**Expert Skills Program at Texas Tech**

**Prematriculation Program Comprehensive Study Guide
TTUHSC version**

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This study guide is designed to save you time and reduce the guesswork about what you should be learning in the ESP Prematriculation Self -Study Block. In general, all you have to do is fill in the short answer questions and complete a few exercises in this guide and you will have covered the important points.

* This also provides a way for you to discuss any of the questions with a study partner (or your pet cat) in order to verify to yourself that you got the point.
* This is faster than regular reading because it directs your attention to look for something, giving you certainty that you are getting the same message as everyone else.
* Please note that many questions do not ask for straight-forward answers. You will need to synthesize and interpret what you read.
* While this program is not graded, it will profoundly affect your grades.

This guide is provided in a doc file so that you can fill it in to verify that you can explain or express the answer. This prevents the error of thinking you know it because you recognize it. you are about to learn why the activity of actually filling in the study guide will make your learning more permanent.

The application of Deliberate Practice (DP) principles will help you adjust your thinking quickly in order to adapt to the medical environment.

* Research in medical education shows that the fastest route to expert performance, whether on knowledge-based exams or skill-based procedures, is through the use of DP.
* Be sure to access the Primer on Deliberate Practice when answering the questions covering the book.
* The remainder of the ESP Blocks consists of activities that are based on this self-study.

If you have questions or concerns, please feel free to contact Dr. Pelley at john.pelley@ttuhsc.edu.

**Book – “SuccessTypes in Medical Education”**

**Chapter 1**

1. Will hard work guarantee success in medical school?

2. Why do you have to emphasize working smarter in medical school? If hard work got you in, isn’t that enough to get you through?

3. Do the students at the top of the admissions rank also wind up at the top of the class rank?

4. Which types of students tend to show their knowledge better on multiple choice exams: sensing or intuitive?

5. Which types of students tend to show their knowledge better when it is applied: sensing or intuitive?

6. How can sensing types apply Deliberate Practice to balance and strengthen their learning skills? For intuitive types?

7. How is the term SuccessTypes related to the use of Deliberate Practice?

**Chapter 2**

1. List the mental functions involved in learning and give the contribution of each in the processing of new information.

2. Compare linear learning and integrative learning.  Which mental function(s) are emphasized in each of these learning styles?

3. What is psychological type?  How can a knowledge of personality type contribute to learning?

4. How are test-wise students different from those who aren’t? Are they more intelligent?

5. Why don’t linear learners trust integrative learning?

6. What is the difference between a type and a trait?

7. How do you identify a person’s type?

8. Comment on each of the following fundamental characteristics of personality type.

a. persistence over time

b. polar opposites

c. learning opposite skills (would this fall under the definition of Deliberate Practice?)

d. pathological behavior

e. which types are good or bad

f. intelligence

9. How does your type relate to what you think is work and what you think is play?

**Chapter 3**

1. When considering psychological type…

a. what do extraversion and introversion describe?

b. what do sensing and intuition describe?

c. what do thinking and feeling describe?

d. what do judging and perceiving describe?

2. How would each of the following preferences sound different when talking about what they are learning?

a. extraversion or introversion?

b. sensing or intuition?

c. thinking or feeling?

d. judging or perceiving?

3. How does each psychological type influence a student’s choice of specialty?

a. extraversion or introversion?

b. sensing or intuition?

c. thinking or feeling?

d. judging or perceiving?

>>>>>>>>>>**Intermission**<<<<<<<<<<

Before continuing on in Chapter 4, take a moment to try and identify your own type by taking the Learning Styles Type Indicator

1. Read the introduction to the LSTI (see the navigation bar on the left at the SuccessTypes site for the introduction and for the LSTI instrument).

a. What is the difference between a test and an indicator?

b. What could cause you to answer the questions in a way that introduces bias?

c. Is your learning style type the same as your true type?  Why or why not?

d. What if one of your type preferences still doesn’t sound like you?  How would you try to determine your true type?

