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Competence Effectance

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Personal Competence

There are two ways that outdoor professionals can influence the reflection and change intentions of their participants. The first and most common way is the collection of facilitation techniques employed in the learning experience as described in the chapter on reflection. The second and lesser well-known method is through competence effectance carefully applied before these facilitation techniques.

Competence effectance refers to the belief that personal competence (if correctly perceived) will increase a participant's chance of success in an adventure experience and grow their newfound perceived competence (Klint, 1992). The theory of competence effectance is based on the personal motivation of the participant (Klint, 1990). This theory is based on the earlier work of Robert White (1959) on effectance motivation and Susan Harter (1978) on competence motivation.

It also uses the Adventure Experience Paradigm (Martin & Priest, 1986) to delineate among conditions of challenge. This chapter will look at these theories from the perspective of the self-motivated participant enjoying their own personal outdoor recreational experiences and then progress to the role of facilitators in educational and therapeutic outdoor experiences. The metaphor of a train on switchable tracks will be used to represent the movement of participants through the model.

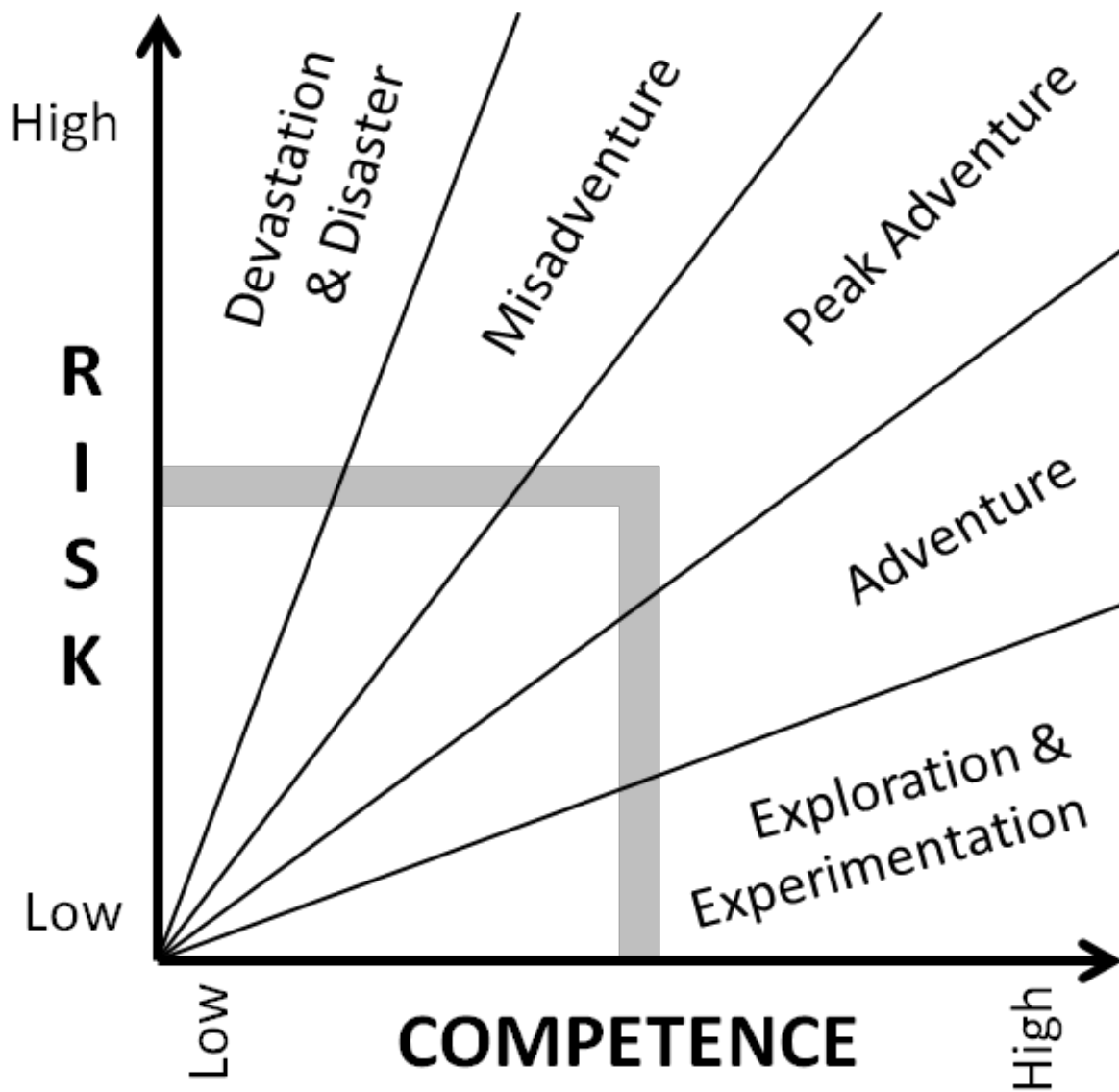
Foundational Theories

The Adventure Experience Paradigm (Martin & Priest, 1986) explains the five conditions of challenge for an outdoor recreational activity depending on the participant's blend of perceived risk and perceived competence as shown in Figure 1. While risk is the measure of the potential to lose something valuable (physical, mental, social, spiritual, financial, etc.), perceived risk is the participant's best guess of how much the dangers will cause a loss. Similarly, since competence is a measure of coping with the demands of the situation, perceived competence is the participant's best estimation of their proficiency to deal with those dangers and thus avoid a loss.

The interaction of risk and competence creates these five conditions of challenge in adventure experiences:

1. exploration and experimentation (risk is minimal; competence is maximal),
2. adventure (risk is low; competence is high),
3. peak adventure (risk and competence are matched, balanced, and optimal),
4. misadventure (risk is high; competence is low), and
5. devastation and disaster (risk is maximal; competence is minimal).

Figure 1: The Adventure Experience Paradigm showing matched levels of perceived risk and competence for astute participants



On a river trip, adventure participants may progress through these five challenging conditions. Initially, they may be playing in flat water and practicing strokes or stretching muscles (exploration & experimentation). Next, they proceed into moving water as they start downstream on a big river avoiding large rocks and submerged logs (adventure). Then, they get wet in white water, yet pass through each rapid without capsizing. However, they come close a few times, because they feel like they are on the razor's edge

