



# THE ‘FUNCTION TO FLOW’ (F2F) MODEL:

AN INTERDISCIPLINARY APPROACH TO ASSESSING MOVEMENT WITHIN AND BEYOND THE CONTEXT OF CLIMBING

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## COMMENTS AND TESTIMONIES

### Teacher Testimony about the F2F tool:

“A lot of teachers use JungleSport as a participation activity. And this chart brings the thinking and all of the different skills they bring to it to the forefront. So, really until you came last year, it was just a fun activity the kids did. I didn’t really think of it any other way then. They had fun, they were active. Whereas now, this tool is putting a different spin on it.”

### Teacher Testimonies about the cross-curricular activities:

“That is where our board is heading, towards...the cross-curricular [integration]...science [and] physical education work hand-in-hand... it is good to bring in the English department...to be honest with you I think it is the first time we ever did that”

### Student Comments about Flow:

“Flow means that you can continue climbing you don’t have to stop and plan out your route, you already know what you are going to do. You can communicate with everyone really well and you are not overconfident about what you can do, you just know what you can do. You can get up fine and get back down like perfectly.”

## BACKGROUND

Physical Education programs are expanding to include alternative activities yet what is missing is a conceptual model that facilitates how teachers and students may understand and assess the learning process beyond the dominant sport technique paradigm.

## PURPOSE

The purpose of this research was to create a Function-to-Flow (F2F) interdisciplinary curriculum support tool that facilitates the assessment of an alternative activity beyond baseline levels of participation.

## PARTICIPANTS AND SETTING

Participants included a sample of N= 153 students from grades one, five, seven, eight and nine located within seven different schools in Ottawa (Canada), who booked the JungleSport™ climbing program of their own accord. During the second year of this study, three classes from three different intermediate schools, including two grade 7 classes (n=19 and n=26) and a grade 8 class (n=23), piloted curriculum support tools. The Head Instructor of the JungleSport™ program as well as nine teachers also participated in this study.

## DATA COLLECTION

Sources of information included observations, small group interviews, journal entries from prepared booklets, teacher and head instructor interviews, as well as cross-disciplinary activities that took place in Language Arts, Science & Technology and Drama classes.

## DATA ANALYSIS

The main question that guided this three-year study was: *What is it like to become physically educated in a way that invites an expanded movement consciousness, from the rudiments of movement function to the somatics of flow?* To explore this question, several student-friendly sub-questions were developed to access their perceptions of movement function, form, feeling and flow. Responses to these questions informed the creation of the interdisciplinary F2F curriculum support tool.

## FINDINGS

Analysing movement experiences in terms of muscular function, form, feeling and flow as exemplified in this study has the potential to broaden narrowed conceptions of learning in the physical education context. Thus the ‘physical education-as-sport-technique’ paradigm (Kirk, 2010) which largely attends to isolated form has the potential to become the ‘function-form-feeling-flow’ paradigm, an interdisciplinary integration that shows how knowledge has been advanced and transformed. Thus, in closely observing students climbing and co-reflecting on the percepts and concepts that emerge in relation to the F2F inspired curriculum support tool, assessment and interdisciplinary understanding in PE has the potential to reach new heights

## KNOWLEDGE MOBILIZATION PLAN

A website that depicts videos and curriculum support tools is currently being created. It will feature 2.0 technology, hence, it will provide opportunity for further development and application of the F2F model.

## FROM FUNCTION TO FLOW (F2F): A RUBRIC FOR ASSESSING CLIMBING

	Knowledge and Understanding	Thinking and Inquiring	Communication	Application
Function Level 1	Limited knowledge and understanding of movement skills and body parts involved in climbing.	Limited processing skills, critical/creative thinking and planning strategies involved in climbing.	Limited communication skills and use of vocabulary with respect to techniques and principles of safety for individual and partner-based challenges.	Applies knowledge of movement skills and concepts in climbing to other physical activities with limited effectiveness
	Student Prompt: <i>I climb mostly with my upper body. I am not aware of my legs and feet.</i>	Student Prompt: <i>I climb with any available hold and body part with no plan.</i>	Student Prompt: <i>I can recite the rules for safety but I cannot explain the reasoning behind them.</i>	Student Prompt: <i>I see that upper body strength is required for climbing.</i>
	Teacher Prompt: <i>What body parts are involved in climbing?</i>	Teacher Prompt: <i>Where do you place your hands, feet, and hips during climbing?</i>	Teacher Prompt: <i>What are the rules to consider before, during and after climbing?</i>	Teacher Prompt: <i>What physical activities prepare your body for climbing?</i>

