ASC Workshop Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Theme | Workshop LEad |  | Date |
| **Elaboration** | Chris Harder |  | January, 2018 |

Overview

This workshop explores the topic of Interrogative Elaboration and is based on research from the learningscientists.org. Students will discuss how to build a deeper knowledge of a topic by asking probing questions (how?, why?), making accurate analogies and comparing similarities and differences of one of more ideas. Finally, participants will have an opportunity to apply the strategies presented in this workshop towards topics they are currently engaged with in one or more of their college courses.

| Workshop Guide | | |  | |
| --- | --- | --- | --- | --- |
| Objectives | **Participants will be able to:**   * Understand the principals of the elaborative interrogation study strategy. * Walk through an example of elaborative interrogation in action. * Know the limits of elaboration and how to check for accuracy. * Practice using the elaborative interrogation strategy in context with their own course materials. | | | |
| REsources | * See [www.rrc.ca/success](http://www.rrc.ca/success) (with direct link to ppt) for slide deck and handouts:   + Elaboration slides (.ppt) * Data projector & laptop * Whiteboard and markers * Poster paper (or 11” x 17” paper) and markers for group activity. | | | |
| **Process** | **Person** | **Action** | | **Time** |
| introduce yourself as an academic coach & introduce topic | Workshop Lead | **Slide 1: Title**  Introduce Self and RRC’s Academic Success Center.  Introduce topic and elicit student’s prior knowledge.  “*Elaborative Interrogation*”. What an unusual name for a workshop! What do you think we will be covering in this workshop based on the title alone?”  “We will answer that question together as we proceed into this workshop.” | | 1 min |
| Introduce learning objectives for Worksop | Workshop Lead | **Slide 2: Introduce class activity**  Go through the agenda for the workshop.  Explain that after walking through an example of Elaboration, they will have a chance to apply this technique towards their own course materials. | | 1 min |
| Activate curiosity and interest in Elaborative interrogation | Workshop Lead  Students  Workshop Lead | **Slide 3: What is “Elaborative Interrogation”?**  Ask Ss to offer definitions for the terms “Elaborate” and “Interrogate”.  Explain that the term elaboration can be used to mean a lot of different things. **<click>**  However, when we are talking about studying using elaboration, it involves explaining and describing ideas with many details.  Elaboration also involves:   * making connections among ideas you are trying to learn. * connecting the material to your own experiences, memories, and day-to-day life. **<click>**   Interrogation means to question. **<click>**  So, when you use elaborative interrogation…   * You ask yourself questions about how and why things work. * Then produce the answers to these questions. | | 1 min |
| Provide a framwork for the learning strategy | Workshop Lead | **Slide 4: Interrogative Elaboration in Action**  Walk through the steps involved in each stage of the Elaborative Interrogation learning strategy. **<click>**  “Start by making a list of all of the ideas you need to learn from your class materials. Then, go down the list and ask yourself questions about how these ideas work and why.”  “As you ask yourself questions, go through your class materials (e.g., your textbook, class notes, any materials your teacher has provided, etc.) and look for the answers to your questions.” **<click>**  Enforce the idea that not all questions are equal. For this strategy to be effective, students should ask “open questions”, particularly, How? and Why?. **<click>**  Then, find the answers in your class materials and discuss them with your classmates. **<click>**  As you continue to elaborate on the ideas you are learning, make connections between multiple ideas to-be-learned and explain how they work together. **<click>**  A good way to do this is to take two ideas and think about ways they are similar and ways they are different. **<click>**  Finally, to help encode the new knowledge, relate the topic to your own memories and experiences.  Let Ss know that since the goal of this series of workshops is to enhance awareness of brain based learning strategies, so today we will be going to examine an example topic that is related to the brain.  **<click>**  Introduce the topic: Neural Communication  Ask Ss what they already know aobut this topic (not much, likely).  Let them know that by the end of this example, they will hopefully have a much deeper understanding of this unfamiliar topic. | | 3 mins |
| Provide a framwork for the learning strategy | Workshop Lead | **Slide 5-7: Interrogation Stage**  “Start by asking yourself “What do I need to learn?”.  Offer some tips on where to begin questioning:   * Start with the big picture. * What are the parts involved? * What does each part do? * How are these parts connected?   Explain that today, a good first question might be 🡪 ***“How does neural communication work?”* <click>**  “Imagine you find this information in your textbook along with this picture.”  *“Dendrites receive messages from many other neurons, and then the messages converge in the soma.”*  This sentence is describing what two parts of a neuron do – it describes actions. – When something “happens” in a sentence, always ask: *“So What?”*  Practice asking open questions:  “What happens when the dendrites receive messages from other neurons?” – *The messages converge (meet) in the soma.* (we were given this information already) **<click>**  Extend the question further: What happens when the messages converge in the soma?” – Follow your questions and gather information that will provide the answers.  