Running Head: DOUBLES TENNIS

Doubles Tennis:

A Model to Understanding Metacomprehension

Megan Pule

University of Illinois

EPSY 490:

Tom Anderson

April 22, 2009

Metacomprehension comes form two parts meta- and comprehension. “The prefix meta- is used to mean about (its own category)” (Meta). For example, metadata would mean that data is being analyzed about data. Comprehension means an ability to understand or lack of understanding. Therefore, metacomprehension would come to mean an ability to be aware of or understand ones understanding of a topic.

Sally Standiford outlines four dimensions combining comprehension and metacomprehension in her paper Metacomprehension.

1. High Comprehension – High Metacomprehension: students who know and are aware that they know. (Standiford) A student exhibiting high comprehension and high metacomprehension may have done well on a test and thought that they did well.
2. Low Comprehension – High Metacomprehension: students who do not know and are aware that they do not know. (Standiford) A student exhibiting low comprehension and high metacomprehension may have done poorly on a test and are aware that they have done poorly. This comparison allows for a student to analyze what has gone wrong in their understanding and create a plan for improvement.
3. High Comprehension – Low Metacomprehension: students who know but do not think that they know. (Standiford) A student exhibiting high comprehension and low metacromprehension may have done well on an exam but think that they did poorly. This is often thought to be tied with confidence or a difference in expectation.
4. Low Comprehension – Low Metacomprehension: students who do not know but think that they do. (Standiford) A student exhibiting low comprehension and low metacomprehension may have performed poorly on a test but thought that they have done well. This may be compared to a false sense of security.

When metacomprehension is incorporated into the classroom it can be a valuable tool for students to utilize. A Purdue University professor defines metacomprehension to be "the learners' ability to monitor the degree to which they understand information being communicated to them…" (Metacognitive Skills). Outside of the test examples given above, the concept of metacomprehension has great premise in a math classroom. In a building process it is imperative that students are continuously monitoring their understanding. If a student does not understand the first aspect, there is no hope for growth and understanding future steps. A student exhibiting a good metacomprehension level is able to continuously monitor their understand and ask questions to improve their comprehension. However, a student exhibiting a low level of metacomprehension may not know that they do no understand a topic and practice it incorrectly, thus building a repertoire of improper knowledge.

When I think about metacomprehension I envision learning to play doubles tennis. There are two major aspects to placement in doubles tennis, one is flow from right to left and the second is a front to back stance. Ideally, when one doubles player covers a shot down an alley, the second doubles players should move closer to the center of the court to cover more of the court during a return shot. Similarly, if one player moves forward to cover the net the other person should move closer to the baseline in an effort to cover a deep shot. Teams exhibiting these movement strategies would be exemplifying high metacomprehension as they are aware of the placement of their partner on the court as well as possible holes in a defensive strategy, and able to correct for possible shots.

Using Sally Sandiford's model, doubles tennis could be analyzed using spatial awareness – metaspacial awareness as follows.

1. High Spatial Awareness – High Metaspatial Awareness: A team exhibiting high spacial awareness and high metaspatial awareness would exhibit good movement on the court and an ability to correct for an improper stroke or movement.
2. Low Spatial Awareness – High Metaspatial Awareness: A team exhibiting low spatial awareness and high metaspatial awareness may be correctly spaced apart from one another but in improper areas of the court. For instance, one person may be standing beyond an alley where a ball is likely to not land within the boundaries of play, but may not be aware of it, and the partner has correctly moved in the same direction, in an effort to cover more of the court. A team in this situation may be correcting for a partner's mistake but may still leave the other alley open for a shot.
3. High Spatial Awareness – Low Metaspatial Awareness: A team exhibiting high spatial awareness and low metspatial awareness may be standing within the boundaries, in good form, but overlapping areas or leaving large portions of the court wide open. An example of this is fairly common on a service side. In the positioning of one person standing near the net and the other person serving. A beginner player in the front will often not look back to observe the movement of the rear person, thus exhibiting low metaspatial awareness, not correcting for other movements.
4. Low Spatial Awareness – Low Metaspatial Awareness: A team exhibiting low spatial awareness and low metaspatial awareness will often exhibit qualities of beginning tennis players playing on the same court. Each player will be running, frantically back and forth after the ball, often times colliding with the partner and going after ball which are out of bounds.

The theory that metacomprehension is like playing doubles tennis, however, does exhibit some flaws. Although a team is exhibiting high spatial awareness – high metaspatial awareness it does not imply that they will be successful. While spatial awareness is one key part of playing tennis there are other components to adjust for. A player can manipulate a shot and ball reaction by playing a spin on the ball, aligning their feet in a particular position or utilizing a particular shot type such as a lob, drop shot or a volley. These elements to tennis must be adjusted for and may not always be calculated solely with spatial awareness. These exterior elements are also accounted for through metacomprehension, but draw from a bank of knowledge, strategies, in which a person uses "the self-monitoring of progress in the use of the strategy" (Mayer 20). These strategies are an example of transfer, "the effect of previous learning on new learning" (Mayer 25) and cannot always be accounted for in instruction, but rather previous experiences.

References

Mayer, Richard E. (2008). *Learning and Instruction.* (2nd ed.). Columbus: Pearson Merrill Prentice Hall.

Meta. (n.d.) Retrieved Apil 22, 2009, from Wikipedia: http://en.wikpedia.org/wiki/Meta.

Metacognitive Skills. (2001). Retrieved April 22, 2009, from Website: http://education.calumet.purdue.edu/vockell/EdPsyBook/Edpsy7/edpsy7_meta.htm.

Standiford, Sally N. (1984). *Metacomprehension*. Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills. (ERIC Identifier ED250760)