

# **Online Teaching: How To Keep Your Things Simple and Students Motivated**



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# Hello!

## *I am Dr Aini Marina*

I am here to share with you how you can keep your online teaching simple and your students motivated.

First, we need to understand how efficiency in learning works!

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# Cognitive Load and Efficiency in Learning

*Let's start by quickly reviewing about the Cognitive Load Theory*

*Cognitive Load Theory is a universal set of learning principles that are proven to result in efficient instructional environments as a consequence of leveraging human cognitive learning processes*

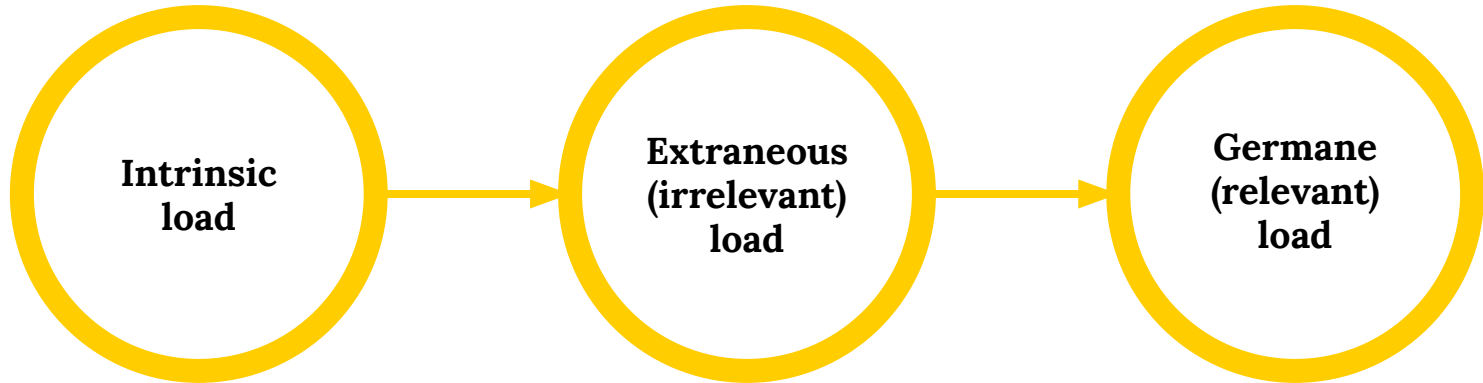
(Clark, Nguyen, Sweller, 2006)



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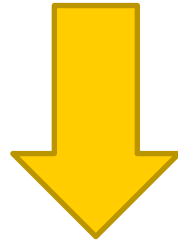


## Types of cognitive load





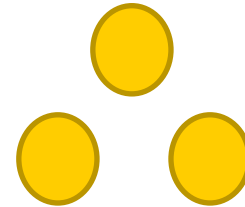
The process is easy ..



