

# The concepts of participation, engagement and flow: A matter of creating optimal play experiences

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ABSTRACT

*Positive functioning relates to the ability to live a good and healthy life, but for children with special needs, this might be compromised and therefore factors related to positive functioning should be explored. As their restrictions concern a variety of general life situations including issues such as peer group interaction, participation, autonomy and self-determination, the focus should be on the children's capabilities when they act in their natural environments. Functional abilities and the creation of opportunities in a challenging environment are optimal for new learning to take place, leading the child towards a positive end point. This article analyses constructs of engagement, participation and flow, indicating their interrelatedness and association to positive functioning. Outcomes change and unfold over time, indicating that functioning should be considered dynamic, context-dependent, culturally and historically conditioned. The article concludes with a suggested model for intervention to enhance positive functioning of children with special needs.*

**Key words:** children with special needs, engagement, flow, participation, positive functioning

## Introduction

Positive functioning could be viewed as an umbrella term capturing several related concepts, such as participation, engagement and flow, which are sometimes used interchangeably to describe people's everyday functioning. Although different concepts and definitions are being used, these concepts emphasise the need to identify and promote factors that enhance people's possibilities of living a good and healthy life, in spite of various needs, circumstances and conditions. There is, however, an urge for clarity of concepts that are studied with the aim of improving people's everyday functioning. In a systems theory perspective individual functioning is influenced by a multitude of factors, each of them with a specified role in the person-environment system. In addition, factors and outcomes are changeable and unfold over time, indicating that people's everyday functioning is dynamic, context-dependent, and culturally and historically conditioned<sup>1</sup>. In this light, positive functioning could preferably be defined as adaptation and regulation in everyday life between individual abilities, motives, interests and goals and contextual values, demands, possibilities and limitations. As such, it requires a thoughtful interpretation wherein the contextual and individual variation is considered. The critical factors of each system under consideration have to be thoroughly defined through a process of operationalisation<sup>2</sup>. Thus, positive functioning demands a careful analysis of influential factors, how these factors can be measured or observed, and how they influence the expected outcome.

What constitutes positive functioning, thus, varies among different populations and cultures. Research involving children with special needs has consistently reported that these children face extensive restrictions and limitations in their everyday lives. These restrictions cover a variety of general life situations including peer group interaction, participation, autonomy and self-determination. Restrictions and limitations in the everyday life of children with special needs have mostly been explained in negative terms as dependent on limitations in body function or genetic predispositions, or environmental restrictions. Few studies have viewed children with special needs in a positive functional perspective, focusing on what children actually do when they act in their natural environment, rather than what they cannot do. In assessment procedures, researchers and practitioners tend to focus on the development and behaviour

of typically developing children to determine how children with special needs deviate from this norm, instead of viewing the functional capacities that the children with special needs actually have and how these capacities match the demands in their natural environment. From a functional perspective, everyday functioning does not require absence of illness or disability; rather it is the capacity or limitations to carry out daily routines and activities of importance to the individual that should be focused on.

The aim of this article is to explore the three constructs closely related to positive functioning of children; engagement, participation and the flow experience as well as their interrelationships in an individual and contextual perspective.

## The three constructs related to positive functioning

### Engagement: the desire for learning and mastery

Participation, engagement and flow are all functional concepts closely related to children's learning. Children's learning is commonly defined as a relatively stable change of behaviour, often occurring spontaneously in children's everyday experiences without any specific instruction or learning strategy. A certain level of development occurs without external experiences due to biological maturity, while learning requires some level and quality of engagement. On the other hand, with increased development and learning through continuous experiences the quantity and quality of engagement increase. With increased engagement children become motivated and interested to be involved in activities with even higher complexity<sup>3,4</sup>. This implies that engagement, as part of the learning process, influences engagement as an outcome and will, over time, promote children's development towards positive functioning.

Thus, the development of engagement should be strongly emphasised in intervention aimed at promoting children's long-term positive functioning. An extensive amount of research has shown that the activities in which children are engaged, their interactions with adults and peers, and the social formation of these interactions and activities are some of the most critical features of children's classroom experiences<sup>5,6,7</sup>. Both developmental theory and empirical evidence suggest that learning to persist in the face of challenge, generally promotes children's positive functioning<sup>8,9,10</sup>.



