

Sylvie Ray-Kaesler, Sandra Châtelain, Vardit Kindler & Eleanor Schneider

2 The evaluation of play from occupational therapy and psychology perspectives

2.1 Introduction

Research on play has provided evidence of the great relevance of play to the fields of early intervention. Play is considered the natural context within which children develop complex social behaviours and competences (Wilkes, Cordier, Bundy, Docking & Munro, 2011). Through play experiences, the child develops many skills in the motor, perceptual, language, cognitive and emotional domains (Rigby & Rodger, 2006; Uren & Stagnitti, 2009). Play is beneficial for healthy child development, learning, creativity and social and emotional wellbeing (Brown, 2009; Ginsburg, 2007; Pelligrini, 2009).

Although play is a common and natural activity of childhood, there is plethora of descriptions and little agreement on a single definition of play (Sutton-Smith, 1997). Literature on the concept of play discusses play as variable and unpredictable, which makes it difficult to define. For example, play is described as “*a contextualized experience*” (Batorowicz, King, Mishra & Missiuna, 2016, p. 1205), “*a transaction between the child and the environment*” (Bundy, 2001, p. 277) and “*play is like beauty – it is in the eye of the beholder*” (Stagnitti, 2004, p. 5).

LUDI (COST, TD1309) adopted the definition of play proposed by Garvey (1990), since it takes into consideration three important and core dimensions of the child’s play: pleasure, self direction (spontaneous behaviour, self-imposed goals), intrinsic drive (not governed by external rewards and compliance with social demands): “*Play is a range of voluntary, intrinsically motivated activities normally associated with recreational pleasure and enjoyment*”. Freedom of choice is the first feature that infant’s play brings to mind, controlled play being no longer play since it loses its spontaneity and means of distraction (Caillois, 2001). Fun and pleasure are other characteristics of play that makes it rewarding in the sense that a child is motivated to repeat it to keep alive the play process (Miller, 1973).

Because play is so important in a child’s life, it is often evaluated. However, the many dimensions and conceptualizations of play are problematic when it comes to measuring and quantifying play (Stagnitti, 2004). Several disciplines with different perspectives on play intervene in play-related concerns, which might explain why there is no gold standard for a comprehensive assessment of play. Moreover, the objectivity, reliability and validity of the instruments used to evaluate play are very difficult to attain with the unpredictable nature of play (Gitlin-Weiner, Sandgrun & Schaefer, 2000).

The purpose of this chapter is to broaden our understanding of the evaluation of play and use of play in assessment from an occupational and psychological perspective: what it is, what the objectives are, why professionals evaluate play as well as what methods and instruments are available to assess children's play. Examples of play and play-based assessment tools are provided, the majority being from the field of occupational therapy. In addition, implications for the assessment of play of children with disabilities and for parents are discussed.

2.2 Assessment of play

The assessment of play can be classified into two categories: the first addresses the core dimensions of play through "*play assessment*". The second addresses the developmental skills necessary for play through "*play-based assessment*".

2.2.1 Play assessment

Play assessment primarily reflects the interaction between the child and the social and physical environment. It encompasses tools whose main objective is to measure the many dimensions of play, the pleasure in play and playfulness in children (Stagnitti, 2004). Play assessment tools identify what types or forms of play children favour and master, what are the play activities available to them, how playful they are, when, where and with whom they play. They help understand children's everyday experience and meaning of play in the social context, the nuances of their play and how they functionally participate in play (Miller & Kuhaneck, 2008). Play assessment is based on the child's abilities rather than disabilities, as they are reflected in play (Knox, 2010). Play assessment should be conducted where play occurs, in the naturalistic environment of children and focus on child-initiated and spontaneous rather than adult-initiated and directed play (Kelly-Vance & Ryalls, 2008; McConachie et al., 2006).

Play assessment can provide useful information in order to optimize educational, clinical, community and research programs (Parham, 2015). It has important implications for planning services that provide environments in which a child can have successful and enjoyable play experiences, including interesting and accessible toys and playmates. Play assessment is a way to facilitate play, as the time and space for play have been reduced in the home and school environments (Ginsburg, 2007). It emphasizes the importance of play for its own sake, with play being a goal of intervention and not only a means for developing non-play skills. It promotes play for fun, providing guidelines to parents and educators on how to nurture play and designing interventions that optimize the child's play participation (Stagnitti, 2004). Moreover, play assessment helps to investigate a child's progress through the types of

play, mainly the presence of pretend play, and through social play styles when playing with peers and with adults so that the child's current play performance can be used as an outcome measure for assessing the effectiveness of intervention (Stagnitti, 2004).

There are different tools that can be considered play assessments, for example the “*Assessment of Ludic Behavior*” – ALB (Ferland, 2005), the “*Test of Environmental Supportiveness*” – ToES (Skard & Bundy, 2008) and the “*Test of Playfulness*” – ToP (Skard & Bundy, 2008). They are observations of the child's free play behaviour whose primary objective is to evaluate the child's pleasure in the play experience or the environmental factors that can affect play. They provide qualitative data necessary to acquire an in-depth understanding of a child's play experiences (Parham, 2015). The ALB is a direct observational tool used to document and describe the qualitative aspects of a child's free play behaviour, play interests, ludic abilities, ludic attitude and communication in play, concepts derived from the Ludic Model. Ferland (2005) describes children's play as a subjective ludic attitude characterized by aspects similar to Bundy's concept of playfulness, but also including curiosity, attention and exploration. According to Bundy (2008), playfulness is the children's approach to play, a necessary complement to the play activities in which they engage. Skard and Bundy (2008), in an assessment called the Test of Playfulness (ToP), operationally defined playfulness as consisting of four elements: (1) intrinsic motivation, (2) internal control, (3) freedom from the constraints of reality, and (4) “framing” (i.e., the giving and reading of cues). There are play assessments whose method is to observe the occurrence of specific play behaviours. The “*Test of Pretend Play*” – ToPP (Lewis & Boucher, 1997) can help the therapist focus on the three different types of symbolic play: “*substituting one object for another, reference to an absent object as if it was present and attributing an imaginary property to an object*” (Clift, Stagnitti & DeMello, 1998, p. 200). The behaviours are scored and can be converted to age equivalents (Kaugars, 2011). Such quantitative scores are helpful when the purpose of assessment is to measure play strengths and weaknesses or changes in pretend play over time and the effectiveness of intervention using pretend play (Parham, 2015).

The “*Child Initiated Pretend Play Assessment*” – ChIPPA (Stagnitti, 2007) is a norm-referenced standardized test of the child's initiated pretend and imaginative play skills. It assesses the child's level of complexity and self-organisation in pretend play, the child's use of symbolic skills in play and his/her ability to initiate play.

2.2.2 Play-based assessment

Play-based assessment includes norm-based measures designed to evaluate particular developmental skills that may be observed through play activities, for example motor, process and communication-interaction skills (O'Grady & Dusing, 2015). Such measures were developed by researchers interested in differences between the skills of children with disabilities and typically developing children (Lifter, Mason & Barton,

2011). Play-based assessments have the advantage of providing an opportunity to observe the child's development. They offer an alternative to the traditional standardized assessment with contrived tasks that could give rise to unnecessary emotional pressure or feeling of failure or incompetence in children. Since play skills are often the same as those used in other domains, assessing them may be easier through non-threatening play activities (Howard & McInnes, 2013).

According to Kaugars (2011), play-based assessment may reveal multiple psychological and developmental aspects of a child and give him/her the opportunity to demonstrate a variety of skills that may be hindered in classic test batteries. According to Bundy (1993), play-based assessment tools are advantageous when a therapist wants to learn if a child's skills are adequate to meet the challenges presented in play, and to quantify changes in one or more of these skills. O'Grady & Dusing (2015) indicate however that play-based assessment tools measure a similar but not identical construct than developmental tests. Moreover, such tools are not designed to assess core aspects of play and do not say whether a child actually plays and how often (Parham, 2015).

Examples of play-based assessments are the "*Play In Early Childhood Evaluation System*" – PIECES (Kelly-Vance & Ryalls, 2005), the "*Penn Interactive Peer Play Scale*" – PIPPS (Fantuzzo, 2000) and the "*Transdisciplinary Play-Based Assessment*" – TPBA (Linder, 1993; Linder & Linas, 2009). These instruments are observations of cognitive, social, emotional, communication and sensory-motor development in play situations, alone or with peers. Play behaviour is assessed with conventional toys, classified in types of play and compared to norms.

2.3 Facets or dimensions assessed through play

There seems to be a consensus that play is a complex and multifaceted phenomenon of major importance (Power, 2000). The Person, Environment and Occupation Model (Law et al., 1996) describes the dynamic relationship between people, their occupations and roles, and the environments in which they live, work and play, with occupational performance being the outcome of the transaction between these three elements (Schneider & Rosenblum, 2014). The transactional nature of play and the good fit between the person/player, the environment or context in which play occurs, and the characteristics of the play activity are of major importance in enabling optimal engagement in play experiences (Law et al. 1996; Rigby & Rodger, 2006). Furthermore, children's ability to play is influenced by their interest and level of skill in the different domains of function (e.g., sensory-motor, cognitive, etc.), the potential barriers and enablers in their environment, and the challenges of any given activity (Rigby & Huggins, 2003). When observing and analyzing the child's play, it is important to consider all elements in the child-environment-play transaction.

