Porticus:

Enabling factors for Early Childhood Development – short version of the Rapid literature overview

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This document serves as an insight into the enabling factors.

Early Childhood Development

The children are developing new skills and competencies at a fast pace, especially in their early age (Baral, 2011). The main areas of development include physical, psychomotor, mental, language, pre-literacy and pre-numeracy or socio-emotional competencies (Yakupogullari & Yagan Guder, 2020).

A three-years old child should be able to handle basic motoric coordination (e.g., climbing, jumping, manipulation with small objects), to initiate the self-regulatory processes of own behaviour, to try controlling negative emotions and to play with other children; theory of mind could not be developed yet (problems with others´ perspective taking); the literacy (e.g., simple sentences) and numeracy skills (basic categorization according to shape or colour with mistakes) should be developed at a basic level (Baral, 2011).

A four-years old child should be able to control soft motoric coordination (e.g., scissors, movement of a pencil), to control own emotions in various context, also without presence of an adult; to play with other children and be able to swap toys, play cooperative games or take turns by a specific toy or environment; the literacy (connecting simple sentences together, using past and present tense) and numeracy skills (classification according to a single category without often mistakes) are also developing (Baral, 2011).

A five-years old child should be able to turn pages in a book without tearing them apart, to regulate emotions and behaviour (to think before acting), to maintain peer-relations and be a part of some peer-groups; the literacy (longer thematic conversation, be able to tell own opinion or idea) and numeracy skills (simultaneous categorization according to more than one category) (Baral, 2011).

A child ready for transition to primary school should be able to run, jump, go backwards for 30 metres, control a pencil and scissors, toss a ball, clap hands, use a zipper, do puzzles, copy simple shapes, and draw a picture, identify body parts, read simple books, know some child songs, verbally be able to say various alphabetical letters, write their own name, identify others by their name. Moreover, children should be able to complete an uncompleted sentence, answer about questions about heard simple story, know the meaning of words used in that story, identify a story from pictures, know the concept of direction and position, to listen to others, follow simple instructions. Basic mathematical knowledge during transition to school should be the ability to recognize the probability of several phenomena, differentiate shapes, classify similar objects according to the colour, shape, or size, know the meaning of more and less, order objects according to the size (Baral, 2011). The cognitive abilities level of children before entering school predicts their academic performance later in their studies (Eastman, 2006).

Types of programs targeting ECD and their preliminary effects

The ECD programs and interventions are usually diverse in length of the intervention, in age of the target population, in targeting families with differing SES, or in location of the intervention (preschool, child centres, or community programs). The most common ECD programs are the formal intervention programs held within kindergartens (preschools) (Baral, 2011). The formal preschool

programs also demonstrated greater effectivity than community education programs in outcomes associated with preschool children ECD such as literacy, vocabulary, numeracy and quantitative thinking, and socio-emotional competences (Engle et al., 2011). One of the explanations of higher effect sizes of the formal education intervention centred to the preschools could be that the preschools have usually better educated intervention providers (teachers) than community centres (Woodhead et al., 2014). There is expected to be greater variability in the provided quality of the intervention across communities and parents in the community centred programs, mainly because of low standardization and systematization of intervention processes (Shallwani et al., 2018).

The main advantages of community centred programs are e.g., recognizing the family as a change agent; the community programs could be less financially demanding due to support and investments driven from the natural environment of the child; interconnectedness of the child with the other local change agents; better identification of local needs; community based institutions and centres are more deeply rooted in the environment and could increase the motivation of families and children to participate (Shallwani et al., 2018). The effectiveness of these community centred programs might be adequate as well, for instance in the mathematical and verbal literacy and, also, social development compared to control group in a quasi-experimental design after 16 months (N = 10,000; age range 3-6 years) (Bernal & Fernandez, 2013).

Overall, some evidence exists to support ECD interventions with certain characteristics. The largest effects were found in ECD intervention programs targeting socially and otherwise disadvantaged children (Woodhead et al., 2014) or children with the major language as a secondary language (Onu et al., 2010) or ECD programs focusing on increase of school readiness as the main outcome (Engle et al., 2011). The benefits of ECD interventions could be divided into short-term goals (e.g., increasing school readiness) and long-term goals (e.g., overall reduction of differences between children from the majority population and disadvantaged or disabled children) (Zigler & Styfco, 2001). The ECD interventions could have also long-term impact to the health and well-being in adult life (Baral, 2011; Zigler & Gilman, 1998). However, to reach the long-term effects, it is generally required more intensive program than just a short-term intervention (Siraj-Blatchford et al., 2002).

Effectivity was further demonstrated in structured program for early reading (Opel et al., 2009), interactive instructions that are adequate to the development of the child (Moore et al., 2008), and formal preschool education rather than informal community based (Rao et al., 2012). Meta-analysis of 11 longitudinal ECD intervention programs from Lazar and Darlington (1982) showed positive impact to the academic competencies in the adolescence and the students were less likely to seek special education until the final measurement in 19 years of age. The included programs were characterized by the adequate sample sizes, usage of standardized measures, quasi-experimental design, and focus to the disadvantaged children (1982). However, the effect to increase cognitive abilities was probably caused by increase in motivation to study rather than increase in cognition *per se* (Siraj-Blatchford et al., 2002).

All ECD intervention programs both at the local or international level should be ideally theoretically anchored and designed according to the best possible scientific rigor to produce the best possible scientific evidence, because preschool age children are very sensitive to any changes in nature (environment) and nurture (education/care) and scientifically unsuitable program might affect especially disadvantaged children less effectively (Flores et al., 2016), which is hardy ethical. Therefore, quality standards are key mechanism how to set up the minimal level of quality needed in any ECD intervention program to be conducted. Researchers from Harvard centre for Child development who followed the previous work of National Academy of Sciences suggested such quality standards (Shonkoff, 2007). These quality standards rose from high quality ECD programs

targeting learning, behavioural and health outcomes among preschool children. The resulting standards with a promise to increase the effectivity of the ECD programs when complied included: 1) the size of classes should be rather small with low ration of number of pupils per one teacher; 2) to employ skilled and experienced intervention providers or to provide them comprehensive training; 3) to use a developmentally adequate curriculum; 4) children should be exposed to multiple languages in their learning environment; 5) children should feel safe in their physical environment; 6) adults (e.g., parents or teachers) should be responsive to the child and provide warm and friendly atmosphere; 7) parents should be invited to participate in the ECD program (*Center on the Developing Child at Harvard University*, Shonkoff, 2007). Any child should be provided skills necessary for transition from preschool to primary school (Flores et al., 2016).

The development of child´s physical capabilities, mental abilities, talents and personality in the amiable social infrastructure or environment were assured in the Convention on the Rights of the Child in 1990 (*United Nations Human Rights Office of the High Commissioner [UNOHCHR]*, 1990). The importance of external factors, such as economic conditions in the region, socio-cultural factors, planned help strategies of the region etc. were highlighted in the *EFA Global Monitoring Report on Quality* (UNESCO, 2004, p. 36).

Any quality standards and programs complying to them should be continually evaluated to provide the best quality education to all children (Flores et al., 2016). Rao et al. (2013) found out that the fidelity of intervention (implementation quality) was the main predictor of increase in cognitive development in a sample of 32 preschool ECD intervention studies. The fidelity was assessed mainly by training and experience of intervention providers (i.e., teachers and social workers), structure of the program, instructions and curriculum adapted to the developmental needs of children.

The ECD intervention programs can be divided into four categories according the scientific rigor: 1) programs without any research background based on initiatives of teachers or community centres; 2) programs based on research (based on empirical data acquired through systematic investigation, research methods and clear research questions; 3) programs based on evidence (research methodology using an experimental or quasi-experimental design); 4) meta-analyses or clearinghouses where information about effectivity of certain programs is aggregated from various studies (Flores et al., 2016).

