



14 OPEN CANOE

The open canoe is an infinitely diverse craft, being used today for anything from day trips to full on expeditions over weeks in remote wilderness areas. Recreational canoeing has evolved and adapted from a variety of practical uses and consequently there is a whole suite of skills for open water, moving water and journeying.

The Canoe Coach, perhaps more than any other discipline, has an incredibly broad scope, and for newly-fledged coaches the number of skills that need to be honed can be quite intimidating. But take heart, because like any coach in any discipline or sport your knowledge base grows and grows with experience. Always keep in mind the important role you as a coach play in developing canoesport.

WHERE TO START

First you need to know your group. Their technical ability, depth of knowledge, understanding and prior experiences determine your starting point. Discovering where their motivation lies guides the scope, content and environment. Homing in on their main learning style(s) will guide you into the most effective coaching approaches. Your informal chats with students (remember to listen) will give a lot of information, and using a combination of unstructured and structured observation in introductory sessions will provide the rest.

Choice of venue is key to running successful sessions. It is easier to plan sessions for sites you know well, as the site provides an outline plan of where to coach

what. For unfamiliar venues you have to react more to what the site or voyage offers, using more demonstrations so you can assess suitability of sections for any given exercise, and leading from the front more.

Above all our job is to motivate and inspire our students. Coaches should focus on a holistic approach to developing students. Ask yourself why a student needs to acquire a skill and where will they use it in the future? Focus on helping students understand why they do things (i.e. process) and where and when, not just what and how. Vary exercises as much as possible to maintain interest and help ingrain learning.

I firmly believe that skilled coaching is about a set of ideas and themes for delivering sessions, rather than how to do strokes per se. This holistic approach is

primarily paddler-centred and the truly skilled coach takes their students from point A to point B in a seamless transition where the student is not even aware of the process.

Key Themes

When coaching canoe I return again and again to several key themes, which are fundamentally important for the learning process. Symbols are used throughout this chapter to highlight where they come into play:



Students should practise strokes on **both sides**. This is called bilateral transfer. See Chapter 1 Coaching.



Bow and stern paddlers should **swap over** in tandem. This develops a full stroke repertoire and a deeper understanding of how paddlers' actions affect canoe movement. It also provides a smoother transition for those who wish to progress to solo paddling.



Communication and teamwork are essential skills for tandem pairs. As paddlers learn and consolidate new stroke combinations and practise in new and more challenging environments, the coach may need to reinforce these key skills.



Having learnt the basics of a new skill it is important to apply and develop further on a **journey**. The onus is on the coach to find venues to challenge students, allowing them to experiment and fine-tune Boat, Body, Blade elements, power, etc. In other words it's all about mileage!

▶ BOAT, BODY, BLADE

BOAT (Trim)

The canoe's sheer size means that Boat, or correct trim, becomes far more significant in an efficient and skilled performance. Hence, the order of priority for canoeing is 'Boat, Body, Blade'.

As coaches we focus on how total body weight and weight distribution in the canoe affect trim, because these are the factors we can easily influence. We should also be aware of the impact manufacturers have on trim, particularly through design and position of seats. For example, take the GP canoe typically found in outdoor centres and clubs.

Seats are often:

- Fixed high above the floor, which raises paddlers' centre of gravity and reduces stability.
- Fixed too close to the stern and bow, which creates a very confined space for the bow paddler, and throws the stern paddler's weight back, affecting trim.
- Shaped moulded plastic, which encourages students to face forwards, which conflicts with learning and maintaining correct body position.

Encourage your students to experiment with seat position, height and angle to find the best set up. Boat settings are personal and you and your students will benefit if you dedicate time to kitting your canoes out properly.

Trim is generally adjusted through a choice, or combination, of:

- Paddler(s) leaning/moving forwards or backwards.
- Paddler(s) actually moving, using kit bags to sit on if necessary (major adjustments).
- Moving kit bags forwards or backwards (minor adjustments).



COACH'S TIP

- Moving back from students gives a visual on their canoe and you can move paddlers and/or kit bags around until the trim looks right.



Photo 1 Canoe well trimmed - stern slightly heavier than bow.



Photo 2 Canoe badly trimmed - bow heavy and digging into water.

BODY

The beginner most often orientates their body to face the bow. This needs to be corrected from the outset as the body blocks the full path of the paddle and severely hampers the development of effective and efficient strokes.

Encourage them to rotate knees and upper body towards the gunwale on paddling side. This allows maximum upper body rotation during stroke sequence and importantly uses the skeletal system and strongest muscles to provide power. Strokes can now be performed with maximum efficiency, which is crucial for preventing muscle fatigue on long journeys.



Photo 3 Tandem paddler rotated towards gunwale on their paddle side. Photo 4 Orientated facing the bow.

Beginners often sit centrally in the canoe as this makes them feel stable. They should be encouraged to sit slightly off-centre and low in the canoe.

Encourage them to shift bottom (and body weight) towards paddling side. For tandem paddlers this allows a more upright, and therefore more efficient, paddle stroke. For solo paddlers this allows them to edge the canoe, presenting a slimmer keel-line to the water, which reduces drag, and is invaluable for journeys on flat water and easy flows.



Photo 5 Good - tandem paddlers sitting close to gunwale on their paddle side.

Photo 6 Bad - tandem paddlers sitting on centre line.

BLADE

The vast variety of strokes and stroke combinations makes open canoeing a never-ending voyage of discovery. For the coach this variety presents a challenge in its own right, which is why I adopt a holistic approach, focusing on sets of skills needed by students to go on a journey, rather than on the individual strokes.

► COACHING TANDEM

COMMUNICATION & TEAMWORK

The most experienced coach in the world is doomed to fail if they can't get tandem pairs working together effectively. I cannot stress the importance enough,

except to say that I return again and again to communication and teamwork throughout my own sessions.

Coaching Progressions:

✔ Tandem pairs face each other in the canoe. Paddlers can introduce themselves. Get one to paddle forwards and the other backwards (don't worry at this stage about the canoe going in circles).

Benefits ► Develops timing; provides reinforcement for visual learners; and introduces peer coaching.

✔ With paddlers in normal seating position, get them to initiate strokes by tapping their paddle shaft on the gunwale:

- Forward and reverse strokes
- Forward and reverse sweep strokes
- Draw strokes – first on same side and then on opposite sides

Benefits ► *Develops timing; provides input for audio learners; and can be repeated as necessary - timing often falls apart when new strokes and stroke combinations or sequences are introduced.*



✔ Have students sit facing each other in the centre. One student holds the top-hand position of both paddles, whilst the other holds the lower-hand position of both paddles. Have them 'row' forwards and backwards.