Engagement has been defined as “the amount of time children spend interacting appropriately with the environment at different levels of competence” and concerns the observation of sustained behaviour over time, how children actually use their time in a manner that is expected due to development and the specific situation in which they are involved<sup>11</sup>. This means that children that are engaged interact with their natural environment by using their initial competence, experience, interests and motives. What is considered appropriate engagement, thus will differ between children as well as between situations, and the social and cultural context.

Children’s natural environments usually consist of settings that are supposed to be available to all children at a certain age, independent of ability or earlier experiences. In spite of the cultural diversity in the children’s natural environments the research of children’s learning in natural environments has been concerned with the concept of activity settings. An activity setting has been defined as “ ‘a situation-specific’ experience, opportunity, or event that involves a child’s interaction with people, the physical environment, or both, and provides a context for a child to learn about his or her own abilities or capabilities”<sup>12</sup>. According to Dunst<sup>12</sup> learning is a circular process that builds on four components: interests, engagement, mastery and competence. In this circular process, each component promotes the other<sup>13,14,15,16</sup>. Interest and motivation in learning spur developmentally appropriate behaviours, such as exploration, problem solving and creativity, thought to increase the probability of engagement<sup>12,17,18</sup>. Whether the natural environments provide similar opportunities of engagement is probably dependent on how initial abilities, interests and experiences are considered in the activity setting.

The elements provided in the natural environment support the children in the process by giving continuous feedback and reinforcement which influence the children’s autonomy and their ability to generalise engagement to varied contexts and situations and decrease their dependency on external reinforcement. Autonomy for children has largely been defined by how children perceive activities and tasks to be self-chosen<sup>19</sup>. The more children perceive tasks to be self-chosen and to have self-perceived value the higher the levels of autonomy. Several studies have indicated that children’s opportunities to make choices influence their engagement in activities<sup>20,21</sup>. Wehmeyer, Kelchner and Richards<sup>22</sup> describe autonomy as being dependent on personal interests and/or abilities and free from external influence or interference. Several studies have revealed that the more children rely on their capabilities, the better they are at handling challenging situations and seeking feedback<sup>23</sup>. Csikzentmihaly and Hunter<sup>18</sup> found that children that were motivated and interested in interacting with their natural environment seemed to perceive themselves better able to control what was happening to them. Sheldon and Elliott<sup>24</sup> argued that self-concordant goals which fulfil basic needs and emanate from an intrinsic motivation have much stronger impact on positive functioning, than goals that are set up by someone else. Thus, children’s intrinsic motivation and interest to be engaged appear to be an initial reinforcer for continuous higher-level engagement and mastery.

While earlier studies of engagement have mostly focused on engagement as participation in different types of activities<sup>25</sup>, recent research has broadened the emphasis to quantity of time and to the study of the qualitative differences in complexity of behaviour. Both the focus of children’s behaviour (engagement with adults, peers, or materials) and the level of the behaviour (from low-level behaviours such as undifferentiated behaviour or casual attention to high-level behaviours such as symbolic behaviour or problem solving) are of interest<sup>26,27</sup>. Engagement could, thus, be viewed as a continuous concept: most children are engaged a fairly large amount of their time, but there could be important qualitative differences in the type of behaviour they display during that time. Engagement in meaningful activities provides a basis for engagement in more complex behaviours such as problem solving and persistence<sup>28</sup>. Problem solving and persistence are behaviours that similarly have been used to define mastery motivation in research about different types of goal-directed behaviours<sup>29</sup>.

The difference between mastery, motivation and engagement is that the latter captures several kinds of behaviour on different levels, not only goal-directed behaviours. As children become more competent in certain behaviours they develop a sense of mastery, which leads them to become interested in engaging in more complex behaviours, such as problem solving and persistence. Children who are frequently engaged in differ-

entiated behaviour (which is not considered as high-level engagement behaviour) have been found to be more developmentally mature and rated by their teachers as more engaged in competent and persistent behaviour than children who are less engaged in differentiated behaviour<sup>30</sup>. The results of several studies indicate that higher levels of mastery behaviours measured during the infant and toddler period predict higher levels of cognitive competence during the following one to two years<sup>29</sup>. In addition, they found that engagement in developmentally appropriate behaviours predicted growth in developmental age and mastery of daily routine activities, such as dressing or feeding oneself<sup>31</sup>. Thus, the ability to meet challenges and engage in goal-directed behaviours promotes children’s autonomy, making it easier for them to function in a positive manner in varied environments and situations.