Theoretical Bronfenbrenner´s ecological model

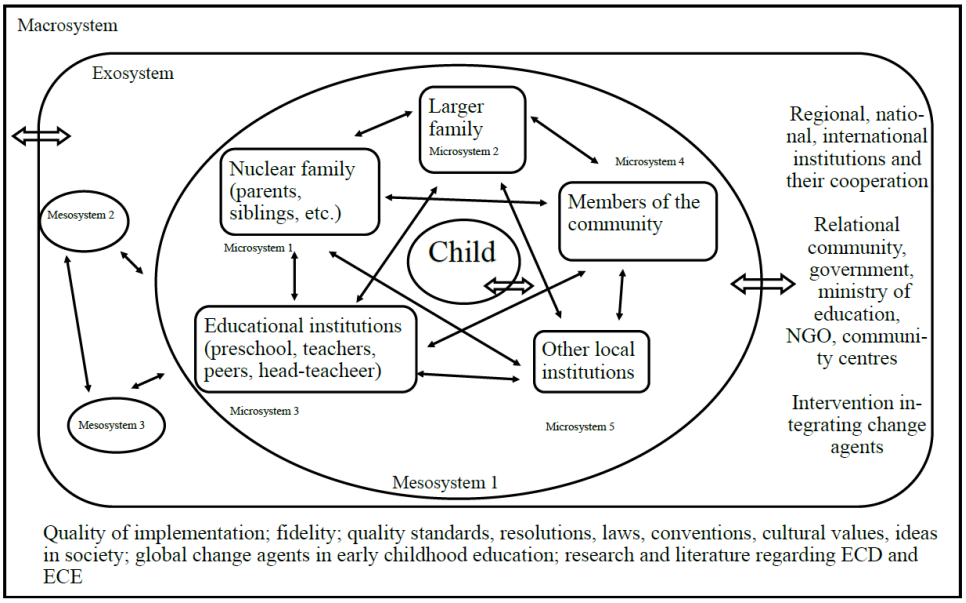
Systems Approach for Better Education Development (SABER-ECD) developed within *World Bank* incorporates ECD programs criteria (Neuman & Devercelli, 2013) identifying four processes necessary for any ECD intervention program: structural variables (physical environment, availability of learning materials and other required equipment, ratio of pupils per teacher); intervention provider variables (education and training level, mentoring and supervision availability during intervention); ECD program characteristics variables (program length, intensity, curriculum, daily routines, and engagement of parents into the intervention); and process variables (interactions between change agents of the intervention, e.g., child-child or child-teacher interactions) (Shallwani et al., 2018).

Any ECD intervention program occurs in multi-layered environment of relationships between possible change agents who are mutually affecting each other (King et al., 2005). The ECD programs are not isolated from these relations, rather the programs are impacted by the communities where the program is conducted (Shallwani et al., 2018). The ECD intervention change agents usually include children, parents, teachers, larger family, community, head teacher or management of the educational institution, local, regional, national, and international educational organizations either governmental or non-governmental (Qtoshi & Poudel, 2014).

Bronfenbrenner (1977) created the ecological model which describes the multi-layered perspective of the system of an individual. To understand the ECD of a specific child, it is useful to know the context or the specific environment and agents influencing the child. At the centre of the model, there is a child (Jedwab et al., 2019). The UNESCO (2014) goals include survival and appropriate development of the child and development of knowledge and skills corresponding to the child´s age. Around the individual child is situated the microsystem or the closest ecological layer with a strong influence towards the child. Each child enters several microsystems with varying distance and influence towards the child. The microsystem that includes the nuclear family (parents, siblings, etc.) and the closest environment has potentially the largest influence (Jedwab et al., 2019). The UNESCO (2014) goals towards the family microsystem include cognitively stimulating and emotionally supporting home environment and availability of adequate sources. Around all the microsystems there is the mesosystem which represents the interactions between individual microsystems with a relation to the particular child. These interactions could be driven by external factors, by the microsystems, or even by the child itself. Around the mesosystem is situated the exosystem including factors from outer surroundings usually affecting the child non-directly (Jedwab et al., 2019). The UNESCO (2014) goals for mesosystem and exosystem include ECD programs and services to improve healthcare, education, nurture, and social protection simultaneously with cooperation of change agents in the best interests of the child. Around the exosystem, there is the macrosystem including cultural values, ideas in society (Jedwab et al., 2019). The UNESCO (2014) goals include laws, policies, standards, conventions to protect children and families, together with program fidelity and implementation quality standards.

The *Total Environment Assessment Model for Early Childhood Development* (*TEAM-ECD;* Siddiqi et al., 2007) was built according to the Bronfenbrenner´s ecological model as well. The TEAM-ECD states that interaction between individual ecological layers play the key role in fulfilling the elementary needs of each preschool child. The ecological layers are understood as mutually dependent spheres of influence. However, the layers are understood slightly differently than in Jedwab et al. (2019): the central layer is represented by the child itself; around the child is the layer of family and home-environment; around is the layer of neighbourhood, residence, and geographically close community; around is the layer of relational community (common characteristic features independent of geographic location, e.g., membership in some subcultures); around is the ecological layer of ECD service providers; around is the layer of regional environment; around is the national environment. Around all these layers could be also understood an ultimate layer of global space which the child shares with other people on the Earth (Shallwani et al., 2018).

Bronfenbrenner´s Ecological model (1977)



Child itself as a change agent in ECD

Children alone are the first change agent. They bring their own experiences and requirements to the interaction with other change agent and to their own ECD. Children are certainly not only passive receivers of the interventions. Children are continually containing and integrating other people, interventions, space, materials, artefacts and texts within their own child´s play. Children more likely co-create the social situations of ECD and they have the option to vary in collaboration and cooperation regarding following shared goals within time.

For instance, chronic illness can be a cause of enduring pain, distress, and tiredness of some children. The chronic illness condition might reduce concentration toward learning, reduce child´s exploration and negatively affect cognitive development (Salm & Schunk, 2008). Further, implementation of any program that is not directly specialized to learning difficulties could be negatively influenced by the lower capability to reach, process, analyse, and retrieve information regarding the population of children with LD (Baral, 2011).

Except of inherent level of cognitive abilities, early childhood development could be facilitated or impeded by the positive approach of the child towards learning in general. Child´s approach to learning can facilitate his enthusiasm and focused attention for learning, and persistence to complete the tasks and reach the goals (McDermott et al., 2012). Moreover, the positive approach to learning can compensate the non-optimal learning environment. The difference between positive approach of the child and socio-emotional factors is that positive approach is based on attitudes and motivation toward learning rather than interpersonal or emotion-regulatory skills that are prerequisite to learning (Józsa & Barrett, 2018).

The majority of ECE are based on interactions of children with adults and with peers (both within specific programs and spontaneously during play. According to the social cognitive theory of Bandura (1986) the observation and social experiences are the main contributing factor to learning. Children are probably continually observing others (primarily the subjectively perceived more competent individuals, such as parents) and learning from this observation. Children are not learning in the social vacuum (Siraj-Blatchford et al., 2002). In addition, there is some evidence that some topics in the parent-child interactions were initiated by the children, who were purposefully trying to

understand concepts missing in their knowledge base (Snow, 1986). Children might be self-organizing their development and there could be bi-directional process between child initiative and parental responsivity (Mol & Neuman, 2014). These children that are more active in their ECD could be seen as more capable and consequentially gain more parental stimulation and their ECD could be fasten (Melhuish et al., 2008).

Parents as change agents in ECD

Healthy cognitive ECD is associated with several parental activities in early childhood, such as reading to children, progressive usage of complex language, care and warm relationships represented in parent-child interactions (Bradley, 2002). The development could be fastened by stimulating activities, where parent can help children to acquire specific skills (e.g., connection between letters and their auditory signals) and to develop motivation of children toward learning (Becker, 2010; Melhuish et al., 2008). There will be less trust and less healthy social functioning without secured attachment between parents and children. To reach secured and stable attachment, the communication and interactions should be consistent, responsive ect. Insecure attachment could be a preceding factor of child´s later internalizing problems (Baral, 2011).

