TABLE 3.1. CAST'S PRINCIPLES AND CHECKPOINTS FOR UDL

Multiple Means of Representation (MMR)	Multiple Means of Action and Expression (MMA)	Multiple Means of Engagement (MME)
Guideline 1: Provide options for perception ← Checkpoint 1.1: Offer ways of customizing the display of information ← Checkpoint 1.2: Offer alternatives for auditory information ← Checkpoint 1.3: Offer alternatives for visual information	Guideline 4: Provide options for physical action ← Checkpoint 4.1: Vary the methods for response and navigation ← Checkpoint 4.2: Optimize access to tools and assistive technologies	Guideline 7: Provide options for recruiting interest ← Checkpoint 7.1: Optimize individual choice and autonomy ← Checkpoint 7.2: Optimize relevance, value, and authenticity ← Checkpoint 7.3: Minimize threats and distractions
Guideline 2: Provide options for language, mathematical expressions, and symbols ← Checkpoint 2.1: Clarify vocabulary and symbols ← Checkpoint 2.2: Clarify syntax and structure ← Checkpoint 2.3: Support decoding of text, mathematical notation, and symbols ← Checkpoint 2.4: Promote understanding across languages ← Checkpoint 2.5: Illustrate through multiple media_	Guideline 5: Provide options for expression and communication ← Checkpoint 5.1: Use multiple media for communication ← Checkpoint 5.2: Use multiple tools for construction and composition ← Checkpoint 5.3: Build fluencies with graduated levels of support for practice and performance	Guideline 8: Provide options for sustaining effort and persistence ← Checkpoint 8.1: Heighten salience of goals and objectives ← Checkpoint 8.2: Vary demands and resources to optimize challenge ← Checkpoint 8.3: Foster collaboration and community ← Checkpoint 8.4: Increase mastery- oriented feedback

(Continued)

CHAPTER 3: APPLYING UNIVERSAL DESIGN FOR LEARNING TO INCLUSIVE TEACHER EDUCATION IN AN INTENSIVE ONLINE WORKSHOP—FARIDAH PAWAN

TABLE 3.1. Continued

Multiple Means of Representation (MMR)	Multiple Means of Action and Expression (MMA)	Multiple Means of Engagement (MME)
Guideline 3: Provide options for comprehension ← Checkpoint 3.1: Activate or supply background knowledge ← Checkpoint 3.2: Highlight patterns, critical features, big ideas, and relationships ← Checkpoint 3.3: Guide information processing, visualization, and manipulation ← Checkpoint 3.4: Maximize transfer and generalization	Guideline 6: Provide options for executive functions ← Checkpoint 6.1: Guide appropriate goal setting ← Checkpoint 6.2: Support planning and strategy development ← Checkpoint 6.3: Facilitate managing information and resources ← Checkpoint 6.4: Enhance capacity for monitoring progress	Guideline 9: Provide options for self-regulation ← Checkpoint 9.1: Promote expectations and beliefs that optimize motivation ← Checkpoint 9.2: Facilitate personal coping skills and strategies ← Checkpoint 9.3: Develop self- assessment and reflection

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