2. Now answer the LSTI questions to determine your type based on learning style.

a. How did your type come out?

b. Did you have a hard time answering some of the questions because you tend to fit both of the descriptions?

3. Turn to Appendix A in SuccessTypes and read the description for your type. Does this sound like you?

* There are staff available in the Office of Student Affairs (if you aren’t at TTUHSC, your school may have student counselors available who can help with this) who will help you to address uncertainties about your type.  For now, just making a first try at it is good enough.  Experience will eventually teach you to identify your type.

Now it’s time to continue the study guide for the SuccessTypes book.

>>>>>>>>>>**End of Intermission**<<<<<<<<<<

**Chapter 4**

1. In what ways might people with the same type be different from each other?

2. What does it mean that the different dimensions of your type interact?

3. What is a dominant function? The inferior function?

4. Why is verification of a person’s personality type important?

**Chapter 5**

1. How can Deliberate Practice be applied to your type preferences?

2. Give some examples from Table 5.1 that are typical of you when you learn.

3. How can introversion provide balance to learning in the extravert? Does learning introverting skills convert an extravert into an introvert?

4. What does extraversion provide to balance learning in the introvert? Does learning extraverting skills convert an introvert into an extravert?

5. What does intuitive perception provide to balance learning in the sensing type? Does learning intuitive skills convert a sensing type into an intuitive type?

6. What does sensing perception provide to balance learning in the intuitive type? Does learning sensing skills convert an intuitive type into a sensing type?

7. What does thinking judgment provide to balance learning in the feeling type? Does learning thinking type skills convert a feeling type into a thinking type?

8. What does feeling judgment provide to balance learning in the thinking type? Does learning feeling type skills convert a thinking type into a feeling type?

9. What do judging preferences provide to balance learning in the perceptive type? Does learning judging type skills convert a perceiving type into a judging type?

10. What do perceiving preferences provide to balance learning in the judging type? Does learning perceiving type skills convert a judging type into a perceiving type?

**Chapter 6**

1. What is the difference between efficient study and effective study?

2. What are the four general principles required to achieve effective study?

3. Why does passive learning not exist?

4. How does visualization help learning?

5. How does verbalization help learning?

**Chapter 7**

1. What is a concept map and how does constructing one contribute to learning?

2. When you read, do you “look at” or do you “look for?”

3. How does concept mapping provide a question to answer when you are reading?

4. How does writing about what you are reading help long-term learning?

5. What is the special benefit of concept mapping for sensing types? For intuitive types?

6. What are the steps in constructing a concept map?

7. Review the concept map examples for biochemistry, gross anatomy, and histology.  There are two examples for each.

* Each concept map example is derived from a sample of text that is representative of course notes or a textbook.
* Take each term or phrase contained in the bubbles, find it in the text, and highlight it.
* When you are finished, you will have a visual representation of the amount of text material that is contained within the concept map.
* Can you find any details in the text that were left out?

8.  Construct your own concept map for the biochemistry, gross anatomy, and histology exercises.  There are two exercises for each.  If you are a sensing type, you may find it easier to map in the “top-down” style as indicated in the SuccessTypes in Medical Education handout (included in links at Unit Directions webpage).

* Compare your map with the sample provided at the end of the workspace.
* Is your map different?
	+ It may still be “correct” if the connections are correct.
	+ Different people will elect to group things differently.  This still accomplishes the goal of integrative learning.
* It will help you to work with concept maps if you can compare your finished maps with a classmate.
* Why won’t it work to just study your classmates’ concept maps instead of creating your own? (Hint: your answer should relate the map to the way you read)

9. Refer to the concept map for the Henderson-Hasselbalch equation listed on the Unit Directions page and compose a brief paragraph in order to convert the map back into text.  Begin with the main topic and formulate a description of the major topics and the important concepts and facts related to each.  Think of it as paraphrasing lecture notes.  Compare the text samples and their matching concept maps in chapter 7 of SuccessTypes as a guide.

