Leave No One Behind:

Using Flow Learning to Increase Outdoor Recreation Opportunities for People of All Abilities

Dr. Jennifer Leo
UNESCO Chair, Institute of Technology Tralee in Ireland

Hamid Mustafa
UNESCO Chair, Institute of Technology Tralee in Ireland

Dr. Niamh-Elizabeth Mourton
UNESCO Chair, Institute of Technology Tralee in Ireland

Ann O'Connor
Institute of Technology Tralee in Ireland

Abstract

The UN's Sustainable Development Goals (SDGs) promote sustainable development, including access to nature. Despite benefits associated with outdoor engagement, people with disabilities are less likely to have access. The Flow Learning framework has potential to promote outdoor engagement for people with disabilities. Flow Learning involves a sequence of activities to introduce and engage learners with nature. This paper uses a case example to present a potential applications of Flow Learning to develop meaningful outdoor activities for adults with disabilities (aged 18 to 25 years) within the context of the SDGs. Discussion focuses on how Flow Learning is useful to develop structured programming that stimulates outdoor appreciation among people with disabilities.

Keywords: *accessibility, disability, flow learning, outdoor recreation, sustainable development goals*

Outdoor recreation activities (e.g., hiking, kayaking, horseback riding) offer an important way to connect all people, including those with disabilities, with the natural environment (Sandell & Ohman, 2010). In addition to increasing environmental awareness (Sandell & Ohman, 2010), participating in outdoor recreation activities may also improve mental health and well-being for people with a range of disabilities, including mental illness (Maier & Jette, 2016). Regular access to forest-based activities resulted in improved communication and ability to attend to environmental conditions, increased social relationships, and better sleep quality for young adults with autism (Uehara, 1999). Despite the benefits associated with outdoor recreation participation, people with disabilities, particularly adults with intellectual and developmental disabilities, are less likely to access outdoor recreation activities (Burns & Graefe, 2007).

Experiencing the outdoors through recreation activities is critical to develop an appreciation of and relationship with the environment (Benton, 2011; Sandell & Ohman, 2010). For example, developing activities for use during a hiking session with adults with disabilities can promote and enhance exploration of the forest (or natural space/environment) by guiding participants to use their senses to listen, smell, touch and taste (Benton, 2011). Sandell and Ohman (2010) purport that these direct encounters with nature are useful to promote and enhance environmental sustainability through the values that are integrated in outdoor recreation activities. Structured outdoor learning experiences have the potential to make natural spaces more accessible and meaningful.

Sustainable Development Goals (SDGs)

Leaders from around the world have committed to achieving the Sustainable Development Goals (SDGs), which are a new set of goals, targets, and indicators developed to end poverty, address climate change, and fight inequalities (Mustafa, n.d.). The SDGs will be used to frame political agendas to inform the development and implementation of inclusive policies, which may incorporate sport, physical activity and recreation (including outdoor recreation activities). The 17 Sustainable Development Goals could be broken down into three main focus areas: Society, Economy, and Biosphere. Since the implementation of the SDGs, most work in relation to sport, physical education and recreation has focused on contributing to the areas of Society and Economy. Little attention has been paid to the potential contribution of sport, physical education and recreation towards achieving Biosphere SDGs. Within the Biosphere area, and relevant to outdoor recreation, there are four related SDGs: SDG 6 (Clean Water and Sanitation), 13 (Climate Action), 14 (Life below Water), and 15 (Life on Land) (see http://www.un.org/sustainabledevelopment/sustainable-development-goals/ for more information about the SDGs).

The objective for achieving the SDGs is to meet the goals and targets by the year 2030 (Ford, 2015), which means we are entering an ideal point in time to introduce elements of the SDGs into recreation planning and programming. Building on the principle of "leaving no one behind," the new Agenda emphasizes a holistic approach to achieving sustainable development for all, thereby addressing the lack of inclusion of disability within previous policies ("Disability and Sports | United Nations Enable," 2017). The newly implemented 2030 Agenda for Sustainable Development holds a deep promise for persons with disabilities everywhere as

disability is referenced in multiple sections (e.g., related to education, employment, and inequality). At a local level, this means that recreation planners and outdoor leaders have global policies available to support their work and justify requests for funding and program development.