### Interaction: press for mastery

Children’s engagement behaviour is largely influenced by the interactions taking place in the social context of the preschool or school classroom. One of the most central aspects in promoting engagement of children in a classroom is the ability systematically to provide an attractive, interesting and well-managed classroom or context. The sensitivity and responsiveness that teachers provide is one of the most influential aspects that facilitate children’s socio-emotional development and their abilities and interests to engage in social interaction with their environment<sup>32,33</sup>. This includes quick and adaptive responses to children’s needs and this leads to the provision of a variety of opportunities for communication. Earlier studies have shown that the association between environmental quality and mastery engagement is largely mediated through caregiver sensitivity<sup>34</sup>. That means that the context in which some children, eg, typically developing children, are likely to follow teachers encouragement of interaction might not be the context in which another child, eg, a child with a disability, is likely to respond to that lead. The challenge for teachers is not just to provide developmentally appropriate activities and opportunities for engagement for all children, but also to be sensitive and responsive enough to be able to adapt to each child’s specific experiences, interests, and skills. Children in such contexts will have a higher probability of spending more time participating in developmentally appropriate activities than their peers in classrooms with less engaged teachers<sup>35,36,37,38</sup>.

Teachers could use a variety of strategies during the everyday activities to promote children’s engagement. This would, however, involve a thorough consideration of the children’s initial experiences, abilities and interests to motivate them to engage on a developmentally appropriate level. Children who frequently show higher levels of engagement have been found in classrooms with teachers that elaborate on the children’s activities and behaviours. In turn, a close association has been found between frequent engagement with materials and children’s goal-directedness and developmentally appropriate play activities<sup>36</sup>. Strategies that facilitate children’s engagement could be summarised as:

1. a careful preparation of everyday activities and materials which would allow the children to play and interact without interruption,
2. the use of appropriate language and behaviour for each child to be able to consider personal experiences, interests, and skills,
3. the use of responsive teaching strategies to incorporate children’s individual goals and cultural experiences into the context of the activity,
4. the elaboration of children’s activities and behaviours and the reinforcement of their developmentally appropriate engagement,
5. allowing and encouraging children to make choices and decisions to facilitate their sense of control and autonomy,
6. the use of incidental teaching methods in which the degree of formal instructions is minimised,
7. reinforcing and encouraging social interaction among children to enhance practice of social skills through problem solving and persistence, and
8. integrating intervention into daily routines and activities and focusing on the development of general life skills that will improve engagement for all children independently of context or situation<sup>33,21,39</sup>.

Some interventionists working with children with special needs in clinical settings have adopted the principles of the “Just Right Challenge”<sup>40</sup> and the “Adaptive Response”<sup>41</sup>. The theoretical assumptions behind these approaches will be explained in detail under the flow section. The



objective of these principles is to create and/or provide fun and purposeful activities with challenges, yet adapted to the child's abilities so that engagement becomes reachable for the child. The interventionist constantly observes the child's behaviour, takes note of behavioural cues, and follows the child's lead to make the necessary adaptations. These leads are later used to create "Just Right Challenging" activities for the child. The theory and the clinical use of this approach have proven successful in helping children with foremost sensory impairments in their ability to play and regulate their behaviour in interaction with the environment<sup>42</sup>.

This approach fits the functional perspective as it is of a lesser concern whether the child has a disability or not. As argued by Schuldberg<sup>43</sup>, the probability of developmental change is higher when in a state of disequilibrium. Thus, the presence of an adapted challenge between the child's functional abilities and the environmental opportunities might create the optimal circumstances for new learning to take place, promoting positive functioning for various child populations and regulating their behaviour<sup>44</sup>. The environmental prerequisites for promoting positive functioning probably vary more according to children's experiences, motives, interests and contextual and cultural values, than on type of disability or problem behaviour.

### Participation and play

Participation is a multidimensional construct. Definitions of participation differ, depending on which perspectives are considered. The ambiguity of the concept contributes to the fact that varying definitions are used in the literature. Ideological perspectives on participation are based on opinions that participation is used for a humanistic motive. Most definitions of participation allude to the importance it assigns to motivation and engagement<sup>45</sup>, and it also relates to the dimensions body, activity and environment according to the World Health Organization's International Classification of Functioning, Disability and Health (ICF)<sup>46,47</sup>. Therefore, participation is seen as a health-related concept and this is supported in the results of Eriksson's study with children with special needs, their parents, teachers and consultants<sup>47</sup>. The participants in this study also defined the concept of participation as a positive experience and a means to define well-being<sup>48</sup>. In the ICF<sup>49</sup> participation is defined as "involvement in a life situation"<sup>50</sup>. This definition implies interaction with the social and physical environment, as well as an individual's motivation or desire to participate in activities.

