Presentations on the career project
- Marketing math presentations on the smart board
- Product presentations based on products acquired from vendors through written communications
- Research a decade and present trends (products, music, etc.)
- Prepare a print ad and present to the class
- Tape a radio spot they've developed
- Research ad space costs and present

Program Area Specific Examples: Agriculture Education

Cross-Referenced Chart for Adapting Performance-Based Assessments

(Sample illustrated: Agricultural Mechanics Unit for Agricultural Science I)

Curriculum/Unit	Performance-Based Assessment (PBA)	Alternative PBAs
Agricultural Science I		
Agricultural Mechanics Unit for Agricultural Science I • Common Hand Tools	Design, organize, and participate in a tool identification contest	*Agricultural Mechanics Unit for Agricultural Science I* and *Agricultural Mechanics Unit for Agricultural Science II*—Common Power Tools
• Common Power Tools	Give a safety presentation for a power tool	*Agricultural Mechanics Unit for Agricultural Science I*—Common Hand Tools
• Woodworking	Construct a woodworking project	• *Agricultural Construction Volume I*—Project Construction • *Agricultural Construction Volume II*—Woodworking
• Tool Sharpening and Reconditioning	Participate in a tool reconditioning contest	None identified
• Arc Welding	Make common flat position welds as part of a welding contest	• *Agricultural Construction Volume I*—Arc Welding • *Agricultural Mechanics Unit for Agricultural Science II*—Arc Welding
• Oxyfuel Cutting	Make basic cuts as part of a class-wide contest	*Agricultural Construction Volume II*—Oxy-Gas and Other Cutting/Welding Processes
• Painting	Finish a project using paint and a paintbrush	• *Agricultural Construction Volume II*—Finishing • *Agricultural Mechanics Unit for Agricultural Science II*—Painting and Finishing

Program Area Specific Examples: Trade and Industrial Education

Authentic Assessment Checklist for Daily Safety Practices

Laboratory Safety in Trade and Industrial Education Programs

Authentic Assessment Checklist for Daily Safety Practices

Student Name: _____

Note to Teacher: One point is earned per day for each task (binary checklist = either "yes or no"). Point values will be surrendered for that day and all work will cease if major safety rules are broken.

Learner Objective:	**C. Appreciate Power Tool and Hand Tool Safety**
Task Statement:	4. Describe the safe operating procedures of all portable power tools used in the course 7. Safely demonstrate all hand equipment/tools

Dates: May 1 – May 5, 2003
Points Possible: _____
Grading Scale: One point is earned per day for each task (binary checklist = either "yes or no"). Point values will be surrendered for any day and all work will cease if major safety rules are broken.

Task	**Date**				
Work Area	5/1	5/2	5/3	5/4	5/5
1. Keeps work area clean					
2. Keeps work area well lit.					
3. Does not operate power tools in explosive atmospheres					
4. Keeps bystanders/children/visitors away while operating power tools.					
Electrical Safety					
1. Uses polarized and grounding plugs correctly					
2. Avoids body contact with grounded surfaces					
3. Does not expose power tools to rain or wet conditions					
4. Does not abuse cord					
5. Uses proper outdoor extension cords ("W-A" or "W")					
Personal Safety					
1. Maintains "safety edge" (uses good judgment, stays alert)					
2. Does not use tools when tired or under influence					
3. Dresses properly					
4. Ensures power tool is off before plugging in					
5. Ensures adjusting keys or wrenches are removed before turning on					
6. Does not overreach/keeps balance and footing					
7. Uses Personal Protective Equipment					
Tool Use and Care					
1. Uses appropriate clamps/methods to secure workpiece					
2. Does not force tool					
3. Does not use tool if power switch is inoperable					
4. Disconnects from power source before making adjustments					
5. Stores idle tools out of reach of children/untrained persons					
6. Maintains tools with care					
7. Checks for misalignment, binding, breakage, other damages					
8. Uses appropriate accessories for the tool used					

Adapted from: Porter-Cable Corporation (2001). *Instruction manual: Double insulated bayonet saw*. Part No. 900471 (0110).

Effective Curriculum and Instruction for Career Education

Unit 6: Apply Assessment Theory to the Classroom

Suggested Unit Assessment

Measurable Learner Objective:	Apply Assessment Theory to the Classroom
Behavioral Objective:	1. When presented with assessment theory definitions and discussions, the teacher will differentiate among all terms with 100% accuracy. 2. Given existing measurable learner objectives and instructional strategies/activities/resources, the teacher will create performance-based and authentic cognitive assessments consistent with DESE requirements and professional literature. 3. Given existing measurable learner objectives and instructional strategies/activities/resources, the teacher will create performance-based and authentic affective assessments consistent with DESE requirements and professional literature. 4. Given existing measurable learner objectives and instructional strategies/activities/resources, the teacher will create performance-based and authentic psychomotor assessments consistent with DESE requirements and professional literature. 5. When planning student assessments, the teacher will appreciate assessment theory, student needs, and stakeholder needs as evidenced by incorporating authentic performance-based assessments into their program.

