

Sam

171.5
185

Total
Course = 506.46
Points

Course
Grade = A!
Way to go!!

Step 2) complete the following questions:

1. Identify the video and the part of your video you are referring to and what aspect(s) you are focusing on. This will make sure Dr. Z. is watching what you are watching so you both have the same point(s) of reference and to keep your focus on answering the remaining aspects of the Application Project. If you are unsure to look big, small, or medium...feel free to ask Dr. Z. for help! For example... Hey Dr. Z., I'm going to watch the Weber State Football video and I'm going to focus on #34 in white during seconds 6 - 8. (2 points)
2. Identify the skill you are watching from a task perspective. (5 points)
3. Identify the performer you are watching from a performance proficiency perspective (PPP). (5 points)
4. What stage of learning is your performer at and how do you know? (3 points)
5. Describe the person, the task, and the environment of the skill being performed. Why does identifying these aspects important? (5 points)
6. Perform a task analysis of the critical skill / movement pattern that you identify in your task perspective. (8 points)
7. Why is performing a task analysis important to do? (2 points)
8. Explain what is happening to the performer for each stage of information processing. (5 points)
9. Explain the interconnections of the Environmental Predictability, PPP, Stage of Learning, information processing, and Reaction time of the performer and how this relates to you as a teacher/practitioner. (5 points)
10. Apply Hick's Law to what we are seeing. (5 points)
11. If you were going to teach someone this skill, what are some specific ways you could modify their reaction times and why would you want to do so? (5 points) *You need one way...*
12. What types of anticipation are being used...if any...and how does this impact the persons performance? (2 points) *Practice; ↑ S-R compatibility ... OK ... Comfort in choices... S-R compatibility from #10...*
13. Draw and explain what the inverted-U principle is for this task and why you drew it the way you did. (5 points) *Controlled vs Automatic Processing?*
14. Define the type of attention needed to perform this task. (2 points)
15. If the person is doing 2 things at once explain how they are able to do so for each stage of information processing. (If they aren't doing two things at once suppose they are and explain how they might be able to do 2 things at once) (6 points) *MOC's?*
16. What are some examples of the performers 4 different memory systems being utilized? (4 points) *OK...*
17. Draw and **DETAIL** and **APPLY** the **closed loop system of motor control** to what the performer is doing. This mean draw out the **closed** loop system and identify **EVERYTHING** in the **closed** loop system and apply each "thing" in the **closed** loop system to what the performer is doing. (30 points)
18. Draw and **DETAIL** and **APPLY** the **open loop system of motor control** to what the performer is doing. This mean draw out the **open** loop system and identify **EVERYTHING** in the **open** loop system and apply each "thing" in the **open** loop system to what the performer is doing. (10 points....super megahint....if you did #17 you should have also done #18)