* The purpose of this exercise is to illustrate how a concept map can be a complete representation of material that would normally be read passively from a text book.
* A map cannot be constructed from passive reading!
* After you have completed your paragraph, check your work against the example linked on the Unit Directions.

10. Refer to the outline of anatomy terminology linked at the Unit Directions webpage and construct a main heading (aka – level 1) map.  This level 1 map is just an organizer to connect all of the major topics.

* For each major topic construct a topic map (aka – level 2).
* Continue to expand from the level 2 map and concept map, going through the entire outline in order to practice the method.  All of the content in this outline will be used in gross anatomy.
* This example is especially good for showing crosslinks.  Crosslinks are the highest level of integrative learning.

11.  After you have completed your map, check your work with a classmate or bring it for the Q&A session during orientation.  No "solution" map is provided here because you now need to experience what it will be like when you are concept mapping your reading every day during your coursework. The best way to verify your maps is discussed in Chapter 10, “Time management can have built-in flexibility.”

**Chapter 8**

1. Why are exam questions topics?

2. Why is memorization not enough for medical school examinations?

3. What is gained from understanding each answer choice, especially the wrong answers?

4. List the four steps in question analysis.

a. Where in a practice question can you find topics to study?

b. When looking up the information needed to explain the correct answer, will it always be found in one place? Why?

c. When looking up the information needed to explain a wrong answer, will it always be found in one place? Why?

d. What is the advantage to rephrasing questions?

**Chapter 9**

1. Is a sensing type more likely to see using their imagination as work or as play?

2. How does it benefit a student to create analogies?

3. What type of thinking skills are developed when similarities and differences are identified?

a. Does a teacher always need to require this from a student?

b. How would Deliberate Practice apply here?

4. Should introverts skip group study? Why?

a. Which types benefit from group study? How?

(Note: Since this version of SuccessTypes was written, it has been determined that the question analysis system described in Chapter 8 works better in group study and the time limit should be one hour minimum. The same principles in Chapter 9 still apply.)

b. What topics should be reviewed during group study?

c. How often should a group study together?

d. What is the advantage of having to explain your reasons to the group?

**Chapter 10**

1. How is a time management system different from a time management schedule?

2. What is “smart” study?

What is the purpose of the identification stage?

a. What should you look for during the identification stage? How does this agree with the Deliberate Practice approach?

b. What is the difference between “looking at” and “looking for”?

c. What is the goal of the identification stage?

d. How much time should the identification stage take?

e. Does the identification stage constitute learning? Why?

f. What are the main things that are accomplished in the identification stage?

3. What does the orientation stage usually involve?

a. Is “listening to” more or less effective than “listening for?” Why?

b. What types of things would you listen for in a lecture?

c. What main things are accomplished during the orientation stage?

4. What does the organization stage usually involve?

a. What does organization of the day’s new learning material accomplish?

b. When should the organization stage take place?

c. What is the one question in the back of your mind when reading?

d. What main things are accomplished during the organization stage?

5. Why is a verification stage needed?

a. When is verification best done?

b. How can concept maps be used during verification? Describe.

c. What main things are accomplished during the verification stage?

6. How does examination study fit in to the SuccessTypes system of learning?

**Chapter 11**

1. Which part of your personality shows through when you experience stress?

2. Look up your dominant function and your inferior function and make a record of it here. Don’t worry if you aren’t sure of your type. If you determine later that you are actually a different type, the same rules still apply and you can do this exercise over again.

3. Determine for your “best guess” type:

a. your characteristic stress behavior

b. coping options

4. How does your type relate to when you are at play?

5. Use the examples in the SuccessTypes book to list one or two strategies for developing your shadow function to better prepare you for stress coping behaviors.

a. Strategy A

b. Strategy B

**Chapter 12**

1. How does a SuccessType use Deliberate Practice in different situations?

2. Why isn’t your type the most important thing to know about the way you like to think?

3. Give examples of each of your type preferences at your best and at your worst.

4. Give examples of how the skills of your opposite type show you where to apply Deliberate Practice.

5. How might understanding your opposite type preferences benefit:

a. a personal relationship?

b. a professional relationship?

c. a patient/physician relationship?