In order to assess play, the evaluator must identify what elements of play are most relevant to evaluate for a specific child and in what particular context in order to be able to select the method and instrument that enable the best analysis of these elements. As Bundy (2005) concluded in her review of measures of play performance, there is not one battery of play scales that would enable in-depth evaluation of play. Knox (2010) stated that in order to capture the child's play behaviours, one needs to assess the child multiple times in a variety of settings. According to Mulligan (2003), in evaluating the child's play, it is important to identify and document what the child's play preferences are, how the child uses play materials, the child's social behaviours during play interactions and the emotional and psychosocial manifestations of play. Bundy (2005; 2011^a) described five important facets of play that should be considered when examining the child's play: the child's approach to play, preferred play activities, the skills a player uses for play, the source of motivation for play, and the environment.

With regard to the source of motivation for play, Bundy (2011^{a,b}) has noted this as being an aspect requiring further research. Since engaging in free play means pursuing a task for the interest, fun and challenge it provides, it is closely associated with intrinsic motivation (Ziviani & Poulsen, 2015). There is indeed an important connection between a child's play, his personal play preferences, and the play setting. The most positive experiences occur when a child's interests match his/her abilities (Harding et al., 2009). It is therefore a practitioner's challenge and duty to gather information about a child's play motivation in order to support his/her active engagement in play. However, to our knowledge, no play assessments have been developed for assessing the source of motivation for play or why a child chooses a particular play activity.

Figure 2.1 shows the five facets of play that we recommend be examined when assessing a child's play. These facets are discussed in the sections below.



Figure 2.1. Five facets of play, adapted from Bundy (2011^a)

2.3.1 Playfulness

The player's playfulness is an important element that should be examined when evaluating play. Playfulness, defined as a disposition to play, is seen as a reflection of the combined presence of intrinsic motivation, internal control, freedom to suspend reality and framing (Skard & Bundy, 2008). The "*Test of playfulness*" - ToP (Skard & Bundy, 2008) is a play assessment that was developed to assess the child's playfulness. The child's intrinsic motivation, internal control, suspension of reality and ability to give and read cues are scored through items that relate to the extent of, the intensity and the level of skill of the behaviour displayed. Bundy (2011^a) states that when a child is intrinsically motivated, he/she is intensely engaged in play for the fun of it and is likely to show persistence in a given activity. When children feel they have internal control over their actions, they feel safe. The ability to suspend reality may be reflected in the child's pretend play, tendency to tease or clown or demonstrate his/her own interpretation of reality/fantasy. Knox (2010) describes playful children as showing flexibility and spontaneity in play and in social interactions, curiosity, imagination, creativity and joy, and the ability to take charge of actions.

2.3.2 Preferred play activities

The child's play preferences and preferred activities also need to be considered when evaluating the child's play. In a longitudinal study of infants from 10 to 14 months of age (Schneider, 2009), infants as young as 10 months showed obvious preferences in the kind of play experiences that they found engrossing, challenging and enjoyable, resulting in enhanced levels of play. Moreover, results indicated that when the object/activity tapped the infant's interest and intrinsic motivation, the infant sustained attention, persisted and engaged in the task or activity for longer periods, and was able to attain a higher level of play. These behavioural manifestations of persistence, engagement and enjoyment concur with behaviours described by Bundy (1997; 2011^a) as reflecting the child's intrinsic motivation. Findings lend support to Bundy's claim that the inherent aspects of the activity have a major impact on the child's motivation and eagerness to engage in play.

Children's play preferences can be demonstrated through observing their play behaviours. Use of self-report measures such as interviews or questionnaires, for example, the "*Kid Play Profile*" (Henry, 2008) or the "*Play History*" (Takata, 1974; Bryze, 2008), can also provide relevant information on the child's play preferences.

2.3.3 Skills a player uses for play

Bundy (2011^a) stated that the skills the child demonstrates in play are the most commonly assessed, possibly because it is easier to observe skills than other aspects of play. Knox (2010) gives examples of evaluations that assess skills in a particular area through play, such as the classic assessment of social play developed by Parten (1933). These assessments typically use structured play settings, materials and activities or play observations. Additional evaluations, described previously as play-based assessments, assess developmental competencies through play.

The “*Transdisciplinary Play-based Assessment*” – TPBA (Linder, 1993; Linder & Linas, 2009) assesses social, emotional, cognitive, motor, physical and language aspects of child development in the naturalistic environment. Examples of motor or movement skills include observation of the child’s quality of movement when changing positions or whether the child is able to run on different surfaces. Fine motor skills include observation of the child’s bilateral hand movement, reaching and grasping skills, manipulative prehension as well as motor planning. The child’s ability to problem solve, persist and remain attentive and on task are examples of items that demonstrate the child’s cognitive skills and mastery motivation.

The “*Revised Knox Preschool Play Scale*” – RKPPS (Knox, 2008) is another assessment that provides information on the child’s developmental maturity in relation to play. It includes four dimensions that are assessed through twelve different categories. The first dimension, space management, describes the way children learn to use their bodies and the space around them. The way in which children handle materials and the purposes for which various materials are used are assessed through the material management dimension. The third dimension, pretense-symbolic, relates to the way in which children gain understanding of the social world and learn to differentiate between reality and imagination. The fourth dimension, participation, describes the amount and manner of the child’s interaction with people in the environment and the degree of independence and cooperation involved in play activities. This assessment provides a play age as well as a profile of the child’s play abilities in the four dimensions.

In conclusion, play performance is likely to be affected by the child’s developmental maturity, skills, interests, and motivation to participate in the play activity (Schneider, 2009). Children’s forms of play activities change over time and reflect their development (Knox, 2010).

2.3.4 Characteristics and requirements of the activity

Variation in children’s play behaviour and competence is influenced by exogenous factors within the child-play-environment transaction (Rigby & Gaik, 2007) such as the physical dimensions of the environment, interactions with others, the variety

of objects available to the child and age appropriateness of toys (Tamis-LeMonda & Bornstein, 1996). Rigby and Rodger (2006) stated that many important transitions occur during childhood, such as the transition from exploratory and sensorimotor play to more social and cooperative forms of play, thus reflecting the occurrence of developmental stages in play. This demonstrates the importance of providing play activities that are appropriate to the child's age or developmental level. Furthermore, it is important to analyze what are the physical, social and cognitive demands of the activity, its complexity, as well as the number and sequence of steps of an activity. Gibson (1977) stated that perception of the environment inevitably leads to some course of action. Affordances, or clues in the environment that indicate possibilities for action, are perceived in an immediate way, for example, buttons for pushing. This means that the qualities or properties of an object define its possible uses or make clear how it can or should be used.

Features of the play activities themselves are also critical to the child-play-environment fit: characteristics of the object/activity that allow it to be manipulated, adapted and modified, allow for better child-activity fit (Rigby & Rodger, 2006). Object properties such as novelty, physical responsiveness, the potential to elicit sounds when touched, and the configural complexity of the object can also affect the amount and nature of the exploratory behaviour (Power, 2000). According to Rigby and Rodger (2006), toys and play materials that are multipurpose as well as unstructured, such as blocks, pencil and paper, dolls, play-dough, can encourage the child to be creative, problem solve and take control of the activity.

Analyzing the components of an activity can help identify how to grade an activity appropriately in order to match the skill, interests and motivation of the child. For example, for a child with difficulty in figure-ground discrimination, the games played with the child should have an appropriate amount of visual details. For a child with difficulty in manipulating small objects, the objects provided should be large enough to enable effective grasp and manipulation. When the level of play skill matches the level of challenge of the activity, this is considered the "just right challenge" for facilitating play skills (Rigby & Rodger, 2006).

2.3.5 Environment - physical and social

The environment plays a critical role in facilitating and enabling children's play and playfulness. The physical environment (location in space and time, objects, accessibility) and social context of play (play alone/with others, supports, attitudes) are essential factors in children's play participation (Miller & Kuhaneck, 2008; Batorowicz et al., 2016). The physical environment relates to the various play settings and spaces, e.g. the home, playground, neighborhood or educational setting. The physical features of the environment such as amount of noise or number of sensory stimuli can either be resources or barriers to play. The play settings and materials

need to be safe and accessible for the child. Moreover, children must know what the rules and expectations are of their behaviour in the different settings. The play spaces should have appropriately sized furniture, equipment and materials for the targeted age group. A supportive physical environment is one that uses diverse types of equipment supporting various forms of play, graduated levels of challenge and affords numerous opportunities for social interaction. Assistive technologies and adapted or modified play equipment/materials can also be used to support play (Rigby & Rodger, 2006).

