**Discussion Item 9:** Choose two of the learning principles Waitzkin covers in The Art of Learning Part 1. Describe the chosen principles and discuss specifically and at length how you might use those principles to make improvements in your teaching.

## Discussion Review

Successful talent development begins with motivation to succeed (Kiewra, Kindle Locations 2798-2799). Motivation to succeed sprouts from curiosity and the creativity of the mind. From an early age we have a strong desire to discover and enjoy new activities. Two of Waitzkin's learning principles, Innocent Moves and Beginner's Mind, support the ideas that children have an extraordinary capacity for innovation and should not be bound by the limited curiosity and creativity of the adult mind (Robinson, 2006). These two principles will be discussed below and methods for applying these principles will be shared.

## Innocent Moves

Waitzkin described chess as "familiar" and "made sense" when he initially encountered the art of chess (p. 4). He mentioned how the pieces moved like magical forest animals and he could feel the dangerous potential they held (p. 4). These statements are extremely detailed for such early memories. I would imagine that Waitzkin could recall these memories with such detail because these moments supported his curiosity and talent for playing chess. Being exposed to chess at such an innocent age probably ignited his desire to discover and enjoy the game. I recall a TEDTalk by Ken Robinson called *How schools kill creativity* and cannot help but relate this to Waitzkin's early memories of playing chess. Robinson believes that curiosity is natural in all creatures and where you can spark curiosity, you can boost creativity. For example, Waitzkin did not approach the table knowing the rules and routines of chess; he approached the table because he had a curiosity. Once the chess game began he was creative with his strategies in order to react to his opponent's moves. Surprising, he was not frightened of being wrong nor did his opponent or mother seem frightened of letting him be wrong. In his talk, Robinson explains how students are so afraid of being wrong they just lose their curiosity and therefore their creativity. Therefore, we need an education system that nurtures creativity (Robinson, 2006). Of course, I am not saying that educators should just let

students do whatever they want but they do need to provide the opportunities and situations that spark curiosity and allow for creative outlets.

As a middle school science teacher I encounter many students that "hate science" or think that "it is too hard" but this is not really the case, they have just lost their curiosity for science. Therefore to improve as a teacher I need to implement more project-based learning that involves meaningful inquiry and student engagement (ascd.org). When students are able to make internal associations, the content becomes personally meaningful and is more easily learned (Kiewra, Kindle Locations 1202-1203, 1216). For example, instead of providing students with rock samples during a lab and asking them to record observations in their lab notebook, I can take them outside (in Arizona) and walk across campus to a rock outcrop and let them take samples and perform hands-on observations. Similar to Waitzkin's excitement when he first saw the game and was then able to interact with the pieces his curiosity exploded. He wanted to play over and over again. Imagine a simple fieldtrip across campus igniting the interest of one student who goes on to be a successful geologist. By nurturing curiosity and allowing students to be creative, I provide them with opportunities to explore possible interests and engage in more meaningful learning.

**Beginner's Mind**

Similar to Innocent Moves, a beginner's mind must be receptive and willing to gain new knowledge. The interactions that Waitzkin shared when learning from Tai Chi master William Chen, were a chilling reminder that teaching is not simply the transfer of information from one person to another (p. 98). The teaching-learning relationship is an apprenticeship, where the mentor provides knowledge by sharing ongoing thinking and inner conversations with the mentee (Kiewra, Kindle Locations 3052-3053). This is an interesting discovery for me because I always thought my passion for science would ignite curiosity and interest from my students. Of course, this was not the case. I can conclude that meaningful learning occurs when teachers help students develop and grow at their own pace, enhance creativity by allowing for mistakes, and involve students in highly structured activities (quality) versus busy work (quantity).

Again, project-based learning would be ideal in helping students be more receptive and willing to gain new knowledge. Project-based learning also places the teacher in more of a facilitator, guiding, and mentoring position allowing them to engage in a student's learning process. For example, this previous summer I took a geology course specifically structured towards science teachers. We spent two weeks driving around Wyoming looking at rocks, outcrops, mountains, and valleys. Before I attended this class I thought I new enough about geology to be a successful 7th grade teacher, however this course proved me wrong. I learned so much more from being involved in the learning process, listening to my fellow classmates, and physically touching the rocks. By facilitating learning and guiding my students towards a learning goal, I would be able to develop a level of trust and comfort with them, thereby helping my students become receptive and willing to gain new knowledge.

To improve my teaching I would need to be more interactive in labs my students perform. For example, to expand on my previous example of a fieldtrip to a local rock outcrop, I would need to participate alongside my students (in the dirt and rocks), showing them how to collect samples, mark the samples correctly, and label the collection site accurately. These interactions place me in a mentor position without being obtrusive and controlling, allowing for more meaningful learning to occur. Students can learn at their own pace and make mistakes that enhance creativity, while participating in a highly structured activity to meet desired learning goals.

## Summary

Two of Waitzkin's principles, Innocent Moves and Beginner's Mind, attest to the importance of establishing the teaching-learning relationship. When student interests are reinforced at a young age, they sustain their curiosity and enhance their creativity, increasing their success as a learner. When students participate in work that is personally meaningful they learn more easily and have a stronger desire to do well (Kiewra, Kindle Locations 1202-1203, 1216). All of these factors contribute to extraordinary, talented people.

**References:**

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