

Grow With Flow!  
Flow and Physical Activity in Young Children

by

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## Abstract

This summary paper presents three different perspectives on the phenomenon of *flow*: theoretical and foundational, presented as an academic course; analytical, presented as a research study; and practical, as demonstrated through a physical education program plan. *Flow* is a universal phenomenon, that joyful feeling of total absorption in a task, one which is pursued for its own sake. *Flow* can be facilitated through sport and physical activity, and *flow* experiences are an effective way to cultivate internal resources for resilience. The purpose of the research presented herein was two-fold: to gain an understanding of children's experiences of *flow* while at play, and to introduce and assess a tool for identifying the *flow* experiences of children in a physical activity context. While much of the widespread research on *flow* emphasizes performance outcomes and focuses on adult populations, the current study centers on the phenomenological experiences of kids in a kindergarten physical education (PE) class with a view toward a better understanding of those experiences as a way to inform the design of PE programs and activities. Furthermore, the study explores the links between *flow* theory, resiliency domains, and executive function skills.

The study itself is grounded in the principals of phenomenology and pragmatic inquiry, using observational data collected using an adapted tool called the Flow Indicators in Recreational Sport and Play. This data collection tool was supplemented with reflective drawings and teacher interviews. Qualitative data analysis and descriptive coding highlighting themes were the methods used to analyze the information. The findings indicate that *flow*-related behaviours are observable in a group of children engaged in a purposefully-designed, school-based PE activity, and that flow indicating behaviours emerged and retreated over the course of the activity; peer interaction contributed to enjoyment and the emergence of *flow* indicators; having a clear goal, story, or challenge to be a part of contributed enjoyment and the emergence of *flow* indicators; and perceived effort contributed to whether the activity was deemed fun or not.

The imperative to encourage life-long physical activity is less a problem to be solved than a call to action – an effort to promote effort; a movement to promote movement – because so much is at stake when we lose the connection between our bodies, our minds, and our spirits. This study highlights opportunities to embed concepts from *flow* theory into program development, as a way to encourage a lifelong commitment to an active, rather than passive, physical and mental life.

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## **Statement of Problem and Context**

The current crisis of inactivity has far reaching effects that go beyond the well-known burdens on our economy and health care systems. What we lose as individuals is less tangible, but equally valuable: we lose the opportunity to engage not only our bodies but our minds through the joy of movement. The imperative to encourage movement, physical activity, and participation has taken on new practical urgency in recent years, and has only been exacerbated by the current pandemic: we need to get moving, not just for our physical health, but for the mental, emotional, social, and even environmental health of us as individuals, communities, and society as a whole. The current study explores that imperative by asking: How do children experience the phenomenon of *flow* in play settings; and are there indicators of flow that are observable while children are engaged in physical activity or play?

## **Significance and Implications**

So much is at stake when we lose the connection between our bodies, our minds, and our spirits. The more people move, and the more people who move, the better, and one of the keys to *continuing* with physical activity is to *begin* with physical activity (Kristén et al., 2002, p. 150). If we can understand what keeps us moving, and how we see ourselves (and the world around us) when we do, perhaps we can create more opportunities for more people to have a more active, more engaged, happier, and healthier physical and mental life.

Deliberate, intentional movement cultivates the internal resources and capacity for resilience, and *flow* theory, applied within the context of physical activity – through sport or play – offers insights into the relationships, processes, goals, and outcomes that can be embedded into practical programming for children and youth.

## Positionality

The year that I started karate was the year that my mom was diagnosed with ovarian cancer. Late stage, prognosis poor. I was a month or two into the second year of my history degree at Simon Fraser University when I got the news, which my Scottish/Irish/German-English parents characteristically downplayed: “small lump, surgery scheduled – everything’s going to be fine, wait until Christmas to come home”. I believed them and so I waited, but I worried. I needed something to distract me.