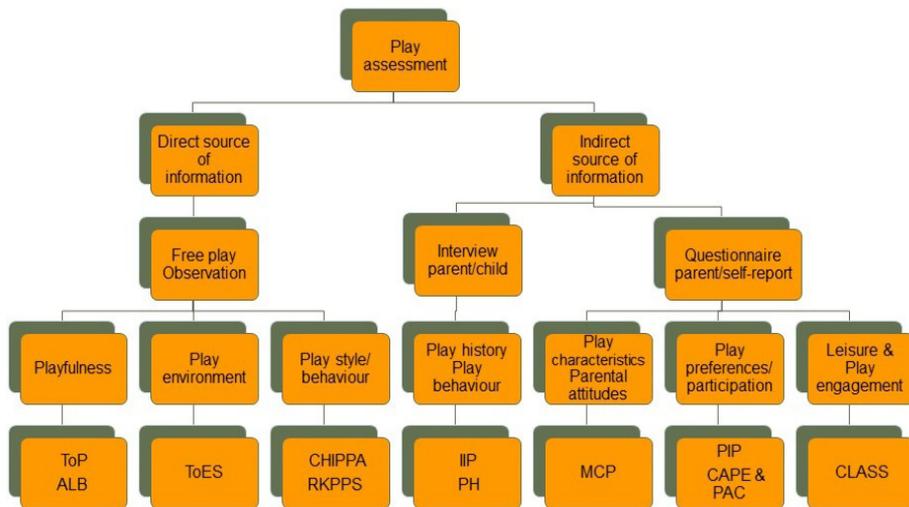
The social environment comprises the individuals with whom a child plays, adults and peers, both familiar and unfamiliar persons who may support or influence the child's play. When looking at environmental factors, the role of the parents in creating and fostering the play environment is crucial. Rigby and Rodger (2006) maintained that adults can support and facilitate the child's play by structuring the time and space for play and providing the necessary resources and materials. In playing alongside the child and being a partner in his/her play, the adult can observe and respond to the child's cues, follow the child's lead and provide assistance in a timely manner. It is also crucial to create opportunities for children to play together or alongside their peers in close physical proximity in order to enable interactive social play.

The "*Test of Environmental Supportiveness*" – TOES (Skard & Bundy, 2008) examines the environmental supportiveness for play. It attempts to determine the source of the children's motivations when relating to the human and physical environment, and includes items that relate to the safety, accessibility, adherence to boundaries and rules, support of play activities, and responsiveness to cues.

In conclusion, the above five facets/dimensions of play should be carefully considered when assessing play.

2.4 Methods designed to assess the core aspects of play

This chapter provides a survey of methods designed mainly to assess core aspects or facets of play such as playfulness, the environment of play and the child's play style, rather than specific motor, sensory cognitive or socio-emotional skills. There are many different methods that can be classified in two main groups according to the source of information: a) direct sources of information using observations of play behaviours and b) indirect sources of information using questionnaires, self-reports and interviews that address play experiences (Figure 2.2).



Notes: ALB: Assessment of Ludic Behaviour (Ferland, 2005); CAPE: Children's Assessment of Participation and Enjoyment (King et al., 2004); CHIPPA: Child Initiated Pretend Play Assessment (Stagnitti, 2007); CLASS: Children's Leisure Assessment Scale (Rosenblum, Sachs & Schreuer, 2010); IIP: Initial Interview with Parents on the Ludic Behavior of their Child (Ferland, 2005); MCP: My Child's Play (Schneider & Rosenblum, 2014); PAC: Preference for Activities of Children (King et al., 2004); PIP: Paediatric Interest Profiles (Henry, 2008); PH: Play History (Takata, 1974; Bryze 2008); RKPPS: Revised Knox Preschool Play Scale (Knox, 2008); ToES: Test of Environmental Supportiveness (Skard & Bundy, 2008); ToP: Test of Playfulness (Skard & Bundy, 2008)

Figure 2.2. Classification of play assessment methods

2.4.1 Direct source of information: Observation

Observation is the most common method used to capture spontaneous and actual play behaviours of young children. Observations of naturally occurring play behaviours provide the best descriptions of the freely chosen, voluntarily initiated and variable characteristics of play (Parham, 2015). They are without doubt informative and clinically useful but time-consuming and often impractical in applied research.

The observation of play behaviours may require multiple sessions in a variety of settings since a child's play can be very different at different times (Knox, 2010). These settings differ according to the play materials available and the people who are present. Parents and peers can be asked to join during the observation, so that the observer can assess how the child relates to them (Kaugars, 2011). The presence of playmates can prompt more complex play behaviours such as social play behaviours (Garvey, 1990). Moreover, different characteristics in peers can elicit different types of play. Gender and age are known to influence play and are predictors of diversity in participation (King et al., 2006; Kelly-Vance & Ryalls, 2008).

The use of play observational tools with predefined criteria can facilitate the observation of the child's approach to play and play environment (Bundy, 2011^{a,b}). The results provide the starting point for intervention. However, most play observational tools examine only certain aspects of play, such as specific play skills and play behaviours. They do not capture the perspective of the child and it is possible that the observed play is more a task than play (Kennedy-Behr, Rodger & Mickan, 2015). Therefore, a good understanding of the child and the environment of play must inform these observations.

a) Play observation settings and materials

Observations aimed at capturing a child's actual play behaviour are commonly conducted in the context of free play (Bundy, 2011^b). The choice of the location should take into consideration the child's level of comfort (Kelly-Vance & Ryalls, 2008). Contextualized assessment carried out in naturalistic play settings may be more effective in encouraging the young child to initiate the play activity and to participate actively (Short et al., 2011). It may more easily reveal a child's desires and the challenges, barriers, enablers and opportunities for engagement in play. For example, Pierce (2000) observed infants' and toddlers' play at home to get a better understanding of the spatial dimension of play and how the co-occupations of mothers affected the children's play. She described how the mothers supported and shaped the play through the management of home space and play objects, and positioning the child for play.

The play of a child is dependent on what is afforded by the environment. Play materials are an important contextual factor in the play assessment that can influence a child's natural play behaviours (Athanasidou, 2000, in Caprino & Laudanna, 2009). According to Howard and McInnes (2013), the professionals have an important role in creating playful environments, presenting appropriate activities and facilitating positive and fruitful interactions. Thus, the observer should ensure that toys with the potential to elicit more complex forms of play are accessible to the child. When standardized toys are used in structured settings, they may not be accessible to the child and thus might alter or inhibit his/her play (Knox, 2010).

One of the advantages of using naturalistic settings such as the home environment for assessing play is that it provides valid samples of play behaviours in familiar and daily surroundings (Stagnitti, 2004). Knox (2010) described factors that facilitate and promote play as the availability of familiar objects and people, freedom from stress, provision of novelty and opportunities to make choices. Scheduling play experiences when the child is not hungry or tired, within a safe and comfortable atmosphere and interaction, with adults who are non-intrusive and non-directive, also promotes play. On the other hand, too many challenges or excess competition, external constraints, too much novelty and limited choices are factors that may inhibit play. Rigby & Huggins (2003) and Rigby & Rodger (2006) maintained that enabling the child to play in environments that are supportive, stimulating and developmentally appropriate,

and providing play objects and activities that have the “right amount” of challenge and appeal, are of manifest importance in promoting an optimal child-activity fit. Interventions directed at modifying the environment or the difficulty of the play activity might be easier to implement and have greater success than just trying to build the skills of the child.

The “*Assessment of Ludic Behavior*” – ALB (Ferland, 2005), the “*Test of Playfulness*” – ToP (Skard & Bundy, 2008) and the “*Test of Environmental Supportiveness*” – TOES (Skard & Bundy, 2008) are instruments that involve a direct observation of the child’s free play behaviour in natural environments and require no special equipment and no standard set of toys. With the ToP, the child is observed playing alone or with peers. In order for the TOES to measure the influence of human environmental factors on the playfulness of a child, it requires the presence of caregivers and playmates. The “*Revised Knox Preschool Play scale*” - RKPPS (Knox, 2008) is another direct observational assessment tool conducted by observing a child’s play behaviour in his/her natural environment, both indoors and outdoors with conventional toys. The “*Child Initiated Pretend Play Assessment*” – ChIPPA (Stagnitti, 2007) can be conducted in the home, school or clinical setting. It assesses two aspects of pretend play: conventional-imaginative play using a set of conventional toys and symbolic play using a set of unstructured play materials chosen based on gender neutrality and developmental appropriateness.

b) Role of the observer

In free play observation, play has to be observed in its spontaneity. No prompts should be provided to the child, since the presence of an adult can influence the child’s behaviours. When one wants to observe free play and exclude potential influences by the observer, then the adults’ role is to observe the child play without intervention of any kind and possibly be hidden from the child behind a one-way mirror (Slade, 1987, in Caprino & Laudanna, 2009). When the presence of the observer is obvious, then familiarity between the observer and the child is recommended (Leyytines, 1991, in Caprino & Laudanna, 2009).

When children are hesitant or unable to engage in play, they might need adults to encourage them to play. When the play observation is guided or directed by adults, it usually incorporates aspects of play not spontaneously initiated by the child. When the observer provides instructions during the observation, this can diminish the spontaneity of play. There is the risk that the child will tend to respond to the demand of the adult rather than engage in self-initiated play (Parham, 2015).

When the observer introduces instructions or prompts to guide the child to perform specific tasks, he must be mindful that he might not be assessing free play (Parham, 2015). For example, with the “*Test of Pretend Play*” – ToPP (Lewis & Boucher, 1997), the children have to demonstrate specific play actions. Symbolic play is modelled for children to copy and children are instructed verbally. The observer, with a standard set of material and toys, shows the child different play actions following

standardized instructions, then the child is expected to reproduce them. The children are asked to play with a teddy bear and have to perform four items: “*make the teddy bear do something to or with an imaginary object, make the teddy bear feels something, make the teddy bear be something else and make the teddy bear carry out a series of activities*” (Kaugars, 2011, p. 69).

c) Observation recording techniques

Observation involves the systematic recording of children’s play behaviour. Recording techniques reduce biases in the transcription process but are costly in time and personnel.

Howard and McInnes (2013) present and describe different observation techniques usually used by psychologists and anthropologists. The *narrative techniques and diaries* involve recording observations in some medium such as a diary or video and audio recording. The data recorded in a diary is generally overarching and, because it is often written after the play session, can be more open to interpretation bias. A *running record* allows the practitioner to conduct observations in real time on everything the child does or says. This technique offers the advantage of not being based on practitioner’s memories but is very exigent, often time-restricted and involves decision making about the level of details the therapist chooses to include.