6. Do you think you have learned enough to pay it forward? Why?

**Video – “Introduction to the Expert Skills Program”**

There is no study guide for this video. There are two versions – one for teachers and one for students. It is included in this series as a convenience for other medical schools to learn about the ESP and to evaluate its usefulness in their educational program. It will help you to understand how the program evolved using student input and brain research findings and some of the dilemmas in medical education that it attempts to address.

**Video 1 – “The Growth Mindset and Increasing Intelligence”**

* The guide below will approximate the order of the slides
* It’s OK if you want to add information to your answers from other sources like the Deliberate Practice Primer or the SuccessTypes book.

**Slides 4-5**

1. Why do Growth Mindset students feel smarter when they are learning than when they get a good grade back on an exam?

Why is it important to know how the brain works?

2. What do people with the Growth Mindset believe about their intelligence?

3. What do people with the Fixed Mindset believe about their intelligence?

4. Why do people with the Fixed Mindset fear failure?

5. Why don’t people with the Growth Mindset fear failure? What is their attitude toward learning?

**Slide 6**

1. Why isn’t “practice makes perfect” true?

2. What type of practice produces experts?

3. What type of practice is used by people with the Growth Mindset?

4. What does self-awareness help us to see?

5. Why is self-acceptance necessary when dealing with weakness?

**Slide 7**

1. What is Deliberate Practice designed to improve?

2. What type of skills in medicine might benefit from Deliberate Practice?

3. Since Deliberate Practice requires repeated effort, can you give examples of repeated effort in the way you study?

4. How does the Growth Mindset keep our behavior from becoming automated? What is the danger from automated performance?

5. Why is Deliberate Practice hard work?

6. What is self-actualization? How will you know when you have achieved it? (Warning: Trick question!)

7. Why can’t highly talented people be considered to be experts or superior performers without Deliberate Practice?

8. How will you know when you are using Deliberate Practice in your learning?

**Slide 8**

1. What is metacognition?

2. How can it be applied to a study of the functional areas of the brain?

**Video 2 – Clinical Skill Areas Of The Cortex**

**Slide 2**

1. What types of data are collected from the patient?

2. What allows the beginning student to recognize the meaning of the data they are collecting? How about a more experienced physician?

3. What step begins the process of analyzing the patient’s data? What is produced?

4. What actions can be taken when a diagnosis is established?

**Slide 3**

1. In what general area of the cortex (front or back) is the History and Physical processed?

2. What area of the cortex remembers basic science information?

3. What area of the cortex develops the differential diagnosis and establishes the diagnosis?

4. What area of the cortex is used to speak with the patient or to write orders for the patient?

5. What is the general difference in the type of processing comparing the front of the brain to the back?

**Slides 4-6**

1. What types of activities would constitute “concrete experience?” What area of the brain does this correspond to in the clinical reasoning process?

2. Why is reflective observation necessary? What area of the brain does this correspond to in the clinical reasoning process?

3. What are some basic questions that would help you discover relationships and patterns? What aspect of clinical reasoning does this correspond to?

4. What types of actions can result from a decision? What area of the brain does this correspond to in the clinical reasoning process?

5. How does a decision produce a concrete experience?

6. What is the Experiential Learning Cycle? What critical feature maintains a continuous cycle without an end?

7. Describe what steps are processed in the back of the brain and what steps are processed in the front?

8. Which part of the brain (from the illustration in the slide) organizes concrete experience? What skill would be increased for this area of the brain, i.e. what would you be able to improve?

9. Which part of the brain processes our long term memory to try to recognize what we perceive? What skill would be increased for this area of the brain, i.e. what would you be able to improve?

10. Which part of our brain tries to make meaning out of what we perceive by making predictions about it? How would an increased skill in this area of the brain be measured, i.e. what would you be able to improve?

11. How do we find out if our predictions about new information are correct? What are some examples of what you could do to use this step in the cycle? What skill would be increased for this area of the brain, i.e. what would you be able to improve?

