

# 12 Tips for Learning Throughout One's Career

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## 1. Learn with purpose: to serve others.

In *On Walden Pond*, Henry Thoreau wrote that most people live lives of quiet desperation, because they lack meaning in their lives. Many students seem to learn with quiet desperation, never quite fully understanding what they are studying, why they are studying it, or how this knowledge could be useful. Yet as physicians, we get to see every day what should give meaning to our work and to our learning. You may have started out like others, studying just to get good grades and to just get into medical school. Once in medical school, although you still have had tests to take and grades to achieve, I have seen you find more important reasons to learn – to serve your patients, their families, and their communities. As you move into the next stages of your career, keep in mind that we learn in order to serve others. Also, as you advance, you'll have more 'others' to serve with your learning, including other team members and students of your own.

## 2. Keep building your learning prowess.

We built this curriculum to help you to not only acquire the knowledge, skills, and attitudes to be excellent physicians, but also to help you build skills for the learning you'll need to do throughout your careers. I have watched you develop your learning prowess in both classroom and clinical settings, and watched you start managing your own learning. As you continue in residency and beyond, keep building and refining your learning prowess, keep becoming more independent in coaching yourself, and keep sharing these learning strategies with others.

## 3. Rebuild knowledge into scripts for use.

Studies of expert clinicians have found that these experts draw upon a large 'case library' that accumulates automatically from patients they've seen. We had you learn by discussing cases in small group from the first day of the first week of the first year of medical school, to get you started early in building your case libraries. Expert clinicians also organize their formal knowledge into structured 'knowledge scripts' for use in clinical decision making. Rather than have you learn to do this implicitly, by trial and error, over several decades, we have designed the curriculum to deliberately and explicitly show you how to organize your knowledge into scripts for clinical use. I have seen you use specific templates when learning about topic knowledge, like the 'Disease 7' and the 'Clinical Problem 5'. I have also seen you use the explicit approach we've taught you to build distinguishing knowledge and to put all this knowledge into plans for clinical decisions and actions. As you move forward in your career, keep using these

explicit devices to organize your knowledge and continue to broaden the range of knowledge templates you use. This will help you to more readily extend and update that knowledge and more easily teach your own students to learn this way, too.

## 4. Learn how to unlearn, relearn, and update.

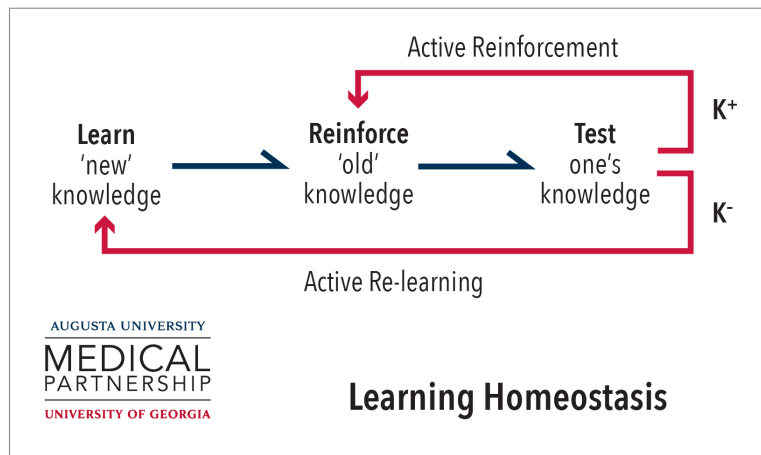
Knowledge advances and changes over time, and the pace of this change is quickening, so we now frequently need to update our knowledge and our practice. Since I've seen how hard you have worked to study all that you have already learned, I would understand the temptation you might feel to cling that knowledge because of how much effort it took to learn it. Yet to keep up to date and to learn throughout your career means being able to recognize 'update signals', to unlearn outdated knowledge, and to relearn the topic by integrating the new knowledge. From our work together, I have already seen you do some of this work, so I know you can do it. During residency and beyond, build time to deliberately practice unlearning and relearning, and to show your own students how to do this, too.

## 5. Learn critically: sort sense from non-sense.

Just because something is new does not mean that it is credible enough, important enough, and applicable enough to your patients and clinical settings that you should change your practice. You'll need to be able to sort the sense from the non-sense, in order to distinguish true update signals from noise. From our work together, I know you have already learned how to critically appraise some types of evidence from clinical care research, and you have had practice using these skills. During residency, I encourage you to broaden the range of types of clinical care research studies for which you can independently appraise the evidence critically, to deliberately practice this appraisal skill so you become better and faster at it, and to share with your students how to do this.