✔ Have students move around in the canoe changing positions.

✔ Have students sit on gunwales in centre of canoe with hands linked, and both lean out over the water, counter-balancing each other (trust game).

✔ Have one student gunwale bobbing, standing either on the floor or on the gunwales.

Benefits ► *Develops a high level of trust between teams, since the consequence of getting it wrong is likely to be a wet one!*

ROLES IN THE OPEN CANOE

Bow and stern paddlers each have distinct roles.

The **bow** paddler is responsible for:

- Route choice.
- Timing and pacing of strokes.
- Decision making for, and initiating of, major changes in direction.

The **stern** paddler is responsible for:

- Providing power (momentum) to assist the bow paddler's strokes.
- Minor corrections to direction to maintain a straight running course.

Without wanting to over-generalise, the coach often witnesses the scenario of male/female tandem partnerships, where the man takes the stern seat and assumes the status of decision-maker. Whilst often providing the ideal trim (with the heavier paddler to rear and lighter paddler to front), it does not permit effective development of teamwork and skills development.



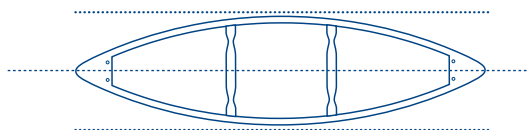
COACH'S TIP

- Set a square or triangular course and have tandem pairs follow it first with the stern paddler carrying out steerage, whilst the bow paddler provides power only; then swap roles.

► OPEN WATER SKILLS

STRAIGHT RUNNING

Every time the coach moves onto new skills, elements of Boat, Body, Blade will need adjusting. In the case of forward paddling, good body position and an evenly balanced canoe are essential (see above). Beginners will benefit from visualising the paths of the bow and stern paddle. Drawing a diagram in the sand or using a waterproof notepad can be very effective. Correction should be introduced from the outset as appropriate, applying a short stern pry (similar to stern rudder).



COACH'S TIP



- When swapping bow and stern roles, rather than physically moving up and down the boat, paddlers can turn on their seats to face the opposite direction, adjusting trim accordingly.

TURNING THE CANOE

Coaching Progressions:

- ✓ Have teams perform sweeps, with bow paddler using a forward sweep and stern paddler using a Reverse Sweep (and vice versa).
- ✓ Have teams experiment with edging to assist turning.
- ✓ Introduce sweeps on the move, combining with other strokes.



COACH'S TIP

- Make sure students look in the direction of travel. (There is a particular tendency with sweep strokes for paddlers to focus on the passage of the blade through the water and if this is a forward sweep this will edge the canoe the wrong way.)

- ✓ The coach stands in the canoe or on the bank and holds his/her paddle pointing skyward. As students paddle towards you, let your paddle swing down to left or right and they have to respond with the appropriate sweep strokes to turn in that direction.

- ✓ Have teams paddle in a square clockwise and then anticlockwise.

- ✓ Play 'follow my leader' or 'mother duck', with coach or assistant initiating a series of zigzags, which become progressively tighter and tighter as students become more proficient.

MOVING SIDEWAYS

This section focuses on specific skills for bow paddlers. Coaches often introduce cross-deck strokes much later. Personally, I find it is a natural progression to develop cross-deck draws in tandem with draw strokes, as it is easy to adapt the draw/cross-deck draw into a bow-cut/cross-bow cut.

Coaching Progressions:

► Bow Draws

- ✓ Paddlers practise draws on the same side as each other.



Paddlers practise draws on opposing sides.



Once proficient in a stationary setting, students should practise on the move, with bow paddlers changing direction using draws and stern paddlers assisting with forward sweeps.

► Cross-Deck Draws



Repeat draw stroke exercises, but in the third exercise the stern paddler now assists the bow paddler's cross-bow draw with a reverse sweep.



COACH'S TIP

- In the Cross-Deck Draw, the body tends to block recovery of the paddle, so get paddlers to slice the blade forward (and out) at the end of the stroke.

► Bow Cuts/Cross-Bow-Cuts



Repeat the draw stroke exercises getting the bow paddler to place the blade further towards the bow, with full shoulder rotation and elbow tight (lower hand) to hip on a bow-cut and elbow close to chest to produce a cross-bow cut.



Have students paddle in a square (clockwise and anticlockwise), focussing on maintaining speed and reducing stalling throughout the turns.



Use the 'follow my leader' and 'tag' exercises to develop the stroke further.

EDGING

This is a good time to look at edging, because effective edging leads to greater efficiency in turns and helps maintain hull speed.

Coaching Progressions:



Students can explore edging through knee wobbling, i.e. shifting body weight over each knee in turn, gently at first and then with increasing commitment.



Introduce a 1-3 grading for degrees of edging and call out a number which students have to initiate and hold.



COACH'S TIP

- Throw balls into the bottom of the canoe, giving students instant visual feedback on trim and edge.



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Photo 7 Balls loose in the bottom of the canoe

- Have students stretch hands out in front (no paddle) and sweep them from left to right over the gunwales, with head and shoulders following line of hands. Emphasise the feel of a gentle rolling of the canoe, i.e. a smooth transition, rather than rocking from edge to edge.



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Photo 8 Head and shoulders leading the edging

Advanced Coaching Progressions:

- Get students to shift centre knee towards the paddle-side gunwale. This uses body weight to aid edging, and is especially useful for lighter students.

- Have students paddle forwards whilst maintaining an inside edge. The canoe performs a wide-radius turn as a result of edging rather than steering.



Once students can hold an edge, they can use edging effectively to assist turning on the move (this is awkward for paddlers on their off-side).

STEERING THE CANOE

Here we are focusing on specific skills for stern paddlers, primarily stern prys (goon strokes) and 'J'-strokes.

► Stern Pry (Goon Strokes)

The stern pry is a crucial stroke for stern paddlers, but as with all strokes it has its time and place. It is a natural progression for the stern paddler as it has less of a stalling effect on the canoe when turning on the move and so provides a more efficient tandem combination with a bow-cut. It is also favoured in moving water because it provides maximum leverage making it extremely effective on technical water.