(peak adventure). When they capsize and swim through the most difficult rapid, they are scared, but they survive with a few bumps and bruises (misadventure). Finally, during the notable drop of a small cascade in the main channel, their craft becomes pinned on a boulder and they narrowly escape a whirlpool-like hole, although they are embarrassingly rescued downstream and the craft is eventually recovered with some damage (devastation and disaster). Death and serious injury are avoided on this trip.

Martin and Priest (1986) identified several types of participants in self-directed adventure experiences. Three extreme personalities are worth considering: the timid and fearful, the arrogant and fearless, and the astute. Timid and fearful participants under-perceive their competence and over-perceive the risks, they typically fall short of their peak adventure goal and enjoy adventure or frequent exploration and experimentation. Arrogant and fearless participants over-perceive their competence and under-perceive the risks, they usually over shoot their peak adventure goal and end up in misadventure or occasional devastation and disaster. Astute participants correctly perceive both risk and competence and reach their peak adventure goal. Through repeated practice tries (mastery attempts) in each adventure activity, all participants move toward becoming fully astute, so that they can match their personal competence to the situational risks and achieve the ultimate goal of peak adventure whenever they go outdoors.

Peak adventure is the place where participants experience flow: “a state of experience that is engrossing, intrinsically rewarding, and outside the parameters of worry and [tedium]” (Csikszentmihalyi & Csikszentmihalyi, 1990, p. 150) in a kind of transcendent experience.

On a two-month canoe trip across the Northwest Territories of Canada, I was blessed with such an experience. Near the end of a long day of paddling the sun was low in the sky and my mind had ceased its normal chatter. I had the sensation of becoming my paddling and all that was around me. Stroke after stroke I was called to merge with my experience until “I” was no more. Only perception existed, a perception that was more complete. More whole than any I have known in a usual state of consciousness. (Harper, 1995, para. 50).

Have you experienced something similar? In times of flow (Csikszentmihalyi, 1975), goals are clear, feedback on personal performance is immediate, action and awareness merge, concen-

tration goes uninterrupted (participants focus on limited stimulus and screen out the unimportant), reality becomes vague, internal awareness heightens, feelings of control are enjoyed, and the experience becomes autotelic, where participants want to repeat the adventure in hopes of reproducing a state of flow once more (Short & Priest, 1993). People “are motivated to participate because of the intrinsic feelings of enjoyment, well-being and personal competence that they experience” (Boniface, 2007, p. 55).