12. Which skill area does premedical education tend to emphasize the most?

13. Compare what the temporal lobe processes and what the pre-frontal area processes. Which one makes decisions?

**Slides 9**

1. What does it mean that we think “back to the future?”

2. Which area of the cortex is emphasized in the first two years of medical school, front vs. back? Does the opposite happen in the last two years? Why or why not?

3. How are “grouping” terms processed by the back of the brain? By the front?

4. Which area of the brain would organize information differently from the way it was presented in a lecture?

5. What sort of decisions would be involved in dialogue?

6. What does it accomplish if you are always aware of whether you are making decisions during your learning and what kind of decisions can you be making? (Hint: this question can have a long answer and would be good to discuss in a group to compare views.)

**Video 3 – Learning Style, Personality Type, and Specialty Choice**

**Slide 2-3**

1. Why is the discussion here limited to the Myers-Briggs personality types?

2. How much can you tell about a person when you know their type preferences?

4. Do MBTI types provide a complete description of the way a person thinks? Why or why not?

5. How does the effort involved in performing in your type compare with performing in your opposite?

6. In the example of folding your arms, which way of folding corresponds to your opposite? Which way of folding your arms requires the most energy and would tire you out sooner?

**Slides 4**

1. Does your type score indicate how much of a preference you have? Can you explain this in terms of “type” and “trait?”

2. Do some preferences indicate limitations in thinking?

3. Are some types more highly intelligent?

4. What are some examples of personality disorders that can be determined by the MBTI?

**Slides 5-6**

1. What is the significance of the points on the chart that represent each personality type?

2. Do these studies show that GPA and SAT are correlated? What does it show?

3. Do the students who scored higher on this chart have a smarter type? What else besides being smarter could explain the differences in scores?

4. Can linear learners “learn” how to become integrative learners?

5. If integrative learners (intuitive types) learn to understand, what do linear learners (sensing types) learn for?

6. What feature of difficult multiple choice exams more closely matches the way intuitive types learn?

**Slide 7-10**

1. What area of the brain contributes to the extraversion/introversion preferences?

2. What area of the brain contributes to the sensing/intuitive preferences?

3. What is the function of the thalamus in sensory input?

4. What is a high gain thalamus?

5. What Myers-Briggs personality type has a high gain thalamus?

6. How do people with a low gain thalamus behave?

7. What type of evoked response does a person with a high gain thalamus have?

8. People of which type of thalamus need to “talk it out” to do their best thinking?

**Slides 11-14**

1. When learning new material, what do sensing types pay most attention to? How does this affect the way they take tests?

2. How do intuitive types know if their big picture is correct? How does their big picture help them on exams?

3. Can sensing types be taught to learn by forming big pictures from concepts?

4. What does memorization entail?

5. How does higher order thinking compare to memorization? Which type prefers HOTS?

6. Which type prefers to learn in linear fashion without skipping around?

7. What is the “Personality Paradox?” Why doesn’t it also apply to the intuitive type? (Remember that there are only tendencies with personality types)

8. What do sensing types look for when determining the answer to a multiple choice test question? How about intuitive types?

**Slide 15**

1. How do thinking types make decisions? Feeling types?

2. Are feeling types irrational because they are subjective in their judgments and decision making?

3. Do thinking types have feelings?

**Slide 16**

1. What does the “joy of closure” mean? Which type prefers it?

2. What does the “joy of discovery” mean? Which type prefers it?

3. Which type show up early for scheduled events?

4. Which type prefers to keep their options open?

**Slides 17-18**

1. What type of specialty practices do sensing types tend to find most attractive?

2. Which specialties are data driven? Which ones are procedure driven?

3. Which specialties are diagnostic? Which ones are pattern recognition?

4. Can your type tell you which specialty to choose? Why or why not?

5. How does type influence your specialty choice?

6. What should you expect if you choose a specialty that does not match your personality type?

**Video 4 – Changing Your Brain to Improve Learning Skills**

**Slide 2**

1. What are the two main requirements for changing your brain? What primarily needs to happen during waking hours? During sleep?