	Knowledge and Understanding	Thinking and Inquiring	Communication	Application
Form Level 2	Some knowledge and understanding of how body shapes can influence climbing.	Some processing skills, critical/creative thinking and planning strategies involved in climbing.	Some communication skills and use of vocabulary with respect to techniques and principles of safety for individual and partner-based challenges.	Applies knowledge of movement skills and concepts in climbing to other physical activities with some effectiveness.
	Student Prompt: <i>I reach with long arms and keep my hips close to the wall.</i>	Student Prompt: <i>Before I climb, I stop and plan my route, e.g., I think where I am going to put my hands and feet.</i>	Student Prompt: <i>I can help my partner climb with technical and supportive verbal cues.</i>	Student Prompt: <i>I see how strength and flexibility in climbing applies to yoga and dance.</i>
	Teacher Prompt: <i>What body shapes/positions make it easier/harder to climb?</i>	Teacher Prompt: <i>Where do you want to place your hands, feet and hips on your next climb?</i>	Teacher Prompt: <i>How does proper belaying technique improve safety?</i>	Teacher Prompt: <i>How might the strength and flexibility gained from climbing transfer to other physical activities?</i>

	Knowledge and Understanding	Thinking and Inquiring	Communication	Application
Feeling Level 3	Considerable knowledge of body awareness and understanding of when it is time to work and time to rest.	Considerable processing skills, critical/creative thinking and planning strategies involved in climbing.	Considerable communication skills and use of vocabulary with respect to techniques and principles of safety for individual and partner-based challenges.	Applies knowledge of movement skills and concepts in climbing to other physical activities with considerable effectiveness.
	Student Prompt: <i>I adjust the position of my hands, feet, hips and legs so that I feel strong when I climb. I also feel when my body needs to rest.</i>	Student Prompt: <i>I am able to anticipate how my body will feel and adjust my plan accordingly.</i>	Student Prompt: <i>I can read my partner’s body language and respond with appropriate technical and empathetic support.</i>	Student Prompt: <i>I feel how an awareness of core activation and centre of gravity in climbing relates to other sports like hockey, skiing and gymnastics.</i>
	Teacher Prompt: <i>What body parts are you squeezing/relaxing while climbing?</i>	Teacher Prompt: <i>How do you respond to the feeling of tired muscles during a climb? How might you move with more efficiency?</i>	Teacher Prompt: <i>How did you support your partner?</i>	Teacher prompt: <i>As you climb, do you feel a response in your muscles? How might these feelings influence your participation in other physical activities?</i>

	Knowledge and Understanding	Thinking and Inquiring	Communication	Application
Flow Level 4	Highly effective knowledge of energy levels, principles of effort and awareness of inter-relational connections.	Highly effective processing skills, critical/creative thinking and planning strategies involved in climbing that prepare a climber to experience an effortless, connected and flowing climbing experience.	Highly effective communication skills and use of vocabulary with respect to techniques and principles of safety for individual and partner-based challenges.	Applies knowledge of movement skills and concepts in climbing to other physical activities with a high degree of effectiveness.
	Student Prompt: <i>I climb with a consistent rhythm. My movements are fluid and effortless. I feel connected to the wall.</i>	Student Prompt: <i>I am able to think in the motions of climbing and refine my plan as I go. My plan and climbing experience merge.</i>	Student Prompt: <i>I can communicate in a way that enhances the connection I feel to my partner/environment.</i>	Student Prompt: <i>I can design a strength and flexibility fitness program that would improve climbing performance.</i>
	Teacher Prompt: <i>Did your climb flow? Did you feel a sense of connection to the equipment or to your partner?</i>	Teacher Prompt: <i>How did your anticipated climb compare to your actual climb?</i>	Teacher prompt: <i>How did you experience your partner’s climb? Describe your degree of connection</i>	Teacher prompt: <i>How would you design a fitness program that prepares students for climbing?</i>



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