Outdoor Recreation and Sustainable Development

The 2030 Agenda for Sustainable Development was developed around the principle of "leaving no one behind" to include equitable access to education, health and well-being opportunities, including those that exist in natural spaces (United Nations, 2015). The right to equal access extends beyond traditional health and education settings to include sport, physical activity, and outdoor recreation.

Flow Learning (Cornell, 2015) is a useful framework to develop and deliver activities that will increase access to and engagement with natural spaces for people with disabilities. The purpose of this paper is to discuss the use of Flow Learning to develop meaningful outdoor learning activities for young adults with disabilities within the context of the United Nations' Sustainable Development Goals (SDGs).

Flow Learning

The Flow Learning framework provides educators with a sequence of activities to introduce and engage learners with the natural environment (Cornell, 2015). Developed by Cornell (2015), following years of practice and engagement in outdoor education, it is purposeful and structured enough to plan learning sessions, yet flexible enough to develop and adapt activities to meet the needs of any group. The practical and applied nature of the Flow Learning framework differentiates it from Csikszentmihalyi's (2008) Flow Theory, which describes flow as an optimal state of activity engagement, as determined by the appropriate combination of challenge level, focus, and concentration.

Cornell (2015) introduced a sequence of Flow Learning activities with four stages, yet it is possible to move in and out of the sequence to tailor the learning session for each group (for example, depending on the age or comfort level of participants with one another). Figure 1 offers a visual representation of the Flow Learning sequence and Table 1 provides examples of activities for each Stage of Flow Learning.

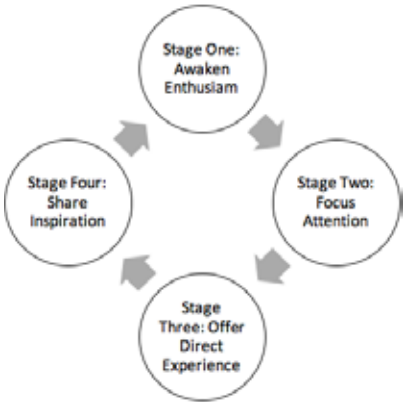

Figure 1. Flow Learning Sequence.

Table 1
Sample Activities for Flow Learning Stages

Stage	Purpose	Sample Activity
One: Awaken enthusiasm	Playfulness & alertness	*Animal Parts* • Divide the group into small teams • Ask each group to select a favourite animal • Use all of the group members to form the parts (e.g., head, body, limbs) of their chosen animal
Two: Focus attention	Receptivity	*Sounds* • Invite participants to sit quietly, eyes closed, with elbows bent and fists closed, listening to sounds in the environment • With each new sound they hear, raise one finger
Three: Offer direct experience	Communing with nature	*Blindfolded Walk* • In partners, the leader guides their blindfolded partner to explore a natural area using multiple senses. • For example, they are encouraged to listen, smell, and touch.
Four: Share inspiration	Idealism	*A Letter to Myself* • Encourage participants to write a letter to themselves, describing their experience, how they are feeling, and what it means to be connected to nature. • Mail the letters to participants in one month.

Note: Activities are adapted from Cornell (2015)

Stage One: Awaken Enthusiasm, is useful to establish rapport with the instructor, participants, and subject (e.g., natural space to be explored). Selected learning activities are fun, yet instructive, and experiential. This stage is focused on establishing an atmosphere of enthusiasm, which helps participants to overcome any feelings of passivity and become involved. As an instructor, the playfulness of Stage One can be balanced by providing some direction and structure to minimize discipline problems and prepare the participants for move sensitive activities to come.

