Using operation zones

The operation zones model

180. The operation zones model is a useful tool to help activity leaders understand the importance of identifying their own and the participants' competence in relation to the difficulty of an activity. It can also help activity leaders to work out the appropriate ratio of competent leaders to novices for an EOTC activity*. While this model was originally designed as a tool for adventure activities*, it can be applied in many other contexts, for example, in sport or in a stage challenge.

181. An outdoor leader should strive to be more competent than the activity demands in order to create a safety margin. This enables them to look after their group and to cope if under stress. For example:

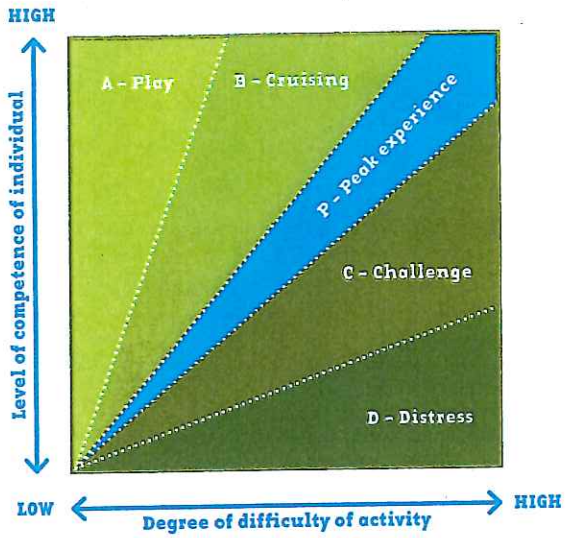
- A Grade 2 kayaker leading a group down a Grade 2 river may have trouble if something goes wrong, because their concentration will be on their own paddling. However, a Grade 3 or 4 paddler leading the same trip is likely to be paddling in a state of unconscious competence, enabling them to focus on the group, cope with the unexpected, and prevent or resolve any incidents*.

182. Outdoor leaders are most effective when operating within their field of competence. The operation zones model for adventure activities (figure 5.1) on page 50 is a useful tool for identifying this.

"We want to develop children as well-rounded citizens and lifelong learners. Hopefully they won't see these experiences in isolation; they might be the trigger for a long-term recreational interest or passion."

Principal

Figure 5.1 Operation Zones Model for Adventure Activities



Adapted from Martin and Priest, 1986

A – Play zone: *Individual's ability far exceeds the level of difficulty of the activity; can lead to boredom, lack of concentration, and incidents.*

B – Cruising zone: *Individual's ability is above the level of difficulty of the activity; can cope easily with challenge and emergencies; enjoyment without stress.*

P – Peak experience zone: *Individual's competence matches the level of difficulty; their performance is at physical and sensory potential; in state of flow.*

C – Challenge zone: *The difficulty of the activity is slightly above the ability level of the individual; can be a good learning zone; support and maximum concentration required; some anxiety and potential for mishap.*

D – Distress zone: *The difficulty of the activity is far above the ability level of the individual; anxiety and fear present; potential for major incident.*

Case study

183. The operation zones model for adventure activities* (figure 5.1) can help determine the right level of activity for a particular group. For example:

Two instructors, both of whom hold a Kayak 1 qualification, plan a kayak trip for nine students and a teacher:

- Three students can paddle Grade 1 competently.
- Five students and the teacher can paddle Grade 2 competently.
- One student is a competent Grade 3 paddler.
- The two instructors are competent Grade 4 paddlers.

The two instructors are the activity leaders, one student is an assistant, and eight students and the teacher are participants on this trip.

On a **Grade 2 river trip**, the instructors will be operating in the upper B zone, although they will be challenged by managing the group. The student assistant will also be operating in the B zone, cruising. Five students and the teacher will be operating in the P zone, having a peak experience as their competence matches the task. Three students will find the trip very challenging, operating in the C zone.

On a **Grade 3 river trip**, the instructors will be operating in the lower B zone. One student's competence exactly matches the task in the P zone, and that student will be a participant, not an assistant this time. Five students and the teacher will be very challenged in the C zone. Three students will be distressed and in danger (the D zone).