Participation, by definition is closely linked to engagement in activities such as play, having friends and taking part in daily activities<sup>51,52,53,54</sup>. Eriksson stated further that the experience of participation could be divided into three categories, 1) to experience, ie, to have positive experiences of control and belonging through active interaction, 2) to act, ie, to be active, both physically and mentally in life situations, and 3) context, ie, the availability of activities and interactions with the environment<sup>47</sup>.

Participation has been investigated from various life situations, for example sport participation<sup>55</sup>, parent participation in education<sup>56,57</sup>, parent participation in literacy activities<sup>58,59</sup>, and parent participation in preschool contexts<sup>60</sup>. Play forms the vehicle in which a child develops multiple roles that are required from children to interact with different people in different situations.

The United Nations Convention of the Rights of the Child<sup>61</sup> endorsed that every child has the right to play and also to participate in all matters that are of concern to them, for example in the preschool environment.

1. Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and arts.
2. Parties shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity" (p. 170).

Participating in play can give teachers and interventionists many valuable experiences and strengthen the relationship between child and adult. Teachers' participation in play is important for child development<sup>62,63,64</sup>. Vygotsky advocates that adult participation in play is significant because it can create a zone of proximal development<sup>65</sup>. This is only if adults are responsive and not directive. Directive and non-responsive adults hinder children's levels of engagement.

In a study with adults with disabilities<sup>66</sup>, participation appeared as one of two overall themes in the experience of play. Participation in this context was about adjustment; the peers adjusted to the person with the disability, and vice versa, people with the disability adjusted themselves in order to be part of the play experience. Participation also consists of challenges as play initiates sensation-seeking experiences with friends, which could be both physically, and mentally challenging. This study indicated that play afforded adults with disabilities the opportunity for participation and a feeling of being included in the play experience, but also the means for adjustment and confronting challenges.

### Flow

Following this discussion the clear link between engagement, participation and flow will emerge.

Csikszentmihalyi<sup>67</sup> developed the theory of flow and describes it as a state of complete absorption or engagement in an activity. The mind becomes focused and engaged on an activity and cannot be distracted by external forces. Flow is viewed as a model of engagement and enjoyment<sup>67,68</sup> and it is suggested that an individual operates at full capacity when in a state of flow. For interventionists working with children and especially children with special needs, this status is important for learning to take place. Of similar importance for engaging with children, is the concept of enjoyment. Enjoyment is derived from experiences that are intrinsically rewarding or motivating. It is what propels people to initiate or continue an activity because they enjoy the process in the here and now<sup>69</sup>. In order to describe what makes enjoyable activities so gratifying, eight major components of creating enjoyment have been identified:

- 1) a challenging activity that requires skills
- 2) the merging of action and awareness
- 3) clear goals and feedback
- 4) concentration on the task at hand
- 5) sense of control
- 6) loss of self-consciousness
- 7) distortion of time, and
- 8) the just right challenge<sup>46</sup>

Research has indicated that feelings of joy occur when performing a sequence of activities that are goal-directed and have clear guiding rules, that require a need to concentrate and apply specific skills. The flow state can be represented as a channel on a grid of challenge versus skills, separating the states of anxiety and boredom. The context should provide challenging opportunities that match the person's skills. If the skills do not match the demands of the activity, children withdraw as they become bored (too low) or anxious (too high). Du Toit<sup>70</sup> stated that each person has a specific potential, influenced by factors such as intelligence, personality and environmental opportunity. This puts the flow model in the domain of the bio-psycho-social realm. There is a constant tension between these components and for flow to occur there should be a just right challenge to the abilities of the person. Appropriate feedback is a key concept for reinforcement of appropriate behaviours and can be experienced on an internal as well as external level<sup>71</sup>. When a person needs to be successful in participating in an activity, he has to concentrate actively on the relevant stimuli inherent in the activity. It is in this context that a person becomes so involved in the activity the execution becomes almost automatic and it is reported that the activity is done for the sake of the activity (autotelic) and not for the external reward<sup>72</sup>. According to King<sup>41</sup> this is when subcortical integration of newly learnt skills or behaviours occurs and it can be said that the person is absorbed in "suspended reality"<sup>73</sup>. A lapse in concentration will erase the feeling of optimal experience as it requires strenuous physical exertion and highly disciplined cognitive involvement.