I have always been sporty, and I like to think I come by it honestly: my grandfather on my dad’s side was local Calgary hockey legend Doug “Crafty” Cairns, of 1946’s Calgary Stampeder Allan Cup victory fame, who had been recruited by three of the “Original Six”<sup>1</sup>, and there’s not a team photo in North Battleford, Saskatchewan’s community yearbooks from the 1930s that doesn’t feature my paternal grandmother Ethel Martinson – including softball, hockey, diving, basketball, equestrian, curling, and cross-country skiing. My father, Ken “Pivot” Cairns, was thus a natural athlete, excelling at track and field and football before setting his sights on an Olympic dream: he was among the last players cut from the 1964 Olympic hockey team, a disappointment he harbours to this day. Nevertheless, athletics provided a different opportunity for him via a hockey scholarship to Colorado College, where he met my mom.

Nancy Bowers was different. She too was on scholarship, but an academic one, and was majoring – with honours – in Mathematics. She was a self-described US “army brat” who, as a kid, learned how to make fast, loyal, and enduring friendships. Fiercely smart and independent, she was a feminist before she knew what that meant: she would not get married until after she graduated, and then they would travel and live abroad (and delay having kids) before “settling

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<sup>1</sup> The group of six teams that made up the National Hockey League before its expansion in 1967. My grandfather’s archives include recruitment letters from the Chicago Blackhawks, Montreal Canadiens, and New York Rangers.

down” and getting to work. She drank and smoked and hated to cook; she laughed easily and read a lot and did both with equal voracity and delight. She also had a needlepoint in the kitchen of my childhood home that read “*my idea of exercise is a good brisk sit*”.

I guess I take after my father. He was my coach (official or unofficial) for almost every team I remember being on, and many of my happy childhood memories involve some activity or event that he had planned for me and my sister (horseback riding; ski trips; a now infamous cycling trip from Calgary, Alberta to Sandpoint, Idaho the summer I was 9). When I got older, the leisure activities I chose for myself were almost always physical: hiking, canoeing, cycling, swimming – I felt confident and happy when my body was moving.

So, when I got the news about my mom’s diagnosis, I sought out something that would at least help balance out my feelings of anxiety and read. The University rec centre offered myriad options, but I only knew what I *didn’t* want to do. I didn’t want to be on a team; I didn’t want to have to talk to anyone. I wanted something vigorous, something cool – and I wanted something that *no one I knew* was doing. Enter the SFU karate club.

Fast-forward 25+ years, and I am still practicing karate. In 2019 I earned my third-degree black belt, and I have started up an all-ages karate club in Fernie, BC. I credit karate with enabling me to cope with, care for, and ultimately mourn my mother and her illness. Karate’s role in sustaining me during that period and beyond, along with my (very privileged, to be sure) lifelong enjoyment of recreational sport, frames my research and informs my interest in the resiliency-building qualities of movement through the experience of *flow*. And now, as a parent and as a coach, I am especially interested in *flow* when we’re young, and how it can contribute to an active life.

## Theoretical Framework

The following framework supports the general assertions that: (1) *flow* is a universal human phenomenon; (2) *flow* can be facilitated through sport and physical activity; and (3) *flow* experiences are an effective way to create internal resources for resilience.

### What is Flow?

The concept of *flow* was named and elucidated by Hungarian psychologist Mihaly Csikszentmihalyi in 1975 to describe the joyful feeling of total absorption in a task, one which is pursued for its own sake. Csikszentmihalyi's original interest, developed from a childhood in Europe during and after the Second World War, was in "understanding what contributed to a life that was worth living" (Csikszentmihalyi, 2004). His studies began with interviews of "creative people" – accomplished artists, scientists, and the like – who all seemed to describe similar states when they felt they were performing at their peak, wherein they had given themselves over to the task or experience at hand, their selves or identities seeming to disappear (Csikszentmihalyi, 1975). Their statements so often included themes of floating on air, drifting through water, or flowing that Csikszentmihalyi adopted the latter term to represent the common experience or phenomenon.

**Components of Flow.** Csikszentmihalyi's initial description of *flow*, or "optimal experience" (Csikszentmihalyi, 1982, p. 13), identified the following necessary components: (1) clarity of goals and immediate feedback; (2) a high level of concentration; (3) balance between skills and challenge; (4) the feeling of control; (5) seeming effortless; and (6) loss of sense of time (Csikszentmihalyi, 1997). His studies of optimal experience also uncovered common outcomes, namely intrinsic motivation and enjoyment (Abuhamdeh & Csikszentmihalyi, 2011; Csikszentmihalyi, 1990; Nakamura & Csikszentmihalyi, 2009). These streams of research

underpinned the emerging field of Positive Psychology, signaling a shift in focus across the profession, away from mental illness and toward mental health (Azar, 2011).

