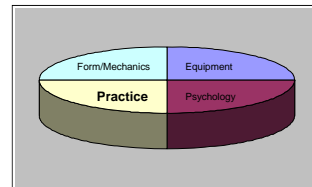


"Instituting Practice Variability in the Technical Training of High Jumpers: A Framework for Coaches "

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The Sports Performance Pie

- **Methods to improve performance**
 - Form & Mechanics
 - Equipment
 - Psychology
 - Practice



The Missing Piece

- **What is the best way to practice?**

Traditional Approach:

"Practice Makes Perfect"

"Repetition, Repetition, Repetition"

Evidence Based Approach – developed through motor learning research:

"Proper Practice Makes Perfect"

Goals

Overall Goal: movement memory

- 1) Identify the importance of practice variability in repeating desired movements
- 2) Provide specific (evidence-based) practice drills
- 3) Provide you with a practice plan or guide to increase one's ability to produce desired movements

Practice Variability: What is it?

General definition – a practice or training session where athletes practice different movements, sport contexts, and situations

Example:

VARIABLE PRACTICE:
Varying take off positions

CONSTANT PRACTICE:
1 position

Practice Variability

Motor learning research using laboratory and sports based skills show:

Variable practice is better for learning than constant practice

Why does it help to practice taking off from different positions?

Practice Variability: Aspects to Vary

Aspects of practice you can vary:

- 1) **Movements:**
- 2) **Sport Context:**
- 3) **Situation:**

Practice Drills: Organizing the Variability

What are different ways can you organize practice variability?

There are several practice drills you can use to organize variability in your practice

- Random Practice
- Serial Practice
- Block Practice
- Result Dependent Practice
- Increasing Practice
- Self-controlled Practice
- Mini Blocked Practice

Practice Drills

Block Practice:
 f f f f f b b b b b p p p p p p

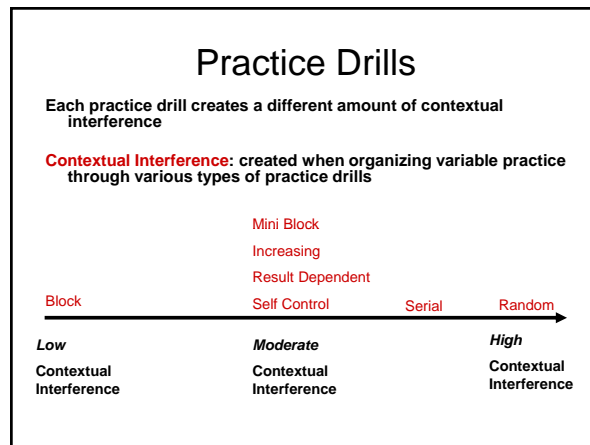
Mini Blocked Practice
 f f f b b b p p p f f f b b b p p p

Serial Practice
 f b p f b p f b p f b p f b p f b p

Random Practice
 f p b p f b f b p p p f p f b f b p

Increasing Practice
 f f f b b b p p p f b p f b p f b p f p b p f b f b p

Self-controlled Practice: Athlete chooses take-off position
Result Dependent Practice: Determined by quality of performance



Practice Variability

- You can vary many aspects of practice and create practice drills that create different amounts of contextual interference.
- How do you know what to vary?
The answer: Be goal driven with your practice variability
- Target the aspect of performance you want to improve
 - Take-off position?
 - Running mechanics?
 - Release Mechanics?

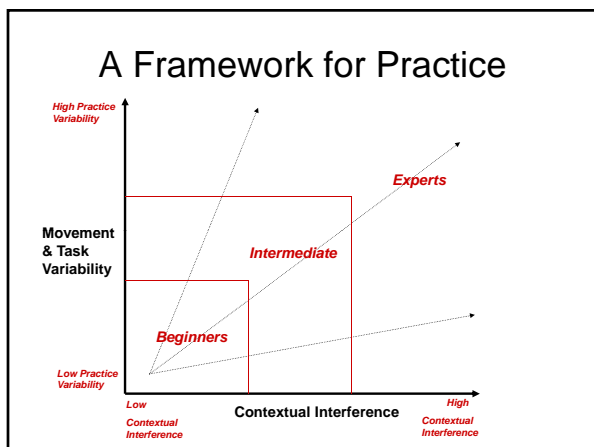
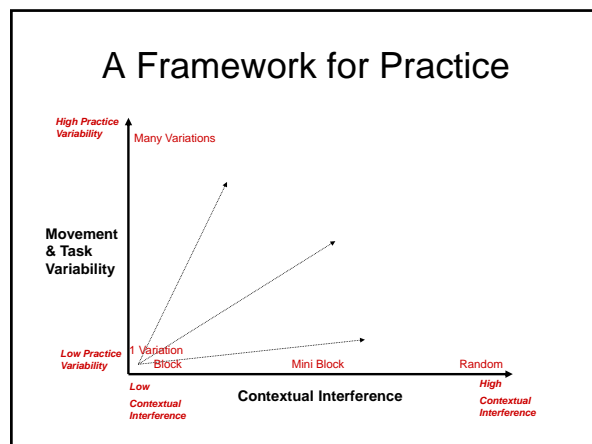
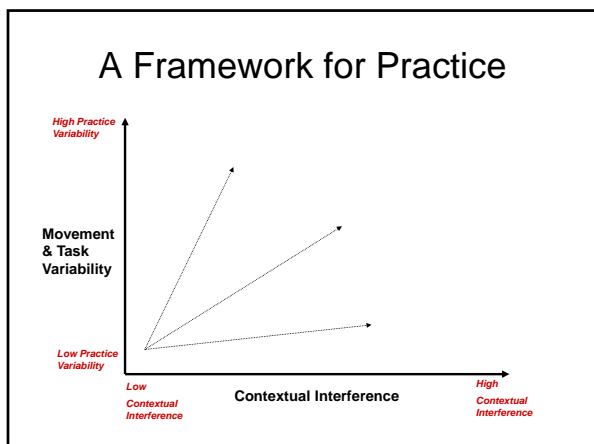
A Framework for Practice

- There are many practice possibilities that can be created when you organize your practice variability

Example:
 Weakness – take-off position
 Possibilities of practice:

- 1) Practice various take-off positions separately (Block Practice)
- 2) Practice various take-off positions together (Random Practice)

- How do you know how much to vary and when?



- ### An Important Point to Consider
- Practice performance
 - Low Variability/CI Drills → Few Errors
 - High Variability/CI Drills → Many Errors
 - Competition Performance
 - Low Variability/CI Drills → Many Errors
 - High Variability/CI Drills → Few Errors

- ### Wrap Up
- Be goal driven when instituting variability
 - Practice drills create different amounts of contextual interference
 - Instituting variation & contextual interference will competition performance
 - Things to be varied:
 - 1) Movements
 - 2) Task Characteristics
 - 3) Situation
 - Framework for Practice
 - Provides a guide for:
 - how much variability to include
 - organizing variability
 - how you can progress or increase variability