Article Review, By: Robert L. Brown

Submitted for Consideration for 5th Dan Promotional Exam

Palmer, Stephen E. and Kathryn Hildebrand, "Designing Appropriate Learning Tasks: and environmental management model" in *Journal of Physical Education, Recreation and Dance* 76(2), pp48-56 (February 2005).

Abstract: This paper reviews an article by Palmer & Hildebrand (2005) analyzing techniques for teaching complex physical activities, such as sports, in physical education courses. The authors note especially that many models of instruction are simultaneously unsuited for both skilled and unskilled students in their classes. They present a model for designing physical education instruction to better suit the needs of all students. This model is briefly applied to martial arts instruction.

Teachers of martial arts commonly recognize that drills are required to prepare their students for the rigors of sparring. In Judo, the students practice throws and then do *rondoori* (competition in throws) or practice submission holds and other techniques on the ground and then wrestle. In Taekwondo, the students practice their kicks and then start kicking each other in sparring. However, this dichotomous form of training, as Palmer and Hildebrand point out, is inappropriate for all students. In this brief review article, I will review the basic elements of their argument and briefly discuss the lessons that martial arts instructors should learn. I argue that Palmer and Hildebrand's model for designing tasks according to individual students' General Level of Skill Proficiency (GLSP) can be usefully applied to the instruction of martial arts.

Palmer and Hildebrand begin with the fundamental observation that the standard model of teaching physical education courses, one which begins with static practice of an isolated skill and ends with dynamic game play, is inappropriate for most students (p48). They make the point that students sufficiently skilled to enjoy and advance their skills from dynamic game play (five-on-five basketball) will find static drills (dribbling around the court) either boring or too easy, while students that benefit from static drills are not yet ready for dynamic game play. They therefore argue that more appropriate tasks are necessary to avoid boredom and frustration by students (p48).

Designing more appropriate tasks for learning sports skills requires identifying the skill levels of individual students and then adjusting the contexts and environments of practice to advance those skills. Skill levels are first divided according to the four levels of the Generic Levels of Skill Proficiency model (GLSP; see: Graham et al., 2004). At the Pre-Control (lowest) level, students have begun to learn a skill but cannot perform that skill consistently. Using martial arts skills as an example, the student is learning to execute a throw but does not maintain proper control over their partner, loses balance, and is inconsistent in footwork or hand placement. At the Control level, "the student can perform the skill consistently alone in a static environment": the student is able to consistently throw their partner when starting from a static position, concentrates carefully,

and has the acquiescence of their partner. At the Utilization level, skills can be performed in an increasingly dynamic environment: the student is beginning to be able to throw a helpful partner in controlled but dynamic drills ("easy" punch defenses or *rondoori* – Judo throws sparring) without stopping and without excessive concentration. Finally, at the Proficiency stage, students can perform complex skills almost automatically: a student can execute throws in "full speed" punch defenses or "regular" *rondoori* without concentration so that the focus can be on manipulating the context or environment of the throw (perfecting entries, confusing the opponent, etc.). These skills, as they emphasize, are not discreet classes but a continuum (p.49).

Palmer and Hildebrand use this approach to understanding skill level categories to develop an Environmental Management Model (EMM) for sports instruction in which there are five elements of the play environment (p.49): space, obstacles/defenders, equipment, goals/targets, team members. While not all of these categories may be easily applicable to martial arts, I will attempt to present related examples of each. First, space describes the shape and size of the area available for students to execute a task (p.50): many martial arts classes begin with students executing techniques, such as kicks, in long narrow spaces (lines), which can encourage movement but only linearly. Larger (and wider) spaces in which to trade kicks with a partner can make the drill harder for some students (those who like to initiate attacks) but also easier for others (those who like to react, or "counter-kick"). Similarly, smaller spaces may constrain movement and on one level make executing kicks easier, but can create complexities known to those who like close-in fighting. The size and shape of the practice space should account for the skill being taught (how to execute a basic kick versus how to adjust timing, distance or angles).