This shift toward Positive Psychology has led to the growing field of Happiness Studies, and includes research on resilience and thriving (Loh et al., 2013; Tugade and Fredrickson, 2006; among others). Individual resilience may be thought of as the dynamic ability to draw on *internal* resources at a given time. Cultivating those internal resources, with a goal of producing healthy, happy people, is the preoccupation of much of the child development, child psychology, and positive psychology literature (Ginsberg, 2011; Hallowell, 2002). Competence, confidence, connection, and character – the ‘4 Cs of Resilience’ (Ginsberg, 2011), as well as Ginsberg’s 3 additional “crucial Cs” – contribution, coping, and control – are regarded as among the fundamental building blocks for the internal resources that lead to resilience (Hallowell, 2002; Ginsberg, 2011). Furthermore, the necessary conditions for *flow* are reflected in all seven Cs, thereby suggesting a link between the necessary conditions for *flow* and the development of resilience (Hallowell, 2002; Ginsberg, 2011).

### **Purpose and Outcomes**

The purpose of my research was two-fold: first, to gain an understanding children’s experiences of *flow* while at play with a view toward facilitating and increasing those experiences; and second, to introduce and assess a tool for identifying *flow* experiences in a physical activity context – tools that have been adapted to accommodate young participants.

### **Objectives**

The results of the study are intended to inform physical activity and education programming for young people so that *flow* experiences can be facilitated. The links between *flow* and learning, motivation, confidence, resilience, and well-being have been established over close to 50 years of scholarship. The imperative to help facilitate *flow* experiences comes from

the desire not only to increase the outcomes noted above for kids, but also to help engender a lifelong commitment to an active, rather than passive, physical and mental life.

### **Research Questions**

The questions the research aims to address are: 1) How do children experience *flow* in play settings? 2) Are there indicators of *flow* that are observable while children are engaged in physical activity or play?

### **Methodology**

#### **Phenomenology**

I am interested in how children and youth *experience* their participation in physical activities. I cannot arrive at an answer simply through what we know about the body, the mind, or sporting/physical education structures, or even some combination of all these (or more). The relatively limited, and only relatively recent, adoption of phenomenology as a methodology within *flow* research (and *flow*-in-sport research) belies its usefulness as a lens through which to understand the experience.

**Advantages of phenomenology.** Although phenomenology shares commonalities with other qualitative research methodologies like ethnography, and even case study, it departs from those methodologies through its focus on conceptions. Like other qualitative methodologies, phenomenology seeks to understand complex topics, and it is interested in including voices of people with lived experience. It also provides a legitimate and supported framework for investigating, analyzing, and describing nebulous phenomena like meta-cognition, persistence, and resilience, which guide my research aims.

**Disadvantages of phenomenology.** Relationship-building, while a positive opportunity within phenomenological research, takes time, energy, and a firm commitment from both the researcher and the participants. The process of relationship-building was further complicated in

the current research by the COVID-19 pandemic, as connections were required to be made via remote means such as Zoom conferences, emails, and phone conversations, rather than in-person. Nevertheless, the openness and commitment of the partner team and their client families enabled a fruitful partnership.

**Potential limitations.** While proponents of phenomenology believe that the methodology, by its very nature, is democratic, inclusive, and broad, there remains the risk of subordinating some voices to others. Choice of methods and research design may mitigate this potential risk: observational methods and arts-based contributions (along with explanatory text where possible) have been shown to support inclusive research with children (Custodero, 1998; Freeman & Mathison, 2008). Moreover, because the goal was to move beyond understanding and meaning-making toward competency development and learning, a pragmatic approach to the research was also required.