What factors were recognized as being relevant for children literacy? Parental income, education (especially mother´s education), the number and variety of books or other texts available to be read at the home environment, interest of parents in reading books and spending free time by reading, and parental opinion about literacy (McBride-Chang et al., 2010). The mother´s education was as an important factor for literacy also supported by Aram and Levin (2001), who claim that mothers with lower education were more likely to have children with lesser ability to read. This could be explained by greater provision of reading materials, engagement in exercising, and positive opinions and relations to reading and writing (Al-Qaryouti & Kilani, 2015). Only around 5% of later school performance variance was explained by SES in the meta-analysis of White (1982). Higher verbal skills of children were associated with their mothers having more intellectually stimulating jobs (these mothers provided more support and stimulating materials to their children) (Parcel & Menaghan, 1990). Instead of lower SES, the more important factor in lower later literacy might be insufficient capacity of the parents to stimulate their children appropriately (Melhuish et al., 2008).

Parents from socially disadvantaged environment might have (except of lower SES) lower cultural capital (knowledge of dominant culture and the practical application to society). The cultural capital might be the mediator of the relationship between family SES and the frequency of stimulating early childhood activities, and therefore, might be important to later success in educational system (Becker, 2014). Another factor responsible for lower achievement, lower psychological adjustment, and lack of peer social support is associated with the high horizontal mobility of families (Adam, 2004; Oishi, 2010; Jelleyman & Spencer, 2008). Family with high mobility could negatively influence the perceived stability of environment for children (Ferguson et al., 2013). Moreover, the quality of housing can be associated with lesser academic achievement and greater psychological distress of children, even after SES is controlled for (Evans, 2006). In samples of children living in poor quality housing facilities, it is useful to measure also learned helplessness (Ferguson et al., 2013). After moving to better quality housing, school achievement increased (Wilner et al., 1962; Blackman & Harvey, 2001).

Another family risk factor related to poor quality of child´s life is the crowding of home environment (i.e., number of people per one room). Tolerance to crowding is culturally driven (Ferguson et al., 2013). However, research conducted in diverse areas of USA, India, Thailand, Egypt, Hong Kong, South Africa, and Jamaica (Evans, 2006; Liddell & Kruger, 1987, 1989; Wachs & Corapci,

2003), demonstrated that crowding has strong negative impact on cognitive (e.g., psychomotor speed, comprehension, spatial thinking) and behavioural development of children in any location. The reduction of psychomotor speed but not cognitive development as whole in children suffering crowding conditions (Widmayer et al., 1990) might be explained by less opportunities to explore environment and play without adults or any other people. In crowded homes parent less frequently speak with their children (Wachs et al., 1993) and use less complicated vocabulary (Evans et al., 1999). Finally, crowding might negatively influence also quantitative skills (Ferguson et al., 2013). The long-term exposition of home chaos (defined as level of disorganization and stochasticity of the home environment system, where the child is growing) is associated with lesser school achievement, slower socio-emotional development, internalizing problems (early depression, Ackerman & Brown, 2010; Fiese & Winter, 2010), learned helplessness and low self-regulation (Evans et al., 2005). Children need secure structure and predictable surroundings (Ferguson et al., 2013). Additionally, more chaotic home environment is associated also with psychological distress of parents (Deater-Deckard, 2012).

Parents can help children build their meta-linguistic skills, which are useful regardless of the language. These skills can be facilitated through learning secondary languages from early childhood (McBride-Chang et al., 2010). Except of the differences in education, there is no difference between mothers and fathers in facilitation of literacy development (Al-Qaryouti & Kilani, 2015). The very exposure to books in early age itself could be associated with early reading and writing (Rog, 2001). Important others such as siblings, grandparents, and other community members can also contribute to the verbal ECD stimulation of the child (Thapa, 1997). According to Melhuish et al. (2008), the learning with parents at home and home learning environment is the largest predictor of literacy and numeracy in five-to-seven years old children. The SES and mother´s education were also important predictors but engagement of parents to the education of their children might be a crucial factor for later school performance (Flouri & Buchanan, 2004). The school performance was predicted by child´s interest in reading rather than socio-economic status (OECD, 2002). Mullis et al. (2004) further emphasized that the sooner are parents engaged in their child´s education (and home exercising of reading and counting), the better, the more long-term outcomes. Early reading is connected to later better understanding of languages in general (Gest et al., 2004). To learn reading opens a possibility for child to self-educate in all other knowledge areas (Abuya et al., 2015). And it seems that reading-learning is very sensitive for positive or negative attitude of parents (Senechal & LeFevre, 2002). Leichter (1984) demonstrated how family can impact the development of literacy: (1) shared interactive experience containing reading or writing; (2) physical environment containing available reading materials at home; (3) emotional atmosphere and motivation – parental attitudes toward literacy at home.

The dialogic reading is a tool of interactive reading between parents and children, where children are encouraged to relate their own experience to the content that has been read. Children are encouraged to think about the story and to build new insights and understandings of the texts through discussion. Dialogic reading intervention lasting from 8 to 12 weeks was evaluated in three RTC studies (Chow & McBride-Chang, 2003; Fung et al., 2005; Chow et al., 2008). The findings in the sample of children aged from 5 to 9 years showed strong effect size to increase vocabulary and text understanding (reading comprehension) compared to control groups. These findings indicate that the pure reading of books from the beginning to the end might not be satisfactory (McBride-Chang et al., 2010). Finally, higher frequency of reading is associated with higher vocabulary and higher competency of writing (Mol & Neuman, 2014; Bus et al., 1995; Mol & Bus, 2011; Scarborough & Dobrich, 1994).

Another important contribution of parents might be the home learning of mathematics (complemented with exercising math skills). This might increase positive attitudes toward math and also self-confidence in understanding mathematic concepts. With the right materials, parents can exercise with children even if themselves have poor mathematical knowledge (McInnes et al., 2018). But if they do have deeper math knowledge and exercise math with their children, the math learning of the children is faster and have larger effect (O´Toole & de Abreu, 2005). The cooperation between parent and teacher is important: parents can learn more math to gain confidence in teaching math at home and together with the teacher they can create routine activities at home to support natural math thinking (McInnes et al., 2018). It is important to explain the children that math will be always present in their lives and to teach math within the framework of math applications in real life (Sayers et al., 2019).

How to engage parents in the education process of their children? Parental engagement is associated with child´s achievement (Skwarchuk et al., 2014), child´s motivation to learn and self-efficacy (Pomerantz et al., 2007), and also child´s attendance to school (Simon, 2001). Jeynes (2007) defines engagement of parents in more broad sense as communication of parents to children about preschool or school content, expectations about education of their children, participation on school activities, etc. Other relevant parental engagement activities might be father engagement (Jeynes, 2015), helping with the home-works (Patall et al., 2008). Parents actively and frequently participating in preschool-based programs and activities positively influence the reading skills of their children (Miedel & Reynold, 1999). According to Marcon (1999), parental participation in ECE programs increase also early development of positive communication and motor skills. Parental participation with ECE institutions supports parental role in decision making regarding education of their children (Shores, 1998; Doherty, 2000), which might result in better school readiness of the children (Baral, 2011). Parental engagement might even increase the social capital (Hill & Taylor, 2004). Participating parents have more opportunities to interact with other parents and share care- or education-related information (Abuya et al., 2015). Even some behavioural problems could be diminished if there is a consensus between family and ECE institution – because the same information or value can be communicated in two different environments (McNeal, 1999). Nevertheless, if the parents have different expectations about development and education of their children than teachers, this could be a potential risk factor. Effectiveness of the ECE interventions could be reduced by fixed parental expectations. Not all children have the same abilities and capacity to perform any activity. Two children from the same household might be developing differently (Subedi & Shrestha, 2020).

