Getting the Most Out of Craftsbury

Welcome

This abridged version of the Craftsbury Sculler's Handbook will give you important information about our program, how to get the most of out your sessions while you are at camp, and information on sculling technique.

Tips for Having Great Sessions

These tips will make your sessions on the water as productive and enjoyable as possible:

- Wear comfortable clothes that are not too baggy or long, especially sweatshirts that can get caught in your oar handles and shorts that get caught in the seat wheels.
- If it cold or raining, dress warm enough. You should wear a hat to keep body heat in or in the boat, toss a sweatshirt over your toes to keep them warm.
- If it is hot and sunny, wear a hat with a visor, sunglasses, and sunscreen while on the water.
- Make sure you are well fueled. Eat enough (usually not a problem at Craftsbury!) and take water with you in the boat each session to avoid dehydration. Even in cold weather you can be dehydrated without really feeling the need to drink.
- Drink water every 15 minutes while you are training out on the water.
- Watch your steering and follow the traffic pattern to avoid collisions and injury.
- Work on only one technique point at a time. Technical work requires a great deal of concentration. Master one element before moving onto the next.
- Tell coaches what you want to learn and what helps you learn the best; what is your learning style; demonstration, verbal, or shadowing?
- Ask any staff member for help if you need it.
- Stretch briefly after every session to relax your hamstrings and lower back muscles. Better not to skip this.
- Take naps during the day to stay rested.
- Give yourself recovery time with swimming, a sauna, or a massage.
- Keep a logbook with the details of each session.
- Take time to enjoy learning.
- Enjoy yourself.

Safety on the Water

Safety is important. Pay attention to your steering when you are on the water. See below for the traffic pattern on our lake. When another sculler is coming up on you make sure they are aware that you are in their path- in case they don't see you.

Traffic Pattern

Follow the traffic pattern on the lake to decrease the risks of collisions and tree snags. The lake is an hourglass shape, 2.2 miles/3100 meters long, with the "narrows" half way down. Stay directed with your starboard (left) side to the shore; traveling counter-clockwise as you look up the lake. Follow the shoreline through the narrows to avoid getting on the wrong side and into the path of downstream scullers. Do not stop in the narrows. It is easy to collide with oncoming scullers.

Around the Boathouse and Boat Handling

Good boatmanship is part of sculling. Please observe the following when taking care of your equipment during camp.

- Carry your boat with a partner.
- Report breakage or boat damage to our fleet manager.
- Carry oars blades first, avoid getting the grips sandy or dirty.
- When taking the boat in and out of the water, observe that the fin on the bottom of the boat does not hit the dock. DO NOT set a boat on the dock.
- Avoid tracking sand into the boat from shoes as it damages tracks and wheels.
- Follow the traffic pattern
- Boats go into the boathouse stern first.
- Wipe your boat after each row.
- Take good care of your boat.

Elements of Sculling

Definition of Technique

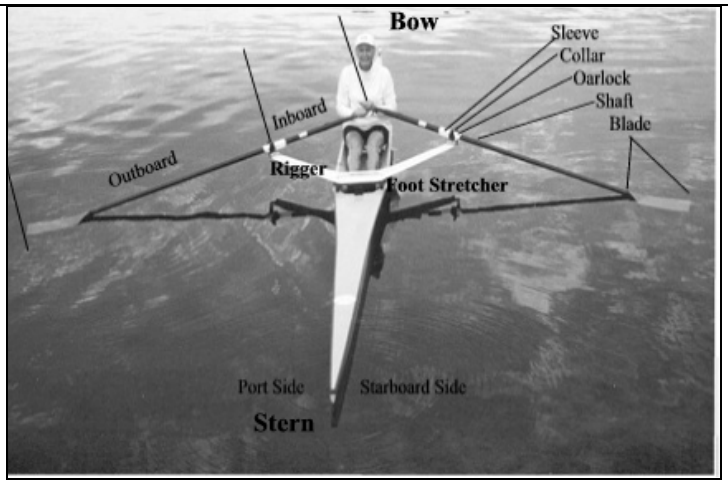
Technique can be defined as *the method of performing the stroke*. It is how you move the boat. Developing your ability to execute the cyclical rowing stroke in the most efficient manner increases your likelihood of achieving personal satisfaction and good competitive results while reducing the risk of back or rib injuries. The more mastery you have the less energy required to realize a specific goal. Good technique is directly related to high economy.