- ✓ 19. Apply the visual systems (visual capture vs. visual dominance; focal vision and ambient vision) to what the performer is doing. (4 points)
- ✓ 20. Explain the concept of GMP's....what are they?; what do we need to know as practitioners in order to help learners develop them?; how is the performer using GMP's in your example/scenario? (4 points)
- ✓ 21. Explain the concept of relative timing.....what is it?; what can change but won't impact one's relative timing of a skill?; how is the performer using relative timing in your example/scenario? (4 points)
22. What is Fitt's Law? Explain if it is being utilized in any way in your example/scenario or not. Why is being aware of Fitt's Law important for practitioners? (4 points) -1
- ✓ 23. How is the speed-accuracy tradeoff being used in your example/scenario? (2 points)
- ✓ 24. How is the performer using their abilities, capabilities, and skills in their performance? (3 points)
- ✓ 25. Explain how the performer is using muscle memory in their performance. (3 points) -2
26. Explain how the performer is a natural athlete or a natural singer and why that makes them so much better than everyone else. (2 points) -1.5
- ✓ 27. Establish a set of goals for this individuals performance. Create **1 outcome** goal. Create **2 performance** goals associated with that outcome goal. Create **6** (3 each) potential *process* goals associated with the performance goals. So for your goal formation we are looking at your goal creation and also your linkage...that your process goals are linked to your performance goals that are linked to your outcome goals. (10 points)
- ✓ 28. Create an ideal practice for this person to achieve one of your goals. What are the 6 considerations you need to think about and **why** are you creating your practice the way you are? (15 points)
- ✓ 29. Describe and identify at least 5 critical aspects of any locomotor, ballistic, or manipulative skill your learner performs. (For example, maybe you see them skipping...what level of skipping are they at and how do you know....what characteristics of skipping are they demonstrating to you to let you know they are an early or proficient skipper?) (5 points)
30. What aspects/terms/concepts of motor development has this individuals demonstrated to you (Hint: See Presentation #24) and what does this have to do with you as their teacher teaching the the practice you created in #28 from above? (5 points) -5
31. Describe/infer the skeletal, muscular, adipose, endocrine, and nervous system development of this performer and how these relate to your teaching them the practice you create din #28 from above. (15 points)
- ✓ 32. What were your top 5 favorite aspects of this course and why? A specific concept? A particular presentation? Maybe you just liked the ending slide of each presentation? (And if you want...you can let me know your least favorite things about this course...I promise they wont impact your grade but knowing them will help me improve the course and as a teacher...) (10 points)
- ✓ 33. What is the GIANT take home message for you from taking this course? (5 points)

CONGRATULATIONS!!!!!!!!!!!!!!!!!!!!!! YOU DID IT!!!!!!!!!!!!!! I know this course is tough....tons of information in it! But you did it...and you should be proud of yourself for completing this course!! Thanks for being a part of it!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Sam Marx

PEP 3100

12/9/2021

Application Assignment

1. The video that I decided to analyze was the Weber State football player who returned a kick for a touchdown against the University of Utah.

2.

- Serial
 - o We can see the start and stop of the skill and there is more than one action involved.
- Motor
 - o Because this task being performed occurs in a game, this player is likely just “doing” rather than thinking.
- Gross
 - o This action requires the use of their entire body.
- Open
 - o With all of the different players on the field, the environment becomes very unpredictable.

3.

- Maximum Certainty of Goal Achievement
 - o While performing this skill the player looks confident in their abilities to perform the task at a high level.
- Minimum Energy Expenditure
 - o During this task the kick returner doesn't have any unnecessary movements.
- Minimum Movement Time
 - o This person performing the skill makes the task look quick and efficient.

Capabilities...?

4. I would say that this player would be an autonomous learner, greatly because of his performance proficiency perspective in that he has maximum confidence in his abilities, minimum effort, and efficient movement.

5. In this task, a Weber State Football player (person) is returning a kickoff (task) in an away football game against the university of Utah (environment). The reason to why identifying these tasks are important is because it allows us as practitioners to breakdown the situation at hand to better evaluate our performers.

and to help us prepare successful and meaningful learning environments!

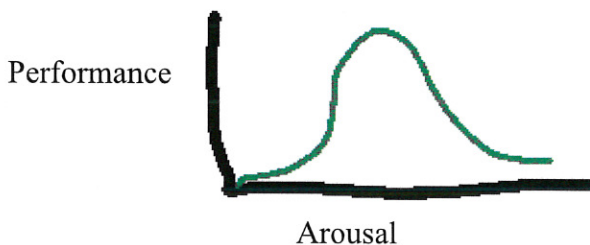
6. Critical Skill/Movement Pattern: Returning a Kickoff (Catching and Running)

- Tracking the trajectory of the ball throughout the air.
- Running towards the anticipated landing spot of the ball.