The *diagrammatic techniques* allow representing the data visually and can have, for example, the form of a playroom map or an activity clock. The practitioner can record the child’s movements, what areas he prefers, how he spends time in the different play activities. The *observation schedules* can be a time sampling, event sampling and behavioural checklist and focus the observation on one of those particular aspects, summarizing data in brief and clear information (Howard & McInnes, 2013).

2.4.2 Indirect source of information: Interview and Questionnaire

Interviews and questionnaires are quick and inexpensive methods compared to direct observations. They can be a reliable, economical and practical source of information about a child’s play (Rosenblum, 2006). They can support early identification of play impairments based on the recognition of specific and/or alarming play behaviours and preferences. They help plan services based on the parents’ or child’s perceptions of his or her play performance and engagement (Rosenblum, Waissman & Diamond, 2016). While observations and interviews with parents and caregivers provide important information on the child’s engagement in play, they fail to include the child’s own perspective on his or her play (Henry, 2000). Core elements of play such as enjoyment, internal control and intrinsic motivation involve internal experiences (Parham, 2015).

a) Children as respondents

Contemporary studies on children view them as competent persons and critique the traditional approach of questioning parents rather than children. The latter have a right to express their opinion, and to have legal protection when doing so is an accepted practice. Moreover, children's view is valid because they are totally immersed in their experience the whole time and are a constant feature of all the play contexts. Moreover, they showed some stability in reporting on play over time (Sturgess & Ziviani, 1996).

There is evidence that the views of children are different from those of adults, who might provide an opinion about how they think the child should feel in relation to how they themselves would feel in a similar situation (Sturgess, Rodger & Ozanne, 2002). It might be possible that a child may not view a play activity as play, since if he or she has to put so much effort to engage in it, it becomes work (Kennedy-Behr, Rodger & Mickan, 2015).

Children's perceptions of their functioning and play experiences provide professionals with interesting knowledge about the way the environment supports or prevents them from playing and about what matters the most to them (Bundy, 1993; Henry, 2000; 2008). Children's perceptions are useful for promoting a collaborative process through discussion in goal setting decisions and for starting play-related interventions. When goals are child-generated, it stimulates the autonomous and intrinsic motivation that helps children to personally endorse them (Ziviani & Poulsen, 2015). Examples of child play goals are to engage with confidence in play with peers, increase the time and space available for play or play with a variety of toys (Kuhaneck, Spitzer & Miller, 2010).

When focusing on how and why a child wants to play, best practice includes asking the child directly using multiple means for questioning, such as photographs, checklists, questionnaires and interviews (McConachie et al., 2006). According to Bryze (2008), a *narrative interview* enables the interviewer to explore the meaning of the child's play and encourage the parents to discover their child's perception of his or her play experiences. Starting the assessment by asking the children about their play experiences and interests is optimal (King et al., 2006). When the interview is focused on the extent to which a particular child is able to engage in play in a familiar context, and is directed at uncovering the obstacles and oriented to problem solving, then this helps identify the child's desired changes in his or her play engagement (Trombly, 1993; Coster, 1998).

These last decades, there has been an increase in the development of paper and pencil *self-reports*, alongside the increase in use of client-centred practice that gives children a greater voice (Sturgess, Rodger & Ozanne, 2002). Self-reports are a quick method to gather information when it may be too time-consuming or difficult to observe a child in a natural play setting. They are invaluable in facilitating a discussion with the child to identify play-related problems. They are reliable and valid measures when the format is appropriate (Henry, 2000).

Consideration needs to be given to the age, intellectual and self-perception capacities of the child when using self-report measures. Children as young as four years of age are able to reliably self-report on attitudes, pain, facts and amount of physical exercise (Sturgess, Rodger & Ozanne, 2002). For disabled children, there can be complexities that affect self-report due to communication and learning difficulties. This raises the issue of choosing age-appropriate questionnaires, in terms of items assessed and response methods (McConachie et al., 2006). The design and wording must be adapted for different age groups, language abilities and endurance. Pictorial representations might be a format recommended to help a child understand the questions and select the appropriate answer (Henry, 2000). The advantage of pictures is that they engage and maintain a child's interest although they may suggest a certain answer and reduce the extent of other meaningful ones (Sturgess, Rodger & Ozanne, 2002). The administration of the assessment should include verbal explanation by an adult in order to ascertain that the child has properly understood the question.

The “*Pediatric Interest Profiles*” – PIP (Henry, 2008) are self-report questionnaires that collect information about play interests directly from the child and are for three age-groups: “*Kid play profile*” (6-9 years); “*Preteen play profile*” (9-12 years); “*Adolescent leisure interest profile*” (12-21 years). The questionnaires ask questions about how often, why, how well, how much and with whom specific play activities are performed and enjoyed. The preteen version was developed to fill the lack of age-appropriate measures that capture youngsters' perspectives on their play and leisure preferences, involvement, and enjoyment. Each group of questions is followed up by an interview.

The “*Children's Assessment of Participation and Enjoyment*” – CAPE (King et al., 2004) is a picture-based self-report questionnaire that assesses the child's participation in, enjoyment of and preferences for formal and informal everyday activities outside school: recreational, active physical, social, skill-based and self-improvement/educational. It can be self-administered using the test booklet or interviewer-administered using 55 activity cards and visual responsive pages. Children are asked if they have performed the activity in the past 4 months and if so, how often, with whom, where and how much they enjoyed the activity. It can be administered to 6-21-year-old children and adolescents with and without disabilities, who are cognitively able to understand the task.

The “*Preference for Activities of Children*” – PAC (King et al., 2004) is a self-report questionnaire that should be used after the CAPE when used together but can be used independently. It is a child self-assessment of 55 items and it includes an interview-assisted version. It identifies the child's preferred activities. The child looks at drawings of other children performing 55 different activities. He records his preference by circling one of the three facial expressions (three-point scale). A card containing enlarged facial expressions with corresponding written descriptions can assist them in their sorting (interview-assisted version).

The “*Child’s Leisure Assessment Scale*” – CLASS (Rosenblum, Sachs & Schreuer, 2010) is a self-report questionnaire developed to examine school aged (10-18 year-old) children’s engagement in leisure activities. The CLASS measures multidimensional participation in childrens’ and adolescents’ leisure activities. The preliminary CLASS contains 50 items or activities belonging to six dimensions of leisure participation: variety (which activities), frequency (how often), sociability (with whom), preference (how much he or she likes the activity), time consumption (how much time invested), and desired activities (which activities are desired but not currently undertaken). The CLASS can be administered in a clinical setting, school or sent by mail and completed at home.

b) Parents as respondents

In recent years, there has been a move to recognize parents as experts on their children, and to give them opportunities to share their knowledge and lived experiences (Gibson et al., 2009). Parents are considered experts because they are able to observe the child across multiple periods of time and varied circumstances.

Interviews with parents enable learning about their child’s play history, play preferences, habits, routines, meanings, and the social relationships that occur through play. Asking teachers may also shed light on these elements. The strategies a therapist can use to elicit narratives from parents about their child’s play are to establish an atmosphere of partnership in order to interact at a personal level, like a conversation or dialogue. The use of an interview guide might be helpful in order to cover the topics of play experiences, nature of play and participation in play, games and recreational activities (Bryze, 2008).

Questionnaires are especially useful in order to detect signs of difficulties in play observed by parents of young children. They may indicate future difficulties in the child’s social participation (Rosenblum, Waissman & Diamond, 2016). Parental questionnaires that indicate the degree of assistance needed and the play choices can facilitate quantification of play participation. Moreover, they can provide a parent with greater insight into the importance of play and their child’s daily functioning (Rosenblum, 2006).

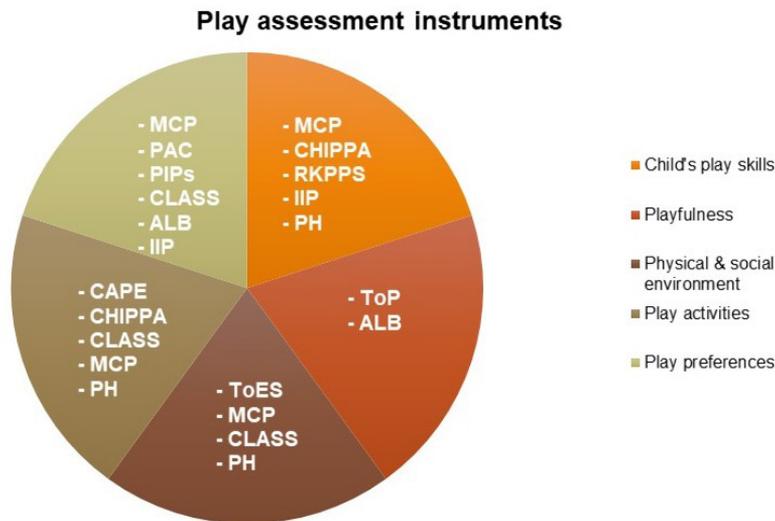
“*The Play history*” (Takata, 1974; Bryze, 2008) is a semi-structured interview with parents or caregivers of 0 to 16 year-old children. It is a way of identifying the child’s play experiences, interactions, environments and opportunities across the time progression of his/her life. The play history is designed to relate information about the quality and quantity of the child’s play in each of five developmental phases or epochs: 1) Sensorimotor, 2) Symbolic and simple constructive, 3) Dramatic and complex constructive and pre-game, 4) Games and 5) Recreational. Elements of each epoch are analysed following four categories: materials (with what does the child play), action (how), people (with whom), setting (where and when).