For the participant, the razor’s edge would be staying in peak adventure, enjoying a feeling of flow, and avoiding a drop off into less stimulating adventure or misadventure. However, the ethical facilitator may want to make use of misadventure as a means to teach about limits and learning from minor mistakes, while avoiding the major consequences of devastation and disaster (Priest & Baillie, 1987). Read more on this later in the chapter.

White (1959) believed that people were motivated intrinsically to influence their circumstances through practice tries or mastery attempts. Their motivating rewards were positive emotions (effectance) and these good feelings would encourage future competence efforts under similar conditions. Therefore, their behaviours resulted from the desire to gain competence and the urge to control their environments, rather than be controlled by the environment. White’s (1959) effectance motivation theory did not consider failure, negative emotions, the opinions of observers, or how success was attributed. Harter (1978) improved this theory by adding these missing pieces and other social factors. Her competence motivation theory (Harter, 1978) was centred on the importance of people’s perceptions of their competence. She believed that perceived competence was impacted by success or failure after practice tries, positive or negative reinforcement from significant others, and attribution of control. Attribution of control (Weiner, 1985) can be internal (credited to one’s own self) or external (blamed on environmental factors). Competence effectance grew out of these theories and other social psychology models.

Two spirals and a switching yard

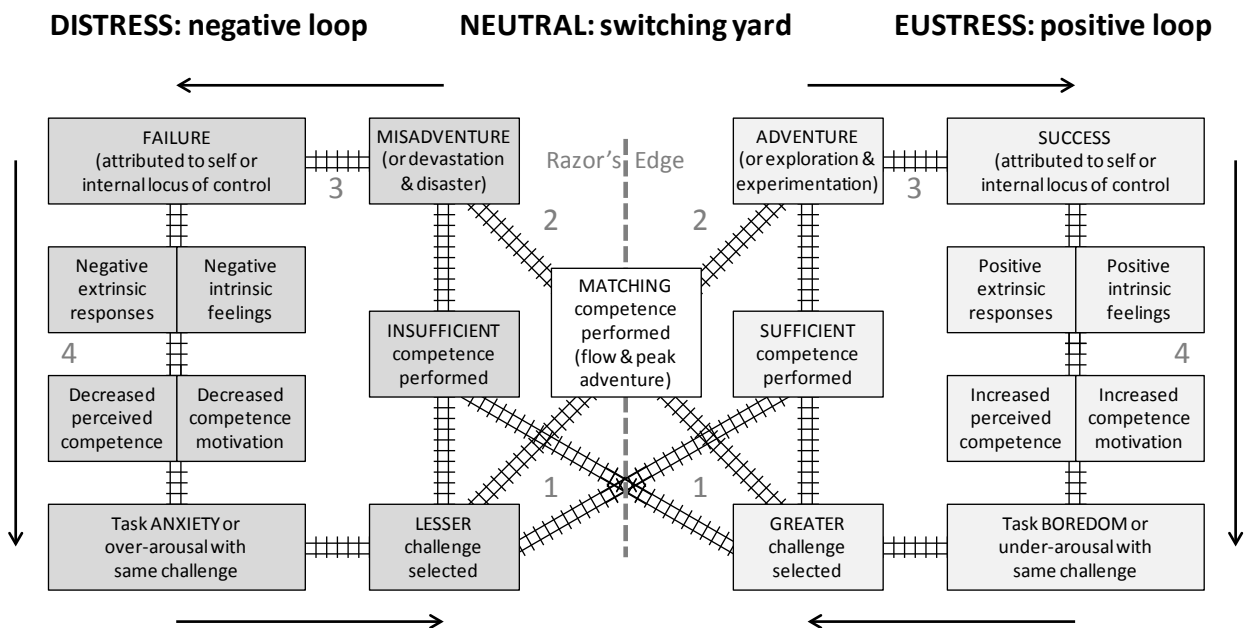
While writing this chapter, I was reminded of the double spiral train tunnels at Kicking Horse Pass in the Canadian Rocky Mountains and so I organized the competence effectance model around a railroad metaphor, where trains represent the participants riding the rails. In Figure 2, tracks join two spirals on either side of a switching yard. This track switching yard is the neutral centre or the razor’s edge, where participants can change direction to enter the other loop. The left feedback loop involves distress or negative stress and engages downward pessimistic feeling, thinking, and behaving, while the right feedback loop involves eustress or positive stress and engages upward optimistic feeling, thinking, and behaving. These loops and the track switching yard are considered by participants each time they encounter a challenge in adventurous outdoor learning. Challenges can be physical hardships, difficult exercise, mental and emotional risk taking alone or in a group, and social conflicts within that group. Participants are self-motivated to resolve their challenges in order to obtain the three driving needs of Deci and Ryan’s (1985, 2008; Ryan et al, 2021) self-determination theory: competence (being effective in behaviours),

autonomy (having and endorsing personal choice), and relatedness (remaining close to and well understood by important others).