- Squaring up shoulders, head, and hips towards the opponent's endzone.
 - Taking half a step back with your non-dominant foot.
 - Taking half a step forwards with your dominant foot.
 - Placing inside of biceps touching your rib cage.
 - Place hands forward in front of body with thumbs pointing away from midline of body.
 - Watching the ball land into your arms.
 - Trapping the ball against your chest.
 - Wrapping dominant hand around the tip of the ball while cradling the rest with your arm.
 - Driving off your dominant foot towards the opponent's endzone.
 - Taking step with non-dominant foot.
7. The reason why performing a task analysis is so important is because as practitioners it allows us to be able to break down a skill so that we can identify any aspects of the skill that our students need improvement or further development or meet the sufficient requirements of the skill.
8. Stimulus Identification = Seeing the ball being kicked.
 Response Selection = Choosing to catch the ball and run.
 Response Programming = Catching the ball and running.
9. In terms of the interconnectedness of Environmental Predictability and PPP, Stage of Learning, Information Processing, Reaction Time, etc. there is a huge correlation and connection. When individuals are performing a skill in a predictable environment their PPP and Stage of Learning increase due to the fact predictability often results in higher confidence and experience. This also decreases reaction time as performers can rely more on their anticipation of the task. Whereas on the other hand, in an unpredictable environment our reaction time increases, and our PPP and Stage of Learning decrease greatly due to the fact that we don't know what to expect. Therefore as a practitioner we should expect our learners to excel more often in more predictable environments, and struggle/need more time in more unpredictable environments. *Nice!*
10. With Hick's Law the more stimuli that we are having to respond to, the slower our reaction time is going to be. In terms of this being applied to the video of the kickoff return, in order for this kick returner to have a quick reaction time he would either need to eliminate some of his alternatives or become more comfortable with his choices (which improves with practice and experience!). *Right!*
11. If I were to teach someone the skill of returning kickoffs, some ways that I could modify/manipulate their reaction times is by eliminating their choices to respond to the kickoff. Normally kick returners have the option to return the kick, call a fair catch, take a touchback, or let the ball land in the endzone. In this instance we could only give our

learner the option to return the kick no matter what, therefore eliminating his choices and improving his reaction time.

12. In this skill the returner is using spatial anticipation for both receiving the kick, and avoiding the defenders. This is because he likely knows that they are going to kick the ball and they are going to try and tackle him eliminating the “when”. However, he doesn’t necessarily know “where” the ball is going to be kicked or “where” the defenders are going to be coming from.
13. For this task the kick returner would *generally* need to be in a medium/moderate arousal level for peak performance. In a high arousal state, the player could start to experience perceptual narrowing.



14. To perform this task at a high level the player would likely need to have a broad and external direction of focus and attention.
15. One method in which performers are able to do 2 things at once is due to parallel processing in which our mind “weeds out” the unnecessary information. In this instance there are certain stimuli that are in a sense completely unnecessary in order to perform this skill. Things such as what the crowd is yelling or the smell of food from the stands isn’t required to perform this skill; therefore, our mind “weeds out”/eliminates this information so they can focus on the important stimuli.

16. Short Term Sensory Store:

- In this scenario the short-term sensory store would be the player’s ability to only focus on the ball and the other players in this selected moment while being able to “weed out” all of the stimuli that are insignificant to perform the task.

Short Term Memory:

- In this scenario the short-term memory would be all of the alternatives the player has in this moment and deciding which option is best in this instance. Therefore this would be the player’s decision to catch the ball and run it towards the endzone.

Working Memory:

- In this scenario this would be the player deciding how to weave through the defense to score a touchdown after catching the ball.

Long Term Memory:

- In this scenario the long-term memory would be the player actually completing the task of catching the ball and running towards the endzone.
Hummm... OK I think I see how you are seeing it...

17. Input:

Sight:

- **Ball**
- Opposing Players
- Coaches
- Fans
- Stadium
- Cheerleaders
- Mascot
- Teammates
- Referees

Sound:

- Fans
- Cheerleaders
- Coaches
- Teammates
- Referee/Whistle

Smell:

- Concession Food
- Other players

Touch:

- **Ball**
- Helmet
- Football Pads
- Cleats
- Uniform

Taste:

- Saliva
- Mouthguard
- Sweat

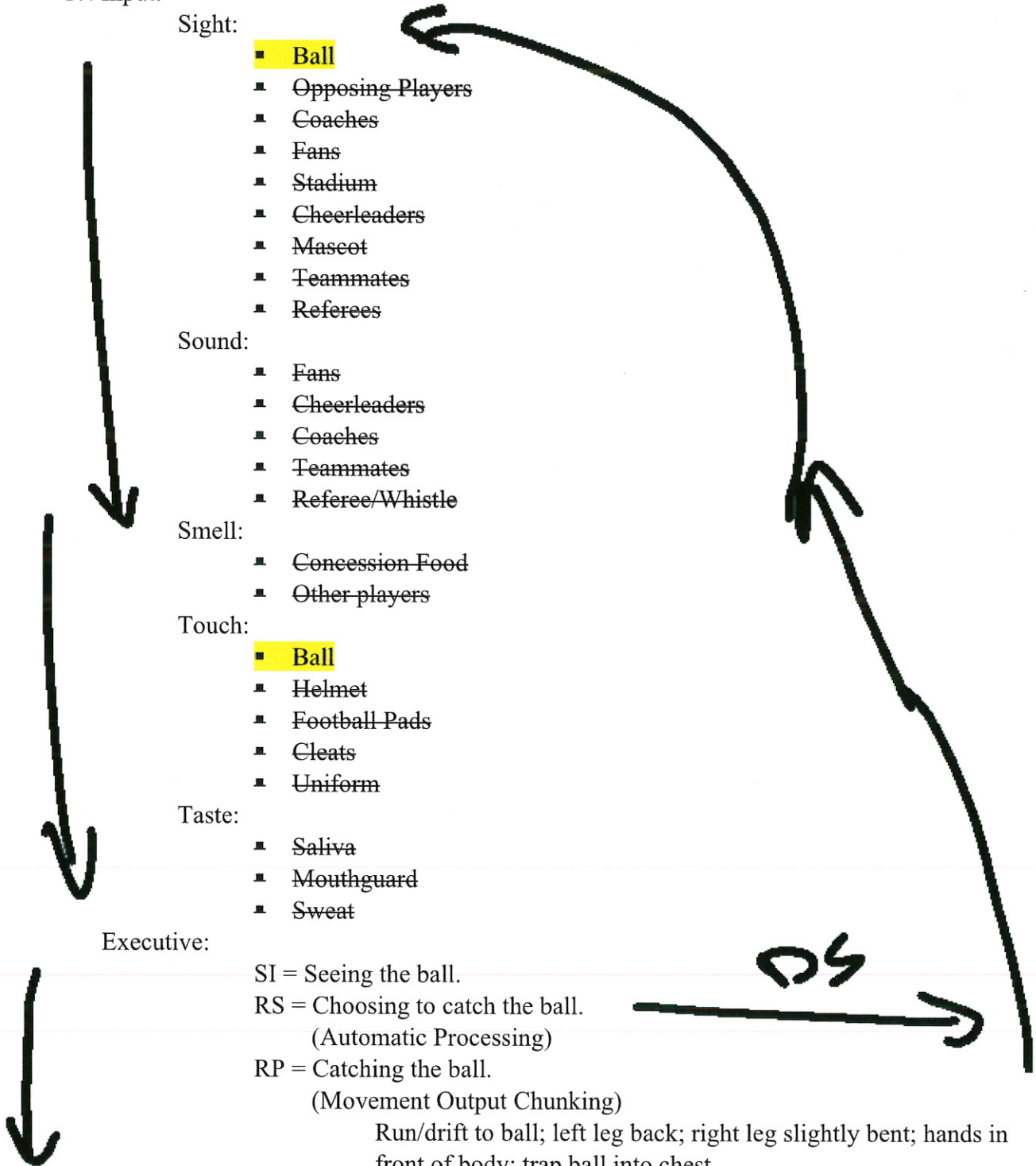
Executive:

- SI = Seeing the ball.
- RS = Choosing to catch the ball.
(Automatic Processing)
- RP = Catching the ball.
(Movement Output Chunking)

Run/drift to ball; left leg back; right leg slightly bent; hands in front of body; trap ball into chest

Effective:

Motor Program:



1. The muscles needed to perform the task. (Legs & Arms)
2. The sequential order.
3. The relative forces of muscle contractions.
4. Relative timing and sequence of contractions.
5. Duration of the respective contractions.