Second, the instructor should consider the number and mobility of obstacles as being related to task difficulty (p.50). With kicking again as an example, the student could kick towards a static target (a person standing), a moving but pre-programmed target (a person that retreats at a constant pace in a constant direction, or a target that moves randomly (a person who moves in any direction at any time), each stage of which builds skills useful to kicking during sparring against an opponent in competition. Third, equipment can be manipulated directly to affect task complexity (p.51): kicking targets can be of various sizes and weights, partners being thrown can be of different weights, heights, or degrees of resistance.

Fourth, most sports require players to put the ball in a basket, goal, or beyond a certain line, the size or other features of which can be manipulated to adjust the difficulty of tasks. Palmer and Hildebrand cite examples of passing a ball to another player as well as using the same skill to score points. Here, the execution of a kick would have as its goal the striking of the opponent, which has already been discussed. Fifth, most sports become more complex, and skills more differentiated, when team members must be accounted for. In this case, Palmer and Hildebrand refer not only to drills in which students now have to

track additional players: in doubles tennis relative to singles, it is harder to determine appropriate ball placement in serving also greater confusion about who is responsible for returning a serve. However, this consideration also extends to safety of the play environment as greater skill is required of students to practice at all when spaces are more confined or densely populated.

By combining skill levels (GLSP) with manipulation of the environmental conditions (EMM), Palmer and Hildebrand propose that more appropriate tasks can be designed to help students develop their skills. They also include a useful table that provides examples of tasks that correspond to particular skill levels and manipulable elements of the play environment. For example, Palmer and Hildebrand recommend that for students at the Control skill level, students should be further from targets but with undefined space boundaries, encounter few but stationary obstacles/defenders, use light-weight equipment, have stationary and larger targets/goals, and only one, if any, team members to think about.

To apply the Palmer and Hildebrand model to martial arts, it suggests a reconceptualization of many martial arts drills are necessary. In particular, two observations stand out. First, most martial arts classes are structured to be self-contained in that students do learn from one lesson to another but the lessons themselves are not linked in progressions over time. For example, if the topic of the week is throws, each day in the week is likely divided between instruction of a particular throw, the students' static practice of the throw, and then a dynamic game-like application. This is clearly inappropriate under the Palmer and Hildebrand model except for advanced students learning new throws. Instead, over the course of several days (or weeks), students should practice in each lesson various skills that are components of throws while varying the difficulty of those lessons for the skill of the students. For example, there are increasingly difficult drills for footwork, entry into grab positions, off-balancing, etc., such that all students are working on the "same" drills at levels appropriate to their skill.

Second, too many martial arts instructors use competition as a reward (or incentive) for students who "sit through the boring stuff." Instead, instructors should devise means of manipulating the EMM in the sparring environment so that students can enjoy competition but are not asked to perform beyond what can reasonably be expected. I again return to the *rondoori* case to exemplify the suggestions inherent in the Palmer and Hildebrand model. An instructor could vary the space in *rondoori* (smaller spaces may restrict movement, making competition more static), the equipment (competing with people of different body sizes rather than the same; with or without belts or uniforms), or goals (mutual off-balancing without throws; one students tries to throw and the other only tries to resist).

In conclusion, Palmer and Hildebrand offer a model for redesigning the tasks and drills used to develop students' skills in sports and offer a convincing rationale for why such an approach is better for the students. The primary weakness of their brief article is their focus on sports that require teams and balls to play

(basketball and volleyball comprise most of their examples), when their paper could have benefited immensely from a broader range of sports. However, their model is sufficiently developed and clear that two lessons are clear for martial arts instructors. First, the paring of static drills with dynamic competition is inappropriate for almost all students under almost all conditions. Second, drills should be designed to be adjustable for the skill levels of the individual students. Third, even dynamic competition should be divisible to enable even advanced competitors to further develop component skills.

Bibliography:

- Graham, G., S. Holt/Hale, and M. Parker. 2004. Children Moving: A reflective approach to teaching physical education (6^{th} ed.). Mountain View, CA: Mayfield.
- Palmer, Stephen E. and Kathryn Hildebrand, "Designing Appropriate Learning Tasks: and environmental management model" in *Journal of Physical Education, Recreation and Dance* 76(2), pp48-56 (February 2005).