	6. Given DESE materials, the teacher will create a written program evaluation plan consistent with DESE/MSIP requirements. 7. When planning a written program evaluation plan, the teacher will recognize the importance of program evaluation as evidenced by developing a realistic plan to collect and assess data for program improvement.
Learning Domain(s):	Cognitive and Affective
Assessments:	1. Peer assessment checklist: Effective student assessments by domain and alignment (analysis and evaluation level) 2. Teacher daily performance work (student assessments and program evaluation) 3. Unit and final exam assessments (comprehension and analysis level)

Peer Assessment: Evaluating Existing Student Assessments

Bloom's Taxonomy Cognitive Levels Assessed: Analysis and Evaluation

Evaluate an identified curriculum of your choice (or materials developed in class) for student assessments using the following checklist. Analyze and evaluate the component in the left-hand column against the criteria at the right.

Components	Criteria (Binary Assessment: Yes or No)
Assessment Theory	☐ Assessments clearly assess all learning domains delivered in the unit/MLO. ☐ Assessment is authentic (as validated by local business and industry's expectations). ☐ Assessment is performance-based regardless of the learning domain assessed. ☐ Assessment is measurable. ☐ Assessment is objective (limits reviewer error/bias). ☐ Assessment is either formative or summative (appropriate) ☐ Other:
Internal Alignment	☐ Assessment aligns with measurable learner objectives (learning domains). ☐ Assessment is supported by instructional strategies, activities, and resources. ☐ Assessment is consistent with verb levels identified in the MLO. ☐ Assessment is consistent with learning levels (Bloom's Taxonomy) identified in the MLO. ☐ Other:
External Alignment	☐ All external academic alignments are assessed (MSIP). ☐ All external technical alignments are assessed (standards). ☐ Other:

Unit and Final Exam Assessments: Potential Assessment Items

Bloom's Taxonomy Cognitive Levels Assessed: Comprehension and Application

On a typed/word processed document to be attached to this sheet, choose ***one*** of the following MLOs to create authentic, performance-based formative and summative assessments. You may use the following resources in your work:

- DESE sample materials (cite per APA)
- School district materials (cite per APA)
- CATER and existing content area sample materials (cite per APA)

Learner Objective: The students will disassemble and reassemble a personal computer "CPU" at the component level (within the main box).

Cognitive Assessments	Affective Assessments	Psychomotor Assessments	Notes

Learner Objective: The student will create employability documents.

Cognitive Assessments	Affective Assessments	Psychomotor Assessments	Notes

Appendixes

Appendix A

Reference List

Reference List

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Appendix B

Missouri Department of Elementary and Secondary Education

Report Writing Form Definitions

Report Writing Form Definitions

These definitions are to be used by MSIP Team Members as they gather information and complete the Report Writing Form.

Term	Definition	Additional Information	Standards & Indicator
academics	classes presenting formal instruction; classes for credit		6.7.1/6.7.3
accommodation	change in test presentation or response requirements that are designed to provide all students with an equal opportunity to demonstrate what they know and can do; Accommodations do not substantively alter a test's content, level, or performance criteria.		
achievement test	a test that measures knowledge of acquired information and skill mastery, usually attained as a result of planned instruction or training		
action research	a form of collective, self-reflective inquiry undertaken by educators in order to improve instructional practices, as well as their understanding of these practices and the situations in which these practices are carried out	the project proceeds through cycles of planning, acting, observing, and reflecting and is systematically and self-critically implemented and interrelated; it seeks both action outcomes and research data	6.7.1/6.7.3
activity	description of the presentation of the material that reflects the learning level of the objective and the knowledge and skills necessary for success on the assessment.	reference to the teaching/learning strategy (the teaching technique; manner in which the material is presented) should be included	6.1.1
alignment, external	the measurable learner objectives and related activities and assessments reflect the demands of the Show-Me Process and Knowledge Standards at the appropriate learning level	alignment to the Curriculum Frameworks is also acceptable. Additional alignments to national standards, etc., are acceptable but not required	6.1.1
alignment, internal	there is close relationship among measurable learner objectives, instructional activities, and assessments (all having external alignment to the Show-Me Standards or Curriculum Frameworks)		6.1.1

articulation	how the curriculum fits together among grade levels and courses within a subject; an exercise to ensure that essential skills and knowledge are introduced, practiced, mastered, and reviewed at the appropriate grade/developmental levels	developing a comprehensive scope-and-sequence outline and/or completing a curriculum mapping project are steps to determine the level of articulation	6.1.1; 6.1.2
articulation agreement	written agreements between school districts and postsecondary institutions to ensure that students completing vocational programs can continue their education after high school		7.3.3
assessment	the process of collecting, analyzing, and interpreting information about academic performance related to educational goals. Assessments, as opposed to tests, typically employ a variety of procedures for evaluating student work and learning.	for MSIP--a clear description and/or example of appropriate summative evaluation for the majority of objectives. Formative assessments may accompany instructional activities. Multiple objectives may be assessed in one test or performance event.	6.1.1
assessment data	information on individuals and groups of students gathered from standardized tests, district-level tests, individual tests, and other classroom evaluations.		6.2
at-risk student	students who, without intervention and support, would not achieve at a level equal to their potential; students who, without intervention and support, will not graduate from high school		6.3.6
authentic assessment	tests demanding the application of skills and knowledge in a "real-life" situation		6.1.2
benchmark	expected or anticipated skill or understanding at various developmental levels; A specified step along a path toward achievement of a goal or standard	generally identified for a few key levels or grade spans; could be identified for each grade span	

