APPLYING GENTILE’S MODEL
ESAT 3200 MOTOR LEARNING & DEVELOPMENT

Name:___________________________________________ Points Earned:_____/20

Introduction: Gentile’s two-dimensional taxonomy is a valuable tool in selecting a progression of functionally appropriate activities or developmentally appropriate activities to develop any motor skill. The physical therapist, exercise specialist, or teacher can develop their own progression of functional appropriate activities which can be assessed to determine if the client or student is developing a motor or sport skill. In rehabilitation and teaching, Gentile’s taxonomy can be used in designing progressively, functionally activities used to regain a motor skill. As an exercise specialist, Gentile’s taxonomy can help chart the progress based on the client’s ability to perform the exercise or activity.

Part 1: The students will be assigned 10 skills below to be correctly classified using the motor skill characteristics for each of the 16 boxes of Gentile’s model. The model can be found on page 12 of Magill’s text in the Table 1.1. Before attempting to classify the 10 skills, I would read the section entitled Gentile’s Two-Dimensions Taxonomy from pages 11 to 19 of your text.

Instructions: Correctly match the characteristics of the box to one of the skills listed below. In the space next to the skill indicate the correct box (e.g. 1b, 2a, etc.). There maybe where one box that can be used more than once.

Skills to be classified

_____Performing repetitive bench presses of 100 lbs using the universal bench press machine not free weights.
_____Hitting a ball off a tee when the performer is stationary but swings at the ball with a bat.
_____Performing forehand drives in tennis off a ball machine where the ball comes over the net at the same speed and location.
_____Shadow boxing without gloves nor an opponent. Pretending to box another boxer.
_____Scrimmage in volleyball with the ball, opponents, and teammate.

_____The football coach develops offensive play that is executed the same way 5 times in arrow with the ball against defenders that move.
_____The tennis teacher developed a drill where he/she throws the tennis ball at different locations of the court and student is required to move and pretend to hit the ball without the racquet from the different locations.
_____Runner performs a fartlek workout (where running speed is varied throughout running) on a treadmill.
_____In physical therapy, the client is required to carry a weight while they walk on carpet, then a tile floor, and then on wooden floor.
_____Stationary balance on one leg for 20 seconds on a low balance beam.
Part II. The example below is a list of competencies about baseball hitting from Boxes 1-16. How one develops a list of activities is to starting with the most difficult activity (Box 16) and working backward to the easiest (Box 1). For example describe how you could change the motor skill described in Box 16 to fit the characteristics of Box 15. Then describe how you could change the skill described in Box 16 to fit the characteristics of Box 14 and so on. If you do this correctly you will have developed a “profile of competencies” that will aid a teacher, athletic trainer, exercise specialist, or physical therapist in the development of any motor or sport skill.

Example: Profile of Competencies of Baseball Hitting

<table>
<thead>
<tr>
<th>Action Function</th>
<th>Body Transport:</th>
<th>Body Transport:</th>
<th>Body Transport:</th>
<th>Body Transport:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Context</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Regulatory Conditions:</td>
<td>Stationary</td>
<td>Stationary</td>
<td>Stationary</td>
<td>Stationary</td>
</tr>
<tr>
<td>Intertrial Variability:</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1a</td>
<td>Hitting off a batting tee from the same height for every trial. The hitter is stationary and does not strike the ball.</td>
<td>Hitting off a batting tee from the same height for every trial. The hitter is stationary but strikes the ball with a bat.</td>
<td>Hitting off a batting tee from the same height for every trial. The hitter moves but uses their hand to hit the ball.</td>
<td>Hitting off a batting tee from the same height for every trial. The hitter moves in all different direction then swings at the ball.</td>
</tr>
<tr>
<td>2a</td>
<td>Hitting off a batting tee. But for every attempt the height of ball on the tee is raised or lowered. The hitter is stationary and does not strike the ball.</td>
<td>Hitting off a batting tee. But for every attempt the height of ball on the tee is raised or lowered. Hitter is stationary but strikes the ball with bat.</td>
<td>Hitting off a batting tee. But for every attempt the height of ball on the tee is raised or lowered. Hitter moves and uses their hand to hit the ball.</td>
<td>Hitting off a batting tee. But for every attempt the height of ball on the tee is raised or lowered. The hitter moves the front foot in different directions to simulate an inside and outside pitch then swings at the ball.</td>
</tr>
<tr>
<td>3a</td>
<td>Hitting off the pitching machine where the ball comes at the same location and speed. The hitter stands holding bat over the hitting area but does not swing.</td>
<td>Hitting off the pitching machine where the ball comes at the same location and speed. The hitter stands in the same area and strikes the ball with a bat.</td>
<td>Hitting off the pitching machine where the ball comes at the same speed and location. The hitter moves around without a bat.</td>
<td>Hitting off the pitching machine where the ball comes at the same speed and location. The hitter steps toward the ball and attempts to hit the ball with a bat.</td>
</tr>
<tr>
<td>4a</td>
<td>Standing and watching the thrower throw different types of pitches.</td>
<td>Pretending to hitting a ball without moving the front foot forward involving a pitcher who is pitching different types of speed, sizes of ball, throwing patterns and/or force.</td>
<td>Pretending to hitting with no bodily movement or stationary while the pitcher moves throwing different pitches.</td>
<td>Hitting a ball differently involving different throws of speed and direction where the hitter is moving their front foot differently depending upon an inside or outside pitch.</td>
</tr>
</tbody>
</table>

From the list of competencies above you can identify activities from the easiest to most difficult that a teacher, physical therapist or exercise specialist could use to develop the skill of hitting.
For example the list of developmental competencies for the skill of baseball hitting that I chose were:

Box 1b: Hitting off a batting tee from the same height for every trial. The hitter is stationary but strikes the ball with a bat.

Box 2b: Hitting off a batting tee. But for every attempt the height of ball on the tee is raised or lowered. Hitter is stationary but strikes the ball with bat.

Box 2d: Hitting off a batting tee. But for every attempt the height of ball on the tee is raised or lowered. The hitter moves the front foot in different directions to simulate an inside and outside pitch then swings at the ball.

Box 3b: Hitting off a pitching machine where the ball comes at the same location and speed. The hitter stands in the same area and strikes the ball with a bat.

Box 3d: Hitting off a pitching machine where the ball comes at the same speed and location. The hitter steps toward the ball and attempts to hit the ball with a bat.

Box 4b: Hitting a ball differently involving different throws of speed and direction where the hitter is moving their front foot differently depending upon an inside or outside pitch.

I could use these competencies to develop or assess the development of a client or student. I could easily assess the client or student’s hitting by determining which activities he/she has mastered. As you can see each skill is from easiest to more difficult (progression) activity. I could also use this as a means to assess the clients or student progress.

If one does possess the basic knowledge about any motor or sport skill, one can then use Gentile’s model for a variety of purposes such as to develop the skill, classifying the client or student present skill level, or designing an individual functional or developmentally appropriate program that progresses in difficulty.

**Part III:** You will demonstrate to the professor your understanding of Gentile’s Taxonomy by developing an activity for only a few boxes. First you need to select a discrete motor or sport skill. Then you are to develop an activity for the following boxes of Gentile’s Taxonomy.

1. Describe the motor skill activity for box 4D.
2. Describe how you could change the skill described in 4D to fit the characteristics of Box 4C.

3. Describe how you could change the skill described in 4D to fit the characteristics of 3D.

4. Describe how you could change the skill described in 4D to fit the characteristics of 2D.

5. Describe how you could change the skill described in 4D to fit the characteristics of Box 1D.