The Steps of Learning Technique

Ref: Skillful Rowing, McNeely/Royle, p.89

- Proper handling of the sculls with minimal power application. Developing basic maneuvering of the boat.
- Mastery of the sculling motion in a wide beam boat or team boat. Emphasis on learning the drive and use of body weight.
- Transitioning to balancing a racing single with medium power application.
- Command over a racing single with technique maintained under various weather and water conditions.

Parts of the Boat and Oars



Three Key Principles

Ref: Biomechanics of Rowing: Coach Boat View, Volker Nolte; Rowing Canada Aviron Winter 2002

1) Good Posture: Good posture reduces the probability of losing any force through movable soft parts of the body and prevents injury at the same time. Good posture means a strong and solid body positioning but not stiff. The famous coach and inventor of modern rowing technique, Steve Fairbairn, called it “freely erect” posture-horizontal chain and keeping the head and shoulders moving on one level during the whole stroke are main indications when the rower does it correctly. If this horizontal movement of the head and shoulders is achieved, the center of gravity of the rower moves minimally in the vertical direction, conserving energy, and maintaining the run of the boat.

Rowers with good posture put themselves in a position to transform all their forces onto the handle, maintain a large force over the whole stroke, and produce a high peak force. Although good posture is necessary during the whole stroke, it is most important at the entry and at the release. In these positions, the rowers can gain the necessary length of the stroke arc and stabilize their bodies to avert injuries.

The length of the stroke depends on several factors: the size of the athlete, the fitness of the athlete, the boat class, the length of the oar etc. The larger and stronger the athlete, the faster the boat, and the shorter the oar, the longer the stroke must be! However, the athlete must always maintain good posture.

2) Correct Use of Hands: The hands are the direct connection of the rower to the oar. They have the function not only to transform all forces but also to guide the oar and thus the blade. At the entry, the hands must be loose and quick to get the blades in the water in the shortest time. In the next split-second they, they have hold onto the handle and transfer the force from the kicking legs to the blade. During the release, the hands have to direct the blade quickly out of the water and execute the feathering. Therefore, the oar must be placed in the fingers (not the fist). During the recovery the fingers are relaxed and loose around the handle, ready to perform the quick entry with a little flick of the wrists. Then they hold onto the oar with flat wrists until the thumb completes the feathering movement.

Correct use of hands also includes continuous movement of the hands, the handle, and the whole body. Pauses (like in the release) or particularly fast movements like rushing the hands out of the release) are to be avoided. World-class athletes always look 'smooth' while rowing even when the boat is going fastest. Smooth movements are an indication that the speed of the motion does not change abruptly.

3) Bladework: The best propulsion is produced when the blade is completely surrounded with water. Obviously, the blade should have no contact with the water during the recovery. At the entry, the blade is guided into the water with the least amount of splash. Any splash is inefficient energy expenditure. Especially, a back splash actually slows the boat down. This means that the speed of the entry must increase with the speed of the boat. For example, the blade can be placed in the water at any speed for the first stroke of the start (boat velocity=0), but the rower has only a few hundredths of a second to do the same to do the same movement when the boat is in full speed. The main direction of force on the blade should be horizontal. Therefore any vertical movement of the blade must be avoided. Only at the end of the stroke does the blade have to be directed out of the water. To do so, it is best to create a pocket behind the blade by moving the blade gradually out of the water while still applying force. This pocket allows the blade to be finally detracted from the water without "entrying" water on the back of the blade.