board approval	the local board of education has adopted the written curriculum	minor, ongoing adjustments in the curriculum can be made without board approval; It is suggested that the board be kept informed on general curriculum and instructional matters on an annual basis. Guides formally reviewed and revised as part of the district's systematic procedures should be approved by the board.	6.1.1
code of conduct	school district document that describes expected behavior and consequences for noncompliance	also known as a discipline policy	6.6.1
comprehension skills	understanding the meaning of or making meaning of spoken or written words		6.3.3
Comprehensive School Improvement Plan (CSIP)	long-range plan developed by the district with involvement by staff, board, parents, patrons to address needs of the district	MSIP concerns must be addressed in the CSIP	6.8.2; 6.8.4; 8.2.1; 8.2.2
constructed response items	these items ask students to give their own short answers rather than choosing from a list of possible answers		6.1.1
cooperative learning	students work in organized groups to learn; roles are assigned to each member of the group and each is accountable for mastery of the concept being learned		6.3.3
course description	a description of the overall course content and major activities or requirements is printed in each curriculum guide; the course description may include broad course objectives used to plan learner objectives/outcomes	may be a course description for each grade level or grade span of the subject, discrete courses should have course descriptions (for example, Algebra II would have a different description than General Math)	6.1.1
course objective	broad expectation for a course of study or individual course	more focused and discrete learner objectives usually supplement and support these course objectives	
cross-reference	objectives are matched, either in part or whole, with some aspects of the Show-Me Standards; without specific focus		6.1.1
curriculum	the plan for the presentation of educational activities in an educational institution		6.1

Curriculum Frameworks	Missouri's Frameworks for Curriculum Development--intended to guide Missouri Schools as they develop local curriculum aligned to the Show-Me Standards	alignment to the Curriculum Frameworks in the written curriculum may be substituted for alignment to the Show-Me Standards	6.1
curriculum guides	documents containing the aligned components of the instructional plan for a school district; MSIP requires graduate goals, rationale, course description, measurable learner objectives, learning activities, assessments, alignment to the Show-Me Standards or Curriculum Frameworks	there is to be written curriculum for each subject/course. As required components are added to the guides, they are to be aligned to the Show-Me Standards. Board approval is required for major revisions as part of the district's revision plan	6.1.1
curriculum mapping	teachers record the lessons taught during the school year and time spent on each. Maps (charts) are made from these data to indicate the subject matter emphasized and the time spent teaching each component	this system is intended to assure agreement among the contents of the curriculum guide, the actual subject matter taught within allotted time spans, and the results of testing	6.1.1, 6.1.2
decoding skills	translating symbols into words		6.3.3
design team	group formally organized to prepare a project for adoption and/or implementation		6.7
disaggregated data	the performance of various groups within a total population can be studied by dividing or separating the achievement or assessment data for specific groups of students	desegregation may be on the following basis: racial/ethnic, boys/ girls, at-risk, special education, poverty level, or other groups	6.3.4
discipline policy	school district document that describes expected behavior and consequences for noncompliance with the expected behavior	may also be called a code of conduct	6.6.1
District Response to the Standards and Indicators	written responses to specific Standards and Indicators to be used in the MSIP team's report; Some sections will be copied into the report verbatim	a publication by this title describes all of the information and documentation that a school district is required to provide for the MSIP review team. It can be found on the DESE web site under MSIP Third-Cycle Resources	
educationally disadvantaged student	students who, without intervention and support, would not achieve at a level equal to their potential; students who, without intervention and support, may not graduate from high school	may include but not limited to students in special instructional programs such as special education, Title I, 504 plans, and/or at-risk programs	6.3.6

eMINTS	"enhancing Missouri's Instructional Networked Teaching Strategies" provides computer-based classrooms for Missouri Schools and training for teachers to use the technology		6.4.4
equity	equal treatment, equal rights, equal access for all populations, and/or multicultural perspectives and cultural diversity concepts	includes gender, racial/ethnic, disability-awareness concepts	6.1.3
fellowship program	a university post awarded to a graduate student who is supported by a university department to teach or undertake research; project designed to improve skills with the support and cooperation of a university or college	the University of Missouri has a fellowship program that places first and/or second year teachers in classrooms with mentoring support from an experienced teacher as they work on their Master's Degree	6.7.6
flexible grouping	temporary groups formed on the basis of assessment results to receive instruction in specific reading strategies and skills, usually with text at the students' instructional level	may vary from whole-group to individual student instruction based on the needs of the group	6.3.3
fluency	speed and accuracy in recognizing words and comprehending connected text, and coordinating the two; identifying letters and words automatically		6.3.3
goal	a broad objective		6.1
graduate goals	a description of what the district expects of its graduates in various subject areas . In the absence of graduate goals, objectives cross-referenced to Show-Me Standards in a board-adopted guide will imply adoption of the Standards as the graduate goals	may be overall goals for all graduates, interim goals for grade levels or grade spans, and/or goals for subject matter fields that relate to the overall graduate goals; Objectives cross-referenced to the Show-Me Standards is the minimum requirement	6.1.1
guided reading	using a teacher-chosen text, the teacher works with a small temporary group of students to develop their processing strategies as they read increasingly difficult texts		6.3.3
independent reading	the student reads silently from student-chosen text at an independent level. The level of materials is monitored by the teacher		6.3.3

