SuccessTypes Survival Strategy

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I developed the *SuccessTypes Survival Strategy* as a realistic way of helping at-risk medical students improve their academic performance. If you are currently at-risk, then you are dealing with several major problems at once.

- The root problem is probably not what you fear, that is, that you are not smart enough. Instead, the problem is likely that you don't understand the way you learn, i.e. your learning style.
- Additional problems are:
  - 1) coping with the panic that sets in as the threat of failure becomes increasingly real,
  - 2) coping with the challenge to your self-identity as a successful student, and
  - 3) coping with an increasing mountain of new material.

The *SuccessTypes Survival Strategy* is only a short term solution.

The strategy described below can be an important step in improving your academic performance, and it can also help you survive long enough to learn more about how to become an even better student. The best time to learn the SuccessTypes methods and philosophy of learning is before you start medical school.

- Historically, SuccessTypes evolved in my mind as a way of helping students make up for learning deficiencies that they brought into medical school from their undergraduate education.
- Learning deficiencies don't always show up in the more flexible undergraduate environment.
- Learning deficiencies tend to show up in the faster paced curriculum of medical school.
- Although a change is indicated, it is difficult to accomplish under the fast pace of medical school.

The *SuccessTypes Survival Strategy* doesn't add onto what you are already doing.

I learned long ago, that a medical student's time is fully accounted for. Taking corrective action cannot involve adding something new to your schedule. For example, if a tornado is 500 feet away from you and closing, you're not going to be motivated to build a tornado shelter, you're going to look for a place to hide. There will be time enough to build that shelter after you have cleaned up the mess. (If Texas Tech was located on the coast, I would have used a hurricane analogy). In the same way, if you are getting further behind every day and that next exam is a few weeks away and closing, that exam poses the same threat to your future as the tornado. It's not the time to sit down and learn how to improve the way you learn. To help you find shelter until the storm passes, I've come up with a strategy that you can do on the run.

- You don't have to add anything to what you already are doing

- You will also get an important head start on changing your learning style in a more effective direction.

Study smart, not hard.

To put the *SuccessTypes Survival Strategy* simply, you are going to maximize your effectiveness by getting inside the professor's mind.

- You are going to quickly develop an anticipation of how the professor thinks, not when he or she is teaching, but when they are writing exam questions.
- Thinking about exam questions will take you directly to a list of the most important things to focus on.
- Not all of the questions in the professor's mind are things that can be memorized. That is why you are in trouble now.
- If you are used to memorization as a path to academic achievement, you need to take just a moment to look at how that compares with thinking at a higher level. Take a quick look at Chapter 2 from *SuccessTypes in Medical Education* and then come back and continue reading.

OK, now you should see that you need to start linking material together like an integrative learner, even if it wasn't taught that way. The best way to do this in a hurry is to use practice questions as learning guides.

- You should clearly understand that you are going to get nowhere fast trying to use practice questions as a self-test to see "what" to study.
- "What" to study is not your problem…it's "how" you are studying that is causing you to miss test questions.

In the directions below, I will show you how to use questions as learning objectives by giving you specific steps to follow. Along the way, I will also give you the reasons for how this learning method will contribute to helping you in the long run.

Effective study is smart study.

Good time management always stresses effectiveness over efficiency. How are they different?

- Efficiency is the ability to get "a lot" done in the time available.
- Effectiveness is getting the "right things" done in the time available.
- For example, efficiency is reading a book at 5,000 words a minute. Effectiveness is determining that you only have to read chapter 3.
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Question analysis is effective because it has you focus only on material that is most likely to be asked on the exam and it will help you do it in a way that will increase your chances of correct guesses. And, by the way, there is nothing wrong with guessing. Any physician can tell you that clinical diagnosis is just educated guessing, but a physician knows how to think with the data to put probability in their favor. There are several rules to follow that will help you start thinking like a physician.

The change in your schedule comes on the weekend.

The first rule to follow is to do everything you normally do throughout the week.

- Study the way you usually study, because we don't want to create too many new things for you to adjust to.
- It's the weekend that I want to have you modify.

The second rule is to either catch up or review the past week's work in the time block from Saturday morning until Sunday afternoon.

- The idea is to look at the material thoughtfully, but don't try to *memorize* it.
- Simply try to make sense of it and go on.
- Focus on this because it will be important for the question analysis strategy.

The question analysis method should follow your weekend review period and should probably occupy 2-3 hours late on Sunday. Adjust the time based on your own experience.

Practice questions help you study in a performance frame of mind.

The third rule is to assemble a group of practice questions drawn from a variety of sources.

- Copies of old exams are an ideal source of questions, but these are becoming increasingly hard to obtain.
- Other sources are “board” review books
    - The McGraw-Hill Pretest series has nothing but questions, also with annotated answers
    - The First-Aid for USMLE Step 1 Q&A volume is also entirely annotated questions.
    - The Mosby Rapid Review series (disclaimer: this includes my own biochemistry review book) has a large selection of case vignette type questions at the Elsevier web site.
    - Look for high quality questions that are freely available on the internet such as those on Webpath.

The fourth rule is to take the questions in random order, to emulate the way they are organized on an exam. The reason for this is you are trying to train your brain to think in an exam mode. It like performing in a sport. If all you did was study in a classroom how to do a proper tennis serve, it's not likely you would perform well when the time came to do it in competition. But, if you get out and practice that tennis serve in what I call the "performance environment," you will be much better prepared when the time comes for serious performance. OK, now that you have your tennis racket, let's start practicing your serve.