2. When you study effectively, what other type of learning is improved besides memory?

3. How would you notice if you are improving the front of your brain?

4. What does it seem like neuroplasticity is?

5. Explain how “Back to the Future” describes whole brain learning.

 **Slides 3-6**

1. What is a dendritic tree?

2. Where are spines found in the dendritic tree? What do spines represent?

3. How does dendritic branching provide integrative memory?

3. What would happen to learning if consolidation did not occur? Has this ever happened to you? (Hint: the answer is yes for everybody!)

4. How are spines related to synapses?

**Slide 7**

1. What part of sleep involves the replay of activity during the previous day? Is this when we dream?

2. What is consolidation? What is the opposite of consolidation?

3. What would be ways that you could block consolidation?

4. Under normal conditions involving adequate sleep, can active learning be blocked?

**Slides 8-10**

1. What membrane bound enzyme at the synapse is activated by the nerve impulses?

a. What intracellular signal does it produce?

b. What enzyme is, in turn, activated by this signal?

c. If this enzyme is kept activated, what transcription factor does it activate?

d. What changes are brought about by activation of this transcription factor?

2. How does pruning occur? What conditions produce pruning?

**Slide 11**

1. How do the dendritic trees for neurons from active learning compare with those from sitting and reading, i.e. passive learning?

2. What area of the limbic system process emotions associated with memory in the temporal lobes?

3. If the dendritic trees represent processing power, what is it that they process?

4. What is the illusion of memory? What creates the illusion that you are creating memory? What is needed to change this illusion into a reality?

**Slide 12**

1. Which part of the brain is bypassed with sitting-and-reading?

2. Which critical step in learning is bypassed with sitting-and-reading?

**Video 5 – Brain Skill Development With Concept Maps**

**Slide 2**

1. What is the difference between the medical school educating you and “you” educating you?

2. What is the best use of learning time in medical school? Can you compare and defend a better system of learning?

3. How could integrative learning apply to educating yourself?

**Slides 3**

1. Why is it important to use concept maps to help organize knowledge? Are concept maps the only way to organize knowledge?

2. How is concept mapping a reading method? How would a concept map affect your reading?

3. What part of concept mapping makes it active learning?

4. Why would a concept map be thought of as “living”?

5. What are the needs of ADD/ADHD students that create problems during ordinary reading? How do concept maps address this?

6. What is the advantage to having a visual representation of your knowledge?

**Slide 4**

1. After the section on how to construct a concept map has been covered, come back to this question and answer how each of the following methods is used in construction of a concept map:

a. Inspectional (analytical) reading? How is “looking for” different from typical reading?

b. Outlining?

c. Paraphrasing?

d. Cluster construction?

e. Comparing?

f. Verbalizing (group or individual)?

**Slides 5-8**

1. What is the fundamental unit of a concept map?

a. What are the circles (or other shapes) that contain concepts and facts called?

b. What is the name of the connecting line between the bubbles called and what is its purpose?

c. Can you show cause-and-effect in a concept map?

2. How do you identify, or recognize, a level of hierarchy in a concept map?

3. What are the two main layouts for a concept map and which one is preferred by most sensing (linear learner) types?

4. Why are cross-links important?

5. What is accomplished by using verbs and other modifiers with the connections? (Hint: it has to do with decision making)

6. Can you list the concepts that are at level 2 in the map for “water?”

7. If you break a map apart so that each link is separate, what have you lost?

8. Each branch point contains a \_\_\_\_\_\_\_\_\_\_ term.

9. What type of reading is required to find a cross-link? What do cross-links reveal?

**Slides 9-11**

1. How many levels of hierarchy do you look for during outlining, the first step of concept map construction?

a. Where are these general concepts going to be placed in the map?

2. Compare the type of reading you do to create your starting outline with the reading needed to complete the map.

3. What do you do if you can’t find any branching concepts to add to a node in your map? What have you learned by discovering that there aren’t any more branch points?