Technique vs. Style

Ref: Skillful Rowing, McNeely/Royle, p.89

Throughout technical discussions it is important to make a clear distinction between technique and style. Technique training is based on a model of the ideal rowing stroke and this frame of reference forms the rudiments of teaching the skills involved. Coaches and athletes collectively must have an understanding of a model that maximizes both biomechanical and physiological needs. A technical model must also be flexible as developments in equipment or new scientific findings may influence current thought and practice. A model is malleable.

The elements of technique refer to learning the parts of the stroke. Correct practice of the stroke as a whole in combination with drills is how those elements are learned. The manner in which an individual performs the stroke can be termed one's style. Style incorporates distinct ways of executing *the fundamentals of an accepted model of the rowing stroke*. It may include traits of the athlete or coach's character and personality or be a specific way of performing a movement that is defined by the rower's anatomical or physiological nature.

Because you have your own individual requirements to meet the technical challenges posed by the rowing stroke, use caution when attempting to directly imitate the technique of champion rowers or scullers. A champion's style does not always represent a perfect model of the stroke. Their style is the result of how they have solved their own technical issues. Study their technique as an example of how he or she has developed their own highly proficient, personal style that successfully executes the elements of the rowing stroke. Use your observations to influence your own individual needs.

Factors Affecting Technique

Ref: Skillful Rowing, McNeely/Royle, p.91

Physical preparation, how fit or strong you are, has a major influence on your technique. In order to execute the stroke correctly one needs to have adequate leg strength, core body strength and cardio-vascular conditioning. Poor physical conditioning will limit your ability to acquire new skills and decreases your chances to maintain proper technique under the stress of fatigue. Technical deterioration is often the result of a decline in physical fitness. For example, without core trunk stability and lower back strength it becomes very difficult for one to maintain posture through the drive often causing the body weight to collapse at the finish of the drive. In another case, without leg power a sculler cannot properly initiate the acceleration of the body weight that is an essential component of the stroke.

Lack of flexibility can also be a limiting factor in achieving good technique. The compressed lower body pose of the catch requires both hamstring and low back flexibility to meet the demands of the position. Either leg compression or upper body posture is compromised when flexibility is lacking. Poor hamstring elasticity will affect your ability to set your body preparation after the release while keeping your legs extended. Flexibility can be improved with practice and it is to every

sculler's benefit to incorporate some stretching into daily training sessions. Improper rigging is another factor than could affect your technique adversely.

Tips on Correcting Faults

Ref: Skillful Rowing, McNeely/Royle, p.134

- Identify the faults to be corrected; isolate the components of the stroke to be remedied.
- Prioritize the primary fault to be corrected.
- Give immediate attention to correction of the fault; an athlete needs to understand the implications of the fault.
- Work on one fault at a time.
- Once the fault is eliminated, the replacement element needs to be demonstrated and learned. The athlete needs a model to learn from.
- Practice the fault correction early in the practice, right after the warm-up so fatigue doesn't interfere with the learning process and concentration is better.
- Avoid working on fault correction late in a practice session when fatigue is present.

Getting back into the boat from the water

Ref: Craftsbury Website: Tech Tips, March 2003

With few exceptions, most single scullers fall out of their boats during the course of their rowing careers. Collisions, breakage, catching crabs, or losing an oar can all be reasons. If you are just learning to row a single, tipping out of the shell can be a common event. Knowing how to get back into your boat from the water is important. First, if you tend to scull alone and do not have shores you can swim into-the skill of climbing back in can be an important safety skill. Second, knowing you can handle yourself in the event that you do fall in builds confidence that will help you become more comfortable in your boat so you can relax and learn technique better. Third, if you row in cold water, being able to handle yourself and the boat quickly can prove critical in a dangerous situation.

Here are suggested steps to get back into your boat from the water:

1. Hold onto the boat once you are in the water. Never leave your boat and try to swim. The boat and oars will float you. Come up near the rigger.

2. Stay relaxed; breathe.

3. Make sure that the boat is righted with the seat up. If you rolled the boat so it is upside down, press down on the rigger nearest you to begin to roll the boat, then reach across and pull the other rigger down towards you so the boat will be right.

