



## REVIEWER'S REPORT

Manuscript No.: IJAR-56667

Title: **Universal Design for Learning: Biological Foundations of Cognitive Diversity**

**Recommendation:**

- Accept as it is .....
- Accept after minor revision.....**
- Accept after major revision .....
- Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		Good		
Techn. Quality	Excellent			
Clarity		Good		
Significance	Excellent			

Reviewer's ID: Dr. Sumathi

### *Detailed Reviewer's Report*

- 1. Universal Design for Learning (UDL) is a proactive, research-based framework aimed at developing flexible learning environments and curricula that accommodate diverse learner needs from the start, rather than retrofitting accommodations. Grounded in brain research, UDL focuses on reducing barriers to learning through three key principles: providing multiple means of Engagement (the "why"), Representation (the "what"), and Action & Expression (the "how").**
- 2. Neuroscience is the scientific study of the nervous system, including the brain, spinal cord, and neural networks, focusing on their structure, function, and development. Executive functions are high-level cognitive skills—often managed by the prefrontal cortex—that act as the brain's "air traffic control system," enabling focus, planning, impulse control, and task switching.**
- 3. Executive function is a set of higher-level cognitive skills managed by the brain's prefrontal cortex that act as an "air traffic control system," allowing individuals to manage information, plan, focus**

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- attention, regulate emotions, and achieve goals. Key components include working memory, inhibitory control, and cognitive flexibility.
4. **Cognitive diversity refers to the inclusion of individuals with different thought patterns, mental perspectives, and problem-solving approaches, rather than focusing only on demographic traits. It stems from varying knowledge, experiences, and personalities, driving innovation and complex problem-solving by reducing groupthink. It offers unique perspectives that enhance team performance.**
  5. **Inclusive education ensures all students, regardless of ability, background, or identity, learn together in age-appropriate general education classrooms within their local schools. It moves beyond mere integration to transform school cultures, focusing on removing barriers, implementing tailored support, and fostering belonging for every child.**
  6. **Affective processing is the neural and psychological mechanism of evaluating stimuli based on emotional valence (positive/negative) and arousal, guiding behavioral responses like approach or avoidance. It operates as an automatic, often unconscious, and ancient brain function involving the limbic system (e.g., amygdala). This process assigns value to information, influencing decision-making, emotion regulation, and memory encoding.**
  7. **Key words are excellent!**
  8. **Some corrections are there inside review part should be made.**
  9. **Result part tables with pictures must be included.**
  10. **Significant points are given.**
  11. **Summary points can be included.**
  12. **After those changes good to publish in your journal.**