Parental engagement could be perceived as threat or interference to education from the teacher perspective. Teachers might feel as professionals and perceive parents as lay people. Some teachers might even disregard the relationships between parents and their children to keep their authority. The problematic teacher behaviour towards parents might be enhanced when parents originate from different ethnic group (Addi-Raccah & Arviv-Elyashiv, 2008; Bæck, 2010; Ng & Yuen, 2015; Kim, 2009). But in order to have effective interventions, parents of preschool children also need support, including for instance: encouragement to positive parenting, providing advice and counselling, practical training of educational skills for home learning, providing of specialized support (when children have learning disabilities or developmental problems) (Oates, 2010; Woodhead et al., 2014). To list some factors that could influence the capability of parents to fulfil basic needs of their children (age and maturity of parents, their mental and physical health, their education level and SES, their attitude to education and quality of interactions with the children (Halpern, in Shoknoff, Meisels, 2000).

Educational system as change agent in ECD (management of the school, teacher, peers)

Role of the teachers as change agents

Teachers are the main child´s ECD change agents within the educational system. Teachers of preschool children should be able to have their own integrity, confidence, theoretical knowledge updated about new research, accepting, cooperative, and positive attitude, and respect to the children, reasoning skills, ability of adaptation, professional experiences and interest in learning and teaching, patience, fairness, and enthusiasm (Upreti, 1979). Teachers can interact with children to increase cognitive skills (e.g. shared thinking, direct teaching, monitoring of progress) or to increase social skills (e.g. encouragement, behavioural management, social interview, care) (Siraj-Blatchford et al., 2002). Teachers are key socializing agents in ECD to increase socio-emotional skills through teaching how children could regulate their own emotions and how to behave in a socially desirable way (Denam et al., 2012). Teachers are responsible for motivation in the classroom toward learning. Because motivation is a known predictor of child´s engagement to learning and eventually to school achievement (Ryan & Deci, 2000), teachers should take this role responsibly.

What are the barriers to implementation of ECE interventions or programs focusing on ECD? First barrier could be of a system nature – when teachers will not be present in the program in long-term. If the teacher leaves the program, new teacher that will take his place will need some time to adapt. Moreover, the more effective teachers might leave the program because of better work opportunities (Subedi & Shrestha, 2020). Second barrier could be the variability in education, experience, length of practice, training, etc. It is often not clear enough which competencies should the teacher possess to be able to ensure implementation of intervention of high quality (Flores et al., 2016). All teachers should be informed during training and preparation of any ECE program implementation what is priority in content and process of intervention. Otherwise, the priority will be given by each individual teacher to different things and the overall quality of intervention might significantly different between teachers (Flores et al., 2016). ECE interventions should be created with the concern of fidelity to identify key mechanisms of change that should not be omitted during the implementation of the intervention and distinguish these key factors from the more marginal supplemental parts of the intervention.

Another barrier could be the disorganization of home environment (regarding the particular children). Chaotic home environment has been defined as prevalence or combination of: noise, crowding, instability, unpredictability, absence of order, absence of structure, routine or regularity (Matheny et al., 1995). Some dimensions of chaotic environment might be present in the school environment (e.g., ratio of students and teachers, size of class, non-existence of routines (Jeon et al., 2016). Teacher might perceive the problematic social interactions of a child arriving to school from chaotic environment overly negatively, punish the child, and contribute to slower development of such child. Therefore, it is necessary that teachers are prepared for greater level of chaotic surroundings or behaviour through their own emotion regulation and coping mechanisms. Teachers incorporated as change agents or intervention providers in any ECE program should be trained to chaotic environment and increase in emotion regulation skills (Jeon et al., 2016). The possible explanations why teacher might negatively respond to children from chaotic environment might be overstimulation (Corapci & Wachs, 2002), tiredness or tension from continuous exposition to chaos (e.g. noise, lack of structure; Evans et al., 1999), or lack of motivation to handle things beyond control, resulting in burnout syndrome (Valiente et al., 2007). When teachers showed the order, structure, and routine while learning, the quality of education was better overall (Hamre et al., 2009).

Role of the peers as change agents

Several factors enabling ECE intervention are associated with the peers of preschool children. Peers offer unique opportunities to meet the social norms in the group and to experience interpersonal and relational group processes. Peers might help children to learn socio-emotional skills

(Baral, 2011). Some peer-related factors might not be beneficial for children (e.g. exclusion, bullying, or decline; Perry et al., 1988; Baral, 2011). But any ECE intervention should take into account possible network of enabling or impeding influence driven from peer-relations.

Role of the head teachers as change agents

Several factors enabling ECE intervention are associated with the head teachers in preschool institutions. Head teacher(s) are responsible for professional development and training of other teachers, providing and conceptualization of the curriculum (Bipath & Nkabidne, 2018). Head teachers are often managing the contact and interaction between teachers and parents via interviews, discussions with parents, personal meetings, or just sending information etc. Head teacher´s role is about building bridges between institution and community – they can invite parents into the school community (Bipath & Nkabinde, 2018). Head teacher might inform parents via these interactions how the children are progressing in ECD in general or literacy/numeracy in particular or what activities were realized in the educational centre. Head teacher are usually both teachers and managers of other teachers. If their role is taken responsively and effectively, parents might be more willing to participate and be more engaged in their children´s educational process. Moreover, parents might be more cooperative and a consensus about shared goals might be reached more easily (Allington & Cunningham, 2002). On the other hand, head teachers who are not accessible for discussion, who create barriers to interactions between teachers and parents and who block teachers in their professional development (for example to maintain their position as a head teacher) are contributing to ineffectiveness of any ECE intervention (Subedi & Shrestha, 2020).

Enabling factors of the ECD intervention

Above in this document were presented both early childhood development and potential change agents from the child´s microsystems. To be effective, any intervention should contain all these potential contributors to the overall change altogether. Moreover, there are factors directly or indirectly enabling the intervention, i.e. “enabling factors”, and factors that diminishes the intervention effects, i.e. “barriers”. Further text in this document will describe the major issues regarding the enablers and barriers.

Physical environment could be also enabling factor to any ECE intervention: toxins, noise, chaos, pollution, quality of neighbourhood or kindergarten all can influence cognitive and socio-emotional development of preschool children and all are known risk factors for adequate ECD (Ferguson et al., 2013). The major risk factors associated with the ECD change in preschool children are listed in Walker et al. (2007): first, it is necessary that parents or caregivers are healthy and their well-being is saturated (e.g. they are not suffering with HIV or depression or substance abuse). Second, socio-cultural and socio-economic background (e.g. women discrimination, authoritative government and authoritative education standards, poverty). Third, the presence of ill-being and/or disadvantaged background could be associated with elevated risks in psychological functioning (e.g. low stimulation of children, ineffective interventions or education, neglecting and insufficient emotional support and responsivity of caregivers) or in biological functioning (e.g. fetal alcohol syndrome). Fourth, cognitive, language, or socio-emotional ECD of children might be affected by all previous risk factors (Walker et al., 2007).

Other enabling factors could incorporate the size of school or class (contextual factor). The mean ratio of pupils to teachers varies between countries (number of pupils per a single teacher): UK (18:1), US (14:1), Germany (13:1), to list some western countries, but also 81:1 (Central African Republic) to name a developing country (World Bank, 2012). Lower pupils-teachers ratio is associated with better achievement in standardized tests and with better sense of belongings to school (Evand, 2006). Younger and socially and economically disadvantaged children usually benefit more from

smaller classroom size (Woessmann & West, 2006; Ferguson et al., 2013). Literacy is necessary enabling factor for all other fields of study or other education. Development of later academic achievement and socio-emotional competencies is pre-requisited by literacy and exposure to language in the first years of child´s life. Further, education is important also for maintenance of good health and nutrition. Caregivers/Parents can form healthy nutritional habits through early experience with nutrition, food regulation and habits connected to eating (Baral, 2011).