In Stage Two: Focus Attention, activities encourage participants to direct their focus and to be more receptive to nature. The enthusiasm that is created in Stage One can be directed to improve the participants' observational skills and increase concentration and calming of the mind.

Stage Three: Offer Direct Experience, involves hands-on activities that are chosen to provide an intuitive experience with nature. Participants are encouraged to focus on specific aspects of nature, such as a rock face, unique flower, or a singing bird to engage with the natural setting. This stage is important to inspire wonder, foster deeper learning, and promote a lasting connection with the natural environment.

The final Stage Four: Share Inspiration, is critical to offer participants the time and space to experience a sense of completion with their time in nature. Closing activities are used to encourage reflection and sharing of ideas. This time helps to foster the group bonding that may have occurred, it reinforces the positive personal experience, and it provides an opportunity to share feedback with the instructor.

The underlying flexibility of Flow Learning allows an instructor to be responsive to the needs of the group by selecting activities according to the interest and attentiveness of the group at a given time, along with the desired goals for the session (Cornell, 2015). For example, to change the pace for participants, you can introduce Stage One or Two activities at various points throughout the session.

Case Example

Flow Learning activities could support attainment of SDGs and targets, within the Biosphere area and focused on environmental sustainability. See Table 1 for specific examples of how relevant SDG targets may fit within the Flow Learning framework, such as introducing climate change. Additionally, Flow Learning provides a framework to consider the integration of the ecosystem and biodiversity values within the process of planning and developing outdoor recreation strategies (SDG 15, Life on Land, 15.9).

The following description offers an example of how Flow Learning was used to structure outdoor recreation activities for young adults with disabilities, within the context of working towards attainment of the SDG Biosphere goals.

Outdoor learning sessions. The participants who took part in this outdoor recreation program were familiar with one another and the instructor as they regularly attended a community-based day program together. There were five young adults with intellectual and developmental disabilities ranging in age from 18 to 25 years. Considering the familiarity among the participants and instructor, less emphasis was placed on activities from stage one to awaken enthusiasm and establish rapport. However, in the event the group was not familiar with one another, they could participate in a number of introductory activities, such as Animal Parts (see Table 1 for description). Within this case example, the group met with the outdoor learning instructor on three separate occasions to explore different natural settings (woodland forest, island trail beside the ocean, and summit hike with extensive valley views). See Figure 2 and 3 for a map of the areas in which the following activities took place.

Figure 2. This map of Ireland provides context for the area where the outdoor recreation activities took place as they were all planned within a 1-hour drive of the post-secondary institution.

Figure 3. This map highlights the location of the 3 outdoor education sessions, on the coast, in the woods, and in the mountains.

Session One took place at Ballyseedy Woods, a 1.5 km loop of a woodland area that offers access to a wide variety of flora and fauna. As seen in Figure 3, participants were introduced to the 'Forest Code' which offered useful guidelines to teach and encourage sustainable practices while accessing the outdoor space (e.g., "Leave things as you find them, take nothing away"). The hiking session provided an opportunity to teach participants about the sensitivity of the natural landscape and how they can participate in recreation activities in a responsible manner (Sandall & Ohman, 2010).

Figure 4. Participants taking a moment to read about and discuss the Forest Code. They were directed to reflect on how they would be sure to follow these guidelines during their time in Ballyseedy Woods, Co. Kerry, Ireland.

For session two, participants travelled to Valentia Island where they hiked a 5 km loop at Bray Head, walking towards Bray Tower, an abandoned signal tower. Following a steady climb, participants would typically be rewarded with views of the Kerry County coast, Skellig Islands, and Wild Atlantic Way, however, on the day of their hike, the group were met with very low and dense fog, thereby restricting visibility significantly. The group encountered a herd of cows, which they had to navigate quietly so as not to disrupt them. Finally, the group hiked a 5 km trail up the Strickeen Mountain at the Gap of Dunloe in Killarney National Park. On this day, the weather cooperated and the participants were rewarded with tremendous views of the Killarney Valley.