Beginners tend to pick this stroke up quickly as it feels less awkward than the 'J'-stroke and they get positive kinaesthetic feedback from the pressure on the blade. Students with experience in other disciplines find they transfer their knowledge of the stern rudder, achieving a relatively effective pry in a short space of time.

Coaching Progressions:

- Have students perform gentle stern prys focusing on the pressure on the non-drive face of the paddle during the push-away phase.



COACH'S TIP

- If students struggle try a kinaesthetic approach, with the coach standing in the water and applying pressure to the blade (some students benefit from closing their eyes during this exercise).

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- Now hold the stern end of the canoe and once the stern paddler has the correct paddle position (push-away phase), push the canoe away. This provides a feel for the pressure on the blade whilst performing on the move.

- ✓ Practise on the move with bow paddlers using bow-draws/cuts and stern paddlers assisting turning with stern prys (rather than the reverse sweeps used earlier).



► 'J'-Strokes

'J'-strokes come in many forms. At one extreme there is the short-'J', a 'snappy' stroke with strong correction. This allows a high stroke rate and its effect is immediate and powerful so it is often favoured by river runners and by tourers (to reach cruising speed from a stationary start). At the other end of the spectrum there is the classic long-'J', a slow almost luxurious stroke where both hands work beyond the gunwale and the paddle trails for longer at the end of the stroke.

Coaching Progressions:

- ✓ Adapt the stern pry coaching progressions.



COACH'S TIP



- Flags and markers are critical for assessing correct thumb, hand and arm position and passage of shaft and blade throughout the stroke. I tend to use the manufacturer's transfers below the gunwale, but you can put markers on the canoe if need be.
- The coach often needs to reinforce communication and teamwork skills as the 'J'-stroke tends to be a slower stroke and so the bow and stern paddlers' timing is thrown. Let stern paddlers practise and refine their stroke first before bringing in the bow paddler and return to initiating strokes by tapping the gunwale if necessary.

REVERSE PADDLING

The principles of effective reverse paddling are the same as for forward paddling, in reverse, i.e. trimmed stern light and paddle strokes parallel to bow-stern centre line, not following the gunwale line.

The bow paddler now needs to apply the steering stroke, either trailing the paddle at end of the stroke (rudder) or performing a reverse-'J' (remember top

thumb turns down into 'breast' pocket allowing lower hand to extend forward).



COACH'S TIP

- Have students standing on the bank and apply pressure to their blade when in correct position for reverse-'J'. Again some students will benefit if they do this with their eyes closed.

Coaching Progressions:

- ✓ Have students exaggerate trim to bow and then stern.

Benefits ► *trimming to extremes provides instant kinaesthetic feedback, helping students develop an instinctive awareness of the forces at play on the canoe.*

- ✓ Have students experiment with adjusting trim so that the bow paddler applies less and less correction.

Benefits ► *this exercise develops awareness of minor alterations to trim, but be mindful that steerage is almost always required and so bow paddlers still need an effective correction stroke.*

- ✓ Put paddlers back to normal paddling positions to practise.

- ✓ Set a 'slalom' course around buoys or other obstacles.



Photo 9 Coach applying pressure to student paddle in reverse 'J'-stroke position.

MOVING SIDEWAYS CONTINUED... PRYS

This is a good time return to skills to move the canoe sideways, looking at the pry. The pry is often introduced relatively early, but I have found that it is better to let students consolidate a basic stroke repertoire first. Meanwhile, a cross-deck draw can be substi-

tuted for a pry. Once confidently performing draws on the move students are ready to look at the pry.

Coaching Progressions:

Adapt the draw stroke coaching progressions, with students focusing on a deep blade and using the gunwale for leverage.

Have students practise on opposing sides, with one using prys and the other draw strokes.

Practise pry/draw combinations on the move.



COACH'S TIP



Timing for the pry/draw combination is critical. If students struggle with this initially, have the bow paddler count into the combination from a forward paddling start.

MOVING WATER SKILLS

If your students' end goal is to paddle rivers they will be thirsty for their first taste of moving water.

Coaches need to adapt sessions according to students' prior experiences:

- Novice canoeists need to consolidate some basic open water skills, and at least be able to paddle in a straight line. Moving water skills can then be developed using gentle currents with big eddies and forgiving eddy lines!
- Experienced flat-water paddlers can transfer knowledge of strokes and trim, but need to focus on manoeuvring skills, controlling speed and reading the water.
- White water kayakers will transfer their knowledge of moving water and paddle strokes, but now need to understand how the canoe behaves in a moving water environment, and learn how to adjust trim.

Introductory Coaching Progressions:

- Review open water skills in easy flows.
- Paddle into/out of the current, experimenting with degrees of edging.



Execute wide turning circles in/out of the current, focusing on a point downstream (this encourages correct body position).



COACH'S TIP

Use trim to assist your students develop new skills, moving them back to normal paddling positions once they have grasped the basics of what you are trying to coach:

► Bow light if coaching straight running or forward ferries.

► students closer together for developing skills for breaking in/out, setting, etc.

► stern light for developing any reverse ferries/setting.

Edging also has a major impact on efficient tracking of the canoe:

► Ensure correct body position and get students to look in direction of travel. (The shoulders tend to follow the head and shift weight to one knee).

► Return to exercises to maintain an edge, if necessary.

FORWARD FERRIES

Coaching Progressions:



Choose a venue with a gentle and consistent flow at the bottom and faster flow at the top. Start students at the bottom and move them upstream to work in faster flows as skill levels improve.



Choose a rapid with a wide sweeping bend and have students focus on adjusting angle in different flow speeds.



Choose a rapid with a series of waves and have students use these to move back and forth across the river (high crosses).



Find a narrow fast flow with eddies either side and have students power across eddy line with a shallow canoe angle, using a running pry/running draw combination to shoot across. If the canoe loses momentum paddlers can provide forward power.

FAST OR SLOW?

There have been two main schools of thought on the best techniques for running rivers - one favour-

ing setting and the other breaking in/out. Over the years I have found that the situation dictates the best approach and so I place equal emphasis on coaching both skills.

BREAKING IN & BREAKING OUT

Start with a venue offering a gentle current and eddies either side.

Coaching Progressions:

► Draw/Forward Sweep Combination

🔧 Break in and out at various entry speeds and angles, focusing on edging and looking in direction of travel.


🔧 As paddlers cross the eddy line have the bow paddler draw on the inside of the turn whilst the stern paddler uses a forward sweep, leaning away from the stroke (this feels quite awkward at first).