Spinal Cord:

Electrical signal of RP/MOC to muscles.

Muscles:

Contraction and relaxation to do Response Programming.

Output: Catching ball



Proprioceptive Feedback: Feeling body brace for impact of ball.

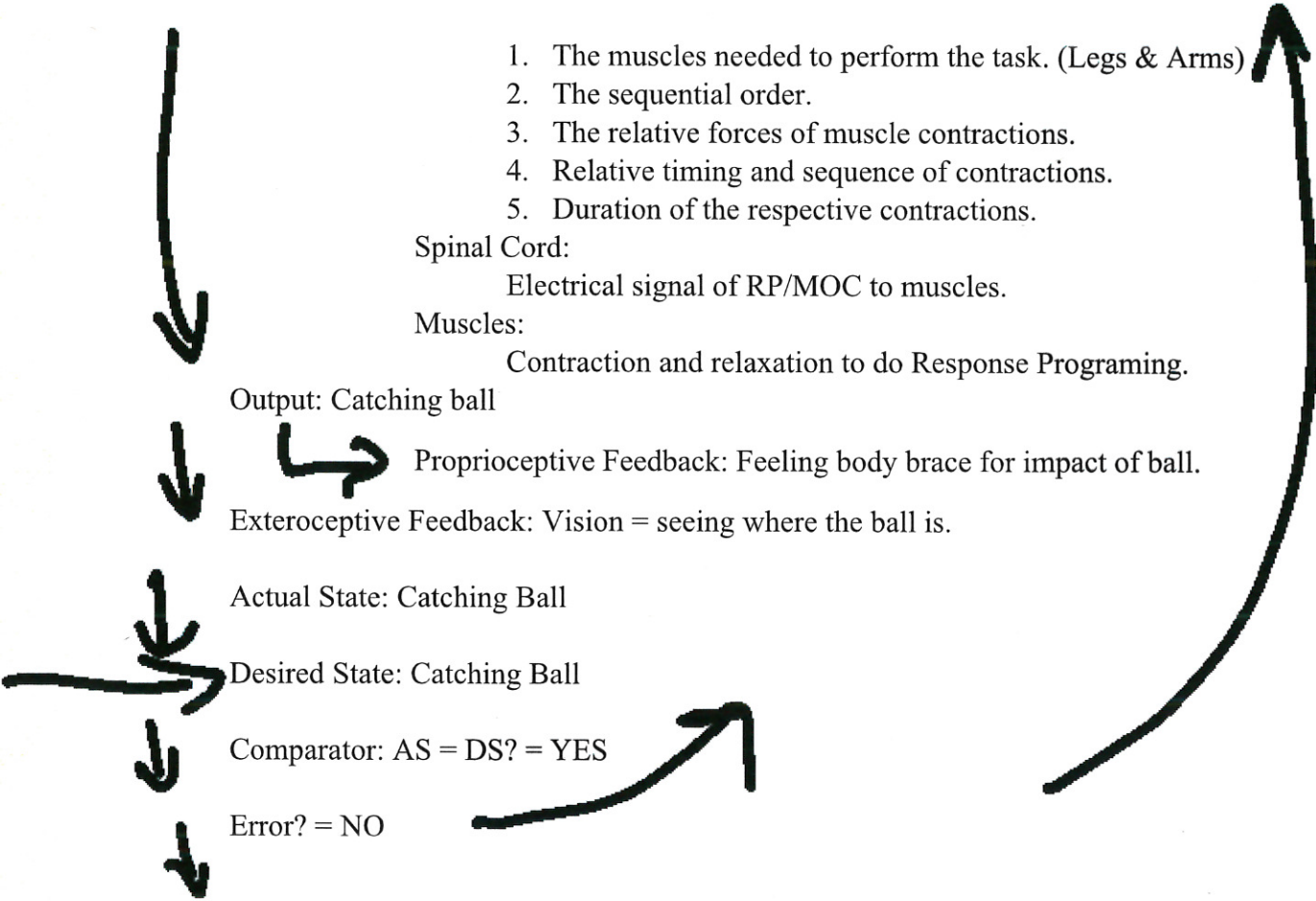
Exteroceptive Feedback: Vision = seeing where the ball is.