4. The oar closest to you should be all the way into the oarlock and the blade flat on the water so it can support you. Hold this handle down in the boat with your hand nearest the foot stretchers.

5. Next, you need to get the other oar handle so you can hold both handles in the bottom of the boat. You may need to jump up or reach to get the other handle but you must get both handles together in one hand before you can continue.

6. Push your seat towards the bow.

7. Hold both handles in your hand closest to the foot stretchers, and with your other hand reach across to the gunnel. You will need to keep pressing on the handles.

8. Kick and jump into the boat as if you are getting out of a swimming pool onto the deck of the pool. You need to be focused on getting the weight of your hips over the boat and into the seat deck. Avoid trying to pull yourself into the boat.

9. Once your hips are in the boat, you are stomach-down, kick again, turn and sit, letting your legs dangle over the side of the boat still. Don't let go of your oar handles here.

10. Raise your oar handles up to right the boat.

11. Make sure both blades are flat on the water and you are stable.

12. Swing your legs in the boat.

13. Put one foot back and scoot back on the seat.

14. Put your feet back in the shoes.

15. Practice it again!

If you row a wing rigger boat or a boat without back stays this method will work well. If you have trouble getting your hips into the boat you may need to do some upper body strengthening. For boats with back stays, some scullers carry a terry cloth wrist band on their oars and can use it to hold the handles together in the event that they need to straddle the boat and get back into the seat deck from the bow. Whichever method you choose feel that you know what to do in case you go in the water. If you do not want to practice in your own boat use a training single or a more stable boat to learn how to get back in.

Maneuvering

Rowing circles with one blade: Start from the finish position, blades flat on the water, boat balanced. Row with one oar only, leaving the other oar feathered on the water for stability. The stabilizing oar handle should be held against the body. Follow the blade with your eyes to see the effect of your actions through the water. Try placing the blade in the water, letting the handle go free to see the natural depth of the blade, and then placing your hand back on the handle to "follow" the movement of the oar. Row yourself in a full circle with one oar and then switch and row around in the other direction with the other oar. Use the least possible power and a loose grasp.

Stopping: Learn how to stop rapidly. From a moving position, at the release, square the blades and press them into the water for a "braking" effect. Lean your body against the handles if needed.

Backing: Backing is when you move the boat towards the stern. First begin by practicing gliding up and down the slide keeping the blades slightly tilted on the surface of the water. Then practice backing with one hand only, the other rests near your body. Start from the finish position, square one blade in the water, letting the blade float; push your hands away from your body. At the end of the stroke, turn the blade feathered with the concave surface facing the water so the tip of the blade skims the water as you bring your hand back to your body. Try 10 strokes and then switch to the other hand. Then use both together. When you are comfortable with the backing motion you may add in slide length as you push away to make the stroke longer. Work up to backing for 50 strokes.

River Turns: Once you are able to back the boat down, you are ready to learn a river turn. You move your hands together but alternate the position of the blades. Using arms/body only, push your hands away from you with the port blade squared and the starboard blade feathered on the water; port backs, starboard is feathered on the water. Then take a stroke with the starboard blade as the port blade is feathered and skims the water; starboard rows, port is feathered. When you have mastered this you can lengthen your slide to take longer strokes. This is a quicker, more efficient way to turn the boat than simply rowing yourself around with one oar, especially if the water is fast or there is strong wind.

Steering:

- Look for important landmarks to line up your stern for various sections of a course in order to point the bow in the correct direction.

- Make steering corrections when the blades are in the water. Scullers can change their course by altering the extension of the handles at the catch. Slightly lengthening the arc of one oar handle will allow the boat to turn to the opposite direction at the initiation of the drive. This will keep disturbance of the drive phase to a minimum.

- Check your course by glancing over your shoulder during the drive if you are in a sculling boat. Some scullers also prefer using a mirror mounted on a hat or headband. Practice the alternation of looking over right and left shoulders for 10-20 strokes during steady rows to get comfortable with this. In a race situation, look out of the boat only as much as you need to for safety, steering, and passing other boats. Excessive steering will decrease your boat speed.