► Cross-Deck Draw/Heavy-'J' Combination

🔧 Once comfortable with the draw/forward sweep combination, introduce the cross-deck draw/ heavy-'J' combination and follow the same coaching progressions as above.



COACH'S TIP


- It is common for students to spin too early on the eddy line, so get them to focus on waiting until the bow starts to turn before placing a bow-cut. If the venue is suitable, use a kinaesthetic approach and get students to close their eyes as they power towards the eddy line and wait to feel the change in pressure.
- Encourage your students to work together matching time and rhythm. 

► Using Both Combinations

Once competent with both combinations, students can return to their normal paddling sides. Set exercises which encourage both combinations to be used naturally, eg:

🔧 Break in and out of an eddy, i.e. Making circles, (create a circuit involving the whole group).

🔧 Break in and out using eddies on both sides and return, i.e. Making a figure of 8.

🔧 Break in and out using eddies on either side and forward ferry back. 

Advanced Coaching Progressions:

🔧 From the bow-draw/cross-bow draw position shift the top hand slightly forward creating a more vertical paddle, similar to a bow rudder and draw this towards the bow, linking into a powerful forward stroke, which regains hull speed.

🔧 The students have absorbed several combinations in a short period of time, so give them freedom to explore what they have learnt through student-led exercises, providing them with a suitable venue and give key areas to focus on:

- Experiment with different angles on exit and entry.
- Experiment with different speeds of approach.
- Maintain knee pressure to aid edging.
- Stroke timing as a team when crossing eddy lines.

A student-led approach gives space and time to consolidate the skills learnt and gets them reading the water speed and adjusting approach angles accordingly.

REVERSE FERRIES & SETTING

When students make the transition from open to moving water a key skill is the ability to avoid obstacles without going broadside. Paddlers are often seen frantically sweeping above obstacles, which increases speed, reduces reaction time/space and is more likely to take them broadside.

Reverse ferrying has two major advantages:

- It reduces and controls speed, which reduces water intake and increases reaction time. It takes a lot of power to completely kill the momentum of a canoe moving at the speed of the current, and all but the most powerful students will struggle, with the result that they mentally tick reverse ferries off their toolbox list. So remember that the goal is speed reduction.
- It keeps the canoe straighter, so avoiding pinning, and puts the canoe into position for side-slipping (setting) into eddies. This is an invaluable skill in tight spaces or when running rapids on sight.

GENTLE FLOWS

Coaching Progressions:

- Adapt the reverse paddling from the open water coaching progressions.



COACH'S TIP



- Bow paddlers should use a competent reverse-‘J’. They will find this easier on their downstream side at first (return to kinaesthetic input if need be).
- Use a consistent flow and avoid crossing eddy lines initially or you risk overloading your students with too many variables and they will tend to spin out on eddy lines.

- Use different venues, introducing variable and faster flows.

- Have students break in, switch to a reverse ferry and paddle across the flow to set into another eddy.

- Windscreen-wiper ferries - have students ferry across flow part way, change direction (bow paddler initiates with draws/prys) and return.

Benefits ► *develops defensive tactics for running faster water and rapids on sight.*

FASTER FLOWS

As students become more proficient on using reverse ferries on faster flows, they will realise the advantage for paddling white water. This defensive approach to paddling white water is essential in open canoe along with the ability to anticipate and read the water.

Coaching Progressions:

- Set angles according to the clock (12 o'clock is downstream), experimenting with angling the canoe between 10.30 and 1.30.

Benefits ► *increases students' awareness of how to use the force of the current on the canoe to cross currents. The aim is to find the optimal angle, which maximises speed and efficiency, and involves surprisingly little effort from the paddlers, aside from a few final power strokes to cross the eddy line. If the angle is too little it will take a long time and many paddle strokes to cross the current. If the angle is too great the force of the current on the canoe will overpower the paddlers and spin the canoe round.*



- Return to edge-holding exercises, using balls on the canoe floor if necessary, and emphasise the gliding or slide-slipping motion.

Benefits ► *edging aids tracking, so it is important to stop students rocking from edge to edge.*



- Space Invaders – paddle downstream and then coach/students call out about an imaginary obstacles (or real ones as students progress) to left, right or ahead and students take evasive action.

Having mastered the basics of reverse ferries/setting, students can resume normal paddling positions. Choose a venue where they can practise and experiment ‘in anger’, with the stern paddler shifting forward to adjust trim, if necessary, and bow paddler adjusting canoe angle with prys/draws.

► DEVELOPING SKILLED PERFORMERS

So far the student experience has been largely task-orientated focusing on strokes and stroke combinations in isolation. This approach provides students with a reasonable toolbox allowing them to become fairly proficient.

In order to become skilled performers paddlers need to consolidate what they have learnt so far and develop the ability to select and adapt these skills in different situations. The coach does this by exposing students to as many venues, exercises and challenges as possible. You will be limited only by your imagination.

Try and resist the temptation to be too prescriptive, but set broad goals and circuits such as:

- Break out and return by forward ferry.
- Break in and reverse ferry across to other bank.
- Set a slalom course down a rapid using eddies.
- Run rapids only using reverse paddling/setting.
- Run rapids under forward power.

If you get this right you will have mastered the skill of moving your students onto the next plateau, from task-orientated and conscious application of strokes, to skilled performers who read the river and unconsciously apply and adjust strokes as appropriate.

▶ SOLO PADDLING

Your students should have a reasonable foundation of skills and understanding of how the canoe responds from being coached tandem. 'Boat, Body, Blade' principles need to be revisited when making the transition to solo work:

- Boat - trim has an even greater significance for the soloist, as does matching the paddler's size (height/weight) to the canoe.
- Correct 'Body' position is essential for effective stroke work and to maintain an edge to assist with turning manoeuvres and forward paddling.
- All strokes now incorporate a steering phase, usually by adjusting 'Blade' position on entry or exit. The most important addition to a soloist's stroke repertoire is a competent 'J'-stroke.

This section assumes that students are building on and transferring skills already learnt in tandem. However, this may not be the case and so the coach may find it appropriate to draw on coaching progressions from the tandem section.

▶ OPEN WATER SKILLS

STRAIGHT RUNNING

Students must be able to maintain an edge now. Many students, however, are initially reluctant to commit to sitting off-centre and the level of edging required, as they feel unstable, so coaches may need to devote time to developing confidence in this skill. Have students run through a range of forward strokes - practising various 'J'-strokes, Indian, Canadian strokes and so on.



