TRAINING CREWS FOR HIGH PERFORMANCE:

Myths, Reality, and What Works!

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TAKE AWAY MESSAGES...

- There are a number of myths/misconceptions about training… **AVOID THEM!**
- There is a science of training and team training… **USE IT!**
- There are established principles of team training…**APPLY THEM!**
- Team training works...**WHEN DESIGNED AND DELIVERED SYSTEMATICALLY!**

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Overview

I. Discuss common training myths and misconceptions.
   - Reality?

II. Outline the Structure of the Team (or CRM) Training.
   - Scenario-based training

III. Answer “What works?”

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Myth

TASK EXPERTS CAN ARTICULATE TRAINING NEEDS

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Reality

- Experts do not have access to their own expertise.
  - Knowledge becomes “compiled”
- Task experts do not necessarily understand the learning process or how learning progresses.
- Task experts are crucial, but they must be paired with learning experts.
  - Partnership

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Myth

Knowing How Well You Did is Enough

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Reality

- Knowledge of results, in and of itself, is not necessarily informative.

- Feedback must be diagnostic.
  - Must direct trainee's attention and give them an indication of how to improve

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Myth

High Fidelity is Better

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Reality

- IT DEPENDS ON THE LEARNING TASK!
  - Including more senses in not necessarily better nor cost effective.

- It is imperative to identify the cues in the task environment that drive performance.
  - Other factors are not worth simulating.

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Myth

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Reality

- Simple task exposure is not training.
- Practice needs to be guided; requires measurement and feedback.
- "Free Play" is generally not advisable.
  - May lead to incorrect assumptions and conclusions.
  - Does not insure that important associations are made.

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Myth

Reactions to training= Learning

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Reality

- Just because trainees are having fun, doesn't mean that they are learning anything.
  - Very little or no relationship
- "Instrumentality" does seem to be a factor.
  - Does seem to be related to learning
  - Affects motivation to learn
- Simple measures of training outcomes are insufficient to judge training quality.

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Myth

Learning will translate into Behavior change

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Reality

- Training transfer is a very complex phenomenon.

- Some of the factors:
  - Supervisor Peer support
  - Climate for Transfer
  - Opportunity to perform/practice

- Even when trainees demonstrate learning after training, it does not mean that they can or will transfer back to the job.

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Myth

Everyone Who Has Ever Learned Anything is a Training Expert

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Reality

- Opinions aside, training is a behavioral/ cognitive event that can be structured to empirical investigation.
- There is a science of training that should be exploited to optimize training design.
- Processes exist which, if appropriately and consistently applied, can help to ensure that effective training is designed.

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Myth

TEAM TRAINING IS JUST A PROGRAM, SIMPLE.

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Reality

Team Training is NOT….

- A Program
- A Place
- A Simulator
- A Collection of Individuals Being Trained Together
- A Computer Network
- The Same as Team Building

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So What Do We Know?

- People organize knowledge into mental models and patterns.
- Repetition and practice lead to learning if appropriately designed.
- Deeper processing in training aids in generalization and transfer.
- Motivation matters.
- Confidence --self-efficacy-- is crucial.
- Training outcomes are dependent on many factors outside of the training itself.

