

Exercise & Sports Biomechanics
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Week 04
Lecture 16
My Dartfish Express

[Hello, everyone! Welcome back to this course on exercise and sports biomechanics].

In the previous video, you explored different qualitative analysis tools in Dartfish, such as single-video qualitative analysis using annotations. The second one is the comparison video using the edit module, stromotion, simul cam, and the action module. As a coach or sports biomechanist, if you wish to provide live feedback for athletes, you can replicate a similar setup. In this example, the athlete is performing the squat, and then he walks towards the monitor to watch his entire performance.

As we discussed before, we need a laptop plus Dartfish software and a web camera connected directly to the laptop. Additionally, to watch the entire performance on a bigger screen, I have connected the monitor to the laptop. The athlete will perform the movement over here, and then he will move towards the monitor to watch his own performance.

Similarly, there is another tool in Dartfish to provide qualitative analysis and immediate feedback, which is **My Dartfish Express**. It is a mobile application. It can be accessed on both Android and iOS devices. Let's explore it, but before that, you need to install the mobile application on your device. To do so, first go to the Google Play Store and install the **MyDartfish Express Coach app**.

Once you have installed it, log in to the email that you registered for installing the Dartfish software on the laptop version. Wait for a while; the videos will sync with the Dartfish cloud that is provided to you. And you are ready to use My Dartfish Express. This is the home screen of My Dartfish Express.

Let us first understand its functions:

In the top left corner, there are three lines. Once you click on that, you will get multiple options. I will turn my mobile to a horizontal position so that you can visualize things much better. The first one is My Video. Once you click on My Video, you will be directed to the home page.

The second one is My Collection. I hope you can now remember what you have already practised in the Dartfish software. Where you have a cloud collection, and I hope you remember that we have already created a folder called NPTEL. If I open that, I can access all three videos that were already synchronized when we initiated this software. I will go back to the same three lines, and if you have any specific favourites, then they will be displayed over here. And lastly, there is an option called settings. And if you move down, there is an option called drawing tools measurement unit. If I select the measurement unit,

I can change it from meters to centimetres, whichever is convenient for us. So, if I want to change the measurement unit to centimetres, I just click on that and then go back to settings.

You will be directed to the home page. And on the right side, you have a search bar. If you have a multiple list of videos, then it would be really beneficial. And the last option is the cloud collection. [So, how many videos are there in the cloud?]

That information will be displayed over here. If you look very carefully, there are two options. One is the local collection, and the second one is the cloud collection. If you are recording any video from the mobile itself and if it is stored only on the mobile, then it is the local collection. Once you have uploaded the video to the cloud, it will be considered a cloud collection.

So far, we have three videos on the cloud. As and when the number of videos in the local collection increases, If you press the button 'Synchronize,' then all the videos will be uploaded to the cloud collection. If I press the button 'Synchronize,' it immediately shows the status as up to date. If you do not want to synchronize the video, there is an option called 'Cancel.'

Just press the button 'Cancel.' It will go to the home page. Or, once you complete the synchronization, just click outside anywhere on the pop-up window. It will redirect you to the home page.

Next, in the right-hand bottom corner, there is a plus icon. Once you click that, you can see three different icons. The first one is the IP camera. Once you click that, It will search for the IP camera to see whether it has been added or not. Here, we do not have an IP camera, but we should understand how it works.

If I press the setup button, you will see an option called scan. If I press it, it will search for the cameras. The device is found, and it can be connected via Wi-Fi so that you can feed the data wirelessly. I am going back to the home page. Again, press the plus icon, and you can notice that there is a camera symbol over here.

Once you press that, you can record the video from the local device, which is from your phone. The last option is to access the videos from your local devices. For example, if someone is recording a video or if the athletes are recording a video and, as a coach, they are sharing it with you from your local device, you can access those videos and provide a better analysis.