COACH'S TIP

- To aid your observation and analysis of Body and Blade positions place markers on the paddler and canoe using coloured tape.


The coach needs to also note the way the boat reacts once at hull speed:

- Rolling – if the canoe rocks from side to side, this generally indicates that the paddler is shifting

their weight from edge to edge. Get paddler to shift more weight to their paddle-side gunwale.

- Pitching – the paddler applies too much power on the blade and/or enters the blade too far forward and exits too far back, having the effect of lifting the bow and killing the canoe's forward momentum. Encourage paddler to adopt a shorter and more vertical stroke.
- Yawing – the bow continually swings from left to right. This can be caused by a number of factors:

- ▶ Canoe tilt
- ▶ Canoe not on paddle-side edge
- ▶ Paddler not focusing on a clear marker ahead
- ▶ Too much power and correction on each stroke

Encourage paddler to aim for a target; start slowly with just enough correction to allow the canoe to maintain a straight line. 

TURNING THE CANOE

The classic textbook turning stroke combinations for the soloist is the inside and outside pivot turns. In reality, soloists tend to use the first phase of the outside pivot combination (cross-bow cut) and the second phase of the inside pivot (bow cut).

Coaching Progressions:



First let students experiment with using just forward power and edging to paddle in wide arcs to left and right. Emphasize weighting the paddle-side knee for both turns. When turning on-side (paddling side), more correction is needed.



Get students to practise using forward power, using different combinations to initiate turning and focusing on the effect on speed and turn, eg:

- Forward sweeps, which create long carving turns.
- Reverse sweeps, which kill hull speed.
- Short forward sweep followed by cross-deck draw, which minimises loss of hull speed and produces a relatively tight turn.
- Forward power with a heavy-'J' and bow draw, which minimises speed loss and produces tight turns.



Set circuits, eg:

- Squares - clockwise and anticlockwise
- Triangles - clockwise and anticlockwise
- Zigzags

Advanced Coaching Progressions:



Once students are skilled in turning the canoe using various combinations, they can perform the same exercises keeping the blade in the water throughout. Try:

- Indian strokes
- Inside pivot turns
- 'C'-Strokes



Now allow paddlers to explore stroke combinations and edging themselves. There are infinite combinations, each provoking slightly different responses from the canoe. Guided experimentation allows competent paddlers to develop a deeper and more instinctive understanding of 'Boat, Body, Blade' interaction. Paddlers may find this awkward at first but with perseverance they learn to maintain pressure on the blade (apart from during the recovery phase) with minimal loss of hull speed.



If some guidance is required try:

- On-side turning, which is relatively easier – moving from power stroke to 'J'-stroke, slicing forward and completing with a bow cut.
- Off-side turning requires forward speed, followed by a forward sweep from the hip back, slicing the blade to a bow jam and following through with forward power before momentum is lost.



COACH'S TIP

- Have students focus on quiet paddle strokes - no ripple and no splashing.

MOVING SIDEWAYS


Correct body position is essential to allow effective blade work in draws and cross-deck draws. Sitting off-centre with knee and upper body rotated lets both hands work over the gunwale and allows a high paddle angle.

Coaching Progressions:



Have students focus on a deep blade, pushing water under the canoe rather than onto the gunwale.



Have students experiment with the blade slightly forward or backward to pull the bow or stern more. 



Repeat exercises for cross-deck draws.

SIDE-SLIPPING

These strokes come into their own on moving water for avoiding obstacles, allowing the canoe to side-slip and maintaining a straight running canoe. The foundations of the strokes, however, are best learnt on open water.

Coaching Progressions:

All strokes need to be practised under forward power:

▶ Running Draws



Have students experiment with opening the leading edge of the blade. Blade angle determines whether the canoe moves sideways or turns.



Have students experiment with blade position, which again influences whether the result is a sideways movement or turn.



To initiate get students to try the following:

- Forward stroke, exit blade and re-enter in running draw position; or
- Forward stroke slicing blade forwards into running draw position.



Having established correct angle and position, students can be introduced to sculling draws to maintain sideways movement once the hull loses speed.

▶ Running Cross-Deck Draws



Follow the same progressions as for running draws.

▶ Running Prys



Follow the progressions for running draws, except the leading edge of the blade is angled toward the gunwale. Pressure on the blade pushes the shaft onto the gunwale.

🔧 The blade can be placed directly or sliced into position from the stern.

🔧 As momentum is lost, the blade can be pushed forwards along the gunwale maintaining pry position, and repeat entering the blade slightly further back, and increasing the stroke rate. This is the basic reverse pitch, which is an excellent stroke incorporating power and steerage in one action, and mostly used for reverse setting.

► MOVING WATER SKILLS

Moving water is the ultimate test of the soloist's understanding of the interaction between Boat/Body/Blade.

Coaches can help the transition to moving water by:

- Venue choice. Students need consistent flows with large eddies and forgiving eddy lines to allow them to start transferring the basic skills into a moving water environment.
- Giving students basic skills for running moving water from day one, focusing on:
 - Forward power and correction
 - Reverse cross-deck paddling
 - Sweeps with edging to assist turning
 - Line choice to avoid tight manoeuvres and sharp eddies

The sooner coaches give their students sufficient skills and get them running short sections of moving water the better. Rather than drilling in lots of strokes, give them the satisfaction of running easy rivers. Their thirst for more will provide all the motivation needed to aid your coaching.


FORWARD FERRIES


As a rule of thumb, I keep students in their normal paddling position for river running. A well-balanced boat allows a range of movements to be performed and sliding forwards or leaning backwards allows for minor trim adjustment. Heavier canoeists obviously have greater impact on trim than lighter people. Broadly speaking, trimming by changing position or moving bags is only practical on open water and very easy rivers. Having said that, lighter paddlers may need to be prepared to throw a heavy kit bag around

to adjust trim and it is still useful to exaggerate trim when learning specific skills. Hence, for coaching forward ferries, you may need to move your students back or get them to throw a bag behind them.

Whether paddling on upstream or downstream side, paddlers should maintain good body position so that they weight the knee on their paddling side. They should also look where they are going, not where they've come from.

Coaching Progressions:

🔧 Start students on their downstream side (minimal correction is required), and have them experiment with varying boat speed and angle. 