The “*Initial Interview with Parents on the Ludic Behavior of Their Child*” – IIP (Ferland, 2005) provides information on play behaviours at home from the parents’ perspective. It gives indications of the child’s usual play materials, toy preferences,

play interests, favourite playmates, most functional position for play and frequency of play in the family environment. It is meant to be used with the “*Assessment of Ludic Behavior*” – ALB (Ferland, 2005).

“*My Child’s Play*”– MCP (Schneider & Rosenblum, 2014) is a parent report questionnaire that includes 43 items that provide in-depth information about a child’s play in terms of the concepts of person, environment and occupation. The MCP was created to answer the need for a practical tool that enables parents to provide comprehensive information on the play of their children. The questionnaire relates to parental perceptions of the child’s play skills and interests, their attitudes towards play and the environmental context. The MCP yields a total score and scores for each of the MCP’s four categories: 1) Interpersonal relationships & social participation, 2) Executive functions, 3) Play characteristics & behaviour, 4) Environmental context. Higher scores reflect better play characteristics. The MCP can be administered to parents of 3 to 9 year-old children with or without disabilities.

Because play is such a complex behaviour, it is unlikely that one single assessment method and tool can provide a full understanding of a child’s play. Figure 2.3 illustrates the instruments described previously to assess the five facets of play.



Notes: ALB: Assessment of Ludic Behaviour (Ferland, 2005); CAPE: Children’s Assessment of Participation and Enjoyment (King et al., 2004); CHIPPA: Child Initiated Pretend Play Assessment (Stagnitti, 2007); CLASS: Children’s Leisure Assessment Scale (Rosenblum, Sachs & Schreuer, 2010); IIP: Initial Interview with Parents on the Ludic Behavior of their Child (Ferland, 2005); MCP: My Child’s Play (Schneider & Rosenblum, 2014); PAC: Preference for Activities of Children (King et al., 2004); PIP: Paediatric Interest Profiles (Henry, 2008) ; PH: Play History (Takata, 1974; Bryze 2008); RKPPS: Revised Knox Preschool Play Scale (Knox, 2008); ToES: Test of Environmental Supportiveness (Skard & Bundy, 2008); ToP: Test of Playfulness (Skard & Bundy, 2008).

Figure 2.3. Examples of play assessment instruments of the main facets of play adapted from Bundy (2011^a)

2.5 Play assessment of children with disabilities

2.5.1 Rationale for assessing the play of children with disabilities

The literature is dominated by comparisons of the play of children with disabilities to that of non-disabled children. It seems to suggest that while disabled children do indeed play, their play is not only different from non-disabled children's play but also unsatisfying and unproductive (Goodley & Runswick-Cole, 2010). Generally speaking, the medical model of disability is focused on what a child cannot do when playing, describing deficient play, delays in play, less variety and complexity in play behaviours and in use of toys. These challenging play behaviours are usually considered problematic and in need of remediation.

Many researchers studied the play of children with different types of disabilities. Porter et al. (2008) described how the level of play of children with hearing impairments was dependent on their communicative abilities, and how children with visual impairments typically played alone and relied on manipulative toys. Jahr et al. (2000) stated that children with Autism Spectrum Disorder (ASD) lacked the ability to take part in reciprocal play with their peers while Messier et al. (2008) described the interest of children with intellectual disabilities in sensory and sensory-motor play as evidence of their immaturity. Cordier et al. (2010) indicated that the difficulties in social interactive play of children with Attention Deficit Disorder (ADD) and/or Hyperactivity Disorder (ADHD) were related to their lack of inter-personal empathy and difficulty discriminating and identifying the emotional states of others. Despite research that has suggested that children with developmental delays often experience limitations in the extent to which they can participate in typical play activities, it has not indicated ways in which they can play (Bult et al., 2011). For those children who have an impairment, play does not come easily and they may indeed play differently or need help in order to engage in play.

Identifying the barriers children with disabilities encounter that hinder their engagement in play and leisure activity might help in removing the barriers so that the child can participate more fully in play. Indeed, recent studies have shown that children with disabilities have fewer opportunities for free play compared to their typically developing peers due to barriers such as family income, recreational orientation, physical environment and supporting policies (Bart, Jarus, Erez & Rosenberg, 2011; Kennedy-Behr, Rodger & Mickan, 2013; King, Petrenchik, Law & Hurley, 2009; Miller & Kuhaneck, 2008; Shikako-Thomas & Law, 2015). Moreover, these barriers that hinder their participation are being sustained through adolescence and adulthood (Badia et al., 2011; Shikako-Thomas et al., 2013; King et al., 2009).

Assessment of the play of children with disabilities serves various purposes, including screening, diagnosing, describing as well as treatment planning (Short et al., 2011). Play can offer understanding of subtle differences and important information regarding diagnostic differentiations in children with developmental

disabilities, such as children with ASD. The play skills of children with ASD have been shown to be lacking novelty and complexity and imaginative play situations have been incorporated into the diagnostic assessment of the condition (Lord et al. 2000). As play is a barometer of development, it can be used to evaluate other domains (Cordier, Bundy, Hocking & Einfeld, 2009; Lewis, Boucher, Lupton & Watson, 2000). For example, pretend play was used to predict language and social skills in children with ASD (Charman, 2003, in Lifter, Mason & Barton, 2011). The assessment of the play participation of children with disabilities can provide important information for preventing health consequences. For example, intervention that increases the engagement in active play of children with Developmental Coordination Disorder (DCD) can diminish the risk of obesity and cardio-vascular diseases for these children (Cairney et al., 2005; Rosenblum, Waissman & Diamond, 2016).

2.5.2 Context for play assessment of children with disabilities

Understanding the role and fundamental characteristics of play in the developing child is a basic requirement when considering the assessment of play in children with developmental delays. The International Classification of Functioning Disability and Health for Children and Youth (ICF-CY) qualifiers (World Health Organization, 2007) can help understand the child's play activity and participation with regard to his or her movement, sensation-perception, cognition and emotional state. Furthermore the evaluator should be aware of the limitations imposed on the child in relation to the physical and social environment as well as the adult's predisposition to play (Blanche, 2008).

Little is known about the participation of children with disabilities and the factors that may influence this participation. Part of the reason is that adequate measures of participation are still lacking and most play measures for children are related to performance, with play performed without social involvement (King et al., 2006; Adolfsson, Malmqvist, Pless & Granlund, 2011). The ICF-CY (2007) has taught us to view the domains of participation (involvement in life situation) component by two qualifiers of performance and capacity. The performance qualifier describes what an individual does in his or her current environment. The capacity qualifier describes an individual's ability to execute a task or an action, hence, the highest probable level of functioning that a person may reach in a given domain at a given moment. This means that to assess the full ability of the individual, one would need to have a standardized environment to neutralize the varying impacts of different environments on the ability of the individual.

The evaluation of play of children with disabilities requires instruments that enable mediation by the evaluator and are culturally adapted, with age-appropriate standards and sensitive to the difficulties of children due to varied impairments. For disabled youngsters, special consideration needs to be given to their dependency on parents and other caregivers, although the level and frequency of needed assistance is particularly difficult to assess (McConachie et al., 2006).

Although standardized tools offer a consistent way to administer, score and interpret data, they might not allow the examiner to adapt the procedure to a disabled child since they are primarily designed for typically developing children (Short et al., 2011). The use of norm-based measures might be unproductive since children with disabilities will almost always score lower than the norm. For these children, having a play age equivalent to typically developing children is certainly less important than being good at the play they want to engage in (Bundy, 1993; Clifford & Bundy, 1989). Capturing their experiences is fundamental to the development of any measure since they may have different perspectives from adults and their typically developing peers on play and leisure. The design of an appropriate instrument involves qualitative work with young disabled people themselves in order to identify user-friendly modes of presentation and responses (McConachie et al., 2006).

Most existing assessments are biased against children who are unable to demonstrate their abilities due to physical, sensory, cognitive, emotional and other impairments. Therefore, the authors suggest developing a mediated and specifically adapted assessment process for qualifying and quantifying the play of children with various developmental delays.

2.5.3 Mediated play assessment

A dyadic joint engagement and mediated interaction between caregiver (parent or therapist) and child might be necessary when assessing the play of children with severe disabilities. In the authors' viewpoint, a "*mediated play assessment*" is a way to evaluate a child who might be unable to initiate play and to act without assistance.

The clinical reasoning that underlies creating a mediated assessment of play will be demonstrated via vignettes based on the author's (VK) personal experience working with children diagnosed with cerebral palsy (CP). However, the use of a mediated play assessment is not restricted to one population. Therapists and educators should consider using a mediated play assessment and modifying the assessment process for children with other various developmental delays in order to collect representative data regarding the different facets of the child's play. The assessment should be based on in depth knowledge of the clinical manifestations of the child's diagnosis.

a) Mediated play assessment when considering motor disorders in children with CP

A child with CP might not be able to actively access and/or explore the environment. "*Cerebral Palsy (CP) describes a group of permanent disorders of the development of movement and posture, causing activity limitations that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, perception, cognition, communication, and behavior, by epilepsy, and by secondary musculoskeletal problems*" (Rosenbaum et al., 2007, p. 9).

The preliminary goal in an in-depth assessment of his/her play must be appropriate positioning in order to allow the child the best possible interaction with the environment. This can be done using adaptive positioning equipment such as adaptive chairs or standers that are “tailored” specifically to the child’s abilities.