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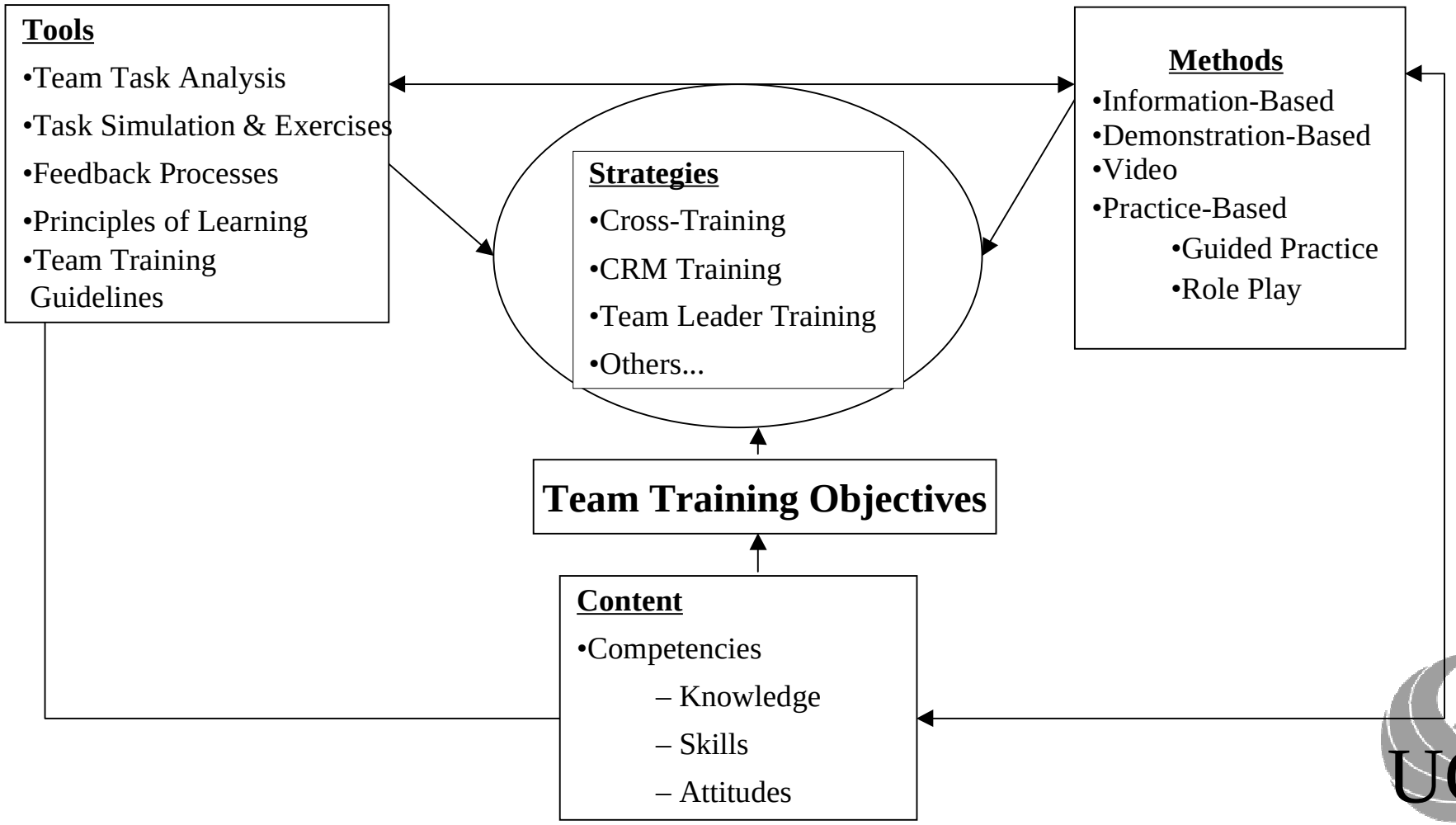
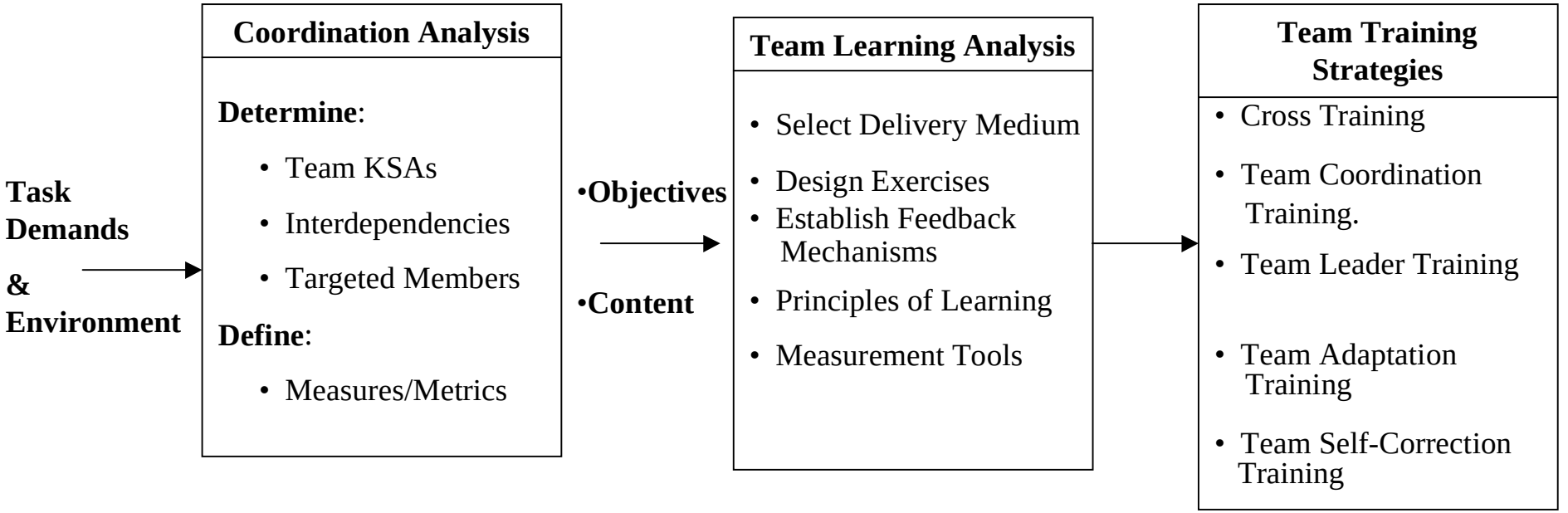
Structure of Team Training



Designing Team Training

A (Simple) Model of Team Training



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Designing Team Training

Implications of the Model

- Model Describes a Fairly Typical "Training Development" Model

- We Will Focus Only on Aspects that are Unique to TEAMS:
  - –Competencies
  - –Coordination Demands
  - –Performance Measures
  - –Exercises Design
  - –Specific Instructional Strategies