🔧 Now progress to upstream side. A slight upstream edge should be maintained (easier for the body to sustain). There will be a trade off between the amount of correction required and loss of speed (and therefore loss of ground). Have students start with entering the current at a shallow angle, experimenting with the amount of correction needed. 

🔧 Windscreen-wiper ferries - have students ferry across flow part way and change direction:

- When paddling on downstream side initiate change of direction using a stern pry and a forward power stroke.
- When paddling on upstream side initiate change using a bow draw and forward power stroke (with a heavy-'J' if necessary).


🔧 Change venues and find variable currents.

BREAKING IN & BREAKING OUT

The secret to effective breaking in/out is to let the water do the work. Forward momentum drives the bow into the current/eddy and water pressure turns the canoe assisted by edging and turning strokes. So students need to focus on timing and developing ultra-slick and intuitive stroke combinations. Just like stepping onto a moving elevator, commitment (to edging) and timing (of strokes and edging) is needed or you will turn on the eddy line or capsize.

Breaking in when paddling on the upstream side is simpler to start with because the paddler can assist the turn and maintain momentum as the canoe enters the current. It does, however, require a change of edge and so timing is crucial.

Coaching Progressions:

- Paddling on upstream side have students gain forward speed towards the current, forward sweep, and simultaneously look downstream, change edge, placing a cross-deck bow-cut in the current. 
- Paddling on downstream side, have students gain momentum towards the current, increasing edge as the bow starts to turn and place a bow-cut in the current. The canoe performs a large arc and quickly loses momentum on entering the current.
- Following on from the last exercise students use forward power strokes with a heavy-'J' on entering the current, then change to a bow-cut, which is drawn towards and continues under the hull (deep 'C'-stroke) finishing in a 'J'-stroke. This combination will maintain hull speed.



COACH'S TIP



- Have students close their eyes and sweep only when they feel the pressure of water start to turn the bow. For this you need to choose the site and manage your site safety carefully, but the exercise offers excellent kinaesthetic reinforcement.

Dip into the coaching progressions used for the tandem pairs to further develop breaking in/out skills.

REVERSE FERRIES & SETTING

Reverse ferries are one of the more difficult strokes to learn as solo paddlers, but are essential for running white water.

Coaches can adapt most of the exercises and techniques used for tandem crews. Choice of venue is critical, a steady consistent flow with no strong eddy lines is ideal; or coach in gentle flows whilst travelling downstream. Remember to trim boats stern light, exaggerating when first introducing the skill and then encourage students to develop from normal river-running position (slightly stern light).

Solo paddlers have two main stroke choices for reverse ferries:

- Reverse paddling combined with reverse cross-deck strokes are often taught to beginners. However this combination has several disadvantages:

- ▶ Students need to be relatively flexible and not suffering any back problems.
- ▶ It involves constant changing from edge to edge which means the canoe does not track well.
- ▶ The pause between strokes results in a greater loss of ground.
- Reverse paddling with a reverse 'J'-stroke allows the canoe to track consistently and less ground is lost. It is better to start students on their downstream side, focusing on adjusting amount of steerage according to flow speed and canoe angle. Ground tends to be lost during the steering phase.



COACH'S TIP

- Either on the bank or with coach in the water apply pressure to student's blade when in correct position for reverse 'J'-stroke (kinaesthetic input). Again some students will benefit if they do this with their eyes closed.

REVERSE PITCH

This is the 'Rolls Royce' of the solo paddler's stroke repertoire and, although rarely mentioned in canoe books, experienced paddlers seem to naturally discover and develop this stroke. The reverse pitch is both efficient and effective, because it eliminates the pause created by the reverse-'J', producing a faster stroke rate and moving the canoe swiftly across the current.

Unlike reverse ferries it is easier to learn the reverse pitch stroke on the upstream side. In both downstream and upstream applications, note that additional steerage strokes may be needed. I often use the occasional powerful reverse-'J'/reverse cross-deck draw to push the stern across eddy lines.

Coaching Progressions:


- Start students on their upstream side. Focus on placing the blade behind the paddler, keeping the shaft almost upright, and at a 45° angle to the gunwale and leading edge forward. Hold this position throughout the stroke. 
- Now progress to downstream side modifying the stroke by starting the stroke at the hips and pushing the blade further forwards.



Photo 10 Reverse pitch, blade angle and position

🔹 Windscreen-wiper ferries - have students ferry across flow part way and change direction by adjusting paddle position forwards or backwards.

🔹 Change venues and find variable currents. 🔄

🔹 Raft slide - as with driving a car at high speed, anticipation of what's ahead is critical. Canoeists must plan ahead, identifying eddies in plenty of time and setting the canoe at an angle so the water pushes the canoe across the river assisted by a gentle paddle rate and edging. The raft slide technique is not concerned about losing ground, and a long oblique angle is taken towards eddies with an increasing paddle rate to assist the last push into the eddy.

▶ DEVELOPING RIVER RUNNING SKILLS

Coaches have endlessly discussed the merits of paddling rivers using predominantly forward or reverse power strokes. Personally I believe both methods are equally valid and should be coached along with an understanding of the pros and cons of each.

- Forward power combined with breaking in/out as necessary is effective where space and time allow, and for regrouping, briefing, portaging, etc.

- Reverse paddling is a more defensive approach and very effective for running rivers on sight. Speed is controlled allowing more time to react and read the river. The canoe is kept straighter - ideal for setting into eddies, or slide-slipping to avoid obstacles. Most importantly the risk of going broadside is minimised. This approach comes into its own on narrow, technical rivers.

The skilled performer, regardless of approach, must learn to react quickly and change canoe angle with minimal ground loss. For this, the soloist must be able to apply various stroke combinations, linking strokes and keeping the blade in the water as much as possible and above all not switch paddling sides!

Practices:

- Bow draws, sliced back to the stern and into a stern pry, if necessary.
- Bow pry and forward sweep finishing with a stern draw, if necessary, moving the canoe the other way.

The result is a square-shaped passage of the blade in the water, hence box strokes, of which there are infinite variations and forms.

Advanced Coaching Progressions:

🔹 Look at different box strokes emphasising quick changes of direction and focusing on maintaining pressure on the blade in the water throughout rather than the individual strokes that the blade forms.

🔹 Run rapids down the main flow using only reverse strokes.

🔹 Space Invaders - using side-slipping on rapids to avoid obstacles.