In the negative distressful loop, participants have experienced a misadventure and believe they have not resolved their challenges (failure). They blame themselves (self-attribution or internal locus of control), and may receive pessimistic reinforcements from their peers (negative extrinsic responses) so they feel bad (negative intrinsic feelings). This leads them to think they are less capable (decrease in perceived competence) and they become less enthusiastic (decreased competence motivation). If asked to repeat the same challenge, they are apprehensive (task anxiety or over-arousal) and so they choose a much easier task (lesser challenge selected). If they don’t do well (insufficient competence performed), then a misadventure results again and they repeat the spiral.

In the positive eustressful loop, participants have experienced an adventure and believe they have overcome their challenges (success). They credit themselves (self-attribution or internal locus of control), and may receive optimistic reinforcements from their peers (positive extrinsic responses) so they feel good (positive intrinsic feelings). This leads them to think they are more capable (increase in perceived competence) and they become more enthusiastic (increased competence motivation). If asked to repeat the same challenge, they are confident (task boredom or under-arousal) and so they choose a much harder task (greater challenge selected). If they do well (sufficient competence performed), then an adventure results again and they repeat the spiral.

Figure 2: A model of the Competence Effectance Theory



responses) so they feel good (positive intrinsic feelings). This leads them to think they are more capable (increase in perceived competence) and they become more enthusiastic (increased competence motivation). If asked to repeat the same challenge, they are uninterested (task boredom or under-arousal) and so they choose a more difficult task (greater challenge selected). If they do well (sufficient competence performed), then an adventure results again and they repeat the spiral.

The track switching yard in between both loops is where participants can decide to change to the other loop. A participant emerging from the negative distress loop that has selected a lesser challenge can switch to the positive eustressful loop by performing sufficient competence or matching competence with an interpretation that the outcome was an adventure continuing into success. A participant emerging from the positive eustress loop that has selected a greater challenge can switch to the negative distressful loop by performing insufficient competence or matching competence with an interpretation that the outcome was a misadventure continuing into failure. Each individual adventurer will attempt to perform matching competence, because they want to reach peak adventure and a flow state, remain on the razor's edge, and return for another adventure next time.

During my first BC bicycle camping trip, I hadn't ridden a bike in decades. My skills were rusty and the first time I tried to brake, I ran into the person stopped ahead of me and knocked down several more in the group line. Everyone laughed and I felt like a fool. Needless to say, I kept my distance from the group and lagged at the back of the pack during the days that followed. I lost my self-confidence and found myself running off the road onto the soft shoulder more than once. Looks like I couldn't do much good around the campsite either.

One day, the trip leader was travelling at the back and noticed my nervous and tentative style on the road. That morning,

the leader coached me on how to: hold the handlebars for rapid breaking, adjust my posture for greater stability, and shift gears for uphill and downhill segments. During lunch, we practiced crashing and rolling off the bike in a private session. In the afternoon, I felt more confident. I peddled up to the front half of the group and manoeuvred well in the pack. Several people commented at how I had improved and didn't try to avoid me. I must have been feeling pretty good about it, because I raced them to the campsite and my newfound assurance carried over to my skills around the campfire and on the road for days afterward.

Facilitated track switching

The facilitator can act as a switch operator by steering participants onto a different track or reversing their perspective, so that they reinterpret the situation and end up in a different place. In educational and therapeutic adventure programs, facilitators have four ways of helping participants to switch tracks or shunt back to previous positions.

First (see "1" in Figure 2), a facilitator can alter the participants' perceptions of their performances in challenges. Emerging from either loop, facilitated discussion can determine whether the participants see the competence they mustered as sufficient or insufficient. Alterations of perceptions can switch them to another track. For instance, for timid and fearful participants, who might gravitate toward insufficient, a facilitator can carefully discuss how their performances were viewed by others as sufficient. Alternatively, for arrogant and fearless participants, who might see themselves as the greatest at that activity, a facilitator can gently discuss how their performances were viewed by others as insufficient.