Reduce  
irrelevant  
load



Increase  
relevant  
load

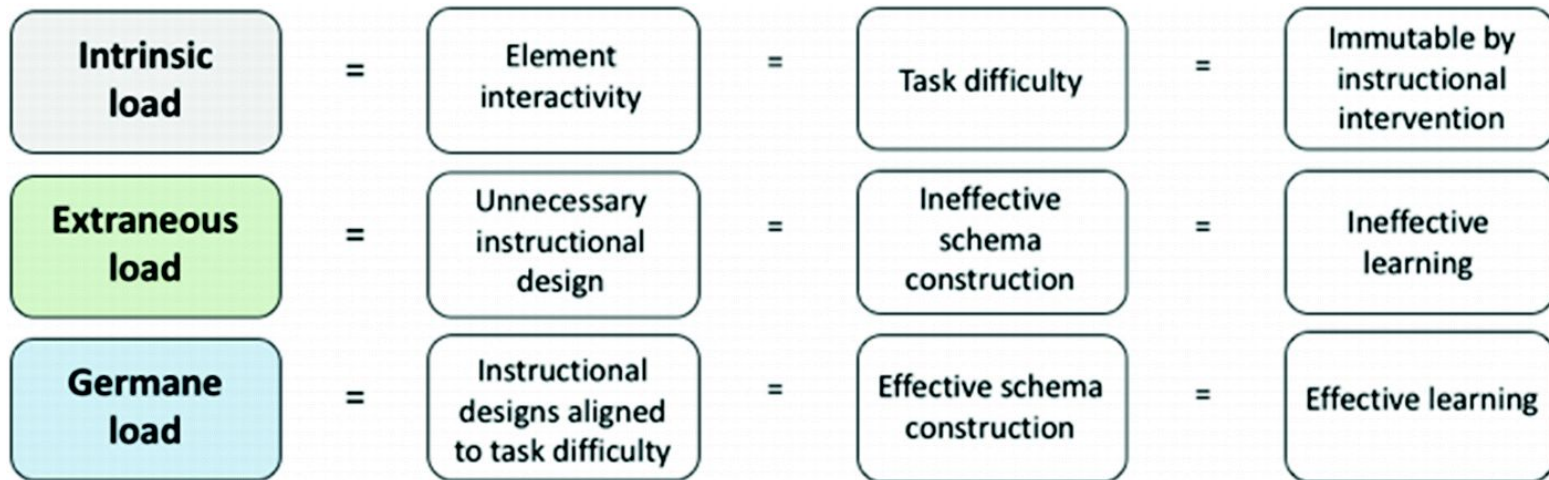


Manage  
intrinsic  
load

**= Efficient Learning**



## In other words..