The child’s movement deficits limit the potential to enter spontaneously into active play and engage in the activity for his/her sensorimotor pleasure. His/her inability to enter fully into play early in life may affect his/her perception of having control over the environment and developing intrinsic motivation (Blanche, 2008). This explains why in the assessment process there should be provision of accessibly adapted toys that will enable active and spontaneous engagement in play. When relating to adapted toys, one has to think of the following objectives: selecting play materials that are appropriate and suitable, making sure they have an easy method of activation and are easily adjustable. In addition, they should be safe and durable, provide opportunity for success and promote self-expression. They should be currently popular among peers and have potential for social interaction. When relating to the action of adaptive play, we can think of “*play that has been altered in form, complexity or intent to serve the needs of children with disabilities*” (Musselwhite, 1986, p. 12).

b) Mediated play assessment when considering sensory disorders in children with CP

Sensory processing in a child with CP may impact on the child’s preferences for certain play materials and activities. For example, it has been stated that these children prefer hard toys as opposed to soft furry toys. They show strong preference for vibratory toys (Curry & Exener, 1988). The child’s sensory environment might have to be adapted to enable the child to fully engage in the play activity.

80% of children with CP have visual limitations of various kinds (Fazzi et al., 2010). It is essential then to have a clear understanding of those limitations and adapt the visual environment and play materials accordingly while assessing play.

Vignette on Ella – an example of adapted play activity.

Ella has Dystonic Cerebral Palsy, Classified as GMFCS² V, MACS³ V and CFCS⁴ IV, which means that Ella has limited functional independence. In addition she has cortical visual impairment.

When Ella was five years old her mother was concerned that her daughter could not play by herself at home after coming home from school. All she could do was sit in the corner of the big couch and watch television.

Part of the service given at her school is the OT’s home visit to provide consultation regarding various functional needs, including participation in play activities. When

2 GMFCS – Gross Motor Function Classification System (www.canchild.ca)

3 MACS – Manual Ability Classification System (www.macs.nu)

4 CFCS – Communication Function Classification System (www.cfcs.us)

arriving at her home, we asked to see what toys she plays with. All her toys were organized in the closet in an orderly manner and they were all toys for typically developing children (Lego, puzzles, Barbie dolls etc.) All the toys required fine motor abilities, which Ella did not have. We asked the mother how Ella plays with her toys and were told that she doesn't actually play with them but rather watches her siblings play with them. She has the role of a "passive player" or onlooker. We asked for permission to play with Ella as we do in school so we could model to the family how we facilitate active play:

I held Ella in my arms since the toys were high up at my eye level and asked her what she wants to play with and waited for her response. In parallel, I suggested putting the toys on a lower shelf where Ella can stand supported instead of being held and make a voluntary choice.

Ella visually scanned the items on the shelf and then focused her eyes on one area. Because it wasn't clear which toy she wanted, I started scanning each toy verbally while moving my index finger from one item to the next, waiting for a YES/NO response from her. As agreed long before with Ella, she made a sound approximating the word "yes" and no sound for NO. When Ella picked the DUPLO her mother was surprised because Ella never chose to play with the DUPLO before since it requires precise fine motor abilities.

I sat on the floor in front of the mirror, legs apart and sat Ella between my legs (with her back to me) so she could have maximum support for sitting. Before taking the DUPLO pieces out, I asked what she wants us to build together, hence giving her a choice between two: a bed for the doll or a car for the doll. In the same scanning manner as we did before when choosing what to play with, Ella decided she wanted us to build a bed for the doll. Since there were 4 different colored blocks, I spread 4 of them on a dark piece of cardboard (an item I always have with me for visually adapting play items for children with visual impairments) and again scanned each one to know what color bed we were going to build.

The mother was in tears of excitement to watch how much Ella enjoyed the control/mastery she had over the play activity. After playing for almost an hour, we pointed out that Ella cannot play by herself but she can play in a mediated play environment where she is given the time and adapted setting for taking part in a play activity.

c) Mediated play assessment when considering cognitive disorders in children with CP

Cognitive impairments might affect play and be more limiting than the restrictions in movement. Therefore, it is crucial to be aware of what effect cognitive skills such as attention span and preferences, locus of control or distractibility have on play and what level of support the child might need in order to keep engaging in play. Cognitive limitations may also affect the ability to enter into make-believe and fantasy play. During a typically developing child's fantasy play, the child replays the past and anticipates the future (Blanche, 2008). These imitated scheme sequences represent,

among others, the child's cognitive ability for representational thinking and the ability to imitate these sequences. Due to their various activity limitations, lack of exposure to peer play and limited participation in daily life routines and community activities other than their own, children with cerebral palsy might have a poor repertoire of schemes that they imitate. Our clinical experience shows that these children's favorite fantasy scheme is playing "patient – doctor". Therefore, when assessing the child, it is important to understand whether this is based on cognitive limitation, motor limitation or lack of experience.

Vignette on Michael - How cognitive impairments have a greater effect on the child's ability than his motor impairment. Helping parents develop an accurate perspective on their child's play.

Michael was born 5 years ago at 25 weeks gestational age at the weight of 650 grams. In addition to Periventricular Leukomalacia resulting in a shunt and ongoing pulmonary problems during the first two years of his life, Michael has Diplegic Cerebral Palsy, Cortical visual impairment and Attention Deficit Disorder.

It was clear very early on, when Michael first attended the infant/toddler special education setting, that his "capacity" for participation, was much higher than his "performance". Gaining independent mobility using a walker took much longer than expected according to his motor ability (Classified as GMFCS III). Michael's attention problems had a major effect on his overall performance in general and his ability for any type of play in particular. In every activity with learning, solitary or social play, Michael needed one-on-one mediation. He had a hard time understanding and participating in social play activities, and showed initiation only when participating in "wild" action figure pretend play. It was hard for him to sustain active play attention for more than 5-10 minutes at a time. Attending to play activities as well as learning activities was very hard for him. The social implications were such that he became aggressive towards his peers in class and had frequent crying fits of behaviour.

A year ago it was suggested to the parents that they give Michael Ritalin in order to help him cope with his attention deficit disorder. The parents were very much against it and refused because they worried that he would get addicted to the drug. The change in their attitude occurred a few months ago when they were invited to screen video clips of his typical play behaviour in class and in other environments in the school. We filmed Michael in free play situations in the class, outside in the school yard, playing with peers (one vs group) and also had clips of him in the different play stations in class and then using the same activities in a quiet environment (Michael's different capacity & performance in different environments).

Sitting together with the mother, we asked her to watch the clips and afterwards reflect on what she saw. Michael's mother was very emotional. She commented on how hard it was for her to watch him in the different play environments and how it

never occurred to her how distinct his attention problem was but even more so she noticed the “social price he pays” because of the ADD.

Michael has been taking Ritalin for 3 months and the effect is remarkable. He started using quadruped canes for walking independently, his play is more controlled, planned and enjoyable and he has made friends that initiate play dates with him in the afternoon.

d) Mediated play assessment when considering communication disorders in children with CP

For those children with CP who are non-speaking, and have to undergo a play assessment, it is crucial to know what the child’s nonverbal and verbal skills are. It is fundamental to incorporate the aided and unaided techniques the child uses to communicate with, and the types of alternative and augmentative system available to them for independent interactive communication in the assessment process.

Vignette on Muhamad - Using an arousing mediated play activity to facilitate active engagement: An example of how play needs to be facilitated for children with severe disabilities in order to assess these children’s ability to play for play’s sake.

Muhamad is a 4 year-old boy. He is diagnosed with Quadriplegic Cerebral Palsy classified as GMFCS V, MACS V, CFCS V and cortical visual impairment.

Muhamad needs adaptive sitting/standing during the day. This is his first year in our school and it is unclear what his cognitive level is. Muhamad smiles, makes sounds and at home he’s his older sister “toy”. When we asked what he plays with at home, the sisters pulled out a baby toy that plays music and lights up when pressed. Because Muhamad does not yet have an adapted seat at home, he sits in his car seat in a reclined position and therefore cannot have enough trunk extension to hold his hand in space in order to actively press the toy. After watching a video clip on the way Muhamad plays, we invited the parents to address the issue of finding adaptive ways for him to sit upright at home (until he will get an adaptive chair) and be able to play ACTIVELY!!

First we showed the parents that Muhamad can play while standing up (supported as in the picture) in front of a small table so he can initiate full participation in a fun play activity. We started at the basic level of an interactive communication play activity: On the table in front of him, Muhamad had a speech generating device (BigMack) with the message “Ruti come back!” recorded on it. When one presses on the device it plays the message that was recorded on it. I asked Ruti the Speech Language therapist to leave the room and then after she left I asked Muhamad where she is, took his hand and together we pressed the BigMack. As soon as it played the message Ruti charged in and said “you called me?” Muhamad started laughing and looked at the door, clearly understanding the play activity.



Ruti ran out and immediately Muhamad pressed the BigMack and looked at the door waiting for Ruti to barge in. We explained to the parents that this kind of activity shows us that he clearly made the connection and that we are ready to raise the level of activity to the next stage and so added another BigMack where Muhamad could ask Ruti to leave and then call her back again... The parents were eager to try this play activity at home and told us the following week that they expanded the play activity: “We decided to see if Muhamad can choose with whom he wants to go out of the room. He reached with his left hand excitedly each time at a different member of the family to leave the room and burst out laughing when he/she came in barging into the room when he called! We all had such fun playing as a family together”!

e) Mediated play assessment when considering parents’ perspective on play

In their study, Graham, Truman & Holgate (2015) described the multifaceted perspectives that parents of children with CP have on play. The parents described the burden of play: the time and energy needed to play with their child and the need for more than one person to facilitate therapeutic play. Parents said that due to the children being limited in their ability to physically manipulate or access toys, they were not able to play on their own. Parents added their view of play as being vicarious, the importance of communication in play and the theme of play and therapy.