### **Pragmatic Inquiry**

With the research question as ‘central’, the researcher chooses data collection and analysis methods that are most likely to provide insights into the question, without any loyalty to a specific research approach, thus allowing for eclectic approaches to research that are necessary to answer the research question. (Savin-Baden & Howell Major, 2013, p. 61)

In other words, pragmatic research “is not about using some methods rather than others; it is about using any methods you know or imagine that are fit for your inquiring purpose and about using any information that can be used to address research questions” (Knight, 2002, p. 16). Therefore, even though a framework is constructed and tools assembled for data collection and interpretation, a degree of flexibility is embedded in a pragmatic approach, which became critically important throughout the research program in 2020.

**The COVID 19 Pandemic.** On March 11, 2020, The World Health Organization (WHO) declared the spread of novel coronavirus SARS-CoV-2 and the disease it causes, known as COVID-19, a worldwide pandemic. On March 15, 2020, the Premier of Alberta, Jason Kenney, closed all kindergarten to Grade 12 schools in the province, and on March 25, 2020, Royal Roads University suspended all in-person data collection methods in favour of alternative, remote options. My original research plan was to observe a Calgary, Alberta-based kindergarten class as part of their newly implemented outdoor free play program, following up with caregiver interviews and focus groups. However, the dispersal of children to their homes and pivot to online learning forced a pragmatic re-evaluation of that plan.

### Methods

The following tables detail my specific approach to the ideas under investigation. *Table 1: Research Question and Significance* links the research questions to the context and potential impacts of the study. *Table 2: Research Question and Data Collection Methods* details the tools and instruments used in the research project. *Table 3: Research Question and Data Analysis Method* shows the means by which results were reviewed and analyzed based on the pragmatic data analysis methods suggested in Savin-Baden & Howell Major, 2013, p. 177.

*Table 1: Research Question and Significance*

Research Question	Significance
1. How do children experience <i>flow</i> in play settings?	Significant for understanding kids' experiences of the phenomenon of <i>flow</i> ; adds to the scholarship of optimal experience in physical education and play settings.
2. Are there indicators of <i>flow</i> that are observable while children are engaged in physical activity or play?	Significant for incorporating an instrument for identifying the <i>flow</i> phenomenon in young children; supports efforts to embed elements of <i>flow</i> in physical education and play settings.

*Table 2: Research Question and Data Collection Method*

Research Question	Data Collection Method
1. How do children experience <i>flow</i> in play settings?	Submitted drawings; teacher interviews

2. Are there indicators of <i>flow</i> that are observable while children are engaged in physical activity or play?	Flow Indicators in Recreational Sport and Play (FIRSAP); teacher interviews; observation and reflection
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Table 3: Research Question and Data Analysis Method

Research Question	Data Analysis Method
1. How do children experience <i>flow</i> in play settings?	Qualitative content analysis based on highlighting themes, similarities and differences
2. Are there indicators of <i>flow</i> that are observable while children are engaged in physical activity or play?	Descriptive coding based on FIRSAP instrument; affective and behavioural indicators

### Sampling Strategy

A pragmatic approach was applied to the sampling strategy: a convenience sample of kindergarten students was established once the research partner, CUPS Calgary, was identified. The risks associated with convenience sampling include bias and lack of generalizability (Freeman & Mathison, 2008); nevertheless, the phenomenological framework helps mitigate the risks, as inferences and findings are applicable to the sample itself.

### Participant Selection

Participants were included in the study based on their attendance at their kindergarten class on the day of data collection. All children who attended class were part of the sample.

### Ethical Considerations

All participants' guardians received and completed consent forms, which permitted the children's participation and allowed the research partner's staff to record the session. The session was recorded via Zoom and on one teacher's smart phone, and video recordings were sent to me after the fact. I did not observe the session as it was happening. Each participant in the video recording was assigned an alpha-numeric identifier during the analysis stage to help manage their specific data. None of the participants/guardians (except for the teaching team) consented to their name, image, or any identifying feature being displayed in any way. Raw data, including

drawings and interview transcripts, has been archived on a secure, password protected and stand-alone hard-drive. Hard copies of drawings remain the property of the participants.

## **Procedures**

Research was carried out within the context of current kindergarten physical education programming at the Child Development Centre run by CUPS Calgary, a non-profit organization in Calgary, Alberta, that “uses the science of brain development to help build resilient lives for Calgarians facing the challenges of poverty and trauma (CUPS, 2021). Because of in-person research constraints as a result of the COVID-19 pandemic, a shift in research venue – away from the intended outdoor, free-play setting, was required as was a teacher-initiated framework.