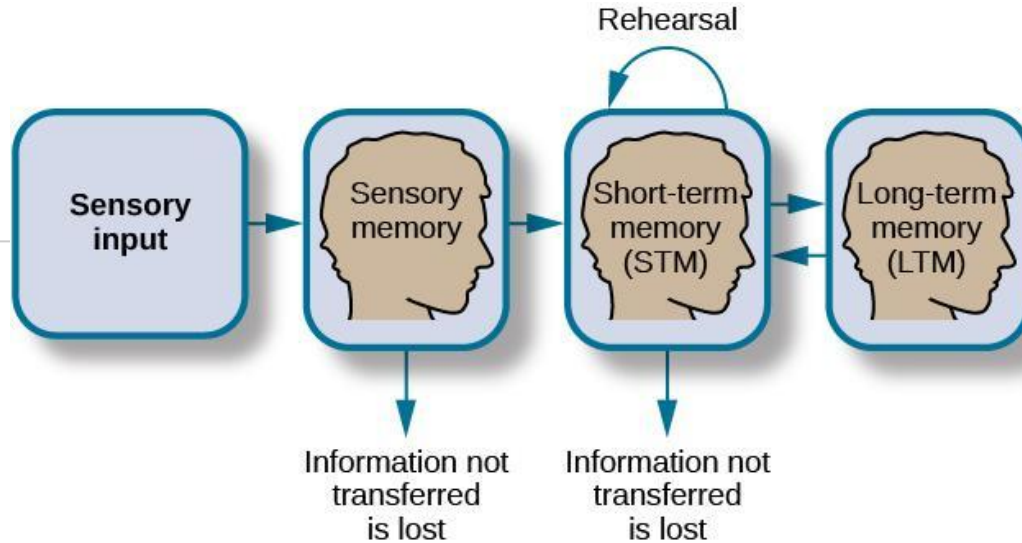


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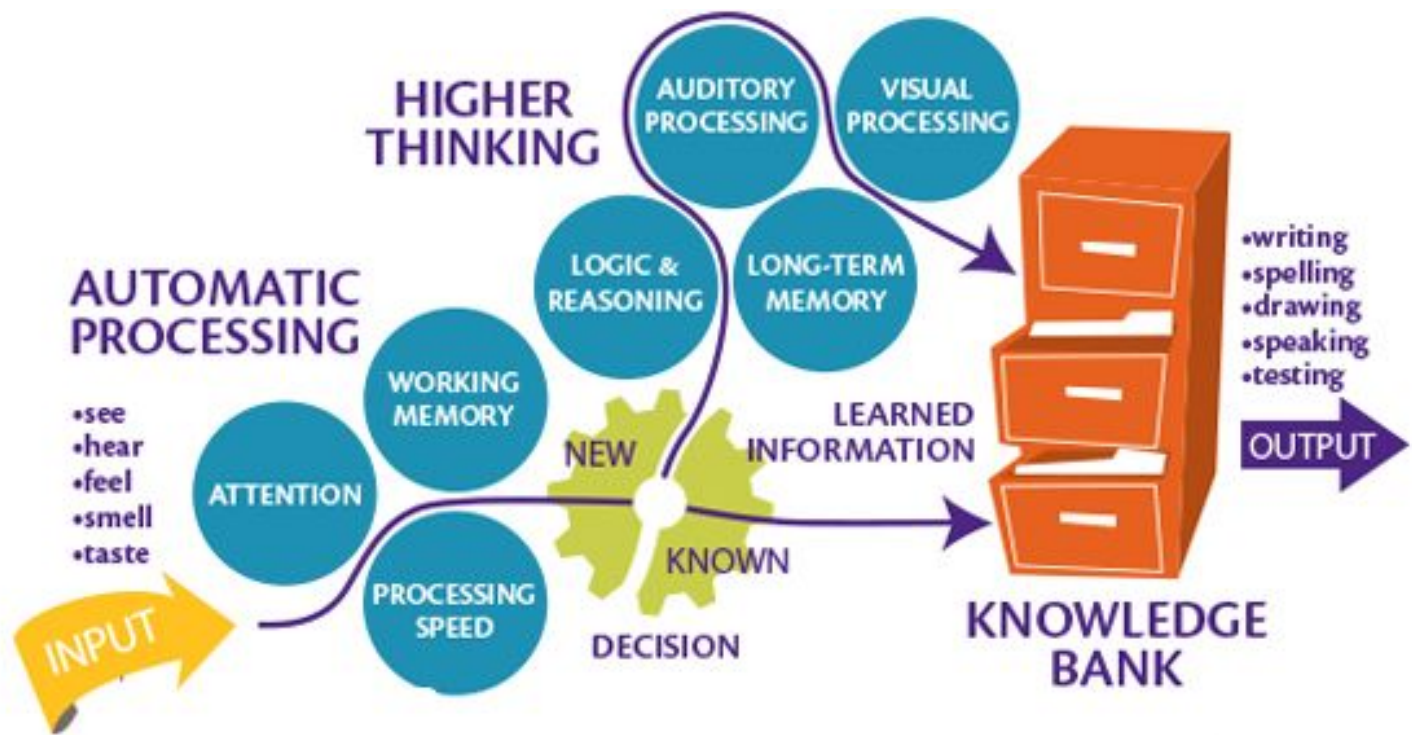
## **The Psychology of Efficiency**