It is suggested that part of the mediated play assessment of the child includes exploring the parent’s view on play: for example, how do they view play as an everyday occupation? How does their child play? We need to clarify a number of issues: does the facilitation of play place a burden on these parents? Do the parents understand the concept of play? Do the parents recognize the importance of play for play’s sake? Michael’s vignette (section c) not only exemplifies how parents are asked to provide their thoughts on how they view their child’s play but also how the child’s performance changes when the environment changes.

Vignette on Judy – A mother’s perspective.

Two years ago, Faye was asked to write her perspective on her daughters’ play. This is her narrative about her play improvement:

“Judy (5 years old) was diagnosed with Cerebral Palsy (CP) around her first Birthday. She was also diagnosed with cortical visual impairment (CVI).

She started physiotherapy when she was 6 months old. At the age of 1 year 7 months, she joined her first rehabilitation kindergarten, where the therapists instructed me on how to help Judy to improve, physically and visually.

As a mother of a CP baby, I focused on Judy’s treatment. I converted our whole daily life into a mini-rehabilitation center. I put all dolls, teddy-bears and toys in a big box in a storage room, and focused on the following:

- Red and yellow coloured items to treat CVI. Judy’s room (in the old apartment) was painted in red with some yellow coloured circles.*
- Lego because I was told they are good for arms and brain*
- Maracas that will improve hands*
- Light and sound toys that move to enhance her vision.*

I spend a lot of time with Judy playing, but I’ve never thought of really playing with her, until I had my first meeting with the therapist in her new kindergarten, where the therapist and the teacher told me that Judy doesn’t know how to play.

I thought to myself, it’s true. I’ve never played with Judy! All I was doing is exercising her muscles and vision, but I’ve never played with her! Also, I don’t know how to play with her or how to teach her to play.

The therapists and teachers started teaching Judy how to play, using toys and dolls. This year they started lending toys, which I use when I play with Judy.

When we received the first toy from the kindergarten, I asked Judy if she wanted to play with me. I received the biggest smile ever from Judy, and she was so enthusiastic that I was going to play with her toy and not the one that I impose on her. We played for more than an hour, and she was so happy.

Now, after almost a year of teaching Judy how to play, I find a 180 degrees change and continuous improvement in her play behaviour.

Most of the improvements are in the following fields: selecting the toy/game she wants, initiating the play, persisting at play with the same game for a long time, more cooperative play with other children, prepared to play by herself.”

In conclusion, as demonstrated in the four vignettes, in order to gain knowledge of the play occupation of children with disabilities, a specific mediated assessment method has to be constructed. This should focus on providing optimal play environments (special adapted positioning, visual and sensory environment), adapted play materials and clear awareness of the child’s aided and unaided communication. Therefore the motor, sensory, cognitive, social and emotional strengths and limitations of each individual child must be acknowledged to best adapt the mediated assessment process. In addition, it is important to have a clear understanding of the parent’s perspective on their child’s play, as parents have a crucial role in facilitating play experiences.

2.6 Occupational Therapy perspective on the evaluation of play

Throughout the years, occupational therapists have addressed play inconsistently in the evaluation of children. They viewed play mainly as an indicator of other abilities, such as fine-motor skills (Miller Kuhaneck, Tanta, Coombs & Pannone, 2013). Occupational science, however, has shifted the focus away from this functional view and has offered a unique perspective on play as the primary occupation of childhood (Reilly, 1969; Pierce, 2000). As occupation denotes engagement in the performance of an activity that has a meaning and purpose for the person, it is assumed that engagement in occupation contributes to health and wellbeing (Kielhofner, 2008; Wilcock, 1999). Thus, “*embodied experiences of occupation in play and in the real world influence how human systems learn to think and communicate about all significant components of life*”, supporting the use of play as therapy (Yerxa, 2000, p. 92).

In recent years, a significant body of literature has been published that legitimizes and enhances the importance of play in occupational therapy (Bundy et al., 2011^{a,b}; Kennedy-Behr, Rodger & Mickan, 2013; Lynch, Hayes & Ryan, 2015; Lynch, Prellwitz, Ray-Kaesler, Jansens & Coussens, 2016; Miller Kuhaneck, Tanta, Coombs & Pannone, 2013; O’Connor & Stagnitti, 2011; Prellwitz, & Skär, 2016; Ray-Kaesler & Lynch, 2017; Wilkes-Gillan, Bundy, Cordier, & Lincoln, 2016). They showed that examining play from an occupational perspective could be a valuable means for helping children participate in play activities in their everyday environment.

Contemporary theories in occupational therapy consider optimal engagement in play experience a good fit between the child’s abilities, the play performance requirements and the play opportunities in the child’s environment (Law, Baum & Dunn, 2005). They call for the profession to examine how a child’s characteristics interact with the play environment to support or hinder play performance. Tools to assess play have been developed to evaluate play as a worthwhile outcome of therapy, an occupational domain in its own right as well as to serve as a medium for achieving an optimal child-play-environment fit and for improving play participation (Bundy, Nelson, Metzger & Bingaman, 2001; Miller Kuhaneck et al., 2013). For example, play assessment tools designed by occupational therapists and introduced to the field in the last decade are the “*Test of Playfulness*” – ToP (Skard & Bundy, 2008), the “*Revised Knox Preschool Play Scale*” – RKPPS (Knox, 2008), The “*Children’s Leisure Assessment Scale*” – CLASS (Rosenblum, Sachs & Schreuer, 2010), “*My Child’s Play*” – MCP (Schneider & Rosenblum, 2014) and the “*Kid and Preteen Play Profiles*” – PIPs (Henry, 2008). These tools consist of observational tools, child-reports and parental questionnaires.

The multiple methods of play assessment represent the variety of approaches under which this complex and multi-faceted phenomenon that is play has been studied (Miller Kuhaneck et al., 2013). The combined use of these methods is particularly helpful in determining the child’s play preferences and playfulness, the demands and supports of the activity and environment, and the significance of

the play activities for the child and his or her family. When more than one source of information is used, it offers a meaningful assessment and broader perspective that encompasses not only the “doing” component denoted by play behaviours but also the social, spiritual and temporal elements of the occupation of play (Coster, 1998).

In spite of the additional instruments developed to assess play *per se*, practitioners usually continue to collect information about a child’s play by using free unstructured observation and by asking significant others. When practitioners use instruments, they are most likely based on the ICF-CY body function and structure domain, especially with children with cerebral palsy (Saleh et al., 2008; Miller Kuhaneck et al., 2013). In studies of occupational therapy practice in three European countries (Ireland, Sweden and Switzerland), therapists all prioritised using assessments that examine functional skills over play (Lynch, Prellwitz, Schulze & Moore, 2018). This trend was evident despite a strong shared valuing of play as an essential occupation in childhood. Even when play assessments were used, the goal of assessment was to establish which body functions were impaired in order to develop intervention plans. These findings mirror other studies that show that play is more often used as a medium to observe motor, sensory and process skills rather than an occupation in itself (Stagnitti, Unsworth & Rodger, 2000). The supremacy of what Trombly (1993) described as a traditional “bottom-up” approach, meaning that the focus is on abilities with expectation that normalizing these abilities will result in better performance, is still prominent.

According to Miller Kuhaneck et al., (2013) occupational therapists feel obliged by prescribers and funders to give assessment of the child’s abilities priority. They also are highly aware of the pressure of early intervention to remediate impairments, particularly in young children, and so prioritise motor function over play (Page, Roos & Banziger, 2015). Moreover, many therapists feel inadequate in assessing play in practice, because play is addressed more fully by other professionals, or is not considered a productive and a respectable goal for intervention. Since a majority of therapists work in a clinical setting, they lack the time and resources to assess play in a child’s familiar setting (Stagnitti, 2004).

A top-down assessment process that comprises the examination of role competence, meaning and barriers to task achievement is argued to better support truly occupation-centred intervention (Rodger & Kennedy-Behr, 2017). However, when occupational therapists adopt a top-down approach, their focus is mainly on self-care rather than play (Miller Kuhaneck et al., 2013). A focus on play depends on the availability of culturally adapted, reliable and valid tools that are occupation-focused and consider the child in context (Coster, 1998). Based on the Person-Environment-Occupation Model (Law et al., 1996), the assessment process should reflect the child-environment-play dynamic relationship, with the play performance being the outcome of the transaction. According to Coster (1998), a top-down approach to play places the child’s participation and how he/she is included or excluded from participating in play on the first level of assessment. The second level addresses the play performance, the adaptations and assistance necessary to achieve it. On the

third level is the assessment of the child's strengths and limitations in performing the play activity. The fourth level addresses the component processes necessary to the play performance.

With such an assessment process, a therapist is able to answer the following questions: What skills and attributes does a child bring to the play situation? What are his/her play challenges, interests, preferences and opportunities in varied contexts? How does a child react, does he/she take turns, what appears to motivate him/her? Does he/she have the attention and problem-solving skills for the play activity? How does he/she handle the frustration, the waiting? Does he/she manipulate objects and toys easily? How does he/she communicate? What play activities are available, when and where, with what requirements? What are the aids and services necessary to support a child with disabilities equal access to play (Miller Kuhaneck, Spitzer & Miller, 2010)?