🔹 Run rapids using power strokes and breaking in/out.

🔹 Practise breaking in, forward ferrying and breaking out into the opposite eddy using the minimum number of strokes. If there is a wave to assist the crossing, a high-cross can be performed, but the principle is fine-tuning the angle so the power of the current pushes the canoe across.

🔹 Figure-of-8 - return to original eddy creating a continuous circuit.

🔹 'S' manoeuvres - choose an eddy half the length of the canoe in mid-stream. Break out and break in on the other focusing on maintaining hull speed/ momentum and minimising the number of strokes (effectively slalom in a big boat!). 🔄

Use your imagination and enthusiasm to come up with other ideas and combinations. Also remember to allow students to take control of their own learning at this level, using more student-led exercises. This will

develop a deeper understanding of the Boat, Body, Blade dynamics, allowing them to apply skills more instinctively, so they can enjoy river running independently without their coach being on hand to guide them.

► TRADITIONAL SKILLS

In my experience, I found that the traditional skills opened up a whole new world of possibilities for journeying. These skills evolved for practical reasons - to make travelling by canoe fast, efficient and functional. Generally speaking, I have also found that the traditional skills are hugely undervalued and under-coached.


In my coaching I often find a section where I can look at a range of traditional skills, teaching not only the skills, but also letting students experiment so they can assess what will be efficient in different environments. For example, a portage may be described on a trip, but on inspection it may be quicker and easier to pull the canoe over a small lip, grab the painters and line a short section and then jump in and use a half-pole to stub down the final rocky section, jumping out and wading if it gets too shallow. By being able to apply all these skills and judge when and what to use, the paddler may have saved themselves a difficult and slow portage down the bank. Plus the satisfaction is tremendous!

► POLING & STUBBING

Poles come into their own on long shallow river and lake sections or shallow boulder rapids, where there is insufficient paddle depth. Venue choice is crucial for these sessions as it is important to practise these skills in context, i.e. where they would be effective.

HALF-POLING

I start poling sessions with half-poling, which is executed from a normal paddling position using the pole just as you would a paddle. Paddlers can make very effective use of half-poles on journeys by quickly transferring between paddle and half-pole as water depth changes.

- Tandem – get teams to pole on their paddle-side, avoiding cross-deck strokes, which increases the chance of hitting their partner. 

- Solo – half-poling is used to effectively perform a range of on-side and cross-deck strokes.

Remember to present the end with aluminium tip to the river (you may wish to tape the open end to prevent it becoming a lethal weapon!).

FULL-POLING

Full-poling allows the paddler to stand. Stability is a big issue when learning the art of poling, but once mastered it provides a welcome change, relieving tired paddling muscles and knees on long journeys.

Boat, Body, Blade factors:

- Boat - needs to be trimmed bow light, to aid forward movement and turning.
- Body - some adopt a feet-together stance and applying maximum edging; whilst others find that a wider stance, with trunk and hips rotated to poling side, provides a more stable platform.
- Pole (Blade) the key markers are:
 - Both thumbs upright.
 - Pole planted at angle to paddler and water.
 - Knees bent, transferring pressure through feet.
 - Mentally focus on moving canoe around the pole.
 - Recovery of the pole for forward power achieved either through walking hands up and down the shaft, or by adopting the windmill technique.



Two extremes of body position for full poling and good blade/pole position (see key points above).

Photo 11 - feet together

Photo 12 (across the page) - wide stance



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Coaching Progressions:

- Once students have grasped the basics they need lots of exercises to improve balance, eg standing up and shifting back and forth in the canoe.



COACH'S TIP

- Lowering the centre of gravity reduces the wobble-factor! Have students lean forwards holding the pole across the gunwales and sliding their hands up and down the gunwales.

- Get students to focus on transferring power from hips, down through knees and feet to move canoe towards and away from pole, and then turning with pole on inside (like going around a may-pole) and outside of the turn (pushing away from the pole).

- Have students do different circuits - circles, squares, etc. - using the pole as a point of leverage.

- To practise using the pole for steerage, find a shallow area and have students adopt a low stance and position the pole behind them. Keep the pole steady and apply pressure through the hips and feet to push/pull the canoe from side to side and swing to right and left.



COACH'S TIP

- For tandem crews have one paddler practise, whilst the other sits on the floor facing their partner. This improves stability and allows them to give peer feedback.

Some coaches use bow rope to aid direction to start with, but I find that if you have to use a rope, you have probably chosen the wrong location.

Advanced Coaching Progressions:

- As students grow in confidence get them to push harder on the pole, transferring power using a hip thrust. The canoe accelerates and proficient polers find they can travel significantly faster than by any other method.

- To negotiate shorter, faster sections, lighten the bow (shift weight back) and increase poling rate by not using the full length of the pole length (reduces recovery time and produces short quick stroke sequences).

STUBBING

Watch a skilled performer and stubbing will look like a rapid series of short little stabbing actions. This prevents the build up of speed and allows directional control using the feet as in poling.

The ideal coaching venue has a shallow gravelly bottom with consistent and minimal flow.

Boat, Body, Blade factors:

- Boat** – needs to be trimmed light upstream. To achieve this either move paddlers forward *or* make them face the other way and spin the canoe around 180° (thus avoiding stepping over the central yoke, kit bags, kids, dogs, etc!).
- Body** – the same as for poling but even lower so the knees are flexed to take the impact.
- Pole (Blade)** – as with poling both thumbs are upright, but the pole is now held at a lower angle, placed further forward in water and downstream end over shoulder.



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Photo 13 Boat, Body, Pole (Blade) - correct position

Coaching Progressions:

► Half-Pole

- ✔ From normal sitting position, have students slow their descent, by planting the pole downstream, and practise pushing the canoe sideways. Work on both sides of the gunwale (except for stern paddlers in tandem).
- ✔ Find a rocky section with variable depth, where students can practise transferring quickly between half-pole and paddle.

► Full-Pole

- ✔ Have students slow their descent, working on both sides of the gunwale.
- ✔ Have students hold position in moving water.
- ✔ Have students push canoe sideways developing into a reverse ferry.
- ✔ Have students pole downriver in gentle flow and then transfer to stubbing where flow speeds increase.



COACH'S TIP

- Stand holding the stern in position to coach control, position and steerage.