*Now let's quickly review how the brain processes information*



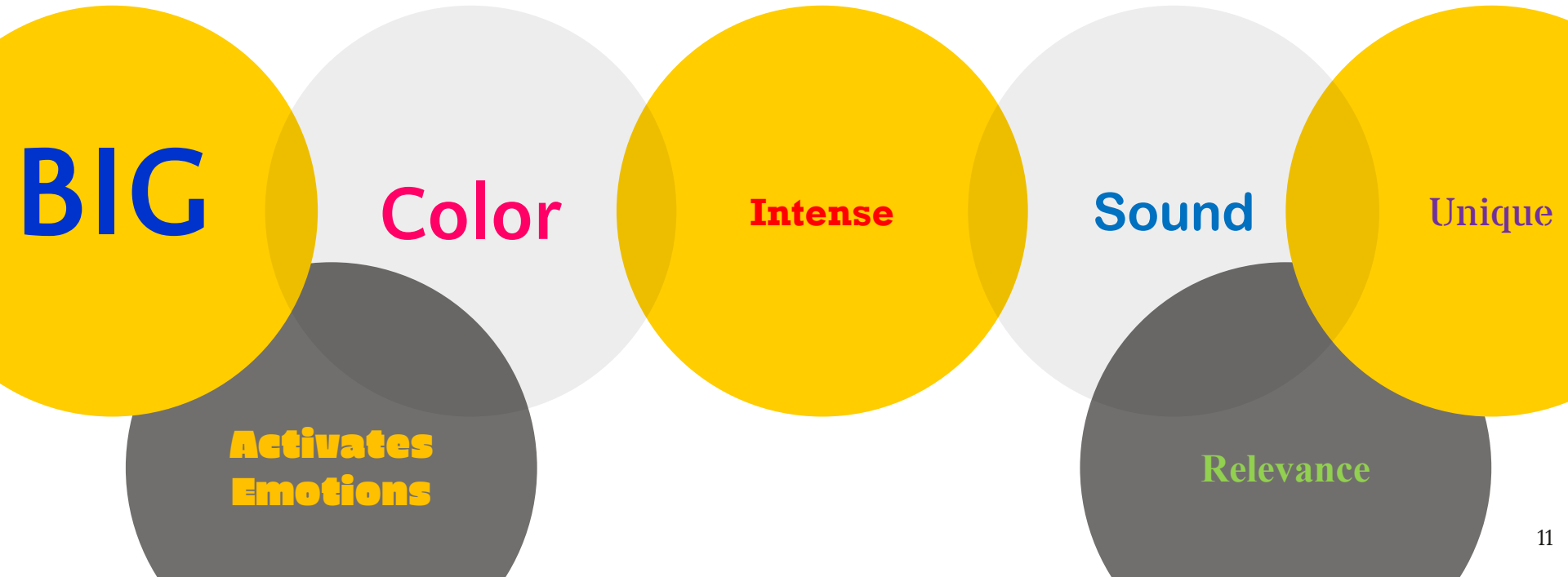


# How humans learn





## What do we pay attention to?



# 101,100,000

Number of views within 24-hour debut of music video on YouTube by BTS on Aug. 21, 2020.  
>210million views as of today, Aug. 27.

