Questions for chapter 3 slides:

1. Point out the nuances of the definition of abilities given in the second slide (what limits are given – it’s not just the “be all and end all,” is it)?

There are a few of them. First, it’s a trait, so should be relatively unchanging. Second, it is only a partial determinant of potential (it’s clearly intended to be one of many things that have an influence), and finally, it is a determinant of potential, not performance.

2. The specific and general motor abilities hypotheses:

   a. Which is the more valid (realistic, closer to “the truth,” supported by the research) of the two? In your own words, give reasons why one is thought to be more valid than the other. Suggest a lab (experiment) we might run in class to test whether these reasons are good ones.

   The specific motor abilities hypothesis is the one that has the research support. The evidence for this (reasons) is that investigations into patterns of correlation among different tasks are low (as in slide 6) rather than high (as in slide 5). It would actually be difficult to run such a test in class, but if we did we should probably use tasks that are relatively free from practice effects (otherwise we’ll just get correlations due to groups of people having practiced or not practiced the skill). And there’s the difficulty. What tasks can we think of that are “relatively free” of practice effects? How about dynamic balance tasks? Standing on a tightrope? On a balance board? If there are low correlations between these two tasks, that would indicate some support for the specific motor abilities hypothesis.

   b. We’ve all come across someone who seems to be good at every sport they attempt. How does the more valid of the two competing hypotheses explain this?

   Several possibilities. 1. the sports are similar, and so rely on the same few underlying abilities. 2. The abilities are randomly distributed, so it makes sense that a lucky few people will get a lot of all of them. 3. There really isn’t a person that fits this description. You just haven’t seen them try enough things to spot just how bad they are at those things they have no ability at.

3. Explain the notion that abilities “explain variation in performance” described in slide number 10 (the one with the graph of the different skills – cycling, catching, chess, and throwing.

Perhaps if we go with another example. Think of all the things that affect your weight. If you eat a lot, you’ll put on weight, certainly, but you’ll also find that you’re weight is affected by exercise, the amount you drink, genetics, your metabolic rate, and so on. So, the more you eat, the more you weigh, but then two people eating the same food wouldn’t put on the same amount of weight because of the other factors I’ve mentioned. So weight gain is partially determined by the amount you eat. This is like saying that weight gain varies with the amount you eat. In other words, the amount you eat explains variation in your weight. Now replace all the factors like “exercise, the amount you drink, genetics, your metabolic rate” with “hand-eye coordination, multilimb coordination, and so on”, and replace “your weight” with “performance”, and you have what I’m trying to say in slide 10.
4. Slides 10-13 explain the research that has given rise to the ideas about abilities that are put forward in the chapter. Basically, we have evidence of an association between these things called abilities and the skills that they support. Where might this relationship have come from?

An ability is basically a statistical construct, which, when created, is associated with people’s success at certain physical activities. This association is the thing we are trying to understand (I colored it in differently to make sure there was no confusion over what we are trying to explain). If an ability is just an association, then it in itself is not an explanation for people’s propensity to learn (their potential, if you prefer). So where might the association have come from? Well, what is suggested in the last few slides is that this association comes largely from experience. That’s the simple answer. The slides themselves just add the detail. For instance, how does experience influence people’s trainability? There’s the obvious way, that the more you practice skill the better you become at both that skill and related skills, but there’s also the less obvious. For instance, experience doesn’t just make people good, it has feedforward influences on the choices people make about subsequent practice. If I’m good at interceptive skills, and have developed good balance, I’ll find I have a good start on skills like kicking, and catching. This in turn will make me seek out these activities, meaning I have even more practice. I’ll also seek out other like skills. Stretch this out over several years, and you have a kid that looks that looks naturally gifted, or at least very “able.”

How does this explain some people’s potential to learn skills they have never experienced before? Well, everyone’s experience is at a certain subset of skills. The extent to which this experience prepares people for (serves as hidden practice of) the new skill is determined by task similarity between the already-experienced skill and the new skill. Think of the ball bouncing/catching example in class.

5. What is the overall conclusion of the slide show, and upon what argument is this conclusion reached?

See above! Just emphasizing the role of experience over genetics, and malleability in place of traits. So clearly both experience and genetics play a role, but experience is not given enough emphasis in the abilities research, so I’m trying to redress the balance.

6. Based on the last few slides, how might we ensure that people are lifelong “addicts” of physical activity?

Basically, by ensuring competence at all fundamental physical activity from the earliest age possible, so that we set this positive feedback loop in motion, and ensure deep seated internalized enjoyment of the activity for its own sake. This is of course good common sense, but there are several successful psychological theories that concur with this view – for instance Deci & Ryan’s self-determination theory, which recognizes the important role of perceived competence in developing intrinsic motivation.