independent reading level	the student reads 96%+ of words accurately and comprehends 100% of the passage		6.3.3
indicator	one of the requirements for meeting a standard		
instructional activities	clear description and/or specific example of how the material (content and process) is to be presented to achieve the learner objective	may be combined with instructional strategies and teacher activities to give a complete explanation of the presentation of the material	6.1.1
instructional reading level	student reads 90-95% of words accurately with 85-90% comprehension		6.3.3
instructional strategies	teaching-learning techniques used to present instruction in the classroom	examples—lecture, whole-group instruction, cooperative learning, flexible grouping, one-on-one instruction, computer-assisted instruction, and hands-on activities	6.1.1; 6.3.2
Integrated Standards and Indicators Manual	MSIP publication that lists the standards and indicators for school accreditation adopted by the State Board of Education	it can be found on the DESE web site under MSIP Third-Cycle Resources	
journals	written record of experiences; may be general in nature or include specific experiences with a certain subject	these are individually composed, not published professional journals	6.7.1/3
learning level	the level of expected mastery of a learning objective as related to Bloom's Taxonomy (knowledge, comprehension, application, etc.) or similar hierarchy	the learning level demanded to meet the Show-Me Performance Standards is at the application level and above	
measurable learner objectives	descriptions of expected learner outcomes in terms of observable learner behavior including a clear delineation of the content to be learned and the learning level	learner competencies, performance indicators, and other terms may also meet this definition. Measurable objective may imply the type of activity and assessment	6.1.1
measure	quantitative condition for meeting an indicator or a standard		
mission statement	a formally adopted declaration that states the aims of a school district or other organization in very general terms		
outcome	expected or anticipated result of an instructional activity for a learner	objective, performance indicator, competency	6.1
peer coaching	learning or improving knowledge or skills with the help of staff or students of equal standing	this could be an instructional strategy, tutoring strategy, or staff development or support activity	6.1.1

performance indicator	a discrete objective or learner outcome that leads to meeting a broader learner objective or outcome; could also be a measure of performance	may be considered a "measurable learner objective" for MSIP purposes in some instances	6.1.1
performance task/event	complex demonstration of student knowledge (i.e. project, speech, essay, concept map, experiments, or research paper)		6.1.1
philosophy	set of precepts, beliefs, principles, or aims, underlying the educational practices in a school district	should directly support the mission statement; sometimes called "beliefs"	
phonemic awareness	insight that every spoken work can be conceived as a sequence of phonemes, units of sound that represent and distinguish meaning in language, early introduction to the letters of the alphabet	an awareness of phonemes is the basis for the understanding of the alphabetic principle and thus the ability to learn phonics and spelling	6.3.3
phonics	instructional practices that emphasize spellings are related to speech sounds in systematic ways; letter-sound correspondences		6.3.3
portfolios	organized collection of artifacts meant to represent the work of an individual or organization		
rationale	a reason or justification for teaching the subject/course related to the district's mission and philosophy is printed in the curriculum guide	may be a rationale for the entire subject matter field, rationale for the subject in a grade span, and/or rationale for individual courses in subject matter fields. Separate rationales may be written for secondary level courses	6.1.1
reading goals	reading expectations for each grade level K-3	these may be district or school reading and/or communication arts curriculum goals for each grade level	6.3.3
Reflective Journals	reflective journals or logs are recordings of key events, thoughts, or feelings in the educator's work days to reflect on for improvement and/or to share learning with colleagues...(Wood and McQuarrie, 1999)		6.7
Report Writing Form	the document on which the MSIP review team records its findings	it can be found on the DESE web site under MSIP Third-Cycle Resources	
rubric	scoring guide with written expectations or levels necessary to earn a certain point value or grade		6.1.2

scope and sequence outline	concrete, often graphic or tabular representation of the presentation of the learner objectives; Scope is the latitude or breadth of the curriculum and sequence is the time order and/or grade level of the presentation of educational experiences	a comprehensive scope and sequence outline can indicate that a curriculum is articulated	6.1.1
selected response items	test that requires the student to choose a correct answer from a limited list of possibilities (i.e. multiple choice, true-false, or matching)		6.1.1
self study	the school district's responses to a given set of standards and indicators such as MSIP, NCA, or other national standards	not required by MSIP, but used by districts for planning purposes	
shared reading	student reads with others (teacher, small group, or partner), usually familiar text		6.3.3
Show-Me Standards	thirty-three performance standards listed under four broad goals and forty knowledge standards listed under six content areas--what high school graduates in Missouri should "know" and be able “to do"	authority for the Show-Me Standards: Section 160.514 RSMO	6.1.1
standard	expected level of quality or excellence against which judgments and accreditation decisions are made		
strategic planning	formal, long-range planning effort that involves school staff, district patrons, and others; elements include developing and refining a plan as well as the steps necessary to implement the components of the plan upon board approval		
strategy	the manner in which the lesson material is presented and practiced; the teaching/learning technique		6.1
study group	group that has an interest in or responsibility for learning about a common topic		
targeted instructional services	Title I reading, math, communication arts, LEP/ESOL differentiated instruction, supplemental reading instruction (e.g. Reading Recovery)		6.3.6
teacher collaboration	groups of teachers working together to achieve improvement		6.7.1/3