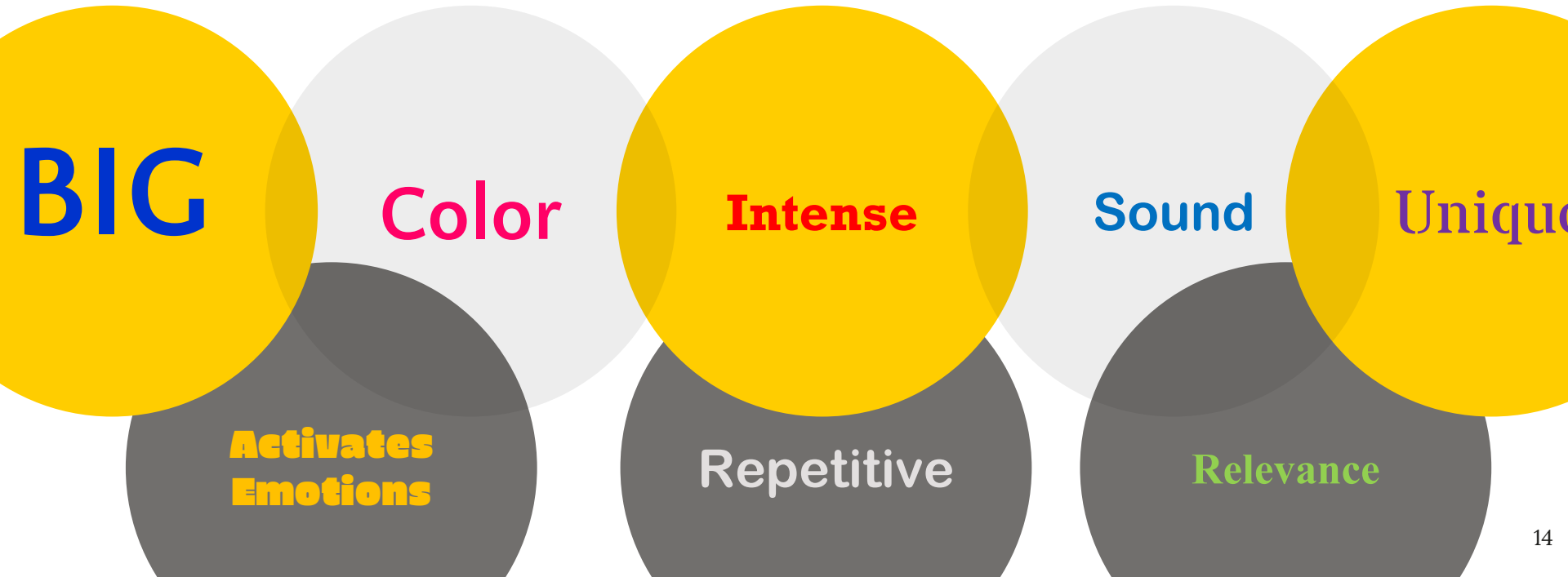




**Why do all Malaysians have a “Vida” neuron?**



**..Because she checks on all of this!**



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**Does our online  
content appeal to  
students? Are they  
highly relevant?**

Let's start by quickly reviewing Cognitive Load (again)

*The goal of your instruction is to free limited working memory from irrelevant mental effort and harness it for the work required to integrate new knowledge and skills into the schemas in long term memory.*

(Clark, Nguyen, Sweller, 2006)



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## Cognitive Load and Learning

### Germane Cognitive Load

Productive mental effort needed to build effective new schemas.

Eg. studying examples.

### Extraneous Cognitive Load

Unproductive mental effort that does not lead to learning.

Incoherent content, poor explanation of visuals, unnecessary redundant tasks

*To make things simple, your online teaching sessions should use instructional methods that promote key learning events and at the same time avoid disrupting them.*

(Clark, Nguyen, Sweller, 2006)



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## Weed Your Online Instruction to Manage Limited Working Memory Capacity

*Eliminate redundant information and activities at all costs.*



## Here's how.

### Pare Content Down to Essentials

Write concise instructional materials,

Eliminate related but unnecessary technical content.

In online teaching, adopt minimalism.

### Eliminate Extraneous Visuals, Texts and Audio

Omit extraneous words and pictures added for interest.

Emotional vs. cognitive sources of motivation

Omit Extraneous Auditory Content

### Eliminate Redundancy in Content Delivery Modes

Don't add words to self-explanatory visuals.

Don't describe visuals with words presented in both text and audio narration

Sequence on-screen text after audio to minimize redundancy.

Know when to narrate text (when visuals are not self-explanatory).

**We also need to provide  
external memory support to  
reduce working memory load.**

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*Bypassing working memory*



## Here's how.

### **Provide Performance Aids as External Memory Supplements**

Readily accessible when needed in the learning environment. Eg. factual information and procedure guides, charts, “cheat sheets”.

When to create? Where many procedures are involved.

### **Design Performance Aids by Applying Cognitive Load Management Techniques**

For spatial content, use visuals as the predominant display.

Why visuals work better?

Design self-explanatory visuals that omit text.

When words are needed, integrate text into the visual.

Integrate performance aids into the performance environment.



## Ways to sustain motivation in an online session

### Tell a captivating story

Of all the starters in your toolkit, storytelling is among the most powerful and consistently successful,

Humans enjoy and learn from stories.

### Use a powerful quote.

Employ the wise words of a well-known person because the name allows you to tap into his or her credibility, likeability, and notoriety



### Ask a rhetorical, thought-provoking question

In addition to yes-or-no questions, you can also arouse curiosity and motivate your learners to think about the answer

### Show a gripping photo.

A picture is worth a thousand words – maybe even more.

Use photos instead of text when possible

### State a shocking statistic or headline.

Its impact ideally persuades the learner to listen and respond positively to your recommendation and next steps.

Cue: BTS video.

### Use a prop or creative visual aid.

A prop is a magnetic tool that hooks your learners and keeps them watching – or listening



## Ways to sustain motivation in an online session

Play a short video.

Videos evoke emotional responses





*Every brain is uniquely organized.*

(Caine & Caine, 1994)



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# Thank you for listening!

Any *thoughts to share?*

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