Actual State: Catching Ball

Desired State: Catching Ball

Comparator: AS = DS? = YES

Error? = NO



18. Input

Stimulus Identification
Response Selection
Response Programming

Executive

Motor Programming

Spinal Cord

Muscles

Effector

Output



19. Visual Systems (From POV of Kick Returner)

Visual Capture

- The visual capture in this instance would likely be the stadium, fans, cheerleaders, mascot, reporters, sideline players, and coaches.

Visual Dominance

- The visual dominance in this instance would likely be the ball (before catching it) and the defenders (after catching the ball).

Focal Vision

- The focal vision applied in this action would likely be identifying which players are playing for what team.

Ambient Vision

- The ambient vision applied in this task would likely be where the defenders are and where the returner's body is in space (playing field).

20. Generalized Motor Programs are stored movement patterns that help allow us to complete skills that we've never practiced before. As practitioners some of the aspects of GMP's we need to be aware of are... movement time (how long), movement amplitude (how soft or hard), movement direction (where), and limb/muscle use (what). With GMP's we are able to reorganize (learn) movements of an entire action. In terms of GMP's within this video of returning a football kick, for the most part it is difficult to replicate identical kick returns with how many different players are on both teams, so while this task alone may not demonstrate GMP's as well as some other tasks there is some aspect of GMP's that apply to this act. This kick returner has the movement patterns down to be able to catch a kicked ball in the air and move his body towards the opponents endzone while avoiding defenders.

21. Relative Timing is essentially the concept that when certain movements happen in relation to other movements of an action. Regardless of how slow or fast these movements happen, all of the components of the action speed up or slow down uniformly in ratio to one another. In this scenario the football player is using relative timing on his running motion and his catching motion. His feet and arms move in ratio to one another while he is running with the ball and his relative timing for catching a ball is in ratio as well. When he is catching the ball, his hands and feet all move uniformly in ratio to one another.

22. Fitt's Law is the idea that movement time is linearly related to the index of movement difficulty. Because of this concept it's important for us as practitioners to be aware of this concept, especially when giving our learners more complex movements; in that we need to allow our learners more time to master the movement and demonstrate more patience. More specifically, in this scenario when the football player is running in open space his movements are much quicker and do not require as much time to move forward. However, when there are numerous players around the returner his movements are

slowed down when he changes directions due to the fact that this skill/movement is more complex and therefore requires more time. *Hum... How does change of direction and Fitts Law interact??*

23. In this scenario this football player could be using the speed-accuracy tradeoff when weaving in-and-out of defenders compared to running in open space. When running in open space this player isn't necessarily worried about his steps being perfect as he is aiming to just be as fast as possible to get into the endzone, whereas when he is weaving in-and-out of defenders he isn't moving as fast as he has to worry about not running into any defenders and being tackled.

24. In this scenario the player is using their abilities through response orientation, reaction time, gross body coordination, speed of limb movement, gross body equilibrium, and rate control. Some ways that this player is using their skills is through catching, running with the football tucked in his arm, dodging/avoiding defenders, and sprinting. One method in which this player is demonstrating his capabilities is through his running speed, when he starts sprinting towards the endzone he is demonstrating how fast he is capable of running.

25. In this situation, the football returner is using "muscle memory" by completing this action with such little thought and much more "doing". This athlete has so much experience and practice with this skill and form of movement, while this player is also in the autonomous stage of learning it is expected that he is capable of completing this task without having to think and do at the same time. One could also argue that he has such a strong stimulus-response compatibility that he has quicker reaction times to this skill.

No such thing as muscle memory...

26. One method in which this performer could be considered a "natural athlete" is due to their natural abilities. As skills and capabilities can be manipulated, abilities cannot be manipulated which can be an outlier in whether a performer of a skill is considered to be a "natural athlete" or "better" than everyone else. Some specific examples of this performer's "natural" abilities are through response orientation, reaction time, gross body coordination, speed of limb movement, gross body equilibrium, and rate control.