If I click the icon, you can access all the videos on your device. If you select any video that you want to import, once you have selected it, at the bottom right corner, there is an option called add. Once you press that, you will get the timeline where you can crop the video initially, and on the right side, there is an option called plus. Once you press the symbol, the video will be imported into the MyDartfish Express app. If I press the back button, now you can see four videos on this device. If you look closely, you will notice that there is a mobile symbol in the first video, which means it is available only on the local device, which is your mobile. And if you notice the other three videos, there is a cloud symbol, which means all these three videos are in the cloud. Once you click the first video, the first option

is the local collection. If I click that, you can see there are multiple options, and the last one is the NPTEL.

If I select that and then press the move button, the video will be synchronized to the cloud. Now, you can notice a symbol. It has changed to the cloud. I will go back to the home page. And again, if you look closely, the first image is available both on the local device and on the cloud. The remaining three videos are available only on the cloud. This will give you a clear picture of where the videos are located.

[Next, we move on to the analysis part]:

You can select any video that you want to analyze and press the play button. The new window will open. In the analysis window, before analyzing the video, you need to explore all the functions. The first one is the play button at the bottom left corner, which helps you to play the video or skip the video. The next button is to reduce the video's playback speed. You have two options to play the video in slow motion. The one that you are currently seeing in the video is the normal speed, which is 1 by 1. If I press once, it will change to 1 by 2, and again 1 by 4 will reduce the speed of the video. Let us check the speed of the video now.

You can see how slow the video is compared to the previous one. In the middle, you have a jog wheel to play the video forward or backward. With the help of the jog wheel, you can move frame by frame and explain the video to the athletes much better. Lastly, in the bottom right corner, there is a camera symbol where you can take a snapshot, which helps you to create an event. On the right-hand side of the video, you have tools to analyze. Once you click the first one, you can explore that there are multiple drawing tools available for analysis. The second one is to choose the color and size of the lines to draw on the screen. The third one is to undo and redo the action. For example, if I am drawing one arrow, I can undo that action and redo the action.

Lastly, you can clear all the drawings by clicking the clear button. Let us try with the same example. I will move to the set position. The first step is to take a snapshot. Above that, I will mark the head position, indicating it is not straight, which leads to excess drag. Second, I will move to the power position and take a snapshot again. You can clearly see the line of force is not appropriate. You can see the left foot position. I will zoom it. You can clearly see the heel drop on the left foot. I will take the snapshot again. So, it will save into the events.

[Next, we move on to the event]:

We have created three events with three different still shots. The first one, if you notice on the left side, is the timeline exactly going into the set position. On the right-hand side, this clearly mentions a double tap to add the description. So, I will double-tap that. I will change the orientation and head position.

I am going to the second. It's the power position where the athlete has to work. The third one is the heel drop. Once it is done, press the back button. Now, at the top right corner, there are three dots. Once you click that, you will get multiple options to share the video. As we discussed before, move to collection. You can send the video to your cloud, or you

can publish it on the Dartfish TV channel. The advantage here is you can share the video by selecting the link. via WhatsApp or email or any other mode. You can share the video with the athletes or coaches. The next one is the analysis recorder, where you can record the audio and provide feedback for the athletes.

Lastly, you can compare two videos for that. You need to click at the top left corner, which is a button called A and B. Once you click that, a new window will pop up to choose the second video. So, I will choose the first one. At the bottom, you can see the jog wheel, You have a separate jog wheel for each video, and there is a yellow line at the top for the two different videos.

I will move the left video first to the set position before initiating the movement. Now I am moving to the second video. Once it is done, press the lock symbol, and then press the play button. Now the video is synchronized.

From here, you can replicate the same steps and provide feedback for the athletes. For example, you have shared the Dartfish link with the athletes or coaches for feedback. What happens if they do not have the Dartfish application on their mobile? How will they watch these videos? The videos which you have analyzed were saved in the cloud.

Athletes and coaches can access these videos via a browser. Athletes can play the video and, in addition, if they select the event button, the feedback given by the biomechanist or coach will be very clear.

With this, we have covered all the different methods of qualitative analysis. Try to utilize the software to the maximum, and if you have any doubts, feel free to communicate via the question-and-answer forum.

[So, thank you. And see you in the next video.]