In collaboration with the CUPS early childhood education (ECE) team, a preliminary activity plan was developed with the following objectives in mind: to observe a group of kindergarten students as they assemble and engage with an obstacle course of their own creation, in order to assess observational indicators of *flow* using an adapted tool called the Flow Indicators in Recreational Sport Activities and Play (FIRSAP). Goals of the activity were defined as enabling children to demonstrate appropriate physical literacy skills, locomotor skills, and manipulative skills as aligned with the province of Alberta’s K-12 Physical Education Curriculum guidelines, in addition to interacting positively with each other through communication, fair play, and teamwork.

**Process.** Two smart phones were used to record the activity: one using the Zoom platform; the other using the phone’s internal video recording software. The Zoom-enabled phone was set up so that the majority of the activity area could be seen throughout the duration of the activity. The other was handheld by the ECE teacher, was focused on individual children as they completed the activity, and was turned off and on over the course of the activity. The activity lasted for 37 minutes, including story-telling, set-up, practice, and completion. Children

were later asked to complete an art project that illustrated their feelings about the activity (self-reflection). Finally, a follow-up, semi-structured interview with the ECE teacher helped provide additional context. Collaboration and interview calls were recorded and transcribed.

### **Findings**

The video recordings were reviewed using a micro-analytic approach in alignment with the FIRSAP instrument: I focused on one child for the duration of the activity and assigned them a code for organizational purposes. I reviewed the recording several times in order to assess and interpret the behaviours while making notes and highlighting any distinctly observable behaviours before completing the FIRSAP for that child. I repeated this process in its entirety an additional time as a means to either corroborate or refute my initial assessment. As with Custodero’s study, data were descriptively rather than numerically coded and grouped based on *flow* indicators (Custodero, 2005). This information is presented in *Table 4: Definitions and Examples of Flow Indicators in Young Children at Play*. The children also submitted drawings and associated descriptions which served as reflective commentary to supplement my initial analysis of the behaviour and indicators of *flow*.

#### **Indicators of the *Flow* Experience**

One of the secondary interests of the present study was to assess whether the *flow* indicators instrument initially developed for music instruction of young children can be adapted and meaningfully applied to the context of young children’s play or physical activity. Categories, indicators, and definitions are from Custodero 2005; examples are from the present study.

*Table 4: Definitions and Examples of Flow Indicators in Young Children at Play*

<b>Flow Indicator</b>	<b>Definition</b>	<b>Example</b>
<b>Challenge Seeking Indicators</b>		
Self-Assignment	Purposeful activity initiated by the child, rather than the adult	<i>Child tries hopping up and down stairs while waiting for the rest of the course to be set up</i>

Self-Correction	Error acknowledgement and adjustment to conform to established 'rules' for an activity in the absence of physical or verbal instruction from adult	<i>Child tries different ways of holding hockey stick to be able to connect with puck</i>
Gesture	Quality of movement very focused and controlled, often exaggerated but with no extraneous motion	<i>Child carefully bounces and catches basketball with both hands</i>
<b>Challenge Monitoring Indicators</b>		
Anticipation	Verbal or physical attempts to guess or show 'what comes next' during the presented activity	<i>Child tells peer "pass me the stick when you're done"</i>
Expansion	Making the presented material more challenging by transforming it in some way	<i>Child twists and turns on trampoline</i>
Extension	Continuing to engage with the presented material after the teacher has finished	<i>Child continues to play after teacher indicates it's time to move on</i>
<b>Social Context Indicators</b>		
Awareness of Adults and Peers	Any observable interactions that involve prolonged gaze, head turning, or physical movement toward another person. Attempts to engage another person physically or verbally are especially noteworthy.	<i>Child moves to be closer to peer while singing</i>

## Discussion

The findings of this study indicate that *flow*-related behaviours are observable in a group of children engaged in a purposefully-designed, school-based physical education activity.