Environment enabling ECE intervention should provide sufficient stimulation and adequate challenges to children; should enable exploration and experimenting, should focus primarily on child´s interests; should be flexible (enable both reflexive, calm, focused learning or reading, and also physical activity. The enabling environment should support learning, help children learn rules or how to communicate with others, and should enable children to exercise their newly acquired skills; should encourage creativity and imagination and enable children to take part of the responsibility or risk. Such environment should give children opportunity to make mistakes, to create sense of equality and better understanding of needs, cultures, religions, and background of other people. Moreover, the environment should be safe (all physical and mental punishments are forbidden, children should be protected from danger and maltreatment) and full of emotional support of caregivers/teachers; should encourage independence and help children build the positive outlook toward learning (Hodgman, 2012). Planning, implementation, and evaluation of ECE intervention could be created in collaboration with all change agents (children, parents, communities etc.) (Subedi & Shrestha, 2020).

Quality standards at the child and ECD program level were identified in literature review of Profeta (2012): the program is evaluated as being of higher quality if the program: (1) is conceptualized as holistic (aiming at the system change rather than only secularized change); (2) has educational goals defined and operationalized at the child, family, teacher, community, and program level (desired effects are defined as well). High quality intervention is focused not only on performance and achievement, but also to the child´s perceived experience of educational process. Any intervention provider should ask several unresolved questions: “Should the scores in questionnaires be accepted as indicators of quality of a given intervention?”; “Should the interventions, which produce desired effects, be labelled as possessing high quality only because they produce desired effects?”; “Is it possible, that interventions are of high quality despite the lack of desired effects?”; “Is it possible that desired effects are reached in interventions that are not interventions of high quality?” (Myers, 2006, paraphrased acc. to Profeta, 2012); (3) the evaluation of the intervention should be formative and continual, based on the child´s developmental need; (4) curriculum is a key element of the intervention quality; high quality curriculum is flexible regarding content and adaptively applied within actual context, is created to associate preschool content with following primary school content (Profeta, 2012). Curriculum influences the role of the teachers, the classroom structure, focus of educational goals, and participation of children in education. High quality interventions target both short- and long-term ECD (cognitive, socio-emotional) of children (Baral, 2011); (5) the education and training of the teacher is important part of quality of intervention. Differences are prevalent in length and type of training, level and type of education, and qualification of intervention providers, quality ECE interventions in the specific context between countries, regions, urban vs. rural areas, between schools and teachers (Profeta, 2012); (6) commitment and space for innovation of teachers (supported by school management) (Qutoshi & Poudel, 2014) could be enabling factors for teacher willingness for ECE intervention. The teachers´ willingness is important for effektive intervention (Subedi & Shrestha, 2020); (7) physical environment for play and learning should be culturally based and should encourage children for social interactions, group activities, offer outside and inside space for physical activities. It is recommended that the quality of ECE interventions should be measured by triangulation of variables (being aware of

evaluating the quality only according to the availability of resources (Profeta, 2012). Play-based learning ECE intervention is identified as important strategy to educate preschoolers (exploration, observation, child´s play could lead to increased cognitive skills) (Subedi & Shrestha, 2020). Children could recognize different activities as play than would adults do (parents, teachers). Children use subtle environmental indicators to recognize, whether the activity is play or not: location, choice, locus of control, presence of adults, positive affect, presence of evaluation from adults. Children are most likely perceiving following activities as play: floor-based activities, choice and control is fully on the side of the child, adults are absent, positive affectivity, no evaluation is present. Such play activities are associated with increase in well-being and consequentially increased learning (McInnes et al., 2018). Children could be formed during their play to explore over their known space to keep them cognitively stimulated. Children could be curious about object, people, events and incorporate these into the play. The child´s play could represent child´s personal experience (EV681 GROUP 8., 2015); (8) the very existence of quality standards could be a sign of quality of the given ECE intervention; similarly important is adequate intervention management, intervention philosophy (this could be important for parental engagement); (9) higher quality is recognized to be within integrated programs (integrating local community and supported by parents; Profeta, 2012). Coordinated and integrated services could be beneficial in securing the child´s access to continual support in various life areas. For instance, ECE intervention typically includes structured curriculum and teaching of daily routine – which could integrate healthy and hygienical habits with educational content. Coordinated intervention is based on the regular communication between local change agents as well as on the connection between various ecological layers and partner organizations, leading to the complex intervention (https://earlylearningtoolkit.org/integrating-services).

Inter-agent communication – associations between ecological layers as an enabling factor of ECE intervention

Problems emerging from the whole system of ECD focused services are related to the fulfilment of dynamically changing needs of included families: (1) system of services is struggling with providing support to all families who need it; (2) services cannot fulfil all family needs; (3) families are struggling with gaining access to services in general (propagation of services could be insufficient); (4) services are often insufficiently integrated between each other (and therefore, not able to provide sustainable support to families; (5) services are often struggling with tailoring intervention to the diverse needs or diverse families; (6) services are typically funded based on measurable outcomes rather than real change. Therefore, several interventions might be overly employed, even though these might not be the most effective possibility in the various context; (7) services are typically oriented to treatment of some problem rather than prevention; (8) system of services is not continually in touch with families of preschool children; (9) several families might be isolated in the community and lack interpersonal relationships in the region; (10) early childhood sector is under-funded in general. Therefore, professional intervention providers might switch their job in ECE for something where better salary is reachable; (11) responsibility for ECE of preschool children is diffused between several layers of the system (where different layers might not be integrated – have different strategies, priorities, e.g., according to currently active projects) (Moore, 2007). The system of specialized targeted services should be changed into more universal, preventive system (Centre for Community Child Health, 2006). Integration of services might be a solution to some of the problems listed above. The targeted system of services might be overly dependent on experiences of professionals. The number of professional in the given community might not be sufficient for full coverage of all families in need.

Integrated systems and institutions might be perceived as catalysts to simple connection of environments contributing to increase in literacy of families and the whole communities (Wiens, 2014). However, the level of this coordination and integration of ECE interventions and other ECD

services might be different across contexts (https://earlylearningtoolkit.org/integrating-services). ECE interventions focusing on ECD are usually used in multiple-layers perspective (see again the Bronfenbrenner´s ecological model). The ECE management, therefore, depends on coordination, integration, and continuity. Actual problems should be communicated and solved both at the regional (communal) and governmental or international levels. Coordination and integration is necessary between change agents: ministries, non-governmental organizations (NGOs), international organizations, private sector (Gwang-Jo & Mami, 2010; MoWCA Bangladesh, 2009; MoPME Bangladesh, 2008; UNESCO et al., 2012; ARNEC, 2011a). Through integration should be interconnected the key areas of child´s safety, nutrition, health, education, and overall child´s protection (Vennam et al., 2009; Profeta, 2012).

The integration could have many forms (Turnbull & Turnbull, 2000), according to the intensity and commitment: 1) low: cooperation including relations between local change agents (institutions), where each site keeps its individual autonomy but agrees with the shared information (e.g. networking); 2) medium: cooperation including relations between local agents, where each site keeps individual autonomy, but agrees that part of planning and coordination will be for a certain time managed together within a certain project or regional service; 3) high: cooperation including relations between local change agents, where all sites are integrated into bigger unit, by sharing resources, information and the procedures of planning and decision making are provided together by all parts of the whole integrated system; 4) complete: cooperation that was transformed into new complex service by unification of two or more sites into a single complex change agent (Moore, 2007).

Even when the country as a whole is directed to the greater integration of ECE programs (e.g. on the international level; UNESCO et al., 2012), the coordination still remains a challenge in regional areas within these countries (SEAMEO INNOTECH, 2011). Diminishing factors to this integration are primarily fragmentation, overlap, and diffusion of responsibility (Horn, 2008), together with decentration of ECE services without resources allocation at the regional layer (Kim & Umayahara, 2010). Also, the main enabling factor for quality of ECE services is the continuity of commitment and consistency in investment for NGOs, who finance ECE interventions (Profeta, 2012).

