

The Development of Sport Video Websites for Coaches, Teachers, and Athletes

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Sites

- CyclingAnalysis.com
- PerformanceVid.com
- PEvideo.org



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This project was initiated with funding by the Faculty Scholars Program of Eastern Oregon University, Summer 2005 and Summer 2008.

Rationale

Feedback. Athletes must have feedback to improve motor skills. The most important feedback is intrinsic to the athlete as they perform the skill (Hughes & Franks, 2004). The athlete's senses (e.g. vision, touch) and proprioceptors (i.e. muscle movement sensors) provide this intrinsic feedback concurrently as they practice and play a sport.

Augmented feedback is extrinsic feedback beyond what the athlete experiences intrinsically during the event. Video is a form of augmented feedback that allows the participant to re-examine their technique from an external perspective.

Another distinction to note is the difference between knowledge of results (KR) and knowledge of performance (KP). Knowledge of results is a motor learning term that denotes feedback to the subject about the end product of the movement. Examples include seeing a basketball go through the hoop, reading the final placement results in a racing event, or finding out the measured distance of a throw. Knowledge of performance is the feedback provided about the execution of a skill. KP examines the technical or tactical techniques displayed by the athlete particularly in relation to how this achieves the purpose of the intended KR. This project focuses mostly on knowledge of performance.

Video is a valuable medium for providing augmented feedback that allows the learner to examine movement patterns in a controllable and information rich visual presentation. Coaching and teaching experts recommend using video for both feedback and modeling (Liebermann & Franks, 2004; Pangrazi, 2007; Rink, 2006; Schempp, 2003).

Modeling. By viewing a vicarious performance, the athlete receives feedback to apply to their own performance. This is known as observational learning. Liebermann and Franks (2004) show that humans instinctively imitate each other and this motor responsiveness to visual examples may be a more efficient means of learning motor skills than other forms of augmented feedback.

The model examples allow athletes to examine critical elements (both good and bad) and enhance their learning. Franks (2004) recommends using expert model performers to demonstrate a skill. Conversely, Rose and Christina (2006) provide evidence that suggests learners may benefit from viewing models of varying skill levels. Videos of other athletes also serve as models for coaches to enter into dialog with their own athletes, and sometimes this intervention is necessary when athletes become passive in error detecting (Liebermann & Franks, 2004). Research strongly supports the effectiveness of modeling interventions for learners of all ages (Rose & Christina).

It is also recommended that coaches and teachers use video for demonstrations of skills during the teaching process (Rink, 2006; Pangrazi, 2007) especially when teachers have physical or skill limitations (Darst & Pangrazi, 2006). McCullagh and Weiss (2002) recommend the following modeling strategies:

1. Use methods that maximize the learners' (observers') selective attention and active rehearsal.

2. Help motivation by choosing an appropriate model (e.g. learning vs correct, coping or master, peer or self)
3. Ask learners to recall important aspects of the demonstration.
4. Videotape is the most practical and effective way to demonstrate because parts can be selected and replayed repeatedly and conveniently.
5. Provide feedback during or after demonstrations that impart information (e.g. focusing attention) or serves to motivate (indicates progress).
6. Overt and covert (imagery) modeling procedures may be interchanged.

Analysis by the professional. "The essence of the coaching process is to instigate observable changes in behaviour. The coaching and teaching of skill depends heavily on analysis in order to effect an improvement in athletic performance. It is clear . . . that informed and accurate measures are necessary for effective feedback and hence improvement of performance" (Franks, 2004, p. 12). Coaches and teachers--even ones with experience--often fall short in their sport skill analysis proficiency. These professionals should use video to practice and improve their recognition of critical kinematic features so they can provide appropriate feedback to learners.

A teacher must be able to adequately analyze a performed skill to reinforce the properly executed aspects and correct any deficiencies. Observation is the most common form of information gathering for diagnosis--simply watching your students perform the skill. Some skills are performed at such a rapid rate (e.g., baseball swing, springboard diving, pole vaulting) that videotape recordings using slow motion and stop action are necessary to get an accurate analysis of the performance. (Schempp, 2003, p. 123).

Reflection. Despite all of the aforementioned benefits of video and the popularity of online video content, very little instructional-targeted sport skill video exists online. This project is an attempt to improve sport movement analysis and feedback by providing quality instructional video online.

Teachers and coaches now have these resources available for improving their sport skill analysis proficiency, which is also a benefit for students. Future teachers preparing for entrance exams that require video analysis will also find the resources helpful. The sport video clips also provide a medium for coaches to enter a dialog with athletes. Teachers and coaches are being encouraged to participate in the project. The sites may also be used as a project for college students to record video and upload their own skills. And, the athletes that are filmed have the video available for them to view multiple times at their own convenience, as Rink and Franks recommend. Since the information will be available to everyone, its usefulness may go beyond the intended audience.

< Purpose

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Method >
