

## GUIDED PRACTICE

Class: Motor Behavior KIN 3260

Date assigned: 9-11-18

Date due:

Time estimate to complete this assignment:

### Overview/Introduction

Understanding and applying The Dynamic Systems Approach

### Learning Objectives

#### Basic objectives

1. List 3-5 learning objectives that you expect students to be able to master on their own before class
  - 1) Be able to apply individual constraints to their own task proficiency
  - 2) Knowledge of the components of the Dynamic Systems Approach
  - 3) Knowledge of their individual constraints in skill proficiency

#### Advanced objectives

1. List 3-4 learning objectives that you expect students to need help mastering in class and after class
  - 1) Application of task modification to a new motor skill
  - 2) Individual differences from a Dynamic Systems Approach Model
  - 3) Individual opinion on usefulness of this model

### Preparatory Activities and Resources:

1. Read chapter 3.
2. Watch videos for labs chapter 3.
3. Analyze former learning of proficient motor skill in student's life.
4. Communicate with group members about skills that you have high and low proficiency in.
5. Decide as a group which skill to use for lab.

Exercises: Please complete by 9-13-18.

- Submit preparatory activity #4 to classmates on Blackboard by 9-13-18

Questions: If you have questions, first submit them to your group members on Blackboard. Second submit them to entire class under Discussion Board "questions for lab 3." If question is not answered in 24 hours, email Dr. Metzker and submit question. Make sure to use your name and lab 3 in the subject heading.



# Lesson Plan

**Lesson:** The Dynamic Systems Approach to Motor Development

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**Lesson:** The purpose of this lab is to explain how motor skills are organized and executed from the dynamic systems theory.

**Timeframe:** Note how long will it take the learner to complete all of the activities from pre-class to post-class activities.

**Estimated time:** 1 week

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**Materials needed:** Describe what items will be needed to complete the in-class activities.

Chapter 3

Video camera or smartphone

Computer or tablet and internet connection

Various equipment for particular skill, e.g. balls, jump ropes, bats, basketball net

**Objectives:** List out the basic objectives tied to pre-class activities and the advanced objectives tied to in-class and post-class activities.

*Basic:*

*1. understanding of the Dynamic Systems Approach*

*2. application of the Dynamic Systems Approach to prior individual skill analysis*

*Advanced:*

*1. analyze task modifications and how to apply them to skill learning of a new task*

*2. comparing different participants with the same task in order to identify individual constraints*

**Background to the Lesson:** All students are kinesiology majors but will come from different concentration areas (health promotion, exercise science, pedagogy). The contents shouldn't be too difficult for the students to understand but applying it will be more challenging so the lesson will be good for that since they will apply it first on their own and then with a group.

**Introduction to Lesson:** Describe the purpose of this content area for learners and timeline of activities for the flipped lesson.

**The Dynamic Systems Approach to Motor Development**

Lesson: The purpose of this lab is to explain how motor skills are organized and executed from the dynamic systems theory. Students will analyze their individual, proficient skill as well as a less proficient skill with the group.

**Procedure [Time needed, include additional steps if needed].**

**Pre-Class Individual Space Activities and Resources:** Outline the major steps for the preparatory activities and be sure to tie the steps to the basic learning objectives you have noted above. Note resources required for learner preparation.

Steps	Purpose	Estimated Time	Learning Objective
<p><b>Step 1:</b></p> <p>Read chapter 3 Focus on the pages on The Dynamic Systems Theory pgs. 59-63 Dynamic Systems Approach: movements are controlled by interactions among various body systems and experiences.</p>	<p>Get familiar with The Dynamic Systems Theory</p>	<p>1 hour</p>	<p>Understanding the Dynamic Systems Approach</p>
<p><b>Step 2:</b></p> <p>Choose a skill you have or had a high level of proficiency in.</p> <p>List all factors that assisted you in learning the skill and why you think each helped. For example, I was a spring board diver so I could chose the skill: performing a pike dive off the 3-meter board.</p> <ul style="list-style-type: none"> <li>- Factors affecting my ability to do the dive               <ul style="list-style-type: none"> <li>o My strength and flexibility- it takes both muscular strength and flexibility to perform</li> <li>o My desire to do it- I had to have desire to decide to go off the 3-meter board and try to perform this skill</li> </ul> </li> </ul>	<p>Applying Dynamic Systems Approach to past skill proficiency</p>	<p>2 hours</p>	<p>Application of the Dynamic Systems Approach to prior individual skill analysis</p>

