




## ASHA CEUs

### Information and Notes Pages

#### “Leveraging the 10 Principles of Neuroplasticity for AAC Device Training”

<p>APPROVED PROVIDER</p>  <p>ASHA CONTINUING EDUCATION AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION</p>	<p>LingraphiCARE America is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. See course information for number of ASHA CEUs, instructional level and content area. ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.</p>
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This course is offered for .01 ASHA CEUs (Introductory level; Professional area).

[www.aacdevice.com](http://www.aacdevice.com)

888-274-2742

## Complete a 0.1 ASHA CEU Course

Speech-language pathologists (SLPs) are invited to participate in a one-hour ASHA-approved course offering, "Leveraging the 10 Principles of Neuroplasticity for Communication Device Training." To be eligible to receive 0.1 ASHA CEUs (Introductory level), please see the guidelines below.

For more information about ASHA's most up-to-date eligibility criteria, go to the FAQ section of the ASHA CE website: <http://www.asha.org/CE/FAQs/>.

### Course Description:

This course reviewed the 10 principles of neuroplasticity and demonstrated how these principles, when considered, provide an approach that will allow the SLP to break through difficult challenges when training for communication devices for people with aphasia.

### Learning Outcomes:

By completing this course, participants will be able to:

1. Identify and explain the principles of neuroplasticity.
2. Explain how to use the principles in association with specific therapeutic techniques.
3. Incorporate principles of neuroplasticity into the best practices for speech-generating device use.

### Additional courses in the Applications of Technology track include:

- Using the Lingraphica Speech Generating Device: An Introductory Web Demo (Introductory, 0.05 ASHA CEUs)
- Using Lingraphica AAC Devices, Apps, and Therapy (Introductory, 0.1 ASHA CEUs)
- Lingraphica Technologies for Your Plan of Care (Introductory, 0.05 ASHA CEUs)
- Ethical Considerations for Bilingual AAC Patients with Aphasia (Introductory, 0.1 ASHA CEUs)

### Processing:

Online course completions are reported to ASHA quarterly. Please allow eight to ten weeks for processing. Lingraphica will issue a certificate of participation to each SLP who completes a CEU course.

For more information, or to start a device trial, contact: [continuinged@lingraphica.com](mailto:continuinged@lingraphica.com)





Understanding Neuroplasticity

**QUESTION:**

**Why use the principles of neuroplasticity for training clients to use communication devices?**



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Understanding Neuroplasticity

**GIVE THE EXPERIENCE**

**Provide the right experience in the right moment to gain the desired outcome.**



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Principles

**#1. USE IT OR LOSE IT**

Failure to drive specific brain functions can lead to functional degradation.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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The Principles

**#2. USE IT AND IMPROVE IT**

Training that drives a specific brain function can lead to an enhancement of that function.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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The Principles

**#3. SPECIFICITY**

The nature of the training experience dictates the nature of plasticity.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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The Principles

**#4. REPETITION MATTERS**

Induction of plasticity requires sufficient repetition.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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## The Principles

### #5. INTENSITY MATTERS

Induction of plasticity requires sufficient training intensity.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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## The Principles

### #6. TIME MATTERS

Different forms of plasticity occur at different time during training.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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## The Principles

### #7. SALIENCE MATTERS

The training experience must be sufficiently salient to induce plasticity.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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The Principles

**#8. AGE MATTERS**

Training-induced plasticity occurs more readily in younger brains.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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The Principles

**#9. TRANSFERENCE**

Plasticity in response to one training experience can enhance the acquisition of similar behaviors.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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The Principles

**#10. INTERFERENCE**

Plasticity in response to one experience can interfere with the acquisition of others.

Reference: Kleim, J.A., & Jones, T.A. (2008). Principles of experience-dependent neural plasticity: Implications for rehabilitation after brain damage. *Journal of Speech, Language, and Hearing Research*, 51, S225-S239.



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## Creating a Plan

What are the most important principles to address for Mrs. Jones?

Use it or lose it	Use it and improve it
Specificity	Repetition Matters
Intensity matters	Time matters
Saliency matters	Age matters
Transference	Interference

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## Personalizing the device



- Where do you begin with customizing?
- What is most important/meaningful to the client/family?
  - What principles do you think play the greatest role?

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## Creating a Plan

Goal Writing



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