technology	the application of scientific, electronic, and/or computer tools in the educational process	technology should not be defined narrowly to include only the latest computer hardware and programs or so broadly to include outdated tools that will not prepare students for today's workplace or higher education challenges	6.1.3, 6.4
training	course work, in-service workshops, coaching activities, study groups, mentoring, administrative guidance and support may all provide ways for teachers to learn or improve knowledge and skills		6.7
word-attack skills	learned strategies to decode, sight read and recognize written words		6.3.3

Appendix C

Missouri School Improvement Program (MSIP)

MSIP Frequently Asked Curriculum Questions

MSIP Frequently Asked Curriculum Questions

6.1 The district implements written curriculum for all its instructional programs.

Q 1—What are the main differences between second- and third-cycle curriculum guides?

A 1—During the second cycle, curriculum guides were required to have these components: rationales, course descriptions, goals for graduates, measurable learner objectives, cross references to the Show-Me Standards or Curriculum Frameworks, and the date of board approval. During the second cycle instructional strategies and assessments were optional components. During the third cycle, instructional activities and assessments are required components along with those that were required during the second cycle, in accordance with the required phase-in schedule. If the district has evidence of curriculum review during the past five years and meets all of the Second Cycle Standards, scoring guide points will not be deducted based on Indicator 6.1.1 alone. The absence of appropriate activities and assessments will generate comments and/or concerns. District with written curriculum that does not meet Second Cycle Standards will receive no points and concerns.

Q 2—What curriculum guides will the team review when they are in the district?

A 2—The team will review curriculum guides for **all** instructional programs listed on the Report Writing Form curriculum chart. The Report Writing Form asks the team to review curricula for communication arts, math, science, social studies, health education, physical education, art, music, all vocational programs, foreign language, and practical arts.

The team will also note the presence of curriculum guides in the areas of preschool, gifted education, guidance, technology, LMC, special education (life skills), cadet teaching, and other. This group of guides will not be held to the same MSIP Standards as the subjects listed in the curriculum chart. In order to qualify as a curriculum guide, appropriate grade-level learner objectives are required.

The schedule for reviewing written curriculum guides for Third-Cycle MSIP required standards is as follows:

- 2001-2002 one of the core subjects tested on the MAP (math, science, social studies, communication arts) is required.

- 2002-2003 two of the core subjects are required.
- 2003-2004 three of the core subjects are required.
- 2004-2005 four of the core subjects are required.
- 2005-2006 **all MAP subject curriculum guides, core and non-core areas, will be reviewed using Third-Cycle MSIP Standards.**

(NOTE: Every year during the Third Cycle, all other guides will be reviewed on the basis of Second-Cycle standards.)

Q 3—Are the curriculum requirements the same for A+ Schools and approved vocational courses?

A 3—A+ and vocational curricula should have contained all of the required and optional components during second cycle. Therefore, all of the components should be there during third-cycle. The A+ curriculum should be fully aligned in one subject area each year until all subjects are fully aligned. The vocational curriculum must be brought fully to third-cycle standards before the beginning of the 2004-2005 school year.

Q 4—Can the district use the Show-Me Standards for the graduate goals?

A 4—Graduate goals for a subject area can be considered in place if cross-references to the Show-Me Standards are in place K-12 and the local school board has reviewed and approved the curriculum guide.

Q 5—What is cross-referencing, and is it required?

A 5—Objectives are matched, either in part or whole, with some aspects of the Show-Me Standards and, may or may not represent true external alignment. At a minimum, objectives must be cross-referenced to the Show-Me Standards or Curriculum Frameworks

Q 6—What is meant by full alignment, and is it required?

A 6—Full alignment means that both external alignment and internal alignment are present. External alignment means that the measurable learner objectives reflect the demands of the Show-Me Performance and Knowledge Standards or Curriculum Frameworks at the appropriate learning level. Internal alignment means that there is close relationship among measurable learner objectives, instructional activities, and assessments. Both must be present for full alignment. Full alignment is not a requirement for MSIP during the third cycle.

Q 7—Are full alignment and cross-referencing different?

A 7—For MSIP purposes, full alignment and cross-referencing are considered different. Cross-referencing is the minimum requirement for the third cycle of MSIP. Full alignment is a factor that could support a strength for the curriculum standard.

Q 8—How will full alignment be determined?

A 8—During each year of the third cycle, the district will choose two objectives for each grade level from each curriculum guide evaluated by the third-cycle standards according to the phase-in schedule for that year to check for full alignment. If 75% of the components display appropriate full alignment, credit will be given for full alignment.

Q 9—What does it mean that a district must have instructional activities and assessments (including performance-based assessments) for a majority of the objectives?