Hum... but there is no such thing as a "natural" athlete...

27. Outcome Goal:

- Return 3 kicks for touchdowns by the end of next season.

Performance Goals:

- Do not muff/miss any catches on kick returns throughout the entire 2022 season.
- Gain at least 25+ yards on 50% of returned kicks.

Process Goals: (technique or strategy/how)

- At practice we are going to receive/catch 10 kickoffs from the back of the endzone.
- During practice we are going to receive/catch 10 kickoffs in the back left of the endzone.

- During practice we are going to receive/catch 10 kickoffs in the back right side of the endzone.
- At practice we are going to receive/catch 10 kickoffs off of the bounce. *Nice!!!!*
- During practice we are going to run kickoff simulated repetitions until we gain at least 25 yards on 3 kickoffs.
- During practice we are going to run kickoff simulated repetitions until we gain at least 50 yards on a kickoff.

Establish a set of goals for this individuals performance. Create **1 outcome** goal. Create **2 performance** goals associated with that outcome goal. Create **6** (3 each) potential *process* goals associated with the performance goals. So for your goal formation we are looking at your goal creation and also your linkage...that your process goals are linked to your performance goals that are linked to your outcome goals.

28.

Transfer of Learning:

- For this individual I would say that a near and positive transfer of learning would be the most beneficial for this athlete as they are already comfortable with the sport of football and have the concept of kick returning fairly mastered.

Practice Schedule:

- For this individual, a distributed practice may be more beneficial for the learning of this skill as a kick return in football leans much more towards a continuous skill than a discrete skill.

How Information is Presented:

- For this athlete, a combination of instructions and demonstrations may be the most beneficial for this learner as they likely don't need to go through guidance procedures as they are already in an upper level of the stage of learning.

Practice Form:

- Some of the different forms of practice that this player could use is a simulator practice and mental imagery to receive a better idea of how to continue to execute this skill within a game-like setting.

Organization:

- For this learner, they would likely most benefit from a random environment to better implement a game-like setting to prepare them for a real-world environment in an *W/W* "open" game of football. They would likely struggle more in practice but would be more prepared for the game.

Variation:

- For this performer, a varied practice may be the most beneficial for this athlete to learn and master the skills needed to execute a kick return. This would contribute to a more similar environment to an "open" game of football.

Hum... ok... I guess varied routes to run!

29. In this situation, the football players is demonstrating the locomotor skills of running. More specifically they are demonstrating a proficient level of running due to the fact that they demonstrate long stride lengths, foot contact towards the ground is in a heel to toe motion, his arm swing works from his hip to his chest in a sagittal plane, his arms and legs are working in opposition to one another, and his arm swing in opposition on a sagittal plane.

30. Some of the different motor development concepts that this individual has demonstrated are Fitt's Law and the speed-accuracy trade-off, Hick's Law, Anticipation, and parallel processing. In terms of these concepts applying to a practice plan, it is very important as practitioners that we consider these factors to best compliment the learning environment and most importantly our learner. In order to put our athlete's in the best position possible to be successful we need to understand the different concepts of motor development and how these each individually affect the player, so that we can manipulate these factors and our athlete to put them in the best environment possible to grow and develop.

31.

32. My top 5 favorite aspects of this course include, the information presented is very applicable to our teaching experiences, you include aspects in this course on how to influence our students' lives outside of the required teaching materials, you demonstrate different methods to influence attention and arousal levels to greatly compliment behavior management skills, how manageable all of the assignments were to complete, and I really enjoyed your presentation of the material as it made class exciting and a valuable experience.

33. I think my biggest take home message from this course, is around the idea that as teachers if our students fail it is 100% the fault and responsibility of the teacher. There are always things/methods that we can do as teachers to influence our students' learning environments to influence them to do their best.

these are motor LEARNING principles... not motor development

maybe not 100%... sometimes no matter what you do students don't want/care to learn is

Cool!