In using an occupational frame of reference, it is necessary that occupational therapists be equally knowledgeable about the child's disability, process of development, play activity and environment, and methods of play assessment. They need to acknowledge the power of play and to reframe their thinking about play. A stronger emphasis regarding the role of play in evaluation and intervention needs to be provided in the educational and practice settings of occupational therapy. As Florey stated over 30 years ago (1981, p. 524): *“Just as the use of scooter boards does not equate to a knowledge of Sensory Integration, the use of play materials and toys does not equate to a knowledge of play”*.

2.7 Psychological perspective on the evaluation of play

Psychologists consider play as the child's natural means of expression, which is why they paid attention to it over the years (Edling Harris & Landreth, 2001). According to Landreth (2001), play allows children to express feelings, strong emotions, thoughts and situations experienced in a safe environment. In this sense, it can be considered as a specific language that doesn't necessarily require verbal words. Thus, play can be viewed as a limitless expression form. Unlike the verbal language, it doesn't require specific rules or meaning, thus it can be expressed in many nuances. For example, the psychologist can use symbolic play to make assumptions about a child's experience by interpreting the theme of his play, the recurrence of the theme and the behaviour related. *“In assessing play behaviour, the observer, then, is constantly comparing what an individual child is doing, saying and feeling to what is normal for that child's age, level of development and environment”* (Landreth, 2001, p. 11). Therefore, there is a consensus in the field that play provides a window for assessing child's development and allows an understanding of children's experiential and psychological world (Perry & Landreth, 2001).

Psychologists might, given their behavioural or constructivist perspective on play, focus more on how a child uses play or on what it reveals about a developing child (Lifter, Mason & Barton, 2011). Research from a behavioural tradition puts emphasis on small samples or single case studies to capture a child's play experience, with a problem in generalizing the findings. In a constructivist perspective, attention is placed on what populations of children do when playing, which expresses what they know and are learning (Lifter, Mason & Barton, 2011). These two perspectives on play must be acknowledged for the value each adds.

According to Howard & McInnes (2013), psychologists use mainly play-based assessments to highlight certain skills and aspects that are necessary for the child's development such as, for example, happiness, physical activity and socialization with other children or problem solving. Such assessments are generally used for two purposes: to track developmental progress and to make important decisions about the intervention (Brassard & Bohem, 2008, in Howard & McInnes, 2013). They usually use different observational tools that can be structured, unstructured or a mixture of both, based on documentation or observation schedules developed by the practitioner. The aims of the observations have to be clearly identified and the way psychologists collect their data has to be adapted accordingly. In order to be as objective as possible, the clinician has to lead his/her observations paying attention to many aspects and in particular, he/she should be aware of the danger associated with interpretation. Actually, some behaviours that can be expressed by the children in play may have different significance for an adult. Children often play for learning about the world and what happens around them. Therefore, the underlying rules of play can be different from that of an adult.

Affective processes can be assessed for example with the "APS - *Affect in Play Scale*" (Russ, 2004). It is an observational tool of the cognitive and affective processes occurring in pretend play in a standardized play task. Social and cognitive aspects of play may be evaluated with the revised "POS - *Play Observation Scale*" (Rubin, 2001). This assessment shows individual differences and differences in age, gender and socio-economic status and highlights withdrawn and aggressive behaviour of children at risk for developing psychological difficulties or children with disabilities.

In conclusion, we can report that psychologists predominantly use play-based assessments that emphasize play as a mediation activity. The aim of an evaluation might not be to focus on the children's abilities to play for the sake of play but to gather information on children's psychological abilities from a therapeutic perspective.

2.8 Parental contribution to the evaluation of play

Play is a very important activity for children. Therefore, parents show commitment to play by promoting it in many ways. They manage play space, select the toys, adopt

attitudes that foster independent play and help their child maintain a proper degree of arousal and interest in the play activity (Pierce, 2000; Hughes, 1999).

Children with disabilities, such as children with autism and learning disabilities, have cognitive impairments that may affect daily activities such as play. Play has many cognitive demands that vary according to the type of play and the activities involved. It may require attention, language, planning, visuo-spatial or theory of mind skills. Thus, it is very important to analyse the different aspects of the play activity.

Is the duration of the activity allowing the child to maintain concentration efficiently until the end? Can the verbal rules be understood correctly or should they be given visually? Does the play activity involve communication and theory of mind skills tailored to the child? Are the visual aspects of the play activity correctly perceived and the motor constraints suitable for the child? The level of difficulty of the play is important too. The play has to be difficult enough to stimulate and interest the child but must remain accessible. These different characteristics need to be adapted so that the child will enjoy and succeed in the play activity. It is important that parents receive guidelines that will help them in adapting and facilitating enjoyable play experiences for their child.

In order for parents to select and manage the play activity as well as support the child in playing, parents should answer two questions: 1) “Is my child showing pleasure in the play?” and 2) “Is the play situation adapted to my child?” In so doing, they can intervene in four dimensions to manage and eventually modify the play situation: pleasure in the play, interest in the play, play space and play object.

1. It might be possible to answer the first question by observing how the child’s behaviour differs when expressing pleasure and interest in play as for example: laugh, smile, good participation, good responses, motivation to play again; or, to the contrary, displeasure or disinterest, for example sigh, distractibility, no-response, stress indicators (tears, agitation, nervousness), wish to give up the play.
2. To answer the second question, parents may quickly observe the setting of the play situation, which comprises the play space (position of the child and objects, accessibility) and characteristics of the play objects’ (usability of the toys) in order to adapt their level of support.

Figure 2.4 illustrates the two questions the parents should answer and the four dimensions on which they can intervene in order to adapt their child’s play situation.

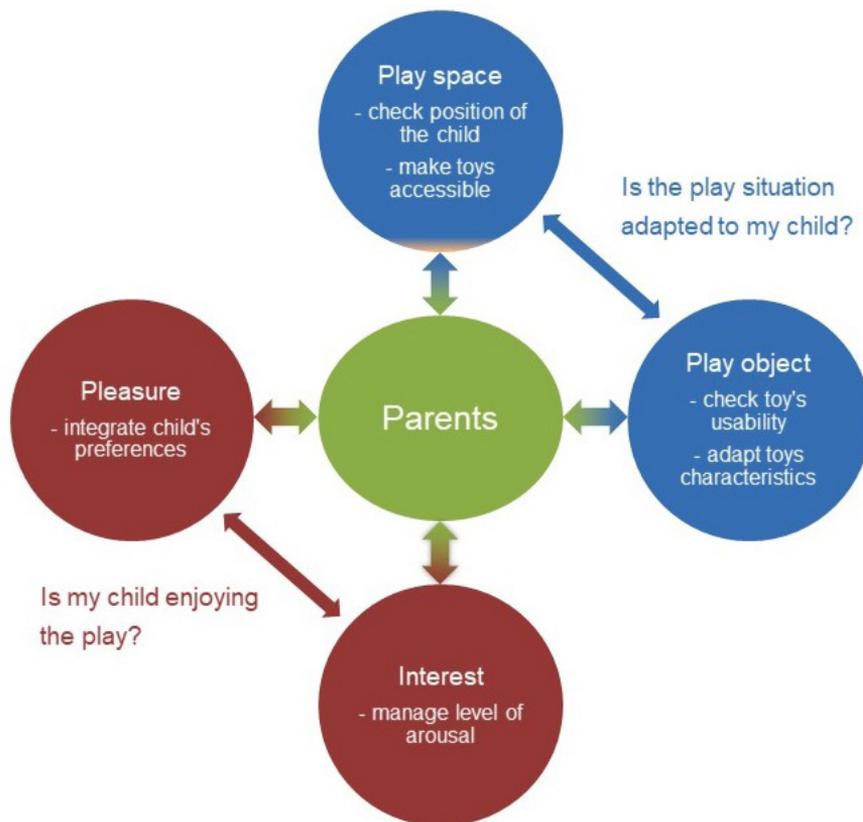


Figure 2.4. Parents' contribution in adapting their child's play

2.9 Conclusion

Professions operate within particular frames of reference with core assumptions that shape their approaches to assessment and intervention. Some of these assumptions are embedded in traditional neuromaturational and rehabilitation approaches that use the information regarding children's play to determine and act on impairments. Some emphasize more social approaches that use this information to determine the children's needs and assist them in playing and participating in their community.

To best meet the children's needs and support for play, flexible services are needed and helping children with disabilities play for the sake of play requires new directions. A "wake-up call" is needed to make play happen. This is necessary in order to provide children with fun and playful experiences, allow meaningfulness and active engagement in free play and to prevent play deprivation. This requires solutions that go beyond the child's proximal environment.

Provision of an ecologically valid play assessment to a child in his or her play context is a first step. Inclusion of parents, caregivers, teachers and children in the evaluation process is more likely to bring play to their attention and enable better adherence to an early intensive intervention program. Dissemination of general information and guidelines about how to observe and mediate children's play to parents and educational and clinical service providers is a second step. Such strategy could not only support the development of interventions for children to prevent play limitations and participation restrictions but also facilitate positive and enriching play experiences.

The assessment of play per se requires a greater level of specificity of children's expression in play and play performance. Experience related to societal and technological changes, new descriptive studies on children's play abilities, activities and participation are needed. Further research is crucial in order to support the use of play in assessment.

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