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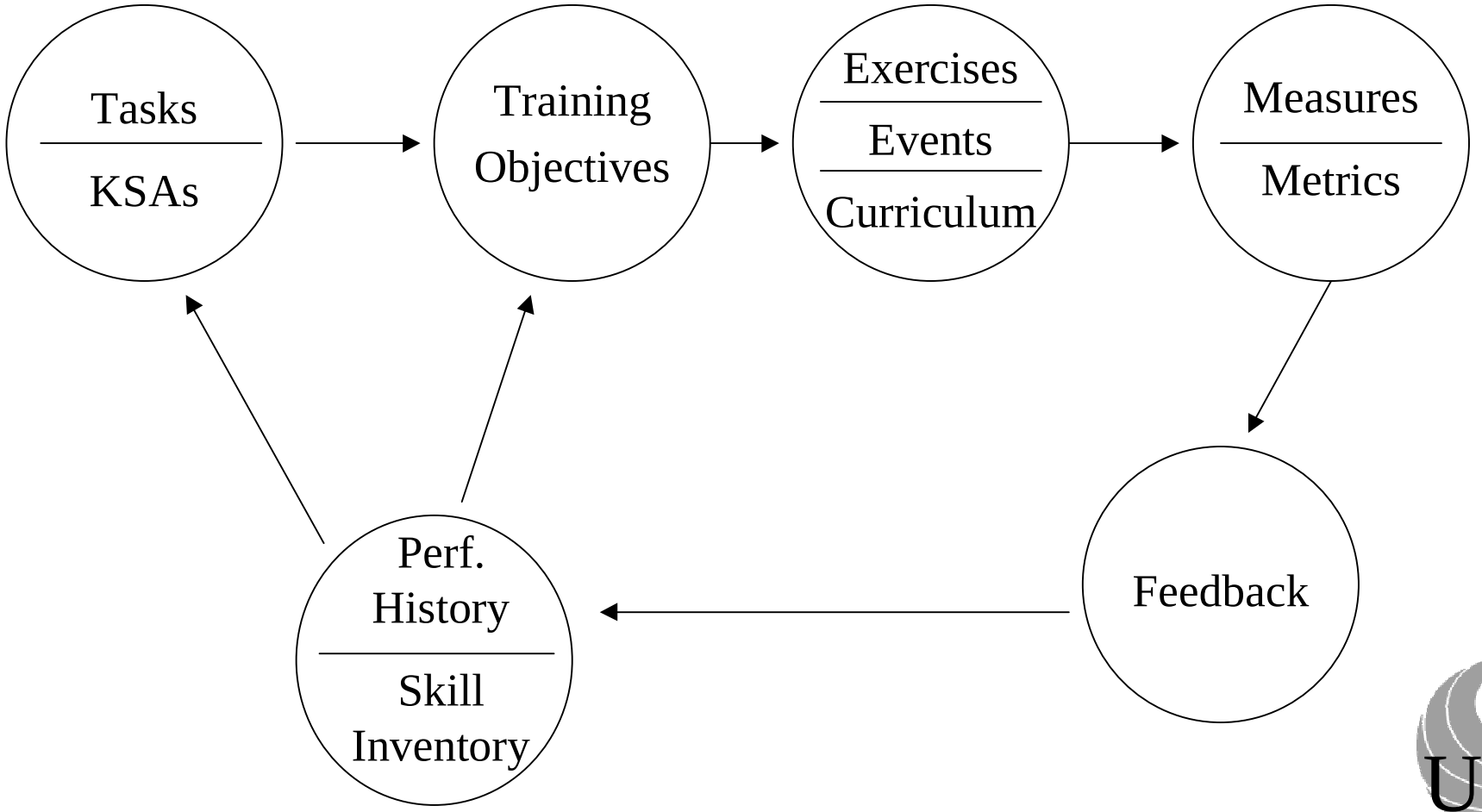
Scenario-Based Training



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What Works?

Applying These…

- Principle 1: Team training should focus on teamwork, not taskwork.
- Principle 2: Team training should be based on competency requirements--KSAs.
- Principle 3: Team training should be more than "Feel Good" intervention, focus on KSAs.
- Principle 4: Team training should include a context in which teamwork skills can be practiced, assessed, diagnosed and learned.

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What Works?

- Principle 5: Diagnose (measure) performance during team training; If not done, no opportunity for learning exists.
- Principle 6: In scenario-based team training, the scenario is the curriculum.
- Principle 7: Team training should include information presentation, demonstration, practice, and feedback.
- Principle 8: Team training should be evaluated at multiple levels, from reactions to improved performance and safety.

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What Works?

- Principle 9: To ensure transfer of team training, create a climate for applying skills.
- Principle 10: Establish a mechanism to foster teamwork.
- Principle 11: Team training is embedded in an organizational system.
- Principle 12: Team training should be ongoing...

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CONCLUSIONS

- **Avoid Myths and Misconceptions...**
- **Rely on the Science...**
- **Apply the best it has to offer...**
- **Don’t try this at home!!!**

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