## 6. Learn to balance benefits and burdens of care.

All clinical interventions we use, whether therapeutic, diagnostic, or preventative maneuvers, have the potential to cause both benefits for patients and burdens upon patients. These burdens include the adverse effects and costs of care, as well as the substantial work involved in self-care patients are asked to carry out. From our work together, I have seen you learn about the benefits and burdens of some interventions, and have seen you work on your ability to balance these benefits and burdens while engaging in shared decision making. During residency and beyond, I encourage you to build knowledge about the balance of benefits and burdens for the main clinical interventions in your chosen field, and to practice shared decision making with your patients. Doing this will help you become highly knowledgeable about the decisions and actions you do every day.



### 7. Learn to see problems whole, from all sides.

During the year I served as a Chief Resident in Internal Medicine, I quickly learned I needed to hear both or all sides of the story before I could make well-informed decisions. From the first day of the first week of the first year, we had you work in teams as you learned, for many reasons, one of which was to help you learn to see problems, from all of its sides, as viewed by all group members. Doing this builds your capacity to recognize problems, characterize what those problems are and what they are not, and to work through the analytic and synthetic processes of problem solving as members of a team. During residency and beyond, keep building your team-oriented problem-solving skills and see problems whole. I also encourage you to address and resolve team conflict constructively, rather than to avoid dealing with it, for your patients' sake.

### 8. Learn both the words and the music.

When we speak, we say words that have meaning as words. Yet we also speak them with inflection, rhythm and tone that forms the music of language and this music can have additional meaning. Also humans can express great deal of additional meaning via non-verbal communication, such as gestures or facial expressions. From our work together I know that you have been learning to observe patients and hear both the words and the music in what they say. You have also been paying attention to what you should say and how you should say it, as part of the art of medicine. During residency and beyond, keep refining your abilities to hear the words and music you hear from patients and to observe their nonverbal communication. Also, keep paying close attention to the words, music, and non-verbal communication you use, to make sure what you say and how you say it align with what you truly mean to communicate.

### 9. Learn by imitation and by evitation.

We learn by imitation when we copy the examples set for us by our teachers and others. We learn by evitation when we avoid following some of the examples we observe, because they appear ineffective or unwelcome. As you've gone through medical school, we hope you have seen many examples of good doctoring to imitate, and you might have also seen some less good examples you will want to avoid. During residency and beyond, take advantage of the greater number and wider range of excellent role models to emulate, yet also be alert for those you'll want to avoid copying. Let's not get too smug, because imitation and evitation are also the tools we can

use to learn from our own experience, noticing both the specific features that worked well that we want to replicate, and also the specific portions that worked less well, that we'd like to avoid in the future. By using both imitation and evitation, we can gain the most learning yield from our observations of others and ourselves.

### 10. Learn about the human condition.

As doctors we aim to serve our patients as whole persons and to serve our communities and societies as whole peoples. I know that you have studied the humanities and that you are sensitive and caring people. As you continue on in your career, I encourage you to keep learning about the human condition, both directly from your patients and also from the humanities. We can also learn about the human condition by living our lives fully and in balance. As one of my teachers used to emphasize, "The care of whole persons takes whole persons."

### 11. Learn for the present and the future.

At some level, I have already seen you do this – when you were studying for a test, like USMLE Step 1, most of you also knew you were learning for the Clerkships that followed. As you went through your Clerkships, you learned not only for that course's Shelf examination and the USMLE Step 2, but also to prepare yourself for residency. Now as you enter residency, keep the same approach, learning both for each rotation and for your clinical future after residency. Metaphorically, we need to keep two sets of 'learning eyes' on two different time horizons. We should ask both "What should we learn today to best help us care for this patient?" and "What should we learn next to prepare ourselves for clinical excellence and eventual mastery?"

### 12. Appreciate those who help you learn.

Many people have helped you get this far, including family, teachers, advisers, and patients. I have already seen you show these people gratitude, such as at the recent faculty appreciation evening your class held, and this morning in your expressions of thanks to your families and other supporters. During residency and beyond, continue this practice and extend it, by appreciating your clinical team members, your patients, and their families. Starting this summer, you'll have your own students on clinical teams, so you'll see how much you get to learn by teaching them. Show appreciation for those who help you learn important lessons, whether these lessons feel 'easy' or 'hard' at the time.