Second (see "2" in Figure 2), a facilitator can adjust the participants' interpretation of their outcome in an adventure. Coming off of the razor's edge from matching competence, facilitated discussion can help participants to decide whether

their experience was adventure or misadventure. Adjustments of interpretations can switch them to another track. By way of illustration, for timid and fearful participants, who need a boost in confidence, facilitators can lean toward cautiously discussing the positives. On the other hand, for arrogant and fearless participants, who need an ego check, facilitators can lean toward smoothly discussing the negatives.

Third (see “3” in Figure 2), after deciding whether their experience was a success or failure, facilitators can convince participants to change their attributions or loci of control. Instead of crediting or blaming themselves (internal locus of control) for success or failure, facilitated discussion can allow them to see some environmental factors (external locus of control) that could have contributed to their success or failure. Changing attributions can shunt them back to a previous location. For example, timid and fearful participants who blame only themselves for failure can be supported by attributing the temporary setback in confidence to the weather or their equipment. Similarly, arrogant and fearless participants who credit only themselves for success, can be humbled by also attributing the momentary boost in ego to good luck or their support team. This method is a highly paradoxical action, because facilitators are commonly shifting participants toward internal attributions as a way to build responsibility and this occasional technique is a rare reversal of that norm.

Fourth (see “4” in Figure 2), throughout either loop, facilitators can encourage participants through facilitated discussion about how best to: provide extrinsic responses to one another, discuss intrinsic feelings in the group debrief, correctly perceive competence, and choose to be motivated. Managing these other parts of the model can shunt participants back to a previous location or aid participants to switch tracks during the next practice try. Discussion can examine the impact of peer criticism versus encouragement, the influence participants’ feelings have on their internal thoughts and behaviours, and how they envision themselves in terms of competence and motivation.

When I was learning to rock climb in Alberta, one of my instructors would always hold me back on my aid routes. I was great at bolting [anchors], using etriers [steps] to gain an advantage, and jumaring up the rope [ascending with rope clamps]. I later realized he was holding me back for good reason; I was getting too cocky or over-confident and I was starting to make critical errors like taking short cuts that wouldn't hold when I placed my weight on them. He held me back by expressing I was only a good climber because of the gear I used to rely heavily on, my upper body strength, and my muscular lower legs.

I was mostly muscle and weighed a lot. So, I was much worse at free climbing, where I couldn't rely on my equipment and had to lift my weight up the rock instead of resting on the gear. My other instructor would always encourage me. She would spend a lot of time making sure I understood that my good lead climbs were due to extended effort and, when I fell, she and I talked about what I had learned from my falls and mistakes. Later, as I climbed on my own and with others, I realized they both were right. Eventually, I became a better free climber than an aid climber and my climbing greatly improved for both types.

The three italicized stories presented in this chapter should resonate with you. The first should remind you of what can motivate people to seek peak adventure and a flow state. The second should instil empathy in you as a facilitator by remembering what learning a new skill was like when you were a novice. And the third should punctuate how valuable and influential you can be to help people learn and change through adventurous outdoor learning (Ayotte-Beaudet et al, 2023).

In outdoor adventure recreation, participants seek a matching balance between situational perceived risk and personal competence in order to reach peak adventure and a state of flow. In addition, “setting goals, and progressively devel-

oping confidence were identified as antecedents of flow” (Boudreau et al, 2020, p. 12). Also, “age is a particularly important sociodemographic antecedent: ...respondents at older ages were more likely to experience psychological flow” in adventure tourism/leisure (Amatulli et al, 2021). Flow is known to involve “time transformation, a sense of control, a focus on the activity, and a feeling of effortlessness” (Boudreau et al, 2020, p. 12) with a “complementary relationship between flow and mindfulness” (Houge Mackenzie, 2022, p. 159).

The purposes of outdoor adventure education, development, and therapy are to rise above the good feelings that adventure activities provide in times of leisure and to facilitate changes in thinking, behaving, and resisting respectively. This movement from recreation to other forms of adventurous outdoor learning requires facilitated discussion. Please take time to learn the theory behind competence effectance by reading this chapter again and finding additional psychological models. Then, under the tutelage of an expert and established outdoor leader, learn to apply those practices which you can utilize to help people switch tracks when they get stuck in one loop or the other.

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