Several key themes emerged from the current study: 1) *Flow* indicating behaviours emerged and retreated repeatedly over the course of the activity, 2) Peer interaction contributed to enjoyment and the emergence of *flow* indicators, 3) Having a clear goal, story, or challenge to be a part of contributed to enjoyment and the emergence of *flow* indicators, and 4) Perceived effort contributed to whether the activity was deemed fun or not.

*Flow* indicating behaviours emerged and retreated repeatedly over the course of the activity. Through the various stages of the activity, from storytelling and set-up to completion of the obstacle course, decorating the tree and singing the song, the children would alternately

display *flow* indicating behaviours and *flow* inhibiting behaviours such as distraction, frustration, or boredom. Nevertheless, as the tasks shifted their engagement would change and new opportunities for *flow* would emerge. This indicates that novelty, changes in focus, and time are dimensions that should be considered when developing PE activities in order to allow sufficient opportunities for *flow* to occur, an assertion supported by Ceja & Navarro (2009) and Collins, Sarkisian & Winner (2009).

*Peer interaction contributed to enjoyment and the emergence of flow indicators.* Walker concluded that “social flow is more enjoyable than solitary flow” (Walker, 2010, n.p.). Indeed, in the current research, peer interaction, more than adult intervention, appeared to increase this group’s enjoyment of the activity. Furthermore, references to “friends” were associated with enjoyment as part of the children’s reflective artwork and explanations. While team sports may still be challenging for children of this age, games that encourage positive interaction with peers will contribute to opportunities for *flow*.

*Having a clear goal, story, or challenge to be a part of contributed to enjoyment and the emergence of flow indicators.* The CUPS kindergarten teachers’ attempt at a practice session before the video recorded session occurred demonstrated the class’s need for additional structure beyond the rules of the activity. Anxiety and frustration, manifested as conflict within the class, indicated that the newly presented activity was too challenging for the class. As a result, the teachers modified the activity to include the story that helped guide the activity, and allowed for a better understanding within the class. The clear goals and outcomes of the story resonated more directly with the class and contributed to the success of the activity. Furthermore, clear goals and feedback are two of the hallmarks of the *flow* experience (Csikszentmihalyi, 1990; Abuhamdeh & Csikszentmihalyi, 2014). Once the class has more practice with the obstacle course activity, it

will be interesting to see if and how they are able to develop an accompanying story on their own.

*Perceived effort contributed to whether the activity was deemed fun or not.* Finally, there appeared to be a clear link within the reflective artwork between whether the activity was fun or not and whether it was experienced as difficult or easy. Not surprisingly, those children who thought it was hard did not think it was fun; still, the relationship between *how* difficult or easy and *how* fun or not is not possible to parse from the data collected herein. It may be that those who enjoyed the activity the most had the correct balance of skill and challenge, and the activity was not simply “easy” at all. An area for future research, specifically with children, may be to explore the links between fun, satisfaction, and motivation.

### **Rationale for Dissertation by Portfolio**

Ultimately, my goal is to contribute to the conversation and have an influence, in some way, on practice. As such, the research cannot remain in the vaults of academia. Instead, as part of the exchange of ideas, it must exist to be adopted, tested, challenged, absorbed, and otherwise enjoyed by academics and practitioners alike. It is for this reason that I think the most effective demonstration of the scope and intent of the research will be through the dissertation by portfolio option.

### **Portfolio Components**

The portfolio components are intended to engage three different audiences with the research, each as a way to contribute to the ongoing conversation about active living: the academic community via the traditional journal article; the research participants through a contribution to program planning; and the wider community of practitioners through training at the college or university level. Each is a distinct means of informing practice, and taken together, provide the greatest potential for impact.

**Journal article manuscript.** The one required component for the dissertation by portfolio option is a publishable journal article, the purpose of which is to contribute to the academic discourse in the discipline(s). While the conversation surrounding *flow*, along with its various contexts, settings, and outcomes, has been occurring in the literature for decades, there continues to be an opportunity to explore and discuss new tools for measuring and observing *flow*, particularly in specific populations like children and youth. Furthermore, the research summarized herein hopes to fill additional gaps in the literature concerning *understanding* the experiences of *flow* in children and youth. As such, publication of the research and its outcomes in an academic journal will help to formally incorporate its particular perspective into broader circulation.