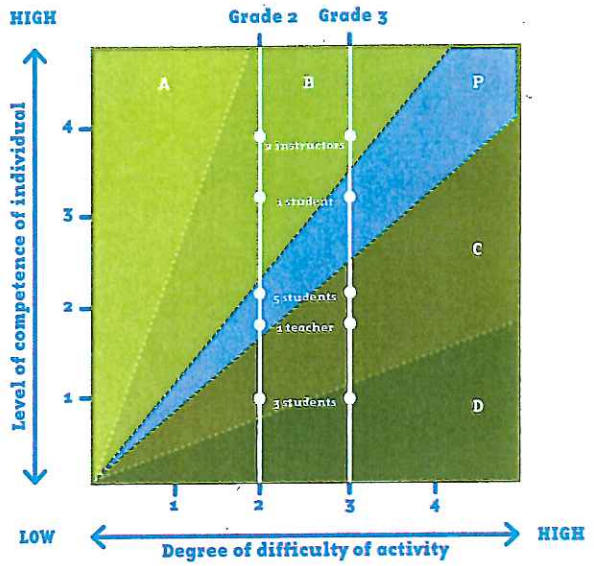
The operation zones model makes it clear which trip is more suitable for this group.

184. Grade 2 river trip
This trip would be suitable for this group in the right conditions, that is, when the river level is normal, the weather forecast fine, the water not too cold, and all participants have adequate equipment. The five students and the teacher will be relatively independent in the P zone, as they have the skills to cope in the conditions and assist each other. The three students in the C zone will find the trip a challenge but, with the right support, this trip has the potential to extend their kayaking skills to the next level. Leaders and students should expect capsizes and have strategies to cope. The student assistant in the B zone and the two leaders could work to assist these three students one on one in difficult sections. The activity leaders' responsibility is to supervise the whole group as well. Effectively, the ratio of skilled paddlers to those needing support would be 1:1. However, the overall ratio of activity leaders to the group would be 1:4 for one instructor and 1:5 for the other instructor (including the assistant). With adequate risk management planning and good emergency procedures in place, the trip could be a peak experience for the group.

185. Grade 3 river trip
On this trip, three students would be in the D zone, six people in the C zone, and one in the P zone. Outdoor activity leaders should* plan, from the start of a trip, not to put anyone in the D zone. This is sure to be a negative experience for the students and may end in serious injury or death. Nine people would be reliant on the two instructors for support on this trip, a ratio of 1:4 or 1:5. It is quite probable that more than one person would need the instructors' help at one time, putting the instructors in the D zone themselves. This trip would have serious potential for loss or injury and is beyond the resources of this group.

186. Grade 2/3 river trip
As the environment is dynamic, a change in the weather or river flow may cause a trip to fluctuate between grades 2 and 3, or even beyond Grade 3. So a Grade 2 trip may turn into a Grade 3 or 4 trip part-way through. Leaders should always be aware of this potential, have procedures to check local weather and river levels, and have strategies to enable them to manage in case the worst happens.

Figure 5.2 Operation Zones Model for the Kayak Case Study



Adapted from Martin and Priest, 1986

Summary

187. The case study above, using the operation zones model, highlights a number of important considerations for EOTC and especially for outdoor education* as follows.

- There will be a range of ability within any group.
- The activity chosen should be within the capabilities of everyone involved. Most people's ability should match or exceed the difficulty of the activity.
- It is OK to have people in the challenge zone (zone C) for limited periods, as this is where a lot of learning can take place. However, there must* be adequate support for people operating in the challenge zone.
- Ratios mean the number of experienced and skilled leaders in relation to the number of participants during an activity (see paragraphs 147–148). This does not always equate with the number of adults to the number of students, as was the case with the teacher who was a participant for this activity.
- Activity leaders must be operating in the A or B zone during an activity. If they find themselves in the challenge or distress zones (zone C or D), they will have no safety margin to assist others if they require support or get into trouble.
- Outdoor activities can fluctuate in their level of difficulty due to the dynamic nature of the environment. Outdoor leaders should take account of this in their planning and decision making. Up-to-date weather forecasts, local knowledge, escape routes, and a "plan B" are essential parts of a risk management plan. Leaders should call off the activity if conditions are uncertain and fluctuations are likely to take the group into the D zone.
- When leading an activity with students, outdoor leaders should seek their own challenge in managing the group, not in the activity itself.
- Personal experience is an important area of professional learning and development for an outdoor leader and needs to be logged along with leadership and training experience.
- Outdoor leaders should create opportunities with their peers to challenge themselves in outdoor activities in order to maintain and improve their skills.