5. **Difficulty**

Simple ____________________________ Complex

Simple

-Little information to process and few decisions to make. A small number of sub-routines involved where speed and timing are not critical. The use of feedback is not significant. For example, sprinting

Difficulty

-have a high perceptual load leading to many decisions having to be made. The skill will have many sub-routines where speed and timing are critical, together with the significant use of feedback. For example, a tennis serve

6. **Organisation**

Low ____________________________ High

Low

-made up of sub-routines that are easily separated and practised by themselves. For example, swimming strokes

High

-movement skills where the sub-routines are very closely linked together and are very difficult to separate without disrupting the skill. For example, the golf swing

**The application of classification to the organisation and determination of practice**

-We classify skills because it tells us:
  - How to teach skills
  - How we can improve skills
  - How we can practise the skill

-The condition in which a skill is learned and practised should:
  - Be the same as those in which it is normally performed
  - Be determined by the nature of the skill
  - Ensure that positive transfer will occur

*Task analysis*- Analysing a skill using the classification system to gain an understanding of how that skill needs to be taught
<table>
<thead>
<tr>
<th>Type of guidance</th>
<th>Characteristics</th>
<th>Example</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Visual**       | - Helps the learner form their mental image of the skill  
|                  | Demonstration provides an excellent means of transmitting information about the skill  
|                  | Vision is the dominant sense and we learn through imitation  
|                  | Demonstrations need to be accurate and focus on important aspects of the skill  
|                  | Visual guidance can also be: video; charts; diagrams | - A teacher demonstrates a chest pass drawing attention to the hand position, extension of the elbows and transfer of body weight | - Very effective in the cognitive/early stages of learning  
|                  | - Allows learner to form an accurate mental image of the skill by viewing demonstrations  
|                  | - Allows skilled performers to analyse their performance | - Demonstrations cannot be too complicated or long/contain too much information  
|                  | - Demonstrations need to be very accurate  
|                  | - Static visual aids do not give information about movement patterns | | |
| **Verbal**       | - Most frequently used form of guidance  
|                  | - Often used in conjunction with visual guidance to direct learner to important cues  
|                  | - Needs to be clear and concise  
|                  | - Teacher has to get the information across to the learners and they have to understand it and relate it to the skill being learned | - Teacher/coach giving information on tactics and strategies in a team talk  
|                  | - Teacher tells the learner the coaching points they need to focus on in the chest pass  
|                  | - Teacher tells the learner the coaching points they need to focus on in the chest pass  
|                  | - Engaged finger position, flexed elbows, extended wrist, transfer body weight, extended fingers | - Effective in learning of open skills which require decisions – making and perceptual judgements  
|                  | - Most effective in the autonomous phase when information can be detailed and technical | - Amount of information has to be limited  
|                  | - Difficult to describe complex, it is learnt by the learner  
|                  | - Can become boring  
|                  | - Coach has to get information across and learners have to relate the information to the skill being learned | | |
| **Manual**       | - Involves the teacher or coach holding and physically manipulating the body of the learner through the correct pattern of movement | - Teacher supports the learner doing a handstand or guides the learner’s arm through a forehand drive in tennis | - Allows the learner to experience of how the skill should feel  
|                  | - Useful in the early stages of learning to allow the learner to develop a kinaesthetic sense of the movement  
|                  | - Very useful in giving confidence and ensure safety in dangerous skills  
|                  | - Allows the learner to experience the spatial and timing aspects of the movement | - The feel of the movement the learner experiences is different from the actual movement  
|                  | - These forms of guidance have to be removed as soon as possible so the learner does not become dependent  
|                  | - They are of limited use for the experienced performer  
|                  | - As they are designed to eliminate errors they do not give the learner the opportunity to correct mistakes | | |
The multi-store model of the memory process

-memory has three components shown above

Selective attention

-Focusing attention on relevant information we filter this information through to the STM
-enables the information important to our performance to be filtered and concentrated on
-Amount of information we can process is limited.
-Process of focusing on the important and ignoring the irrelevant also helps us to react quickly
-Sprinter focuses their attention on the track and the gun and ignores other athletes and the crowd.
-when we do focus on irrelevant information this is known as attentional wastage and affects a beginner’s learning and performance skills

