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FEEDBACK AND THE COLLEGE COACH

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One of the main concerns of teachers and coaches is the ability to provide information to their students in a manner that will allow the student to learn the information as quickly as possible, retain the information for as long as possible and be able to transfer what has been learned from practice to a match play environment. In order to effectively produce these results a coach should be aware of several variables that will play a very important role and they are as follows:

1. *What is the most appropriate type of information to provide?*
2. *How frequently should one provide the information?*
3. *How precise should the information be?*
4. *What is the best way to provide this information?*

Type of Information

The coach has several types of information available when deciding what type to give to their players. Knowledge of results (KR) is information about the outcome of the performance such as how many serves out of ten went in the court. Knowledge of performance (KP) is information about the movement pattern. Transitional information is information relative to what was done incorrectly and what can be done to correct the problem. Due to the fact that the human system can process limited amounts of information at any one time, it seems logical that the coach would want to provide the information that focuses on the least amount that is important to the learning of the task. Even though information about the outcome and the movement pattern can be effective, the information relative to what was incorrect and what can be done to make a correction has been shown to be the most effective. This is particularly true when attempting to work on stroke production, or footwork, which are very complex tasks and can contain a great deal of information. By providing the transitional information, the coach will reduce the amount to that which is appropriate to enhance the learning of the skill. However, the coach must be careful to be knowledgeable about the topic and refrain from providing information that is not relevant to the learning of the skill.

FREQUENCY

One of the main variables that must be properly attended to is how frequently should one provide the information to the learner? Research has shown that the teacher should use a technique called vanishing or fading by which the information is provided on a regular basis early in the learning process and then gradually faded or vanished as the learner progresses. An example might be, if you are working on a skill in the early stages you might give feedback on every trial for the first 100 strokes, then on every fifth stroke for the next 200 trials and then every tenth stroke for the next 300 trials. This gradual fading of the information will force the learner to process the information on their own (problem solve) and allow them to develop their own internal learning strategies. This will develop a stronger and more accessible route between long

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term and short term memory, which will make it easier and quicker to recall information relevant to the production of whatever needs to be done. This can be utilized in the learning of a new skill or in an attempt to fine tune an already well developed skill by adding new information. The next step in this learning progression would be to ask the player to provide their own transitional information (i.e. they would have to decide what was wrong and how to correct it). This would once again force the learner to develop strong internal learning strategies and would be very beneficial when the player is placed in a situation such as a match where he/she has no coaching available and must make his/her own decisions about changes that may be necessary during a match. Even though dual matches consist of only six singles matches at any one time, and some teams will have an assistant coach to help on several courts; there will still be many times when the player will have to make decisions on their own relative to a change in strategy. This can become even more apparent during tournaments when the players are assigned to different sites during the same time frame. If the coach has allowed the team to problem solve on their own with some guidance, then the transfer to a match environment will be much more successful.

Precision

The research dealing with precision suggests that there is an optimal level of precision which is dependent upon several variables.

1. The age of the player

With college age players you can operate with a relatively high level of precision because they have developed the capacity to process information at this level

2. The stage of learning of the individual (are they just learning the skill or learning a new strategy or are they highly skilled)

Again, due to the fact we are dealing with players at a relatively high skill level, the level of precision can be relatively high. However, if the player is being asked to incorporate something new with something already learned, then the level of precision should be lowered somewhat until that information becomes a part of the skill

3. The complexity of the skill to be learned

As the complexity of the demands of the task increase, the level of precision should decrease due to the increased processing demands

How To Provide The Information

There are two basic methods of providing information available to the coach. The first is the use of verbal feedback with no additional aids. The second is the use of technology such as videotape replay.

When limited to strictly verbal feedback be careful to: (1) Not overload your player with too much information (2) Provide appropriate model or demonstration of what you expect them to accomplish.

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If you do have videotape replay available, it would be beneficial to know that research has shown that the use of videotape by itself will not be any more effective than not using the video unless several variables are controlled:

- (1) You must provide a model of the correct method of performing the skill so that the player has a mental template (something with which to compare their performance).*
- (2) You need to provide views from several different perspectives so the player can see what is occurring from different angles.*
- (3) Allow the player to see the tape several times to process all of the information.*
- (4) Allow the player to view the tape in slow motion in order to process the information more effectively.*
- (5) Of the most importance; the player must be given attention focusing cues (preferably via transitional information). The research strongly suggests that without these cues the player will not be able to focus on the relevant information and may indeed frequently focus on information that is not relevant to the learning of the skill.*

SUMMARY

Feedback can be a very effective tool in the arsenal of the college tennis coach if used appropriately. Provide the least amount of information that is relevant, use the fading or vanishing technique to control the frequency and allow the player to problem solve, keep the level of precision at the appropriate level and focus on the effective presentation of your information, and you will be using some of the important principles of motor learning to enhance your methods of preparing your team for match play.

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