Explain that when you do this you are practicing Critical Thinking and Reading Actively! **<click>**  **“Ask Questions as you Study”**  When you encounter new ideas – ask questions! **<click>**  If you are not sure what exactly “neurotransmitters” are, then you should find out! **<click>**  **“Ask more questions!”**  Ask:”What are neurotransmitters?”  Encourage awareness of tools available to students  ”What is/are X” questions are usually seeking a definition.  “Which parts of your textbook are the best places to look for this type of information?”  Ss: *Glossary, Keywords at start or end of a chapter, sidebar of pages often contain definitions of key terms.* **<click>**  So if we find in our golossary: Neurotransmitters are chemicals that allow neurons to communicate with one another. **<click>**  Ask: *Are we done?* – No! there are several other parts we haven’t learned about yet. **<click>**  Ask: *Can we break this topic down further?* – Yes. Ask How? And Why? Questions! **<click>**  Ask: *Are there other details that can help us understand this topic more deeply?* **<click> (The AXON)**  Encourage extending questions further:  The axon carries electricity from the soma to the terminal buttons but, **<click>** *“How does the Axon do this?”* | | 5 min |
| Generate practical strategies based on expert knowledge  (This is most meaningful for students when they are the ones providing this list) | Students  Workshop Lead  (Workshop lead) | **Slide 8-15: Elaboration Stage**  ***Make connections* and start to *elaborate*.**  “Try to discover **analogies** – **<click>** *What is the axon like*? Can you compare it to something that you already understand?”  Suggest: “The axon is like the tail of the neuron” **<click>**  *Analogies can help make an abstract idea “real”.* **<click>**  ”The axon carries the signal to the terminal buttons” – *So what?* Extend the question 🡪 Ask *How* and *Why*? **<click>**  So you might ask yourself: “*How does the signal travel down the axon?”*  **<click> to slide 9.**  *Keep asking questions as you come across new ideas.*  *Whenever possible, make connections to existing knowledge or experiences.* **<click>**  *What is the Myelin Sheath like?* **<click>**  *Dig deeper into the topic with “How” and “Why” questions.* **<click>**  *Why does the axon need a myelin sheath for insulation?* **<click> to slide 10**  Use your existing knowledge, experiences and memories to create a deeper understanding of the topic. **<click>**  Keep digging deeper with How and Why questions. **<click>**  *“Why is the speed of a signal important?”* – Now we are arriving at some critical ideas. **<click> to slide 11**  Ask: “Can you see how by asking the right How and Why questions we can arrive at a deep understanding of a topic?”  Take elaboration further 🡪 *Make comparisons and analyze similarities and differences.* **<click> to slide 12**  **<click>** Ask: *“How can we represent similarities and differences, so they are easy to remember?”* **<click>**  *Graphic Organizers* (Venn diagrams, tables, charts etc.) **<click> to slide 13**  Explain that graphic organizers, like the Venn diagram, can help to record and organize your ideas and make similarities and differences clearer. **<click> through several build-ups for similarities and differences.**  **<click> to slide 14**  “Use **analogies** to make the similarities and differences clearer.”  Offer the example of the axon and terminal buttons as being similar to a power cord on an electrical appliance, where the axon is the insulated wire, and the terminal buttons is the plug connector.  Ask: “*Does* this make more sense now?” | | 5 mins |
| Practical details | Workshop lead | **Slide 15-17: Checking your accuracy**  Remind students that while forming connections and making analogies can be a great way to build an understanding of a concept, it is vital that Ss not fall into the trap of over simplifying or over extending their elaborations.  **<click> to slide 16**  Ask: “For example, are the axon and terminal buttons exactly the same as the powercord on an electrical appliance?”  Ss: NO! **<click>**  Whereas the insulated wire and plug of an electrical appliance both carry electricity, in the case of the axon and terminal buttons, the terminal buttons release chemicals, not electricity.  Understanding the limits of your elaborations will help you transfer this deeper understanding to the new topic you are trying to learn.  **<click> to slide 17**  Explain that the goal is to be able to describe and explain (in detail, using your own words and accurate analogies) without the aid of your notes.  How can this be achieved? **Spaced Practice!** | | 3 mins |
| Students put their skills into practice by testing each other | Students and Workshop lead  Students  Students and Workshop lead | **Slide 18: Class Activity**  Instructions on slide.  Ss are divided into groups of 3 or 4.  Each team gets 1 piece of poster paper (or large piece of paper) and some markers.  Assign 1 person to be the recorder, while the others engage in discussion.  Encourage Ss to go through the Interrogation stage first and identify some important things they need to know about each of the selected concepts.  Workshop facilitator should visit each team to monitor that the questions being asked are “open” and “probing” (How?, Why?).  As teams begin to make comparisons, encourage that they represent this graphically. Venn diagrams or tables work well for this.  Have students share some of the elaborations (analogies, personal connections, etc.) they came up with for each of their topics. | | 15 min |
| Closure | Workshop Lead | **Slide 19 – 22: Help is available**  Remind students of next week’s workshop. | | 1 min |