Figure 5. Participants hiking along the trail on Valentia Island, Co. Kerry, Ireland

Description of activities. The participants in this case had shared in many outdoor excursions. Considering their familiarity with one another, little time was spent with Stage One activities. However, an instructor may wish to begin the program to Awaken Enthusiasm, by introducing an activity such as Noses, which is a guessing game that begins with general descriptions of animals (Cornell, 2015). The clues become increasingly more specific and as participants think they know the answer; they hold a finger to their nose. Participants may try to remove their finger if they become unsure and they are welcome to quietly guess the answer with their neighbours. Rather than focusing on winning by guessing the most correct answers, the activity is intended to be fun and to encourage sharing excitement about the activities ahead. This activity could be used on the first day at Ballyseedy Woods to introduce wildlife that are local to the woods or it could be used each session to illustrate the diversity of animals that were living at the different settings.

To *Focus Attention*, participants were invited to take part in a Sounds activity, which involves listening intently at the surrounding sounds (Cornell, 2015). Participants were directed to sit or stand with their elbows bent and fists closed at shoulder height and eyes closed. With each new sound, participants lifted one finger. For a specified period of time, everyone remained quiet to enhance concentration. Some participants became very excited about the sounds that they heard so it might be helpful to offer reminders about the importance of being quiet.

This activity was introduced during each of the hikes and the participants were encouraged to compare and contrast the sounds they heard in each setting (See Figure 6).

For example, in Ballyseedy Woods there were many different types of birds, on Valentia Island, a helicopter was heard nearby, along with the sounds from the boats heading out to the Skellig Islands, and during the ascent to Strickeen Mountain it was quieter with few birds, but very strong wind. Due to the fog on Valentia Island, participants were particularly engaged with the Sounds activity as their vision was reduced and they became very absorbed in listening to the environment around them.

One approach to *Offer Direct Experience*, involved the use of photography during the hike at the Gap of Dunloe (See Figure 7). Prior to arriving, participants were asked to bring a camera (including cell phone cameras and digital cameras) so that each person could take their own photographs. At the beginning of the experience participants were directed to take specific photographs (e.g., Black Lake, selfie of themselves at Black Lake). This helped participants to become familiar with the use of their cameras and to generate ideas for other images

they would like to capture. Throughout the duration of the hike, participants were asked guided questions about photographs they would like to take to ensure they were making use of the camera. The participants appeared to enjoy this activity as they stopped independently during the hike to take out their camera and capture photos. Interestingly, the photos began with nature as the focus, however, towards the end of the hike, participants spent time capturing images of themselves with other participants. The photographs became much more social in nature.

As a final stage, to *Share Inspiration* of the outdoor learning experiences, participants had an opportunity to debrief and discuss their experiences. The photographs were used to promote and encourage discussion and reflection as the participants were invited to select photos that were meaningful to them and to describe why they were chosen.

Flow Learning activities were incorporated throughout the hikes to provide structured activities that would help the participants to meaningfully engage with their natural environment and focus their attention on the different teachings and information provided by the leader. These activities were part of a step by step process to develop and restore the adoration for the environment around us and thus encourage participants to take steps and actions to promote environmental sustainability. This respect and love for the outdoors has somehow been lost with the current urbanization and implications of recent technology growth which has hindered the effects and bond with the love of outdoors. The issues rising from lack of environmental sustainability such as climate change are not the duty for one person or entity but rather a duty and responsibility for all.

Structuring outdoor activities to focus attention, offer direct experience and share inspiration is critical to promote the adoption of the values related to environmental sustainability which are embedded in the SDGs.

