

Practical Considerations for Giving Feedback

You might find some practical considerations helpful when providing extrinsic feedback. These include when to give feedback, how much feedback to give, how often to give it, and how detailed to make it.

When to Give Feedback

As long as athletes are attending to relevant sources of intrinsic feedback, they don't need (or usually don't want) additional information from you. Therefore, a good rule to keep in mind when considering when to give feedback is "When in doubt, be quiet." Recent research indicates that people profit more from feedback when they ask for it than when someone else (e.g., instructor, coach) decides they need it. Interestingly, these studies also show that learners are able to improve their skills with relatively little extrinsic feedback. In one study, participants who were instructed to ask for extrinsic feedback whenever they wanted it asked for it less than 10 percent of the time. Moreover, most of their feedback requests occurred during their first few learning sessions. These findings suggest that you should resist the temptation to provide assistance more frequently and instead allow athletes to practice their skills on their own. Of course, the more difficult the technical skill, the more likely they will want your feedback.

Least helpful for athletes is extrinsic feedback that is virtually identical to their intrinsic feedback. A gymnast who stumbles forward at the end of a dismount doesn't want to hear the coach say, "You over-rotated on your dismount." Therefore, your goal should always be to provide feedback only when athletes are unable to pick it up on their own. If the gymnast asks why she keeps over-rotating, this indicates that she does not know the reason and needs extrinsic feedback. If you have established good communication with your athletes (chapter 7), you should be able to discern when they need feedback and when they don't. Moreover, if your athletes enjoy open communication with you, they are more likely to request extrinsic feedback when they need it.

Since all learning involves some sort of problem solving, the most helpful feedback you can provide points athletes toward relevant sources of intrinsic feedback. For a softball batter, that feedback might be to focus on the feel of a level swing or on the relationship between the position of the hands and the direction of the batted ball. Once athletes are able to identify relevant intrinsic feedback on their own, they will need even less extrinsic feedback from you. Program feedback is more important during the beginning stage of technical skill practice when athletes are getting the general idea of the relative timing pattern of a movement, while parameter feedback is more important after athletes demonstrate that they can produce the fundamental pattern on a consistent basis.

The games approach to practice suggests that athletes need to be given the opportunity to develop their skills in an independent fashion and engage in their own problem solving. Only when they appear to be at a dead end in their search for solutions or when they stop practicing and ask for your assistance should you offer feedback. The powerful aspect of this approach is that it allows you to capitalize on those teachable moments when athletes are motivated to hear what you have to say and more likely to incorporate it after they do.

How Much Feedback to Give

The most important principle to remember when it comes to deciding how much feedback to give is "Keep it simple." Simple, however, does not mean simplistic. On the contrary, your feedback should provide athletes with the most helpful information possible. Keeping extrinsic feedback

simple means giving athletes the type of feedback that is most relevant at a particular moment. In other words, quality is more important than quantity. That way you will direct athletes' attention to the most important information without overloading them. For example, a beginning soccer player may need performance feedback about the rhythm of his leg swing during the kicking action rather than feedback about the various ways to change the speed and direction of his kicks.

The amount of feedback that is just right also depends on the experience level of the athlete. Extrinsic feedback for a beginning volleyball player should be restricted to one or two specific aspects of performance. If the player is learning how to set the ball, you might tell her to "keep your hands more relaxed" or "bend your knees a bit more" or "watch the ball." However, once the player has acquired the basic movement pattern for setting, you could tell her to "keep it softer and smoother" because the player would then know that "softer and smoother" means relaxing the hands, positioning the body, and anticipating contact with the ball.

Since athletes usually have more difficulty making program adjustments than parameter adjustments, be sure to make your program feedback simpler than your parameter feedback. A football quarterback might need to be told simply to "flick the wrist a bit more" (program feedback) to help him acquire the fundamental relative timing pattern for the forward pass. However, once he demonstrates a more consistent throwing pattern, the player could handle a more complex parameter feedback statement such as "Use more force and release the ball earlier," which would help him throw the ball farther.

Another way to increase the amount of feedback you provide without overloading athletes with too much information is to use summary feedback or average feedback after a practice session. Summary feedback tells athletes how they performed on each of several practice attempts, while average feedback highlights general tendencies in their performance. For a long jumper's last five jumps, summary feedback might be that his plant foot landed beyond the takeoff board on his first, third, fourth, and fifth jumps and on the takeoff board during his second jump. Average feedback for the athlete might be that his plant foot landed slightly beyond the takeoff board for the five attempts. An important issue to consider when giving summary feedback or average feedback is the number of performance attempts to include in the feedback statement. Generally speaking, the more complex the technical skill or the less experienced the athlete, the fewer attempts you should include in the feedback.