A 9—Most districts will have the goal of writing instructional activities and assessments for all of the measurable learner objectives. However, in order to get full credit for the Third-Cycle Standard, only a majority of the measurable learner objectives must have activities and assessments in the required guides during the review. There should be a variety of assessment types, including performance-based assessments, in the required curriculum guides. Some activities and assessments may cover more than one objective, or one objective may have multiple activities and/or assessments.

Q 10—How are instructional strategies and instructional activities different?

A 10—For MSIP purposes, instructional activities are descriptions of the presentation of the material that reflects the learning level of the objective and the knowledge and skills necessary for success on the assessment.

Instructional strategies are teaching-learning techniques used to present instruction in the classroom. Some examples are: lecture, whole-group instruction, cooperative learning, flexible grouping, one-on-one instruction, computer-assisted instruction, and hands-on activities. Reference to the instructional strategy should be included in the required curriculum guide. It may be part of the description of the instructional activity or listed separately.

The team will determine if a variety of appropriate strategies are implemented and record that on the Report Writing Form.

Q 11—Will the team need to see copies of the actual activities and/or assessments?

A 11—The team will need to see a complete description of the activity and/or assessment. The description should be detailed enough that a teacher could easily understand how to duplicate the activity and/or assessment. The learning level of the activity and assessment should match that expected in the objective to be fully aligned. It should include the teaching strategy. For A+ and vocational, each assessment should include a mastery level.

It is also acceptable to have copies of the actual activities and/or assessments in the guide or cross-referenced to the objectives in a separate file or binder. It is important that the team members have access to enough information to help determine if the curriculum is complete and aligned.

Specific references to pages in a textbook or other resources are also acceptable as long as all teachers have access to those resources, and MSIP team members have access to these publications.

Generic references such as "worksheet, quiz, unit test, or rubric-graded test" are not acceptable.

Q 12—Do all measurable objectives have to be aligned?

A 12—The district is responsible for having learner objectives in place to meet the demands of the Show-Me Standards. The district may go beyond the standards and offer programs and instruction that exceeds the breadth and depth of the standards. The curriculum guides may also list required objectives that may be at a level not easily aligned to the standards. In instances such as these, objectives may not be aligned.

MSIP will look at all of the listed curriculum objectives for each course or grade to determine alignment to the Show-Me Standards or Curriculum Frameworks and a sample of objectives with accompanying activities and assessments to determine full alignment.

Q 13—Can goals for graduation be different at elementary, middle, and high school levels?

A 13—Graduate goals may be overall goals for all graduates, interim goals for grade levels or grade spans that lead to meeting the overall goals, and/or goals for subject matter fields that relate to the overall graduate goals.

Q 14—How does the district show that an activity or assessment deals with more than one objective?

A 14—The district should devise a system for tracking the connections among objectives, activities, and assessments. If they are always printed together in the curriculum guides, there should not be a problem in determining the connections. The simplest way is to think about how the teachers in the district will know which objectives are aligned with which activities and assessments. If the objectives, activities, and assessments are not printed in the same document, it would be helpful to mark the aligned components in some manner such as colored highlighters or colored tape tabs.

Q 15—When one assessment is aligned to more than one objective, how does this count toward the requirement that "….specific assessments (including performance-based assessments)" are to be developed "for a majority of the learner objectives?"

A 15—If one major assessment is used to assess several objectives, all of those objectives count toward the majority. Performance-based assessments that combine multiple objectives and combine multiple content and process standards can help make the kind of important connections that lead to success on the MAP.

Q 16—Will districts reviewed in years 2-5 of the third cycle be required to designate two objectives per grade level as the basis for determining full alignment?

A 16—It is anticipated that districts will continue to identify two objectives for each grade level from each required core curriculum guide. The review team may select a sample of objectives from those identified by the district to determine full alignment.

Q 17—Do DESE Curriculum Section expectations for third-cycle curriculum differ from MSIP expectations?

A 17—The Curriculum Section has designed training for school districts that need help in writing meaningful curriculum that will lead to improved instruction and improved student performance. Some of the examples

used to demonstrate well-developed curriculum go beyond the basic requirements of MSIP and would exceed the standard. However, familiarity with these examples should help districts as they write curriculum and plan for curriculum improvement.

Q 18—Must the board approve every change in the curriculum?

A 18—The date of board review and approval must be in each curriculum guide. When minor adjustments are made, it is not necessary to obtain formal adoption. MSIP requires that systematic procedures be used to review and revise curriculum. This indicator does not require formal board approval each time a guide is updated.

Q 19—How will equity, technology, research, and workplace-readiness skills be checked?

A 19—The district will complete a chart in the *District Response to the Standards* that asks for specific places in the curriculum guides where the team can find learner objectives related to the specific topics in the three grade spans (elementary, middle school, and high school). The team members will review the curriculum guides to determine how instruction is presented on each of these topics. The topics may be covered in any area of the curriculum that is appropriate and reaches all students in these grade spans.