Figure 6. Participant immersed in a Sounds activity during their hike through Ballyseedy Woods, Co. Kerry, Ireland

Figure 7. Participants enjoyed taking photographs with one another. The desire to capture these moments, illustrates the potential power of social connectedness that emerged following the time spent with others in nature. Fostering social connectedness in nature may be critical to promote the adoption and support of the environmental sustainability values.

Flow Learning and SDGs

The direct experiences of learning about ecology and interacting with the environment as part of structured outdoor recreation activities was critical to promote positive attitudes towards nature and encourage values related to environmental sustainability (Sandell & Ohman, 2010). These values of environmental sustainability underpin the United Nations in terms of connecting people to nature. Developing outdoor activities through Flow Learning can be used as a tool to spark discussion around the much debated topic of Climate Change. For example, activities within the stage of Share Inspiration can be useful to structure time and space for reflection and discussion. Considering climate change is a global issue, Flow Learning could be used to promote enthusiasm and love of the outdoors with a view of raising awareness on the impact outdoor recreation has in relation to contributing towards the Sustainable Development Agenda. This is especially true for people with disabilities who have previously had fewer opportunities to be active in the outdoors and may be less likely to have considered these environmental issues and questions (Burns & Graefe, 2007).

Concluding Thoughts

There is tremendous potential in the use of Flow Learning to frame the development and delivery of nature-based recreation activities that encourage positive values embedded in nature experiences (Cornell, 2015). This builds on the rec-

ommendation of Sandell and Ohman (2010) to use outdoor recreation activities to promote environmental sustainability. Sustainable development can include social and economic aspects, thereby broadening the scope beyond the ecological focus (Sandell & Ohman, 2010). The alignment of Flow Learning and outdoor education with the discussed Sustainable Development Goals, show the effect and contribution that outdoor education can have on sustainable development. The key to measuring the progress towards the above mentioned targets will be indicators that can be disaggregated. However, precautions have to be taken with regards to the implementation of outdoor education for people with disabilities as the main goal of outdoor education should be for the benefit of the participants. Further research is warranted to learn about the experiences of participants with disabilities who take part in outdoor education activities that are designed and delivered within the framework of Flow Learning.

Taking into account the Sustainable Development Goals motto of 'Leaving no one behind,' Flow Learning is a framework that could be a useful tool to develop structured programming opportunities to stimulate the love of the outdoors among people with disabilities. Increasing access to the outdoors could have a positive impact for people with disabilities on a global level leading to the year 2030, as organizations work towards building a more inclusive society. Given the potential for increasing access and participation, we recommend further research to examine the role of measuring the progress of a global tool that would be used to advocate the specific SDG goals and targets.

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Dr. Jennifer Leo is a postdoctoral researcher with the UNESCO Chair in Inclusive Physical Education, Sport, and Recreation at IT Tralee in Ireland. The UNESCO Chair aims to lead a global partnership for social change, working towards the full and effective inclusion of persons with disabilities on an equal basis with others and their full enjoyment of physical education, sport, fitness and recreation, without discrimination.

Dr. Niamh-Elizabeth Mourton is a postdoctoral researcher with the UNESCO Chair IT Tralee. Since completing her PhD, she has worked in the area of inclusion in sport, physical education and physical activity across a number of local, national and international organisations. Additionally, she has extensive expertise in teaching at 3rd level Education institutions, as well as policy and resource writing, national and international resource development and implementation.

Hamid Mustafa joined the UNESCO Chair team as a research assistant after graduating with a master's degree which was supported by the IOC in Management of Sport Organizations. Hamid brings a strong background in aligning sports organisations projects, strategic plans and policies with Sustainable Development Goals (SDGs) and targets with a practical, measurable adoption emphasis.

Ann O'Connor is a lecturer in the Department of Health and Leisure Studies at IT Tralee, Ireland. Within this role, Ann strives to partner with the UNESCO Chair to share her love of the outdoors with adults with disabilities through structured learning opportunities. In addition to her years as an outdoor recreation professional, Ann worked with the UNESCO Chair in the area sport and development.