In addition, it is still not supported enough by the strong evidence, whether the integration or cooperation of institutions has positive impact on preschool children (Percy-Smith, 2006; Valentine et al., 2007). This is partly because it is practically impossible to use rigorous research methods (e.g., experimental design) to measure effectiveness of integration of services (as outcomes). Usually, it is not ethical or realizable to randomly allocate families or children to integrated services and control group of not-integrated services and compare results afterwards (Valentine et al., 2007). However, in general, there is some weak research support that integration of ECE interventions and other ECD services is associated with better flow of resources, support and services, higher satisfaction of parents with access to services, and increase in well-being and quality of life of families including young children (Moore, 2007). Despite the lack of rigorous research, the professionals in the field are in consensus that the integrated approach and creation of strategic partnerships across institutions and change agents is beneficial (Billett et al., 2005; Department for Education and Skills, 2006; Einbinder et al., 2000; Gardner, 2003; Hayden et al., 2002; Johnson et al., 2003; Leiba & Weinstein, 2003; Percy-Smith, 2006; Rawsthorne & Eardley, 2004; Wolff, 2001).

What are the recommendations to better integrated change agents? (1) understanding of when and where does each sector of services have the actual contact with children (aged from 0 to 6 years) or their families. This understanding is necessary for identification of entrance points for coordinated services or for their integrated provision. During the mapping procedure of key entrance points for potential ECE interventions, it is useful to focus on gaps in service coverage (age, geographical areas, primary language, type and intensity of the physical or mental disability, signs of marginalization or social exclusion of children or especially the high-risk children). Most disadvantaged children have the biggest potential to profit from any ECE intervention; (2) building of

regular communication mechanisms across all important local change layers (e.g., government, ministry, NGO, local or community centres); (3) within each organisation should be created connections at several layers (from the global perspective of management to the local perspectives of operative staff in the field). Such connections could help maintain sustainability or continuity of coordinated or integrated intervention even when the particular employees at certain key positions will leave their jobs. Formal partner agreements might help with maintenance of partnership as well (4) creation of the detailed strategy for monitoring and evaluation of each ECE intervention – such strategy or plan should incorporate indicators related not only to the family, parental, and children´ outcomes across various domains, but also indicators related to the partnership between change agents (between institutions providing ECE) and the effectivity of this partnership. For instance, each included site could provide their aims in the integrated partnership and the evaluation could later monitor achievement of such aims); (5) communication between layers and organisations (local change agents) should be coordinated by simple concrete shared means. If shared ways of communication across sectors and layers already exist, the communication infrastructure between families and other local change agents should be created and propagated toward families; (6) the integrated framework should employ strengths of already existing ECE interventions in the community and systematically fill the gaps in service provision. The integrated framework should be participative for all relevant change agents, roles and responsibilities of all sites should be clarified (https://earlylearningtoolkit.org/integrating-services).

Second perspective of specific enabling factors to cooperation between change agents provides Wiens (2014) in the literature review of academic and grey literature. The enabling factors include: (1) commitment to integration at all levels from management of institutions to the field workers; (2) willingness and capacity, as well as abilities to cooperate; (3) shared goals (clear, realistic, understandable, acceptable for all sites; (4) communication and information sharing between all layers of the whole system and adequate IT support; (5) leadership should be provided by key change agents with competences and social power to make decisions; (6) decision-making process should be collaborative with the key employees of included organizations – e.g. creation of the management group across integrated institutions, teambuilding, or shared problem solving; (7) understanding of the culture of cooperating institutions; (8) understanding of the roles and responsibilities; (9) part of the resources should will be spent for the integration itself; (10) shared access to funding and other external resources across institutions; (11) clear and aimed project visions; (12) realistic time-frames, where all sites agree on the implementation of changes; incremental approach to change; (13) merging of projects, planning, decision making across institutions; (14) training and support of intervention providers – including administrative support and allocation of work time partially to the shared integrated activities with other institutions. Moreover, intervention providers should be already recruited with adequate experience, knowledge, and attitude. Teambuilding and training should be provided across integrated institutions to ensure the same quality; (15) services and ECE interventions should be monitored and evaluated under the dynamically changing circumstances and new information extracted from the whole system itself (Wiens, 2014).

Third perspective of quality ECE interventions on the system layer: (1) the need for comprehensive monitoring and evaluation of the system – rigorous and regular measurement is needed to evaluate the impact of ECE interventions in short- and long-term perspective. Impact evaluation should be conducted through large number of indicators and should incorporate perspectives and outcomes of various stakeholders together. The opportunity to combine external and internal evaluation is a mechanism to ensure the quality of evaluation: practical insights from the intervention providers and from parents are equally important. Such evaluation system should enable the data collection of relevant information and should enable to connect outcomes with intervention fidelity. The evaluation should be supported by coordination of ECE services and other change agents from regional to the national layer. Collected data and results should be reported to all interested sites/change agents – most importantly to the intervention providers as formative feedback; (2) the

need for allocation of budget for ECE interventions (the whole sector needs more funding) and need for cost-benefit analyses regarding reached outcomes. This is associated with the need for scaling-up of those interventions with good practice – with the goal to reduce regional differences in providing the particular service. The role of the government is here crucial to create the minimal quality standards of any intervention that each institution should meet to get funding; (3) need for context-relevant (culture) and local-requirements-fulfilling interventions. Services should be community-based and flexible, and related to the particular family or preschool child (for instance, the need for mother language as language of instructions). It is necessary to combine the universal aspirations with the context-relevant ones; (4) need for connection with parents and local community on the one hand to increase their parenting skills and education in general, and on the other hand, to gain insight about the development of the particular included children (parents can be the first source of this knowledge); (5) need for capable management of ECE interventions or the integration – there should be continuity between home-visiting programs and programs at educational institutions. The consistency should be guaranteed about the prioritized curriculum, teacher´s practices, training of teachers, etc. To compare various ECE interventions between each other, the quality standards and evaluation procedures should be the same across interventions. Government as the primary management at the macro-layer of the ecological model should regulate the interventions to ensure the same quality and guarantee the equal access to the most effective interventions for all children, especially the disadvantaged ones (Profeta, 2012). Moreover, the coordination should be provided both horizontally across institutions or change agents in a single ecological layer and vertically across ecological layers (Shawar & Shiffman, 2017).

Community-based organizations could be more effective in connecting various layers of the educational ecosystem (ECE interventions are more likely directly connected to the community needs). Community-based organizations play key role in implementation of ECE interventions. Moreover, community-based NGOs can often target interventions toward children who are usually not reached by the universal national ECE programs (Shallwani et al., 2018). The main challenges in the community centres were mainly twofold. First was regarding lack of skills, knowledge, and strategies of intervention providers from community centres to provide effective ECE intervention. Second was regarding the lack of motivation, attendance, and engagement of intervention providers when working with children in community centres (Shallwani et al., 2018).

Additional information on integrated services extracted from the literature review of Wiens (2014)[1]

The literature review Wiens (2014) focused on research studies and grey literature integrating various services and institutions regarding ECE or ECD, and communication between key change agents, specifically in Canada (evaluating programs such as Early Years Centres; Better Beginnings, Better Futures) and generally worldwide (Sure Start; Communities for Children etc.). The aim of the review was to locate the research of integrated services and local agents focusing on evaluations, measurable outcomes, effectivity of the cooperative integrated services. In the international scale, several models of integrated services are already functional in several countries (mainly UK, Australia,

[1] Search string for further usage: *("resiliency hub" OR "school hub" OR "school-hub" OR "community hub" OR "family hub" OR "family support hub" OR "early years care centre3 " OR "early years centre" OR "best start" OR "sure start" OR "family centre" OR "integrated early child4 development centre" OR "integrated ECD program5 " OR "integrated service hub" OR "integrated family support centre" OR "integrated child and family centre" OR "integrated services" OR "service integration" OR "neighbourhood6 house" OR "neighbourhood place" OR "learning centre" OR "early childhood and family resource system" OR "early childhood centre" OR "early childhood community development centre" OR "early childhood development centre" OR "centre for early childhood development" OR "early years family resource centre" OR "circles of support" OR "early years continuum" OR "full service school" OR "whole school" OR "healthy communities" OR "better beginnings" OR "first duty" OR "children's centre" OR "communities for children" OR "parents7 house" OR "parenting shop" OR "early learning activity centre" OR "community-based centre"OR "shared services" OR "co-located services" OR "shared facilities" OR multisectoral partnerships") AND (evaluation OR impact OR effectiveness OR results OR findings OR outcomes OR lessons)* (Wiens, 2014).