► LINING

The Canoe and Kayak Handbook contains an excellent section on lining. I would just like to emphasise that the first priority is the safety of the canoe and its contents, so always consider portaging, and remember the golden rule that ropes and water don't mix, and caution is required at all times:

- Minimise the number of knots.
- Keep knots close to the hull.
- Always have a clean end.

Lining Workshops

A good demonstration is essential. I often line my canoe part way first, showing the students how to manage a solo canoe and how to deal with the problems commonly encountered.

Find a venue with trees that have to be negotiated – to pass the tree, the student should let the canoe pass,

go to the other side themselves, and reach through for a bite of rope, using the 'T'-grip to retrieve the rope.

I then pass the canoe to the students. The other canoes can be lined using a mix of team or solo methods.



Photo 14 Lining past a tree

► TRACKING

Tracking techniques are covered in the Canoe and Kayak Handbook. I have found that the traditional long-line approach often causes problems for students with ropes snagging on trees, boulders, etc. Instead, I favour the short-line method of tracking, which still uses bridle, but half the normal length of tracking line. The student has greater control and a firm tug on the ropes usually allows the canoe to ride over any obstacles.



COACH'S TIP

- Carry a large water bag for sessions, as standard kit bags are often insufficient to adjust trim.

► Quick Short-Line Method

A colleague taught me this gem and I use it all the time, usually ending up at the top before the other paddlers have set up their bridles. With no bridle, this technique is incredibly quick and easy to set up. Just be aware that if the bow swings towards you too far, the painter will slip out from under the gunwale, so the angle must be maintained.

- ✔ Take bow painter (minimum length is 1 canoe length); pass it down through bow seat (shore side); take across the back of the seat and up on the far side; pass rope over the gunwale and under the hull.
- ✔ Stern painter should be approximately 1 canoe length.



Photo 15 Tracking set-up

Tracking Workshops:

Key points:

- Clear demonstrations are essential.
- Venue choice is important, starting with no obstacles.
- Group control is essential because of the number of ropes in use.
- Set up one long and one short-line system to reduce the number of canoes and ropes on the water. Get students to take turns, practising both systems.



COACH'S TIP

- Place a student in the downstream end to help trim, and using paddle to steer.

SAILING

For many years, I failed to recognise what sailing has to offer canoeing for journeying, firmly believing that sailing was best left to sailors. But after various long distance trips around the world I am a convert - harnessing the power of the wind offers the potential, on extended expeditions, to cover many miles in a short time allowing more time to explore other areas.

The many different options for sailing rigs – all with pros and cons for different situations – are well documented in other texts. However, I have included some practical ideas for running sailing sessions.

Sailing Workshops:

► Rafted Sailing

Simple rafted pairs using paddles to support the sail are quick to set up and keep more members involved working as a team.

Larger rafts bring entire groups together. Set up can take 20 minutes plus and is very coach led, unless there are two rigs to organise, so I only use it when sailing long distances. However, large rafts can use bigger sails (and so sail faster and in lighter winds) and can sail across the wind. They are also very sociable for groups who mainly spend their time in ones or twos in a canoe.

Trim (Boat) is sorted once afloat – stern heavy for sailing downwind, and more central for sailing across the wind.

Paddles (Blade) are used as rudders for sailing downwind and held centrally, like a leeboard for sailing across the wind.

Whole rafts have been known to flip, so if you have 'all your eggs in one basket' take the weather/water conditions out on the open water into account. You need bailing out systems and a plan for an all-in (including re-righting the raft).

'Man overboard' is a distinct possibility. Some suggest using a trailing line, which can be grabbed by a swimmer, but the most important thing is having a quick release system on the sail.

► Solo & Tandem Sailing

Before venturing out onto open water with a team of solo sailors, make sure you give clear briefings on safety cover and group control. If a canoe gains ground faster it should drop the sail and allow the others to catch up. If there is a capsized all canoes should drop sails, turn into the wind and hold position. Appoint a front canoe (your assistant, if you have one) and buddy systems. I find it best to take the rear, so I can see the whole group and sail over to any capsize.

Generally the canoe needs to be trimmed stern heavy. In tandem canoes make sure there is something for the bow paddler to sit on further back.

For soloists, controlling the sheet (rope to adjust the sail) and steering are hard work over long distances, so cleats and leeboard tie-in (releasable) systems can be used.

WIND

Wind can be a nightmare for everyone, coaches included. Factors affecting canoes in wind include design, amount of freeboard, and paddlers' positions. The coach needs an awareness of these, plus the range of ability in the group.

► Heading Into Wind

There are two schools of thought on paddling into wind:

- Paddlers move forward to weight the bow, allowing the canoe to act like a flag. The disadvantage with this is that more correction is required and so it takes more effort over any distance and ground can be lost.
- Paddlers move back to lighten bow, paddle on downwind side and head slightly off-course until no steerage is required (the wind on the canoe cancels out the turning power in the stroke). After a while, change direction and paddling side. I prefer this method because, although a greater distance is covered, the method is far more efficient and less tiring.

Coaches must position themselves to cover safety and look for sheltered havens for the teams to regroup and rest. When faced with headlands the coach must keep students in line of sight either from the bank or water. If wind is too strong for soloists, they can team up as tandem pairs and tow one canoe, or track round if possible.

► Travelling Across The Wind

I use the same methods described above, but the coach can help the group by setting a ferry angle to follow. In the safety briefing I tell groups that if I blow the whistle and point downwind the group should run with the wind in a close pack.

► Running With The Wind

Fetch can dramatically increase wave size, so be cautious in assessing likely conditions further out. Keep trim bow light (soloists be careful as moving back puts you in the narrowest part, reducing stability). The coach is usually best positioned at the rear so they can paddle quickly to a swimmer. The safety brief should include a point for the group to aim at.

CHRIS FORREST

Chris has been paddling since the late 70's. In kayak, he ran many of the first descents of steep creeks and burns in Scotland throughout the 80's and 90's. In canoe he has linked just about every coast and loch in Scotland to put together new wilderness trips. Canoesport has also offered an excuse to explore other parts of the world - Europe, Scandinavia, Canada, New Zealand and Nepal.

Chris has worked for Glenmore Lodge and Plas y Brenin, playing a part in developing open canoeing at both national centres. He is a Level 5 Coach (Canoe and Inland Kayak) and an International Mountain Guide and now runs his own business, Inspirational Coaching (www.inspirational-coaching.co.uk) focusing on skills improvement, higher level governing body courses and guided trips.

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