Strategies to improve retention and rehearsal

-improve our ability to store information and to be able to remember it


<table>
<thead>
<tr>
<th>Strategies</th>
<th>How?</th>
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| Rehearsal/Practise | -need to practise or rehearse as much as possible.  
                  -do a lot of skill - as skill becomes ‘overlearned’ and has become automatic  
                  -it is thought that practice carries the skill image ‘to and fro’ between the short and long term memories establishing a memory trace.  
                  -this helps both retention and retrieval |
| Association/Linking | -try to link new information to that which the performer already knows  
                     -specific sports can be linked to fundamental motor skills; for example, throwing a javelin can be linked to over arm throw  
                     -helps learner mentally organise the skill  
                     -Linking parts of serial skills together both physically and mentally is really important. For example, a gymnastic sequence  
                     -should give learners 3 coaching point to remember when they go practise.  
                     -When mastered these 3 can be given more |
| Simplicity       | -given time to take in new information, which should be kept simple  
                  -more complex information can be added later  
                  -important that similar information/skills should not be presented close together as they may interfere with each other  
                  -beginners learning to swim, should not be introduced to two different strokes in the same session |
| Organisation     | -Information more easily remembered if organised in a meaningful way  
                  -Gymnastic sequences will be remembered more easily if the individual movements are practiced together in order that the performer links the end of one movement to the beginning of the next |
| Imagery          | -information can be remembered better by having a mental image  
                  -Demonstrations are really important in order that the learners are able to create an image of the skill in their mind  
                  -some coaches link images to words |
A dominant response is a response that is most likely to emerge when a performer experiences an increase in arousal.

High arousal would be beneficial to the performer at the autonomous stage of learning.

The dominant behaviour at this stage would tend to produce a response that is fluent and technically correct.

Conversely, the performance of a novice would be inhibited in conditions of high arousal.

High arousal also helps the performance of gross and simple skills.

**Dominant response** – the behaviour or response that is most likely to be given by the performer.

**Drive theory reductions**

- Term given to a loss of motivation that may be experienced by the performer.
- Reduction of motivation could happen if a skill has been previously well learned or the task has become tedious.
- Decreased motivation occurs if too much practice has taken place and the skill has become overlearned.
- Overlearning may lead to inhibition, which reduces drive.
- At this point, new goals or targets need to be put into place to re-motivate the performer.
- Drive reduction must be avoided when encouraging a young person to develop a balanced, active, and healthy lifestyle.

**Inhibition** - Mental fatigue or boredom that will cause performance to deteriorate.
Bandura’s model of observation

-psychologist named Bandura indicates that observational learning takes place only if the learner can put into place four elements:
  • Attention to demonstration
  • Retention to demonstration
  • Motor reproduction of the demonstration
  • Motivation to match the performance of the demonstration

-Attention: the learner must focus directly onto the model that is being demonstrated

-Retention: Image of the demonstration must be stored or retained by the learner if it is to be copied successfully. Verbal guidance will prevent information overload and help to hold the image in the short-term memory

-Motor reproduction: Learner must have the physical ability and schematic development to copy or replicate the skill that is being demonstrated

-Motivation: In order to reproduce the demonstration, the observer must have the drive or motivation to match the performance of the skill being modelled. External reinforcement of the demonstration will increase the motivation to replicate it

Reinforcement

-The process that causes a response or behaviour to recur by forming and strengthening the S-R learning bond.
-Two type of reinforcement:

Positive Reinforcement
  • After a successful response or desired behaviour has been demonstrated by the learner the teacher would present a show of approval
  • May be in the form of praise and is an intangible reward
  • Could also be presented as some other form of ‘satisfier’ such as a certificate and is a tangible reward

Negative Reinforcement
  • Involves withdrawing or taking away a negative stimulus
  • When learner eventually responds correctly the aversive stimulus of disapproval is withdrawn
  • It is not punishment
  • Weakens the incorrect learning bond but most importantly it also strengthen the correct learning bond. For example, when learning to dive in the water, most beginners experience pain on contact
  • When correct technique is acquired, pain is removed. Negative reinforcement has reinforced the correct diving technique
Varied Practice

- open skills best practised in a varying environment in which the situation is constantly changing
- allows performer to perform same task in a number of different ways
- For example, in order to improve the skill of slip catching in cricket the ball should be delivered to the fielder at varying heights and speeds
- also essential to invasion games
- For example, in a three on two attack on defence drill in rugby the varying environmental conditions will help to improve positional play and passing techniques
- will develop decision making and perceptual skills
- Player will also learn to adapt motor programmes in order to respond effectively to the situational demands
- Adaptations stored in LTM and this is how experience or the schema of the performer is expanded