4. How do you find cross-links? Are they always presented in lecture, or covered as facts in the text?

5. Which Myers-Briggs type has the most trouble at first in finding cross-links?

6. How do you refine a map over the weekend?

a. What is accomplished by reviewing your map out loud?

b. How does this review help the consolidation of memory?

7. When you get really good at mapping, will you only have to make one map instead of redrawing it?

8. Is it possible for mapping to become faster than ordinary reading? More efficient?

**Slides 12-21**

1. In the example slides, can you quickly identify the first level? Second level? Crosslinks?

2. Why would you want to use expansion maps? How can you minimize this (Does every map have to be on standard letter size paper)?

3. What purpose is served by the white space in a map?

4. The maps of seizures used in the slides are drawn “top-down” while the maps of the rotator cuff are drawn “center-out.” Which one tends to be preferred by sensing types and which one tends to be preferred by intuitive types? Which type of map is best?

5. What feature of concept maps is lacking in slide 20, The Mechanism of Transformation By Tumor Viruses?

6. By viewing the examples, are you able to identify branch points and cross-links? Is a convergence a branch point or a cross-link?

7. When a succession of pages is connected by expansion nodes, where is the expansion node located in the higher level map and the lower level map?

a. Where is the best starting point for the overview map?

b. How would a poster pad solve the problem of too many pages with linked maps?

c. Can you describe mapping in terms of Google Earth?

8. Hierarchy branches are \_\_\_\_\_\_\_\_\_\_ terms.

9. What kind of links represent the deepest reading and the hardest exam questions?

**Slide 21**

1. What are the three general steps that help you remember how to construct a concept map?

2. How should you compose your initial list to begin your concept map?

3. Where can you look first to find grouping terms?

4. What are the different ways of finding comparisons for making cross-links?

**Slide 22**

1. What is the primary barrier to the utilization of concept maps? Why?

2. How does learning style affect attitude toward concept mapping?

3. Why does concept mapping require so much energy?

**Slide 23-26**

1. Which is more important, the finished map or making the map?

2. What is meant by saying that concept maps are a discovery process? What part(s) of the brain are responsible for discovery? How?

3. How do concept maps produce understanding?

4. How does mindful learning produce understanding? What type of study methods used in concept mapping increase awareness?

1. What is lost when you study someone else’s map?

a. What is a positive way to use someone else’s map?

b. How would a review group be able to benefit by comparing maps?

2. What is a two-level concept map?

a. How does it help a sensing type adapt to mapping as a learning tool?

b. What problem is created if a concept map doesn’t include everything in a reading assignment?

3. Why can the same topic have more than one correct map?

4. What is the purpose of leaving a lot of white space in a map?

a. What is it about the medical curriculum that causes maps to grow?

5. If you don’t include everything in your map, is something wrong?

6. How could a concept map serve as study notes for an exam? Are there any advantages over the course notes? Disadvantages?

7. When is the best time to construct a concept map with a computer program?

a. Why is Cmap Tools recommended?

8. What would be the reasons for constructing your maps on a computer?

**General questions not on a single slide for Video 5**

1. Why do concept maps help to apply Deliberate Practice to learning?

2. What different ways does one “practice” with a concept map? What kind of activities constitute the “practice”?

3. How would you measure whether concept mapping is developing the front of your brain? The back of your brain?

4. Why would a sensing type be reluctant to adopt concept mapping? An intuitive type?

5. Which learning style would be slowest at concept mapping at first?

6. How do the individual steps in the learning cycle relate to your learning style? To your learning style opposite?

7. What would you experience if the “concrete experience” step was a limitation in your learning?

8. What would you experience if the “reflective observation” step was a limitation in your learning?

9. What would you experience if the “abstract hypothesis” step was a limitation in your learning?

10. What would you experience if the “active testing” step was a limitation in your learning?

11. For each of questions 7-10, how would concept maps serve as Deliberate Practice?

**Video 6 – The Power Of Us – Question Analysis Groups (QuAGs)**

**Slide 2**

1. What are the two major ESP goals?

2. Why is it important to focus on course relevant case vignette questions for analysis?

3. Can you explain why there would be a carry-over of “group” thinking to individual study?

4. How does dialogue produce long-term memory? (See video 4, Changing Your Brain to Improve Learning Skills)

5. A focus on patient data frames the thinking process for QuAGs. What types of data have been collected from you on past visits with your physician?