There are two main questions to answer for every practice question.

For each practice question, there are two primary learning questions will guide your analysis.

1. How would I have had to read to know that the right answer was right?
2. How would I have had to read to know that each wrong answer was wrong?

The fifth rule is to turn to the discussion of the subject covered in the exam question where it is covered your class notes or your textbook .

- Bear in mind that every question is nothing more than a topic, a "study" topic if you will.
- Please don't waste time trying to guess the correct answer. It is better to look up the correct answer and make a note of it.
- You simply want to determine if the question you are analyzing required you to memorize something, or to compare something, or to deduce cause and effect, etc.

What surprises most of the students I have worked with is the revelation that, unless the question is a straight memorization question (usually about 1/3 are recall level), they had to look in two or three places to find the material that helped them know the right answer.

- That is not "natural" for linear learners.
- Linear learners (sensing learning preferences) prefer to take in new information in linear order from the text.

When you begin to notice that the relationships between concepts are not in strict linear order, you are experiencing a change in your learning in a very important way. You are starting to see the "linkages" (relationships/patterns) in knowledge. You are starting to see that it isn't just memorization of facts, but knowing the relationship between facts, that leads to real learning. After your first session, you will never be able to study ineffectively again.

- As you turn back into your notes and scan the book, you will be learning more like people learn when they are not taking required courses.
- You are trying to answer a question, rather than just memorize facts.

The way you study during the week will begin to gradually improve.

As you go back over material that you have just covered the previous week in class, you will begin to "see it differently." That is the phrase used consistently by students as they describe to me the improvement in their learning. But, the really neat thing is that there is a carry-over effect.

- As you study new material during the week, you will start to "see" it differently also.
- You will begin to anticipate likely test topics and how they might appear on an exam.
- Just let this process happen normally without adding any extra methods to what you are doing.

Wrong answers extend your learning into related, and important, topics.

The sixth rule is to continue your analysis by taking each wrong answer choice and answer how you would have had to read to know it was wrong. Here you will have to use a little judgment. Some wrong answers are just too irrelevant to be of much help, so don't waste time with them. What you are after are those wrong answers that torment you on the exams. When professors are concocting these wrong answers they are trying to see:

1. Whether you have learned the difference between related concepts, or
2. Whether you have classified or organized something correctly.

The teacher wants a student who is relying on guessing without learning to "take the bait" on something that sounds like it ought to be right, but isn't. This type of student hasn't really learned anything. The way you avoid the "guessing" trap is to look at the way the question is

trying to distract you. Ask yourself, 'Is the answer using a related term just so you will jump at something familiar?' This is very common and I use it a lot in my own test questions. For example, if I'm asking a question on an oxidation reaction, I might put a wrong answer choice that deals with a reduction reaction. A student that understands oxidation won't be fooled by this, but a student that never learned the difference might take the bait. So, here is how you beat me at this game. If you have a practice question that asks a question about an oxidation reaction and it has a wrong answer choice about reduction, try to figure out why that answer choice is wrong.

- In the process you will not only learn about reduction reactions, but you will learn more about oxidation since the two topics are related.
- This illustrates that by studying wrong answers you will many times be led into related topics, thus preparing you for several more questions.

One question can prepare you for 5 more.

No one question will prepare you completely in one topic, but some can come close to a thorough review of a subtopic. A question on noncompetitive inhibition, for example, will usually guide you, as you analyze it, into the Michaelis constants, competitive inhibition, allosteric regulation, and Lineweaver-Burke double reciprocal plots.

- Question analysis brings an additional perspective that regular memorization doesn't.
- By looking at all these topics in terms of why they are right or wrong answers, you unconsciously start developing a more integrated understanding of how they relate to the overall topic.

Practice questions focus your study on the most important topics first.

One final point. You should also realize that professors usually make up their questions in a hurry. The daily life of a professor revolves around research grants and the data that is needed to keep these grants going. If they are a clinical faculty member, a similar time pressure exists in their clinical practice. In the big picture this isn't all bad, because generally what these professors are working on is quite exciting… much more exciting than making up exam questions.

- Even with the best of intentions their thinking is rushed. Therefore, they will tend to ask about concepts that are more obvious.
- The only thing that keeps them from being totally predictable is that they think more in terms of integration and linkages between topics. That's what makes them scientists.
- You can take advantage of this through question analysis.

Practice questions provide you with something that many professors fail to provide, and that is a list of high priority topics. When you study high priority, you are using your time effectively. The material you don't study has the lowest probability of appearing on the exam, and therefore the lowest priority in your learning.

Let's go over the main points:

- Occasionally the study methods that got a student into medical school don't help him or her keep up with the fast pace of the curriculum.
- Any attempt to intercede with a new strategy must take the student's already overloaded schedule into account.
- Any plan to change study methods must move in the direction of effectiveness rather than efficiency.
- The greatest quick improvement in effectiveness is made by restructuring the weekend.
- Practice questions create a mental attitude that matches the 'performance environment' of the examination.
- The study strategy can be condensed into two main questions that are answered for each practice question.
    1. How would I have had to study to know that the right answer was right?
    2. How would I have had to study to know that each wrong answer was wrong?
- The weekend study of practice questions as a way of review will have a carry-over effect and gradually improve the effectiveness of regular study during the week.
- Because practice questions contain many distracting, yet related, terms, by the time you have analyzed one question you will have prepared yourself for five or more.
- It is safe to substitute 3-4 hours of question analysis for your old way of studying, because by bringing your attention to the highest priority topics first it is a better use of your time.

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