Second, the practice of writing for academic publication itself is reason enough to undertake the exercise, in order to help develop the writing skills and academic style to not only regularly publish journal articles, but also to develop a unique identity as a researcher and writer on the topic.

**Target Publication – Journal of Happiness Studies.** I have chosen the *Journal of Happiness Studies* (<https://link.springer.com/journal/10902>), a peer-reviewed journal “devoted to scientific understanding of subjective well-being” (Journal of Happiness Studies, 2021) as my target publication for three reasons. First, because the journal is interdisciplinary and encourages reflections on and investigations into many different aspects of happiness and well-being – and my research aims to contribute to the conversation surrounding the links between *flow* and learning, motivation, confidence, resilience, and well-being to help engender a lifelong commitment to an active, rather than passive, physical and mental life. There are few other forums that approach happiness and well-being as the baseline, rather than as a pleasant and perhaps unexpected outcome. Second, the *Journal of Happiness Studies*, which grew out of the

Positive Psychology movement spurred on by Csikszentmihalyi and others, has been in circulation for close almost two decades – an indicator of its legitimacy – and has a relatively wide reach, with 547,215 downloads in 2019. Third, while the various sports or education journals may seem like a logical fit, I believe publication within their ranks might cause the research to be overlooked by other disciplines.

The following provides an overview of how the submission requirements are being met:

*Length.* The manuscript must be limited to between 5,000 and 10,000 words: my article, “Toward a Good Condition: Observing Flow in Young Children at Play” is 9,074 words.

*Manuscript information.* The work must not have been published before; must not be submitted for consideration elsewhere; must be approved by the Dissertation Committee on behalf of Royal Roads University; and all permissions must be obtained as required. All formatting, citations and references, and keyword requirements must be reviewed and adhered to.

*Ethical responsibilities.* As author, I am committed to the integrity and professionalism of the “scientific endeavour” (Springer, 2019) and have ensured all guidelines have been reviewed and adhered to.

*Compliance with ethical standards.* The research was conducted after review and approval by the RRU Research Ethics Board, and as such, all standards and requirements have been adhered to, including disclosure of potential conflicts of interest, informed consent and other guidelines involving research with human participants. The article is currently ready for submission.

**Program plan for CUPS Calgary Child Development Centre.** The second proposed component of the dissertation portfolio is a Program Plan tailored specifically to the CUPS Child Development Centre PE class. Titled “Grow With Flow!”, the program embeds the phenomenon of *flow* into PE programming to encourage *flow* opportunities, so that teachers and other practitioners will feel the benefits of participating in activities intentionally designed to promote

resilience. Grow With Flow! Creates the conditions for *flow* through thoughtfully-designed movement activities to help lay the foundations for confidence, competence, connection, contribution, control, coping, and character – necessary tools for individual resilience that serve as protective factors in healthy childhood development. Grow With Flow! Activities are aligned with and guided by the Physical Literacy model; however, Grow With Flow! Privileges *flow* and resiliency domains over physical outcomes.

The Grow With Flow! Guide details these *flow* domains and associated individual or group (or both) resiliency domains as a set of icons as reference points within 5 different PE activity plans that encourage imagination and creativity, in addition to indicators of *flow* such as self-assignment, self-correction, anticipation, expansion, and extension:

1. **Obstacle Course Adventure!** This activity formed the basis of the study herein
2. **Duck, Goose... Moose?** A modified game of Duck, Duck, Goose that uses the movements of different animals
3. **Bean Bag Boogie!** A series of bean bag challenges (described on activity cards that are provided with the guide) to the beat of music
4. **Freeze Dance.** Students dance to the music, but when the teacher pauses the music, children must “freeze” into the pose on the card (provided with the guide)
5. **Storytime Shuffle.** Students create and act out an adventure story, using “Mad-Lib”-style prompts (provided with the guide)

The rationale for creating a program plan is to connect the research directly with end-users. While the experience of *flow* is widespread and recognizable, the concept itself is less so, and the tools to facilitate *flow*, specifically with children, greatly unexplored. Objectives of this component of the portfolio are to help expand the knowledge base of recreational programmers and participants; to provide a way to align the specific values inherent in the concept of *flow* (i.e.,

vitality, embodied knowing, intrinsic motivation) with the program offerings; to promote internal consistency and adherence to organizational values and goals; and to contribute to an evidence-based approach to programming and policies as a way to bolster the profile and reputation of the research partner.