New Zealand, and several EU countries). Centres for preschool children (terminology varies: Sure Start Children´s Centres, Family Support Hubs, Familienzentren, Family Centres, Centre for Youth and Families, ECD centres etc.) were strategically placed into many community centres. Unfortunately, in the 2014, the majority of available research literature to the integrated ECD/ECE services was grey literature (not peer-reviewed in academic journals). Community-based approach to fulfil need of preschool children should offer integrated interventions that are universal, multi-layered, local, relational (Moore & Fry, 2011).

Wiens (2014) further refer to the Moore´s literature review (2008), where the overall finding was that integrated ECD interventions with collaboration between the intervention, parents, and community, has positive impact on reduction of later differences between disadvantaged children and the general population. The multi-layered intervention can contribute to family outcomes in desired manner (cf. Sanders, 2009). The National Education Association in the US formed multi-sectorial partnerships between 16 communities resulting in increased school achievement, health and well-being of young children during integrated interventions (Wiens, 2014). Saewyc and Stewart (2006) even identified that integrated institutions (supplemented with community development and multi-sectorial coordination) seemed to be more effective than non-integrated interventions.

According to Hayes et al. (2012), integrated partnerships of local agents lead to increase of children´s quality of life, but the evaluation of this integration was challenging (to evaluate such a project, first, opinions about shared goals, methods of work, monitoring, and even the evaluation should be united before the implementation of the intervention – in order to measure also the program fidelity and increase the potential for effectiveness. Partnership between institutions was essential component for later comprehensive parental engagement within intervention (Goodall & Vorhaus, 2011; Purcal et al., 2011). However, Goodall and Vorhaus (2011) called for evidence-based model that would create relationships between families, schools, and the whole communities. On the other hand, Milton et al. (2012) who also called for more evidence, did not found support for positive influence of program-communities integration on social capital, criminal rate, or housing of communities.

Recommendations for evaluation

The effectiveness evaluation of such complex functioning between agents is recommended to be evaluated using qualitative analyses. Recommended is for example outcome-based/outcome-harvesting approach. First step is to identify outcomes (final effects that were desired and reached in the system). Second step is to redefine the outcomes into specific goals (operationalized). Third step is to trace back the potential causes or strategies that lead toward these outcomes. Fourth step is to redefine these strategies into specific interventions (operationalized). And finally, identification of indicators that should be measured in the following chronological cross-validation of intervention evaluation to be able to measure the progress (Anderson, 2005; Moore, 2007).

Specific ECE interventions serve usually as a solution to some community-based problem or need. NGOs or other ECE intervention providers are usually deciding which interventions to employ and which not. According to Moore (2007), there are several reasons why a final ECE intervention is selected: habit (“we always used this intervention for this problem”), unconfirmed assumptions (“these particular children need this particular program”), community expectations, intuition, etc. However, none of the aforementioned reasons is based on research. Effectiveness should be

evaluated using evidence-based methodology. And evidence-based practices should be supported and employed in practice (Moore, 2007).

Profeta (2012) provides several recommendations to evaluation of integrated ECE intervention: (1) increased frequency of data sampling, together with increased frequency of results reporting to all included change agents; (2) ecological model and system evaluation could bring insight into differential functioning of different layers of the system; (3) because the goals should be shared across change agents, a perceived theory of change is needed from all relevant change-agent perspectives (families, field workers, children, teachers, management etc.). The quality standards of ECE interventions could be counter-checked against these particular theories of change; (4) important factor for implementation success is the teachers´ belief in effectivity of intervention and their behavioural when providing the intervention; (5) measures should be validated within the culture before usage; (6) management of the intervention or implementation of intervention are also important; (7) ECE interventions should be consulted with representants of all change agents.

Evaluation tool for community engagement

The evaluation of *The Early Years Continuum Project* could serve us as inspiration for our future evaluations of interventions. Evaluation was divided into methods targeting community engagement (case studies of emerging stories when real change occurred), parental engagement and engagement of intervention providers (focus groups and questionniares), intervention team capacity (focus groups with coordinators of the intervention) (Krupa et al., 2014). During the project, communities learned, how to engage parents and intervention providers. A continual support to transform the environment was provided to both parents and teachers. This support included direct communication, sharing tools and diverse processes, increase in accessibility of services, identification of barriers of implementation. The focus on coordination between intervention providers resulted in increased communication and cooperation. Some community centres reported that the integration of services enabled them to provide their service to the generally younger children than usual. During the project, community also created capacities for learning, implementation and maintenance of change – main barriers were participation of all stakeholders and their cooperation, sense for community, leadership, and creation of networks of cooperating organizations. Six structures leading to successful integration and capacity building were: project management team strongly connected to the other agents capable of organization on the general complex layer; coordinators of given areas connected with their communities with the access to resources; evaluation support helping with decision making, operationalization, measurement of progress; community-controlled resources – empowering communities to bring local needs or dynamic change occurring in the system within the community layer; strategic assessment, strategic planning, followed by strategic action; sufficient time-frame – the community need time to develop, build relationships, clarify roles, engage all stakeholders, create cooperation, understand complexity, take action (Wiens, 2014).

Three-year evaluation of the REACH project (centres focused on integration of ECD/ECE services) identified examples of a good practice during integration: coordination; strong relationships with the administrative capacities of educational institutions in each area; standardized protocols or reference conditions for interventions; consistent and frequent meetings with intervention providers; space assigned for education of the institution members; program diversity; support of mother language; diversity of staff (representing population of the community); defined coordinator in each area; defined employees in each area/institution; training of cultural competencies for all intervention providers; shared food and dining; accepting environment creation; child care and health at the centre of attention; natural mentorship and support; trained volunteers; creation of

meaningful opportunities for parents to get engaged; free access and low-stakes service; active seeking for alternative partnerships; continual support for teachers with reflexion and evaluation; help new teachers to build relationships with the community or other teachers; interventions targeted at different ages of children; evidence-based research (Wiens, 2014).

The management of national ECE systems focused on planning, implementation, coordination and funding of ECD related services was conducted via qualitative interviews with key agents, via focus groups with receivers of the given services, and via analysis of important documents (governmental resolutions etc. regarding the ECD topic. In each country was identified unique set of challenges and strategies, however, several themes emerged across all included countries (coordination of integrated services) (Britto et al., 2014).

In the 19 semi-structured interviews with CEOs of EU or US international ECD organizations, NGOs, foundations, or academic institutions. The sample was identified through published peer-review and grey literature and via snow-ball sampling. The sample represented key agents in the global layer of change. Important emerging topics from the thematic analysis were: (1) interaction between agents and institutions that create system enabling ECD, together with the nature of these interactions; (2) understanding of problems and possible solutions; (3) effectiveness of various forms of service propagation – to gain political or economical support; (4) how these key agents operate in the global political context. Subjective experience extracted from these interviews was later cross-validated with the research literature (Shawar & Shiffman, 2017).

When assessing effectiveness of cooperation between institutions is useful to ask following questions: (1) “To what extent do NGOs contribute to increase access to interventions for preschool children?”; (2) “To what extent do NGOs provide support for families?”; (3) “To what extent do NGOs propagate community cohesiveness?”; (4) “What are the barriers that influence the creation and maintenance of integrated services?”; (5) “What are the enabling factors that help the integration of provided services, and increase communication and collaboration between the agents?” (Moore, 2008). These questions could be added: (6) “What are the educational goals?”; (7) “What are the general challenges or problems that the NGOs or community centres face?”; (8) “What have communities/NGOs already done to overcome these challenges/ to solve these problems?” (Shallwani et al., 2018); (9) “What is the agent´s power toward changing the system?”; (10) “How does the agent understand key topics?”; (11) “How would the agent characterize the problem?” (Shawar & Shiffman, 2017).