<ul style="list-style-type: none"> <li>○ Coaching- the coach properly and confidently told me how to do it</li> <li>○ Diving team peers- all of the other divers were performing this skill so there was pressure to do so</li> <li>○ Experience- I had already performed this same dive off of the one meter board.</li> </ul>			
<p><b>Step 3:</b> Prepare to meet with your lab group. List several possible skills that you could possibly do with your group during a one hour lab.</p> <p>a) Choose a skill you are very proficient at (which you could perform during the lab period- so springboard diving is out) and several skills which you are not proficient at and email your list to your group.</p>	Prepare for lab 3 activity	30 minutes	
<p><b>Step 4:</b> Email (or meet with) all group members and together decide who will be the expert and what skill the rest of the group will be performing during lab 3. As a group, chose a skill where one person is the expert and the others have limited experience in and post the skill along with the names of your group members on Discussion board under "Lab 3."</p>	Prepare for lab 3 activity	give 2 days to let students email back and forth to each other	Prepare for task modification of skill

<b>Step 5:</b>			
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***In-Class Group Space Activities and Resources.*** Outline the major steps for the in-class activities and be sure to tie the steps to the advanced learning objectives you have noted above. Also note any resources needed/developed to provide effective active learning activities within class.

<b>Steps</b>	<b>Purpose</b>	<b>Estimated Time</b>	<b>Learning Objective</b>
<p><b>Step 1:</b></p> <p>With your group, discuss the chosen motor skill in which 3 of your group members have limited experience and design some task and environmental modifications that would likely <b>improve</b> performance on that task.</p> <p>a) Describe each task modification</p> <p>b) label the types of constraints that each task modification applies to (individual, task or environmental) and explain how they are intended to help the learner produce a more proficient movement pattern</p>	<p>Get together in a group to understand how to apply the Dynamic Systems Approach by looking at constraints and task modifications</p>	<p>30 minutes</p>	<p>Apply task modifications and how to apply them to skill learning of a new task</p>
<p><b>Step 2:</b></p> <p>Choose three group members to perform the skill both with and without the task modifications based on the following criteria: limited experience with the skill and differing in at least one characteristic (gender, height, etc.) from each other. The fourth group member can record task modifications and skill performance,</p>	<p>To observe differences in learning of the same skill.</p>	<p>1 hour</p>	<p>Comparing different participants with the same task in order to identify individual constraints</p>

<p><b>Step 3:</b></p> <p>For each participant, video record (use a video camera or smartphone) three performances of the skill without the task modifications and three performances with the modifications. You might find it helpful to use an app to later analyze the videos (e.g., CoachMyVideo, Hudl).</p>	<p>To observe differences in learning of the same skill.</p>	<p>Same 1 hour as step 2</p>	<p>Comparing different participants with the same task in order to identify individual constraints</p>
<p><b>Step 4:</b></p>			
<p><b>Step 5:</b></p>			

**Post-Class Individual Space Activities and Resources.** Outline the major steps for the post-class activities and be sure to tie the steps to the advanced learning objectives you have noted above. Also note any resources learners will need to complete any post-class activities assigned after the group space activities.

<b>Steps</b>	<b>Purpose</b>	<b>Estimated Time</b>	<b>Learning Objective</b>
<p><b>Step 1:</b></p> <ol style="list-style-type: none"> <li>1. Analyze the videos and answer the following questions.               <ol style="list-style-type: none"> <li>a. How did the addition of the task modifications affect each participant’s performance? Was your intended outcome confirmed? If not, provide possible reasons to explain why it did</li> </ol> </li> </ol>	<p>Understand differences in individual learning and how task modifications apply to skill learning.</p>	<p>1 hour</p>	<p>Determine how task modifications effect different people when learning a</p>

<p>not affect performance in the way you intended. Use your knowledge of constraints and evidence from the videos to justify your responses.</p> <p>b. What differences in performance did you observe between participants? Describe the differences and provide possible reasons for those differences. If performances did not differ, provide possible reasons for the lack of differences. Use your knowledge of constraints and evidence from the videos to justify your responses.</p>			<p>skill and analyze variables</p>
<p><b>Step 2:</b></p>			

**Evaluation:**

**Analysis.** In this section, note what you think will work, and what challenges you think you may face in implementation.

**Challenge:** *Students may not chose a skill that is a good one to evaluate, for example, weight lifting is a skill but it is pretty simple so it's hard to find a lot of task modifications. We should probably brainstorm in class some of the skills that may not work well.*

**Connections to Future Lessons.** In this section, note how you think this lesson plan connects to your next topics in the course.

The next topic in the course is the stages of learning motor skills so this will look more at the theoretical ideas about how one would progress from the beginner stage, the skill the filmed for this lab, to intermediate and advanced stages of the skill.