Appendix D

Missouri Department of Elementary and Secondary Education

DESE Curriculum Sampler 2003

Note on Appendix D: When distributed in electronic format, the entire DESE Curriculum Sampler (2003) will be imbedded in this document. If viewing this document in print format, the Curriculum Sampler can be accessed by pointing your browser to:

http://www.dese.mo.gov/divimprove/curriculum/index.html

Appendix E

Missouri Center for Career Education

Curriculum Development Definitions of Terms and Proposed Operational Practice

Central Missouri State University

Missouri Center for Career Education

Curriculum Development Definitions of Terms and Proposed Operational Practice

June 29, 2004

Dr. Barton A. Washer

The purpose of this document is to provide clarification for curriculum development terminology. The following definitions are cited from professional literature, textbooks, and the Missouri Department of Elementary and Secondary Education. Where required, some definitions are operationally defined.

The second component of this document (Operational Practice) will attempt to show how these defined components interact in the curriculum development and delivery processes.

Professionally-recognized Terms

Competency. For the purpose of this document, the term ***competency*** will be operationally defined as "a broad instructional statement that, when linked with similar statements, create a listing of desired occupational competence within a specific 'duty band' that is used to plan and deliver instruction within a specific course or program." This term is sometimes used synonymously with other terms, such as measurable learner objectives or task statements (both terms are defined below). When grouped together, these competencies and duty bands form an "occupational" profile (or competency profile). Miller & Miller (2002) Describe an ***instructor's*** competence in three areas: Technical, professional, and personal.

Curriculum. "The sum of the learning activities and experiences that a student has under the auspices or direction of the school" (Finch & Crunkilton, 1999, p. 9). For the purpose of this document, it should be noted that 2003 curriculum projects in Business Education, Health Sciences Education, and Trade and Industrial Education are focusing on developing curriculum *guides* (or plans illustrating how to continue developing a full curriculum) rather than on total curriculum projects.

Curriculum Guide. "Documents containing the aligned components of the instructional plan for a school district; MSIP requires graduate goals, rationale, course description, measurable learner objectives, learning activities, assessments, alignment to the Show-Me Standards, or Curriculum Frameworks (Missouri Department of Elementary and Secondary Education, 2002, p. 3). For the purpose of this document, a curriculum guide will be operationally defined as a document or plan that assists classroom teachers and administrators in developing a full curriculum. These guides should include samples of model lesson plans, instructional strategies, resources, and assessments.

Duty Band. General "organizers" that group similar competencies. For maximum efficiency, occupational (competency) profiles should include between eight and 12 duty bands (Miller and Miller, 2002).

External Alignment (Curriculum). "The measurable learner objectives and related activities and assessments reflect the demands of the Show-Me Process and Knowledge standards at the appropriate level" (p. 1). External alignment to Missouri academic resources can also be achieved by aligning to the Curriculum Frameworks. Alignments to other external sources (i.e., national standards) are acceptable but not required (Missouri Department of Elementary and Secondary Education, 2002, p. 1).

Internal Alignment (Curriculum). "There is a close relationship among measurable learner objectives, instructional activities, and assessments (all having external alignment to the Show-Me Standards or Curriculum Frameworks" (Missouri Department of Elementary and Secondary Education, 2002, p. 1). For the purpose of this document and future instruction and curriculum guides, a measurable learner objective and its instructional activities and assessments should be in the learning domain (cognitive, affective, and psychomotor) and learning level (Bloom's Taxonomy).

Instructional Objectives. "An intent communicated by a statement describing a proposed change in a learner – a statement of what the learner is to be like when he [*sic*] has successfully completed a learning experience" (Mager, 1962, p. 3). For the purpose of this document, Instructional Objectives will be further defined as occurring at the "lesson delivery" level and are used synonymously with student objectives, lesson objectives, behavioral objectives, and lesson outcomes.

Measurable Learner Objective. "Descriptions of expected learner outcomes in terms of observable learner behavior including a clear delineation of the content to be learned and the learning level. Learner competencies, performance indicators, and other terms may also meet this definition" (Missouri Department of Elementary and Secondary Education, 2002, p. 1).

Occupational (Competency) Profiles. A series of task statements, organized by duty bands, that relay the skills required by a particular occupation. Occupational Profiles may include rating scales and instructor documentation areas (e.g., date, rating). Miller and Miller (2002) refer to these as "profile charts."

Task Statements. Precise, stand-alone action phrases that describe a specific skill within a duty band. For maximum efficiency, there should be at least six task statements for each duty band (Miller and Miller, 2002).

Proposed Operational Practice

The following operationally-defined practices are proposed to capture relationships among curricular terminologies. These relationships are designed to assist career education classroom teachers, administrators, and teacher educators in implementing improved instructional strategies and meeting State standards (based on their current curriculum) rather than following the specific definitions of the current literature previously presented.