When in a threatening or challenging situation, we revert to think about ourselves: how will we handle the difficult situation and how will we prepare ourselves? In flow there is no room for self-focus. The only possible challenge comes from the activity and if all attention and skills are not applied to the activity, the person may not be successful in completing it. This is when there is a loss of self-consciousness leading to self-transcendence enabling a person to grow and learn new skills. As the person experiences the emergence of mastery of the activity a sense of control develops. The key to intervention lies in creating and/or providing purposeful activities to children to facilitate learning opportunities.





## Play and flow

The flow experience acts as a magnet for learning, developing new levels of challenges and skills<sup>74</sup>. In an ideal scenario, people would constantly be growing if they were engaged in activities that they enjoyed. Children learn through play as this is their occupation<sup>75,76,63</sup>. Research has indicated that people experience their most enjoyable moments through a process of discovery<sup>77</sup>. Young children discover their environment and learn through a process of discovery and exploration. The interventionist should select and provide children with enjoyable, meaningful and challenging activities for an optimal situation to facilitate development.

Ideally, flow is also the result of engagement, without any consideration for the results. This statement is in alignment with the definition of play, which also states that play should concentrate on the process rather than the end-result<sup>78</sup>. The environmental challenges should be structured to be strong enough to arouse the child but not so strong that they create anxiety. If challenges are overwhelming, all of a person's energies will go towards surviving a situation rather than experiencing it. The flow experience is inherently satisfying and contributes to the occurrence of repetition and practice of skills. In other words, it appears that activities that produce flow are not done for external reward. Satisfaction is based on the relationship between the challenges and skills and for persons to experience satisfaction they should have a feeling of choice, a supportive environment in which to function, participate in activities that facilitate easy attention, and finally there should be a challenge from the activity.

The role of the interventionist is critical in the learning process and Csikszentmihalyi<sup>67</sup> stated that an activity "is able to limit the stimulus field so that one can act in it with total concentration, responding to greater challenges with increasing skills, and when it provides clear and unambiguous feedback, then the person will tend to enjoy the activity for its own sake" (p60). Activities should be presented in such a way that children can experience flow and ultimately grow. If the environment does not provide the opportunities to engage in enjoyable activities, learning will not take place. This means that purposeful activities should be selected and presented for children at their developmental level. In the early de-

velopment of the child, there are specific windows of opportunity that should be used maximally for learning. A purposeful activity is defined as an intrinsically gratifying activity that motivates persons to generate more effort and sustain performance<sup>79</sup> and refers to goal-directed behaviours or tasks that the individual considers meaningful<sup>80</sup>. For a child, play fulfils these requirements. As these types of activities comprise at least a third of the child's everyday activities, the importance of planning and selecting purposeful activities is highlighted.

It is however not an easy task to select meaningful activities for children with special needs. These children have a lot of free time available during the day, but Csikszentmihalyi<sup>74</sup> stated that having leisure time at your disposal does not increase quality of life. Children with special needs usually do not have access to activities due to poor design, the level of their physical or intellectual involvement and/or the way in which the activity is presented to them and consequently participation is compromised<sup>81</sup>. Adaptations should therefore occur on three levels, namely:

- 1) the toy or play material,
- 2) equipping the child with the necessary assistive technology, eg, head pointer and,
- 3) the way in which the activity is presented to the child, eg, implementing strategies to elicit visual and auditory attention.

Implementation of these levels of adaptation would contribute to children having an optimal experience when engaging in activities.

Although the activity is a key component in the experience of flow, good social relationships are a good predictor of flow. It is, therefore, important to realise that energy has to be invested into building relationships with children, as it is an effective way to impact on their positive functioning<sup>74</sup>.

## Conclusion

Specific concepts under the constructs of engagement, participation and flow were highlighted. The authors attempted a schematic representation (Figure 1) to indicate the interrelatedness of the most important concepts.