An example of measurement tool used for observation of YYY was *Measure of Early Learning Environment (MELE)*. The MELE tool consists of 50 items with following domains: physical environment and hygiene (WASH = water, sanitation, hygiene are necessary factors in ECD, see Ngure et al., 2014; Richter et al., 2017; Sudfeld et al., 2015); child-adult and child-child interactions (positive teacher attitudes and supportive environment at classroom have positive effect on adjustment, memory, and learning, see Abadzi, 2006; Hamre & Pianta, 2005; Shallwani, 2016; United Nations Children’s Fund & United Nations Educational Scientific and Cultural Organization Institute for Statistics, 2014); inclusivity; programme and curriculum; literacy; numeracy; scientific skills; free child´s play; art; group activities (Shallwani et al., 2018).

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Supplemental materials in Czech language:

Barriers to integration of change agents

Efektivní řízení ECD je narušováno všemi faktory, které mohou snižovat spolupráci. Financování je zpravidla směřované do dílčích sektorů, což vede ke kompetici o klíčové zdroje, kterých obvykle není dostatek pro všechny. Dále, popis práce pro poskytovatele služeb ve zdravotním a edukačním sektoru často nezmiňují kooperaci s dalšími sektory a koordinaci aktivit. Kanceláře těchto pracovníků jsou následně obvykle fyzicky separovány (Shawar & Shiffman, 2017).

Tyto koordinační výzvy vedou k rozdílům v názoru na to, který ECD program a která strategie integrace je optimální. Někteří členové komunit argumentují, že individuální strategie pro každý sektor fungují nejlépe, tedy tak dlouho, dokud intervence pro předškolní děti jsou jasně vymezené a existují dobře fungující koordinační mechanismy. Jiní členové komunit zase argumentují, že integrované programy, kde spolu kooperují zdravotní, nutriční, edukační a další instituce, které jsou společně financovány, vedeny, implementovány a evaluovány jsou na lokální úrovni to nejlepší (Shawar & Shiffman, 2017).

Jaké problémy vznikají, když NGO (neziskovky se svými intervencemi, non-government organizations) mají odlišný přístup k implementaci intervence než výzkumné instituce? Především zde existuje komunikační propast mezi oběma přístupy, kdy každá strana sleduje trochu jiné cíle. Neziskovky věnující se ECD často vycházejí z praktických požadavků, zaměstnávají praktiky, využívají programy, s nimiž mají roky zkušeností a mají na těchto zkušenostech ověřené, že programy funguji, zároveň obsah intervencí (kurikulum a cíle) a časový rámec je daný dle požadavků toho, kdo projekt financuje. Projektové financování často nepočítá s časem a náklady na výzkum a evaluaci projektů. NGO jsou často zavázány komunitě a nemohou si dovolit počkat na měření baseline. Oproti tomu přístup čistě výzkumných organizací si klade za cíl evidence-base výzkum k zisku zjištění pro ECD teorii (ale i praxi). Cílí na podložení intervencí a programů důkazy o efektivitě dané z povahy vysoce kvalitního výzkumného designu s vhodně nastavenou kontrolní skupinou, dostatečnou velikostí vzorku pro nezbytné analýzy a nezbytností měření baseline před započetím s jakoukoli intervencí (Dawes & Biersteker, 2008).

Obecné bariéry: (1) fiskální zdroje/alokace zdrojů: nedostatek financování; konflikty v rámci institucí nebo mezi institucemi ohledně toho, kdo získá financování a další zdroje; finanční nejistota; spolupráce mezi institucemi vyžaduje další finanční a časové náklady; nedostatek programů obsahující společný rozpočet napříč institucemi; (2) leadership: nedostatek vedení nebo nejasná role vedoucí agentury/instituce se ukazuje být problematická; (3) role a zodpovědnosti: nedostatek jasného vymezení rolí a zodpovědností mezi institucemi nebo v rámci institucí; problémy spojené s příliš velkým množství lokálních aktérů změny a iniciativ, problémy s vyvinutím efektivních rozhodovacích mechanismů napříč institucemi; (4) konkurenční priority: rozdíly v prioritách dílčích aktérů změny, v časových možnostech, v hranicích a v měřítku nebo míře pomoci, kterou dílčí instituce mohou poskytovat; (5) cíle: nedostatek konsensu; příliš ambiciózní cíle nebo rozdíly v organizačních cílech mezi aktéry; (6) závazek: nedostatek závazku a podpory ze strany CEO nebo seniorního managementu v rámci institucí i napříč institucemi; (7) Národní vs. komunitní úroveň: slabé propojení mezi zaměstnanci národních institucí a lidmi pracující lokálně v rámci oblastních iniciativ; (8) ne-fiskální zdroje: ideální zaměstnanci by měli být dostupní a otevření k přijetí nebo zvážení jakékoli rozdílné perspektivy na stejný problém nebo otázku; výzvy spojené s nedostatkem kvalifikovaných pracovníků, nedostatku fyzického prostoru, kde lze společně efektivně pracovat na stejných cílech; alokace času pro společnou práci, konstantní reorganizace struktury i časového harmonogramu podle potřeb dílčích aktérů změny; problematické je, pokud neexistuje nebo není vhodně nastavená IT podpora nebo také pokud se zaměstnanci často mění (odchází a přichází noví); nedostatek důvěry a pochopení mezi jedinci nebo institucemi či negativní profesionální stereotypy; (9) rozpojení už na úrovni vládních oddělení: limitované množství společné práce mezi vládními odděleními a nedostatečná flexibilita programů; (10) komunikace: slabá komunikace a nedostatečné

sdílení informací v rámci a mezi aktéry změny (institucemi) je stále hlavní výzvou k úspěšné multi-agency práci (je potřeba hledat společný jazyk pro komunikaci mezi dílčími aktéry); (11) profesionální a institucionální kultura: rozdílné profesionální ideologie a hodnoty mezi aktéry jsou výzvou; (12) nedostatek zájmu nebo podnětů: vzhledem k tomu, že společná práce spolu přináší množství nových nákladů je zapotřebí jasných pobídek k propagaci tohoto způsobu práce; (13) management: jednou z výzev je otázka, jak zvládnout zakoponovat individuální iniciativu až na strategické úrovni plánování; multi-agency iniciativy musí být vnímány jako silně podporované a propagované na strategické plánovací managementové úrovni, aby mohly být vnímány jako kredibilní i na operativní úrovni v lokálních komunitách; (14) programy koncipované shora-dolů: mnoho problémů je spojených s povahou programů, které jsou tvořeny z národní/vládní úrovně (top) a alokovány v dílčích regionálních oblastech (down); (15) programy řízené cíli a výstupy: některé národní programy nepřikládají pomoci ve znevýhodněných oblastech žádnou další váhu a tudíž se na ni nezaměřují, ačkoli je jí třeba nejvíce zapotřebí, i když výsledky nejsou vždy měřitelné; (16) příležitosti k tréninku: nedostatek kapacity pro rozvoj a trénink dovedností poskytovatelů intervence nebo pracovníků daných institucí; vnímání některých pracovníků, že potřebují nadstavbový trénink na integrovaný způsob práce, aby mohli naplnit požadavky této nové role, podobně jako že potřebují trénink k zvýšení jejich poznání a pochopení, jak fungují ostatní instituce a agentury (Wiens, 2014).

Dalším typem bariér jsou bariéry k vytvoření a operativě integrovaných služeb: (1) dosahování inkluzivního a rovného přístupu; (2) komunikace; (3) morálka zaměstnanců; (4) problémy spojené s hledáním zdrojů, financování a kvalitních zaměstnanců; (5) strategie a plánování (Wiens, 2014).