Relationship between Task Statements, Measurable Learner Objectives, and Duty Bands. For the purpose of the Missouri School Improvement Program (MSIP), it is proposed the Missouri Department of Elementary and Secondary Education's Division of Career Education recognizes:

- *Duty Bands* (when stated in measurable terms) can meet the definition of MSIP's *Measurable Learner Objectives.*
- Existing *duty bands* on many of Missouri's occupational ("competency") profiles may be stated in two-to three-word phrases and may not be measurable.
- Existing *task statements* ("competencies") may be stated in measurable terms. However, *task statement*s should not include all components of behavioral objectives (task, condition, and criteria) since behavioral objectives should be delivered at the lesson level.
- For the purpose of instructional planning efficiency, Missouri occupational profile *duty bands* will be rephrased into *measurable learner objectives,* with the "competencies" below each new *measurable learner objective* being recognized as *task statements* that support the new *measurable learner objective*.
- MSIP standards require that:
    - Learner objectives are stated in measurable terms
    - Curriculum guides have identified instructional strategies, resources, and assessments for *each* specific measurable learner objective with full internal alignment. Although current MSIP review standards allow for "progress" towards full internal alignment, MSIP's intent is for the total curriculum to be fully aligned)
- For the purpose of MSIP documentation, the classroom teacher must address (i.e., identify instructional strategies, resources, assessments, curricular alignment) the new *measurable learner objectives* (existing "duty bands") rather than the specific *task statements* (existing "competencies") of the occupational profile. Using the existing *Core Competencies for Health Care Assistants* (#501013-C) as an example, this strategy would require aligning seven *measurable learner objectives* (existing duty bands) rather than 44 *task statements* (existing competencies).
- Lesson Objectives, for the purpose of this document, will be used synonymously with the terms Behavioral Objectives and Performance Objectives. Translated, these three terms are written for the "lesson" level to guide actual classroom instruction.

Reference List

Finch, C. R. and Crunkilton, J. R. (1999). *Curriculum Development in Vocational and Technical Education: Planning, Content, and Implementation* (4th Ed.). Allyn & Bacon.

Mager, R. F. (1962). *Preparing Instructional Objectives.* Palo Alto, CA: Fearon Publishers.

Missouri Department of Elementary and Secondary Education (2002). Report Writing Form Definitions. Retrieved February 26, 2003, from http://www.dese.state.mo.us/sia/msip/3rd%20cycle%20resources.htm.

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Appendix F

Missouri Department of Elementary and Secondary Education / Division of Career Education's

Guide to Developing a Written Program Evaluation Plan

Guide to Developing a Written Evaluation Plan for Vocational Education Programs

The purpose of this *Guide* is to provide an outline of the components necessary in a written evaluation plan. Evaluation of vocational education programs provides a basis for identifying the strengths and concerns for the various programs and the overall vocational education curriculum. This then leads to the development of objectives and action plans resulting in program improvement. While this *Guide* provides an outline for a written evaluation plan, it is not intended to provide information on how to design and conduct program evaluations.

A plan for the evaluation of vocational education programs should include the following components:

1. The specific goals of the evaluation process

While program improvement is always the goal of the evaluation process, a more specific goal should be set based on the type of evaluation conducted. The goal of the evaluation could be either (A) a general analysis of the vocational education program performance measures and standards or (B) a goal with a more specific focus on objectives and action plans previously established through the evaluation process.

A. Conducting a General Analysis

A general analysis of vocational education programs will provide a baseline of information from which critical issues or areas for improvement can be identified. This general analysis should use program specific standards or checklists and established performance measures for the program and/or vocational education as a basis for the evaluation process. A general analysis of programs should be conducted at least every five years or when major changes to a program have occurred.

B. Conducting an Evaluation Based on Specific Objectives

A more specific goal for program evaluation would be to determine the achievement of an objective and the effectiveness of action plans developed as a result of a previous program evaluation. This type of goal is appropriate with annual evaluations of program improvement objectives. The basis for this type of evaluation is the vocational improvement plan. The measurable objectives and evaluation procedures established for the vocational improvement plan serve as the goals and procedures for the evaluation. This information can be found on the vocational program improvement plan form, a sample of which is included. Performance standards for vocational education should also be part of the annual evaluation process.

2. A description of the evaluation process

The description will include the procedure for gathering, analyzing and reporting data generated through the evaluation process. Included in this section should be:

- A description of the specific program components, goals, performance measures, or improvement objectives to be evaluated
- Timelines for gathering and reporting data

- Assignment of responsibilities for the evaluation process
- Dissemination plan for the evaluation report

3. A list of data sources which will be used in the evaluation process

Data sources which address the evaluation goals must be identified as part of the evaluation plan. These data sources could include, among others:

- Missouri School Improvement Program reports
- Program specific standards and checklists
- The district's Comprehensive School Improvement Plan
- The district's public report data
- Performance measures for vocational education programs
- Follow-up data on students enrolled in vocational programs
- Labor market and community needs assessments
- Student interest surveys
- Surveys of employers of graduates of vocational programs
- Advisory committee review of programs and recommendations
- Student satisfaction surveys
- Information from administrative/board reviews or evaluation

4. A description of the process for program improvement

This section should include how the information included in the evaluation report will be used in planning for program improvement. Improvement plans must be tied to program standards, vocational education performance indicators, and/or standards for the Missouri School Improvement Program. Improvement plans should include measurable objectives and action plans which address the program improvement issues. The enclosed Vocational Program Improvement Plan form should be used to develop the plans.

Information for this section could include:

- How objectives for improvement will be prioritized and selected
- How the action plans to accomplish the objectives will be determined
- The relationship of the vocational program evaluation process to the building or district level Comprehensive School Improvement Plan
- How the implementation of the objectives and action plans will be monitored

Note to Course Instructors: Additional components of this Program Evaluation document can be located at

http://www.dese.mo.gov/divcareered/