We assumed a child is motivated to be in control of his environment and therefore three elements are considered in this proposed model,

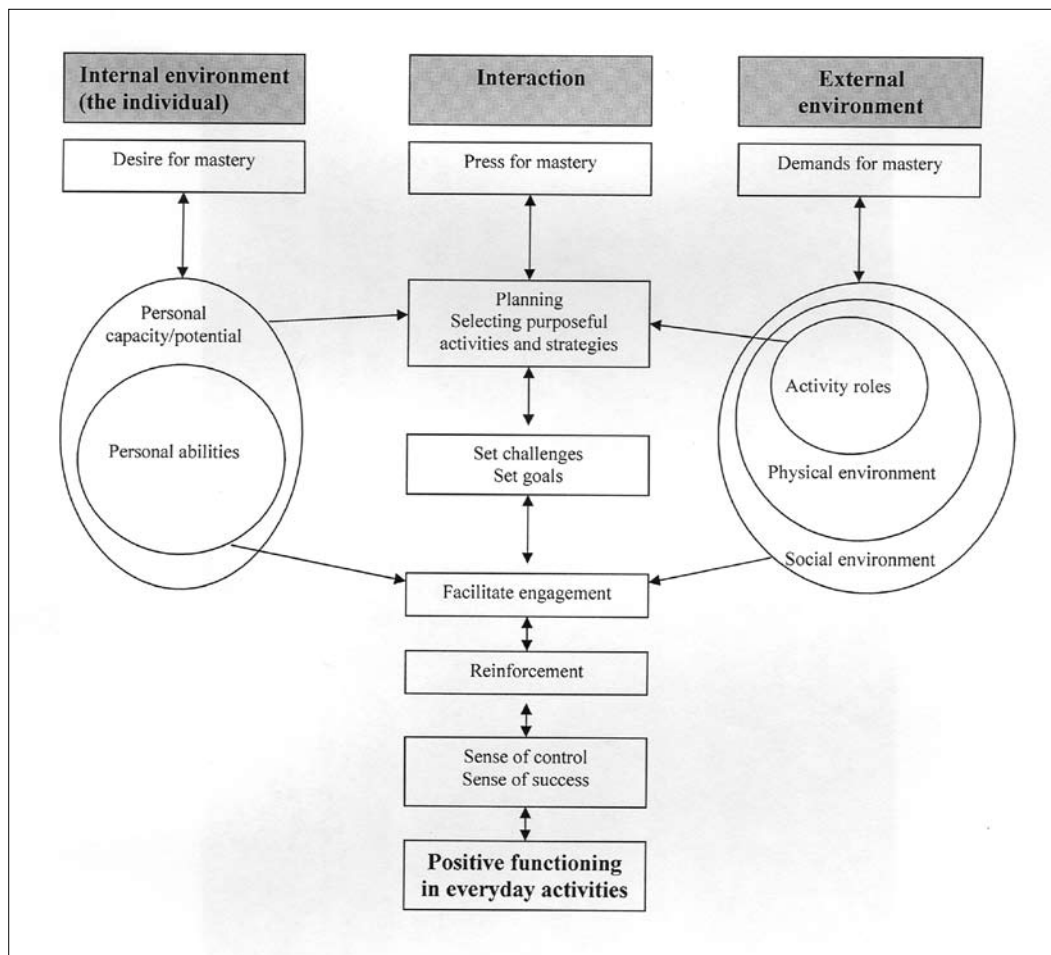


Figure 1: Model for the development of mastery

1) the child, 2) the external environment, and 3) the interaction that occurs between the previously mentioned two elements, each one related to the development of mastery<sup>82</sup>. The end goal of this model is positive functioning in everyday activities as this indicates that learning has occurred through a process of engagement, participation and experiences of flow.

This is a feedback-feedforward system, spiralling towards new and/or higher levels of development. Although there should be equal weighting for each construct, the interventionist who facilitates the interaction between the child and the activity is pivotal in the progression of engagement. Issues like planning, selecting purposeful activities, and setting appropriate goals are the responsibility of the interventionist. To present a "Just-Right-Challenge", the abilities of the child should be matched to the demands presented by the external environment, ie, the activity. The application of specific therapeutic strategies to enhance activity participation will enable the child to learn new skills, which will lead to mastery and ultimately positive functioning in everyday activities. The environment should be structured to meet the abilities of the child in order for him to experience internal and external feedback and ultimately success. Structuring includes the physical accessibility of toys, play materials, and/or equipment. Although engagement progresses through developmental stages, participation is seen as a generic term for interaction with the environment and flow the culmination of optimal experiences enjoyed through engagement and participation. These elements depicted in the model form the key to successful intervention independent of context, culture or disability.

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