I presented Grow With Flow! To CUPS – including the ECE kindergarten teaching team, Child Educator Karen Allen, Senior Manager of Family and Child Development Grant Kennedy, Research and Reporting Coordinator Nicole Williams, and Director of Client Services and Organizational Evaluation Raymond Downie – on February 24, 2021. After a brief presentation of the program plan and guide, I opened the floor to questions and comments. In general, the teaching team was excited about the program and keen to try to the activities. The administrative staff, for their part, appreciated the explicit links to developing tools for resilience, which is the hallmark of their overall organizational mission.

**Module for Academic Course.** The third and final component of the dissertation portfolio is a module on “Understanding and Facilitating Flow”, designed to be part of the “Sport for Society” course that is an elective as part of Royal Roads’ MA in Intercultural and International Communication within the faculty of Social and Applied Science. Universities and colleges are training the next generation of practitioners: such a course ensures the topic is presented as a foundational concept for understanding what it means to participate in sport and the multiple roles that sport plays in individual lives and in society. “Understanding and Facilitating Flow” introduces the phenomenon of *flow*, its conceptual development over close to 50 years of scholarship, and its links to optimal experience and performance, including critical elements of commodification and manipulation of *flow*.

Learning objectives include recognizing the elements of *flow*; understanding its neurological underpinnings; linking the experience of *flow* with the building blocks of resilience, and reflecting on the praxis of embedding *flow* in contexts relevant to the student.

Coursework is a combination of readings (i.e., Bloch, 2000; Csikszentmihalyi, 1982; Ginsberg, 2011; and others), discussion, and individual, phenomenology-informed reflective exercises in order to promote the notion of embodied knowledge, the essential foundation of *flow*. Evaluation is based on demonstrating an understanding of theoretical concepts and their application in practical scenarios, effective exploration of the concept of *flow*, critical reflection, and competence in articulating ideas through the design of a *flow*-related activity.

### **Research Dissemination**

Each component of this dissertation-by-portfolio was intentionally designed to include knowledge transfer and research dissemination opportunities specific to each audience. The program plan has been presented to the research partner and was well-received; the journal article will be submitted – and if rejected, either revised and re-submitted, or re-tooled for submission to another appropriate journal; and the course outline has been submitted for consideration.

Engagement with the research has also uncovered additional opportunities for knowledge transfer. The Basin Physical Literacy and Youth Sport (PLAYS) hub (<https://basinplays.org>), a not-for-profit that “supports sports organizations and active recreation programs to create safe, inclusive, and quality programs for children and youth to build the motivation, physical competence, knowledge, and confidence to participate in sport and active living” (BasinPLAYS, 2021), has expressed interest in learning more. Their platform extends throughout the Columbia Basin and promotes programming and parent, teacher, and coach education through webinars, toolkits, conferences, and training.

## Conclusion

*Flow*-related behaviours are observable in a group of children engaged in a purposefully designed, school-based physical education activity. *Flow* indicating behaviours emerged and retreated repeatedly over the course of the activity; peer interaction contributed to enjoyment and the emergence of *flow* indicators; having a clear goal, story, or challenge to be a part of contributed to enjoyment and the emergence of *flow* indicators; and perceived effort contributed to whether the activity was deemed fun or not. These four elements highlight opportunities to embed concepts from *flow* theory into program development: physical education programming, including those programs that centre on free play, can be enhanced through *flow*-based design.

As with all phenomenological studies, the current research program is limited in its generalizability. Nevertheless, the themes and concepts that emerged are in alignment with much of the current literature. By focusing on younger participants, the present study contributes to our understanding of *flow* and highlights ways to facilitate the experience in the context of structured physical activity. Further research into the links between fun, satisfaction, and motivation of children during play or physical activity should be explored. Finally, application of the FIRSAP instrument in a variety of other contexts, including children of different ages, abilities, socio-economic, or cultural backgrounds is recommended.

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