How Often to Give Feedback

Recent research suggests that more frequent feedback is not necessarily better when it comes to promoting skill development. In fact, many studies have shown that practicing without extrinsic feedback can actually be more beneficial than practicing with it. Possible reasons for performance improvements in the absence of extrinsic feedback are that learners are forced to do more of their own problem solving and they devote more of their attention to available intrinsic feedback. For example, a baseball outfielder practicing his throws to different bases begins to notice the flight path of the ball, see how close to the target it comes, and feel the sensation of the throwing action. He also begins to recognize errors in his performance and think about ways to adjust his throws. The outfielder might also learn that, tactically speaking, throws need to be directed to the cutoff player so they can be caught and thrown to another base if necessary.

Another problem that arises when feedback is presented too frequently is that athletes become dependent on it. Let's say, for example, that the outfielder hears feedback after each of 10 throws to different targets. If the feedback is "Keep the ball lower," what do you think the player will try to do on his next throw? Keep the ball lower. If he hears "Follow through better," he will

attempt to follow through better on the next throw. In other words, each time the player receives extrinsic feedback, he immediately tries to incorporate the feedback on the next throw. The problem is that by making these moment-to-moment corrections, the player is unable to achieve much stability in his performance. As a result, he doesn't learn as much about the relationship between what he is doing and the result that he is getting. Although the outfielder's performance may appear to be improving with more frequent extrinsic feedback, he is probably not learning why this is the case. When he ceases to get extrinsic feedback, the player's performance is likely to regress to its previous level.

In light of the pitfalls of too frequent feedback, you need to decide how often to provide it in order to facilitate rather than impair your athletes' skill development. One way to do this is to reduce the frequency of extrinsic feedback whenever you see your athletes becoming more proficient. For simple skills and tactics, you should be able to do this rather early in practice. However, for more complex skills, you will probably need to wait until your athletes demonstrate an acceptable level of consistency. At that point, begin diminishing the frequency of your feedback. If an athlete's performance begins to drop off, you can increase feedback frequency until it improves. As mentioned before, your goal is to provide athletes with the type, amount, and frequency of extrinsic feedback that forces them to attend to the intrinsic feedback—the feedback they sense themselves—that is relevant for successful performance. The more they do this, the better they will be able to perform in competition without your assistance.

The games approach and the available research on the optimal frequency of extrinsic feedback are in agreement that less is better. Therefore, a general rule is to provide feedback to your athletes more frequently during initial learning and progressively less frequently as skill levels improve. Since the quality of your feedback is more important than the quantity, you should always consider both the content and the timing of your feedback messages in order to provide the most helpful assistance for your athletes.

Delaying feedback also has some benefits. A primary aim of the games approach is the development of athletes who are capable of functioning independently. One way to help your athletes achieve this goal is to encourage them to evaluate their own intrinsic feedback before offering feedback yourself. You should give athletes sufficient time to think about what they did and what the result was. The more complex the technical or tactical skill, the more time athletes will need to evaluate their performance. This means you may need to tolerate silence for a longer period of time when you are asking them to evaluate something relatively complex. By challenging athletes to evaluate their own errors and come up with possible solutions before giving them feedback, you facilitate both their skill development and their capability of detecting and correcting their own mistakes.

How Detailed the Feedback Should Be

A final consideration when providing extrinsic feedback is how precise or detailed to make it. For example, you might tell a swimmer that his turns were "a bit faster" during a particular drill or that they averaged 0.5 seconds. Similarly, you might inform a volleyball player that her sets seemed to be achieving better trajectory during the previous game or that her outside sets were consistently achieving a peak height of 15 feet.

The research on feedback precision suggests that extrinsic feedback does not need to be extremely precise to be effective. This is particularly true during early learning, when athletes are just trying to get a general idea of the correct relative timing pattern. At that point, all they need to know is general information about the relative amount and direction of their errors. You might tell

a beginning high jumper that her takeoff was a bit too early. However, once she achieves a higher level of technical skill, the athlete would benefit from more precise feedback that helps her fine-tune her movements (e.g., the duration in milliseconds of her final two steps).

One way to promote technical skill development while increasing feedback precision is through bandwidth feedback. To do this, establish a performance bandwidth—the amount of error you will tolerate before providing extrinsic feedback. As long as an athlete's performance remains within the tolerance zone, there's no need to give feedback. Normally you'll want to allow a wider bandwidth and provide more general feedback for athletes who are learning a new skill than for performers whose skill level is more advanced. The bandwidth for a beginning softball pitcher, for example, would allow any movements that conform to the basic relative timing pattern. If they don't, a general feedback statement might be "Slow down the stride leg, and speed up the arm action." As the pitcher's skill level improves, the bandwidth would be narrowed so that feedback is given to correct even small performance deviations. If her stride length was a bit too short, you might tell her to increase it by an inch or two. Since bandwidth feedback allows you to give feedback less often, athletes derive the same benefits as they do any time you reduce feedback frequency (as discussed previously). What you need to do is determine a performance bandwidth for athletes that allows them to improve their technical skills as much as possible without your assistance.

This excerpt taken from *Sport Skill Instruction for Coaches* by Craig Wrisberg