**Slide 3**

1. What does QuAG awareness focus on?

2. What are examples of areas of awareness during a QuAG?

a. How is thinking different from yours important?

b. How does anticipation during the QuAG affect your individual study?

3. What activities are going on during a QuAG? Does this process require you to read or to recall from memory? How does the group reach consensus?

4. How can QuAGs make wrong answers correct?

5. Is the insight found in the correct answer or the incorrect answers? Why?

6. Explain why explanations put you in charge of your own learning.

**Slide 4**

1. What happens in the first step of analysis of a question? How does it help to read the lead-in question first? How are the trigger words mapped?

2. After the first student finishes his/her turn, what does the next student talk about regarding the first answer choice? What if it is early in the year and he/she is uncertain or uncomfortable with trying to discuss the answer choice? What are his/her options in an ESP QuAG?

3. How does the group know it is OK to advance to the next answer choice? Why is it essential that consensus is reached for every rationale?

4. What kind of record is made of the discussion?

**Slide 5**

1. What type of information is always provided in a USMLE case vignette question whether it is relevant to the answer choice or not?

**Slide 6**

1. What information in the working template is left blank to be filled in during the discussion?

2. Where can you find a pdf file of this template?

3. What functions does a side-to-side template serve?

**Slides 7-13**

1. In the example case vignette, what is the lead-in question?

2. Where is the information in the question stem added in the S2S map? The answer choices?

a. What are the answer choices called in real life clinical diagnosis?

b. The S2S map can also be used in the clinical years to prepare for Step 2 CK; additional answer choices can be managed by using a second template or generating a larger one on an artist’s pad.

3. Why should group members fill out their own template?

a. What types of notations are entered in the template?

b. Why is limited space in the template a good thing?

c. Will different groups fill have identical maps for the same question? Why? Is this a problem? Why?

4. Why would multiple links extend from a correct answer?

5. What does a link from an incorrect answer indicate about that answer choice?

6. Are there advantages to identifying the correct answer before beginning the analysis? How should this be decided?

**Slide 14**

1. What are a few other examples of lead-ins?

a. What is the usual lead-in question in real life thinking in the clinic?

b. Where can more examples of lead-in questions and question templates be found?

2. How are lead-in’s helpful in ordinary study?

3. Where can you find more examples of lead-in’s?

4. What is a case cluster question?

**Slide 15**

1. What are some advantages of question analysis?

2. How would you use QuAGs to test the effectiveness of your concept maps?

3. How could you use your S2S templates to begin your review for Step 1? How does a review differ from Step 1 Prep?

**Slide 16-17**

1. Describe the differences when analyzing a non-case vignette question. Can the S2S template help?

2. In the example, what does the closest wrong answer have in common with the correct answer? What is the difference that helps you decide that the closest wrong answer is only partially correct?

**Slide 18**

1. Describe how your type contributes to a group where questions are analyzed by providing rationales.

2. Now describe how you benefit from having group members who have preferences opposite to you.

3. Can you think of ways that this experience might help to prepare you for working with patients?

**Slide 19**

1. How can a group leader best lead the group? What will help you to achieve a balance between thinking time and “spinning your wheels?”

2. How long does it take to do a thorough analysis of a standard case vignette question?

3. Is consensus really important? What does it prevent?

4. Is it OK to bring references and other resources?

5. Should you just stick to the question being analyzed or should you go ‘bird-walking’ into other topics?

6. When is it OK to get into a micro-lecture?

7. Why is a weekly meeting desirable?

a. What do you gain with more meetings?

b. What do you risk with more meetings?

8. Can you give examples of some canned comments you can have ready to stimulate or provoke the conversation?